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Affordances and the normativity of emotions

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Abstract The normativity of emotions is a widely discussed phenomenon. So far embodied accounts have not paid sufficient attention to the various aspects of the normativity of emotions. In this paper it shall be pointed out that embodied accounts are constrained in the way they can account for the normativity of emotions due to their commitments to naturalism, externalism, and anti-vehicle-internalism. One way to account for the normativity of emotions within a naturalist framework is to describe the intentional objects of emotions as affordances that are of value for the organism. These affordances are part of a biological and social environment we are situated in, and they stand in complex relations to each other and to skillful organisms. I suggest that describing these relations can replace vehicle-internalist approaches but still account for the normativity of emotions within a naturalist framework.

Keywords Affordances · Embodied cognition · Emotions · Enactivism · Externalism · Naturalism · Normativity

1 Introduction

Many current theories take emotions to be fundamentally embodied (e.g., Prinz 2004; Maiese 2011; Hutto 2012; Colombetti 2014). While these approaches differ substantially in the details, the term "embodied accounts" will be used as an umbrella term to cover all of these accounts insofar as they agree on the following claims: Embodied accounts of emotion (i) take bodily reactions to play a consti-

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tutive role in emotions, (ii) take emotions to be about core relational themes such as “being dangerous” or “being offensive,” (iii) aim to replace vehicle-internalism (i.e., assumptions about inner representations realized and processed by the brain alone), or at least aim for minimalist vehicles such as perception-like states with non-conceptual content, (iv) aim to give a naturalist explanation of emotions, and (v) aim to externalize core relational themes (i.e., the intentional objects of emotions, such as “danger” in the case of fear). These general claims have become popular since they fit very well with an enormous amount of recent empirical evidence from various sources suggesting that there are patterned reactions of the nervous system connected with different types of emotions (Kreibig 2010), and that emotional expressions and bodily postures occur early in infancy (Reddy 2008) and across cultures (Tracy and Robbins 2007), and have homologies in animals (Clark 2010). Embodied accounts point out that bodily reactions are not simply an output or a random byproduct of an emotion but are rather constitutive of an emotion’s intentionality. Put roughly, embodied accounts aim to understand emotions as evolved complex patterns of bodily reactions whose (biological) function is to respond to situations of urgent concern. The bodily reactions involved in emotions partly constitute the emotions’ being meaningful, because emotions are the result of an adaptive history in which the bodily responses became reliable responses to urgent situations.

Contrary to behaviorism, embodied accounts point out that emotions are intentional and evaluative: they are about things that matter for us. Yet contrary to cognitivist theories, embodied accounts highlight that the emotions’ “aboutness” should not be explained by assuming complex inner representations such as judgments with a conceptual content. Instead the bodily reactions themselves and the history of the interaction between a skillful body and a structured environment constitute the meaningfulness of emotions.

As I will argue in the following, embodied accounts have not been paying enough attention to the normativity of emotions in all its aspects but should do so in order to give an adequate characterization of the phenomenon. Yet embodied accounts are constrained in the way that they can account for the normativity of emotions by the naturalist, externalist, and anti-vehicle-internalist claims they embrace. In the following I begin by sketching the claims that embodied accounts rely on. I then explain what the normativity of emotions consists in and point out why embodied accounts have not paid sufficient attention to the explanation of the phenomenon. I then propose my own approach on which we should conceive of the intentional objects of emotions in terms of affordances, where these affordances are part of a value-rich environment that the skillful organism is situated in. I argue that such an approach is committed to a certain form of normative realism but that this normative realism fits well within a naturalist framework. I also suggest that affordances can be described as standing in complex relations to each other and the organism, and that these relations can (at least in part) account for what has been labeled as the emotions’ being subject to rational norms.

2 Embodied accounts

Embodied approaches respond to a steadily growing body of evidence from developmental psychology, ethnology, and behavioral studies in animals suggesting that the expressive patterns and bodily postures associated with certain emotions such as pride, jealousy, embarrassment, and shame might be present in apes, infants, and across cultures.[1] Humans show stereotypical bodily reactions and expressions from a very early age: we swell with pride and hang our heads in shame; our hearts race in fear and our blood boils in anger. In the most general sense, embodied accounts conclude from these studies that emotions can best be described as embodied evaluations that evolved as direct responses to situations of a certain urgency for the organism.[2] The general claims that unite embodied accounts can be described in the following way:

(i) *Embodiment* Bodily reactions play a constitutive role in emotions. The increase of heartbeat, the release of adrenaline, and the tensed muscles that are part of fear form a pattern, and this pattern is not just some random output of an essentially cognitive emotional reaction. On the contrary, the pattern of bodily reactions is the result of an adaptive history in which it gained the function of constituting the emotion's "aboutness."
(ii) *Core Relational Themes* Embodied accounts agree with traditional cognitivist accounts that emotions are intentional and evaluative. To account for the particular "aboutness" of emotions, many embodied accounts adopt Lazarus's (1991) view that each emotion has a certain core relational theme it is about: fear is about something's being dangerous, anger is about something's being offensive, and so on.
(iii) *Anti-Vehicle-Internalism* Embodied accounts generally aim to replace the traditional view of cognitive processes as consisting of complex inner representations realized by the brain alone with approaches that tend to see cognitive processing as being constituted by the interplay between the skillful body and the structured environment. Some accounts completely deny vehicle-internalism for large areas of the mental. They deny that internal representations play any role in the realization of perception, sensation, or emotion. Dynamical accounts even tend to deny that the vehicle/content distinction is a useful distinction at all (e.g., Gallagher 2008; Chemero 2009; Hutto and Myin 2013; Colombetti 2014). Other accounts prefer to define representations in a more modest way by speaking of minimal

[1] See e.g., Draghi-Lorenz et al. (2005), Reddy (2008), Tracy and Robbins (2007), Clark (2010).

[2] It is of course still highly controversial to what degree emotions are constituted by bodily reactions that have their origin in evolution. That cultural differences play an important role in emotion is beyond doubt. Yet even scientists such as Lisa Feldman-Barrett, who doubt that emotions can be individuated with regard to the patterns of bodily arousal they involve, would not deny that bodily arousal plays a central role in emotional coping strategies and that some basic bodily ingredients that combine to constitute different emotions can be identified (see e.g., Barrett et al. 2015). So today, even those who admonish theorists not to overestimate the role of bodily arousal make a much more differentiated claim than traditional cognitivists, who treat bodily arousal as a meaningless causal output or contingent byproduct of an emotion (e.g., Lazarus 1991; Nussbaum 2001). Still the debate about the individuation of emotions is not to be settled on empirical grounds. For the purposes of this paper, I will follow those who think that emotions can be individuated with regard to bodily reactions without further argument, but I argue for an embodied view in detail elsewhere (Hufendiek 2016).

or action-oriented representations that are not realized by the brain alone (Clark 1997).[3]

(iv) *Naturalism* Embodied accounts widely agree on methodological and ontological naturalism, i.e., they aim to explain emotions in continuity with the results on emotions from the sciences and further develop a picture of intelligent organisms as the result of an evolutionary process. Methodological and ontological naturalism both find support in the wide range of evidence that speaks to panculturally occurring features of emotions and a continuity among emotional reactions in humans and other animals.

(v) *Externalism* Embodied accounts (by and large) are committed to diachronic environmental externalism (DEE) and synchronic environmental externalism (SEE). In a nutshell, DEE claims that organisms typically develop the ability to respond to certain types of objects only if there is an adaptive pressure to do so. This implies that the object has to be ontologically prior (in some sense to be specified) to the response that is set up to respond to it. SEE is the claim that no complex, world-representing inner machinery is needed in order to interact with the world in intelligent ways, *because the world is out there* and organisms are well-adapted to it. This implies that we have to think of the object of the response in question as being present and causally effective under normal conditions.

The commitment to externalism (v) is central to why I claim that embodied accounts of emotions need to be more explicit about their ontological commitments. I will therefore develop this claim further in what follows.

3 Externalism

For the externalism claim, as well as for the other claims, it is certainly true that when it comes to the details, authors differ on what it means to embrace externalism: within the teleosemantic framework, Prinz (2004) is committed to a strong version of content externalism, while Hutto (2012) and also Colombetti (2014) would deny that emotions are representations that are subject to semantic norms in the first place. But all embodied accounts of emotions are equally committed to DEE, that is, to the claim that the environment takes on an active structuring role in the evolution of an emotion's intentionality. Biologically inspired versions of naturalism, and particularly the teleosemantic approach to emotion that Prinz is committed to, claim that organisms develop representational powers (or—in enactivist terms—the ability to enact meaning) in direct interaction with the world and in response to certain adaptive pressures exerted by their environments. As Prinz puts it: "Emotions are set up to be set off by

[3] Prinz (2004) is an exception here, since, strictly speaking, he is a vehicle-internalist. In arguing against cognitivists that emotions are perception-like rather than judgment-like Prinz suggests that the vehicles of emotions can be understood as being simple and non-conceptual in format. But for Prinz emotions are perceptions of bodily arousal and the vehicles of these perceptions are situated in the brain alone. The following discussion of the problems that anti-vehicle-internalists face when it comes to the normative dimension of emotions do include Prinz's approach, though, since these problems are largely a result of denying that emotions are *complex* inner representations, such as judgments with a conceptual content.

core relational themes" (Prinz 2004, p. 66). This view depends on the claim that there were circumstances in the external world that our ancestors repeatedly faced, thus making it beneficial for these organisms to develop a representational mechanism to deal with them.

Yet, if what emotions respond to are core relational themes, the most straightforward conclusion would be to assume that core relational themes such as danger, loss, and so on must be objective occurrences with the causal power to create an adaptive pressure. If we say that emotions are "set up to be set off" by core relational themes, this implies that core relational themes are ontologically prior to the emotional responses they trigger. By affecting the organism in various ways, it was the core relational themes that created the adaptive pressure that resulted in the development of the emotional responses in question. Given that core relational themes such as "being dangerous to the organism" are usually described as things that are of value to the organism, this seems to commit one to normative realism.

Embodied accounts further rely on what I call *synchronic environmental externalism* (SEE). The claim is that organisms are situated in a structured environment that they directly interact with. Once we focus on direct forms of intelligent interactions with the outside world, we can refute approaches on which (complex) internal representations are something that stand in between the acting organism and the world and are realized by the brain alone. While controversy exists among different authors in the field concerning whether we need to eliminate representations altogether or simply to modify the meaning of the term (see claim (iii) above regarding anti-vehicle-internalism), there is broad consensus about SEE, i.e., the claim that no complex, world-representing inner machinery is needed in order to interact with the world in intelligent ways, *because the world is out there* and organisms are well-adapted to it. This appears to be a shift in the explanatory burden from the brain to the body and the world. The focus on the structure of the environment, and the organism's bodily skills to interact with it, allows us to explain and model intelligent behavior without necessarily assuming the involvement of complex cognitive processing. DEE and SEE are claims that complement the anti-vehicle-internalist claim that emotions do not essentially involve inner representations realized by the brain alone. The ontological commitments behind DEE and SEE will be central in the following discussion of how embodied accounts can explain the normativity of emotions.

4 The normativity of emotions

In *The Passions of the Soul*, René Descartes gives a definition of what envy is: "Envy is a kind of sadness mingled with hatred which results from our seeing goods coming to those we think unworthy of it. Such a thought can be justified only in the case of goods of fortune… But sometimes fortune gives advantages to someone who is really unworthy of them. Then envy stirs us up only because having a natural love for justice we are vexed that it is upheld in the distribution of these goods" (AT XI, 466 PA 182). Obviously Descartes thinks of envy as an emotion that entails a normative dimension, since it can be appropriate or inappropriate. Yet how can we describe an emotion's being appropriate?

Looking at the example of envy, if I get a job that somebody else has worked very hard for simply because I happen to belong to an influential family, then there is apparently more than one sense in which we can speak about envy as an appropriate response: envy is a s*emantically* appropriate response insofar as the core relational theme of envy is in fact present. Envy is also an *evaluation*, or directed at something that is of (dis)value to us. Many authors make the point by simply saying that emotions are about values, thereby introducing some kind of value-realism into the story (e.g., Deonna and Terroni 2012). Yet the parsimonious naturalist might wonder whether we have to assume that emotions are about values at all. The most straightforward way to address this question is to go through Lazarus's description of core relational themes and see if one can find adequate redescriptions of these core relational themes in non-normative terms.

Take "being dangerous" as an example: if I'm afraid of a snake, and appropriately so since the snake really is dangerous for me, can't the snake's being dangerous for me be explained in chemical terms? A snake is dangerous because of its ability to bite and release venom into the blood. And the snake's being venomous can be analyzed in chemical terms. But although some instances of the core relational theme "being dangerous" refer to events that can be described in physical or chemical terms, the biological level is needed to get an adequate description of the properties *as they come to be represented* in core relational themes: fear doesn't represent the chemical structure of the snake's venom; rather, it represents the snake's being dangerous for our bodily well-being. Being dangerous, indigestible, or offensive are properties that cannot be reasonably explained with reference to physics or chemistry alone. To say that something is dangerous for something else introduces a kind of normativity into the story that can only be captured adequately within a biological framework. It makes sense to speak of "dangerousness" as a property that exists in relation to the organism only if the survival of the organism is introduced as a basic value in the first place. If survival is taken to be a basic value, then it makes sense to say that something is dangerous, indigestible, or offensive and to say that all these things are bad for the organism. Negative emotions represent something as being bad for the organism; more specifically, fear represents something as being dangerous; disgust as indigestible; and so on.

Yet with regard to envy and many other emotions, it is not only impossible to describe their intentional objects in non-normative terms, but it also sounds implausible that their intentional objects should be values with regard to biological standards. For emotions such as envy as well as guilt, shame, jealousy, and pride, the social context in which they occur is a *sine qua non*: these emotions (or homologous forms of these emotions) could not exist in nonsocial species outside of a social context and, what is more important, we need to refer to social rules and norms to spell out what they are about. Contrary to emotions such as fear and disgust, which can be described as being about value-properties whose being of (dis)value can be spelled out with reference to biological norms, jealousy is about being left out by others, guilt is about having transgressed a social norm, and so on. Outside of a social con-

text, the emotions in question could not possibly have the intentional objects they have.[4]

To complicate matters even further, envy not only is unintelligible outside of a social realm that sets up the norms that envy is responsive to. Envy also seems to be subject to rational norms, insofar as we would consider a person irrational who tells us that she envies herself, just as we would find it irrational if a person who appropriately envied me for a job offer I received turned out not to be happy or relieved if she got the job in the end. This rational dimension of emotions has been analyzed in detail by Helm (2001). Helm takes emotions to be felt evaluations that concern things of import, where "each emotion in general imposes rational commitments on one to display a broader pattern of emotions with the same focus in the relevant (actual and counterfactual) situations" (Helm 2001, p. 70). The focus of an emotion, according to Helm, is the background object's having import for the subject, which makes intelligible the evaluation implicit in the emotion. If I happen to own a prize Ming vase that I am very proud of, this is an object of import for me. My fears of having cocktail parties in the house or my anger about somebody throwing a baseball close to the vase are both made intelligible in light of the import that my prize Ming vase has for me (see Helm 2001, p. 69). According to Helm, we need to think of emotions in a holistic framework, where belonging to a broader pattern of emotions with a common focus defined by focal commitments is a necessary condition on the appropriateness of particular emotions. While one does not have to buy into the details of Helm's approach, a comprehensive theory of emotions should be able to account for the phenomenon he is describing. Emotions and their intentional objects cannot be described as isolated responses with a biological function that explains what they are about. Rather the holistic character of emotions and the way that the pattern structure of emotions grants their rationality have to be accounted for.

Faced with these various aspects of the normativity of emotions, embodied accounts find themselves constrained in how they can account for the normative dimension of emotions: their commitment to naturalism constrains what embodied accounts can take norms and values to be; their commitment to externalism constrains embodied accounts to assume that the intentional objects of emotions can be defined (at least to some degree) independently of the emotional response; and their commitment to anti-vehicle-internalism constrains what embodied accounts can take the cognitive processes involved in emotions to be. Yet authors that address the normativity of emotions typically simply assume either that emotions are "about values" (Deonna and Terroni 2012), that the intentional objects of emotions can only be defined simultaneously with the emotion (e.g., Helm 2001, p. 63), or that emotions are judgments or judgment-like states with a conceptual content that are interrelated in content- and rationality-sensitive ways (Kenny 1963; Lazarus 1991; Nussbaum 2001; Solomon 2003). In the following I will introduce the concept of affordances and suggest that they can be understood as value properties in the environment of an organism, where

[4] This is not meant to exclude that emotions such as jealousy and guilt could be results of evolution with a biological function. I would like to remain neutral on the question of whether they are. What I claim is that guilt and jealousy have violations of social norms as their intentional objects. But I do not make any claims about how and why they became the objects of these emotions.

some affordances owe their being of value for certain organisms to biological standards and others to social standards. This approach accounts for emotional objects and their normativity within a naturalist framework by taking emotional objects to be of instrumental value to the organism. Affordances are furthermore introduced as properties that stand in complex relations to each other and to the organisms that perceive them. A description of this structure can (at least in part) account for what appears to be the holistic character of emotions without thereby buying into non-naturalist claims about rational norms.

5 About affordances

I have argued so far that emotions have a complex normative dimension and that embodied accounts are restrained when it comes to accounting for this normative dimension since they are committed to naturalism, externalism, and anti-vehicle-internalism. While naturalism constrains how we can account for norms and values, externalism forces us to think of the intentional objects of emotions as being definable independently of the emotion, and anti-vehicle-internalism forces us not to think of emotions in terms of complex internal representations realized by the brain alone, even if what we want to explain is an emotion's being concerned with the violation of a social norm. In the remainder of the paper, I will argue that we can account for the normativity of emotions without abandoning the narrow framework of embodied accounts just described if we take emotions to be about affordances and take affordances to be partly constituted by relational properties that are of instrumental value to an organism and the evolved responses to such properties.[5]

Affordances, according to Gibson (1986), are features of the environment that exist in relation to the organism and its abilities. These features are of value to the organism, they offer possibilities for action, and they highlight things that should be approached or avoided. For a particular organism, certain fruits look edible; for persons of a certain size and shape, certain objects look sit-upon-able; and so on. Gibson assumes that perception always involves proprioception[6] and thereby has intentional objects that are fundamentally observer-relative although the external information that is picked up through perception is assumed to be real. A tree might look climbable to a squirrel but not to me, while the floor looks walk-upon-able to me but not to a fish. Perceiving an affordance means perceiving the environment with what it offers to the animal in question given its needs and skills. Things in the environment can be perceived as being of value, insofar as they match with the organism's needs and skills. The notion of value can be understood here as an instrumental notion. Things are not in any intrinsic or context-independent sense good or bad; they are good or bad for particular organisms in particular environments. But their being good or bad for the organism does not depend

[5] I develop the theory of action-oriented representations elsewhere (Hufendiek 2016) and argue that it makes sense to talk about representations being about affordances, although Gibson himself was a radical anti-vehicle-internalist who denied *any* notion of internal representation. Here I will focus on the intentional objects of emotions and leave the question of whether emotions are representations and subject to semantic norms open.

[6] "Egoreception accompanies exteroception, like the other side of a coin" (Gibson 1986, p. 126).

on the organism representing them (or responding to them) as good or bad. An animal in an unfamiliar environment might entirely lack the ability to represent some berries as indigestible. But these berries nonetheless have the property of being indigestible simply in relation to the organism and its needs. This is why we need to assume observer-independent relational properties as constitutive parts of affordances. Yet affordances depend on our skills to engage with the world as well, which makes them response-dependent at the same time. Both response-independent relational properties and the evolved responses to them are partly constitutive of emotional affordances. I will develop my view of the ontological status of affordances below.

An affordance theory of emotional objects fits nicely with an embodied account as it offers a good *prima facie* understanding of the relation among bodily reactions, world-directedness, and motivating potential in emotions: the emotions' "aboutness" is constituted by the bodily reactions they involve, and these bodily reactions can be about an external core relational theme or an affordance, because they were set up by evolution (or a learning history) to do so. The bodily reactions, by preparing the body for action, also give an observer-relative shape to the intentional object of the emotion as it is grasped by the subject. In the case of fear, rather than only representing something's being dangerous, we represent it as a danger-to-be-avoided.

Consequently, I suggest that we understand the ontological constitution of an affordance such as a "danger-to-be-avoided" to be two-fold: First, it necessarily includes a relational property such as "being dangerous" that (temporally speaking) precedes the affordance. Yet "being dangerous" is not sufficient for the existence of an affordance. Affordances are also response-dependent insofar as they only exist in relation to our skills. Being dangerous is a relational property that was present in the environments of our ancestors already before they were able to respond emotionally to dangerous situations. The pattern of bodily reactions that evolved in response to this relational property is a further constitutive part of there being an affordance: something that is not only related to us as living organisms, but also to us as agents with certain abilities. Emotions can be understood as representations of affordances that are not only *intentional* (about relational properties) but also *intensional* (involving a particular way of skillfully responding to and thereby grasping relational properties). But, crucially, emotions might be intensional without thereby entailing complex representations with conceptual content; rather, they may be intensional merely because the skillful bodily reactions that prepare one for action constitute a certain mode of presentation.

Current theories of affordance-perception are divided into radical anti-vehicle-internalist (e.g., Chemero 2009; Rietfeld and Kieverstein 2014) and minimal-representationalist accounts (e.g., Clark 1997). While I tend to side with the minimal representationalists and argue elsewhere for emotions as embodied action-oriented representations (Hufendiek 2016), I will not argue for emotions being representations in this paper. On the contrary, the view of affordances that I develop here is in principle adaptable to more radical anti-vehicle internalist frameworks. Crucially, talking about affordances as being intensional does not automatically imply representations. Hutto and Myin (2013) for example allow that things can feel or seem a certain way on the level of basic cognition, which is a way of accounting for skillful responses as constituting a mode of presentation in anti-representationalist terms.

In the following I will develop the ontological status of affordances further, as well as the instrumental value they have in relation to the organism, and the way in which affordances are intensional and stand in relations to each other that can be described as being subject to rational norms.

5.1 The ontological status of emotional affordances

With regard to its precise ontological status, Gibson's original term 'affordance' has been interpreted in several ways. Some argue that affordances are relational properties that establish selection pressure to which the organism then learns to respond (Reed 1996). Others take a different stance and argue that affordances are dispositional properties of the environment complemented by dispositions of the animal: for example, something can be walk-upon-able only if the animal already has the ability to walk, and therefore affordances cannot be seen as establishing selection pressure. In other words, on this view, the abilities presupposed by an affordance must be already in place for the affordance to exist (Turvey 1992; see also Chemero 2009 for a more detailed discussion).

So the puzzle that affordance accounts face is this: Affordances are partially constituted by properties of the environment, since they can come to be perceived by the organism; yet affordances essentially contain a response-dependent element. On the one hand, it is certainly misleading to describe affordances simply as relational properties that establish a selection pressure, since they must be the result of a selection process. But, on the other hand, in order to explain the selection pressure that brings about an affordance we need to assume a kind of property that is of instrumental value for the organism independently of an organism's being able to respond to that property at all. I will argue in the following that affordances must be described as being partly constituted by relational properties that in turn cannot be characterized as response-dependent properties of any sort, since those relational properties must be in place *before* the organism acquires the ability to respond to them. But once an organism has acquired the ability to respond to dangerous situations, i.e. once the relevant action-tendency is in place, we can also speak of a response-dependent property being in place at the same time. "Being dangerous" is a relational property that can exist in relation to an animal even if the animal does not have the ability to detect or respond to this property at all. A "danger-to-be-avoided" is a response-dependent property that owes its identity to the organism's ability to respond to it. It is the existence of the relational property that sets up the selection pressure for the animal to develop the ability to detect it. So, strictly speaking, relational properties and response-dependent properties are both constitutive elements of an affordance.

To develop this idea further let me characterize what relational properties and response-dependent properties are and then explain how relational properties constitute affordances. A property is a relational property if an object has this property not intrinsically but only with regard to another object. Relational properties are objective in the sense that their existence does not in general depend on our representing them or in any sense responding to them. Response-dependent properties, on the other hand, are at least partly constituted by our representations or responses. Typical can-

didates for response-dependent properties are “being red” or “being funny,” and there are different ways to unpack in what sense these properties are response-dependent.[7] Some accounts make the claim that the properties in question are entirely response-dependent, while others claim that the properties arise from an interaction of subject and world. In an embodied framework we need to assume that the objects of our emotions are at least partly constituted by relational properties that are not response-dependent in order to account for DEE and SEE. Let me explain.

Assuming that emotions are about objectively existing relational properties allows for the claim that these properties can be instantiated and individuated regardless of whether the organism is able to perceive them. A token of a relational property can be instantiated without the organism actually perceiving it, and there can be certain tokens of a relational property frequently present in the environment of a species, without any member of the species being able to represent this particular kind of token. For example, a new predator might enter the environment of a species and would constitute a danger even if no member of the species has the ability to represent this danger. The dodo is an example of a bird that was endemic to the island of Mauritius where it evolved in isolation from predators and as a result happened to be not only flightless but also fearless. The bird became extinct briefly after sailors introduced rats and other animals on the island in the seventeenth century that plundered Dodo nests. Dodos had no naturally evolved abilities to detect these predators and defend themselves or fly. Nevertheless it makes sense to say that the predators were dangerous for the Dodos. An account that takes “being dangerous” to be a relational property that can be instantiated independently of a species’ being able to respond to that property has the advantage that it can account for the adaptive pressure that the property might place on the species.

While it makes sense to say that *certain kinds* of dangerous situations only start to exist at some point in the history of a species, it is hard to imagine a living organism in an environment where danger is never instantiated. Organisms that are alive but mortal and vulnerable are, by definition, organisms that can find themselves in danger. It is furthermore hard to imagine any historical or possible environment that entails nothing that could threaten an organism’s well-being. “Being in danger” seems to be a property that deserves the name of a “core relational theme” in a very fundamental sense. Being alive, mortal, and vulnerable implies the possibility of being in danger. Accordingly, we find homologous forms of fear in animals such as zebrafish (Kalueff et al. 2012) and fruitflies (Gibson et al. 2015) that enables them to avoid dangerous situations. The same is true for disgust (Kelly 2011). As soon as there are living organisms in need of nourishing themselves who are able to absorb certain things but not others, they need to be able to distinguish the things that can be absorbed from those that cannot. “Being indigestible” can be seen as the relational property constituting the affordance that disgust is about, an affordance that could be labeled “indigestible-thing-to-be-rejected.”

Still one may wonder why introducing relational properties and making such a fuss about them if in the end a response-dependent element needs to be added. Is a

[7] See e.g., Kauppinen (2014) for an overview of response-dependent properties in metaethics, and Prinz (2007) for a naturalist view that assumes that moral properties are response-dependent.

danger-to-be-avoided anything other than a response-dependent property? In short, yes. I insist on the distinction and on relational properties and response-dependent elements being both constitutive parts of emotional objects for the following reasons: I take relational properties such as "being dangerous" to be such that (a) they can exist in relation to an organism even if the organism doesn't even have the ability to respond to them, (b) these properties create the adaptive pressure for the response to evolve in the first place, and (c) these properties are of instrumental value (or disvalue) for the organism.

Thus we can see why it is necessary to include non-response-dependent relational properties in order to explain affordances. The standard motivation for introducing response-dependent properties is to avoid normative realism. However, the claim I want to make is that affordances do not owe their value to the way we respond to them. The things we (adequately) respond with fear to are dangerous for us and would be dangerous even if we lacked the responses in question. And we needn't avoid a commitment to instrumental value of this sort. Consequently, while an affordance as a danger-to-be-avoided does essentially include a response-dependent element, it essentially includes a non-response-dependent element as well.

5.2 The values and norm-violations perceived through affordances

Gibson thinks of affordances as objects that are of value to the perceiving organism:

> The perceiving of an affordance is not a process of perceiving a value-free physical object to which meaning is somehow added in a way that no one has been able to agree upon; it is a process of perceiving a value-rich ecological object. Physics may be value-free, but ecology is not (Gibson 1986, p. 140).

A naturalist approach can account for these values, since they can be understood as instrumental values, defined with regard to biological norms or standards such as the survival of the organism. As has been suggested above with regard to emotions such as fear and disgust, one might be happy to say their objects are of disvalue to us with regard to biological standards.

Yet, as has been suggested above, with regard to many emotions it looks implausible to determine their intentional objects in terms of bodily needs or biological values in the first place. For emotions such as guilt, shame, jealousy, envy, and pride, the social context in which they occur is constitutive for their intentional objects. We need to refer to social rules and norms to spell out what they are about. Contrary to the objects of fear and disgust, properties whose being of (dis)value can be spelled out with reference to biological norms, the object of jealousy is "being left out by others," guilt is about having transgressed a social norm, and so on. Outside of a social context, the emotions in question could not possibly have the intentional objects they have.

Saying that the object of guilt or jealousy is fundamentally social might seem to suggest that these emotions do not have adaptive functions, and (given some kind of biosemantic or biosemiotic framework) this might suggest that the content or object of these emotions is not determined by a biological function but rather by the social function of the emotion. Yet this does not follow from the claim that these emotions

only can have intentional objects in a social context. Consider homologous forms of shame in apes. These are most adequately described as responses to rule-violations concerning one's status inside a rank hierarchy. While detecting a rule violation committed by oneself with regard to one's status involves representing an intentional object of a complex social nature, the ability to respond to such objects could still have an adaptive function. With regard to most social emotions, there is not enough evidence (yet) to make definite claims about the origin of these emotions, so the question of whether social emotions have adaptive functions or social functions must be left open. Yet even if we accept that we cannot come up with clear decisions on whether these emotions are at bottom subject to biological or social norms, we have to explain how the intentional objects of these emotions are constituted on an ontological level, since it is one thing to claim that "being dangerous" is a relational property but another thing to claim that "having violated a social rule" is a relational property that exists independently of our responses to it.

A central claim of this paper is that both of these types of relational properties, and in particular relational properties concerning violations of social rules, can exist independently of whether we represent them or not. As we will see, the properties in question can exist even in a species that is not able to detect them. I will use guilt as a first example. Guilt can be seen as an embodied reaction to a certain kind of norm violation. The norm itself is established in the social environment through a collective practice and the mutual acceptance of that norm in the practice.[8] There are many rules that we make up as we go along in our social interactions. Rules can get established as conventions that the members of a social group follow without being explicitly represented beforehand. It is not a necessary criterion for a rule to be in place that somebody represents it and then purposefully establishes it.[9] It is a criterion for a rule that it is followed and can be followed by members of a social group. But people can establish these rules without the intention of doing so and might or might not come to represent these rules explicitly later on. Rules are visible in social contexts in the form of re-occurring patterns of behavior and in people's sanctioning behavior when a rule is not followed. Re-occurring behavior patterns are grounded in the dispositions of people to do similar things under similar conditions.

In the case of guilt there are typical manifestations of guilt-relevant norm transgressions. A caregiver's stern face or raised voice might, for example, indicate to an infant not yet able to understand language that she has violated a social norm. If a raised voice or stern face are reliable signs of having transgressed a social rule or norm, it

[8] See Rietfeld (2008) and Rietfeld and Kieverstein (2014) for an approach to affordances that are the result of our social practices or ways of living. See also H.L.A. Hart and his famous distinction between habits and rules. Hart proposes several conditions for a rule being present, including (i) regularity of behavior, (ii) a standard of criticism, (iii) a tendency to criticize for violations of the rule, and (iv) felt bindingness of the rule (Hart 1961).

[9] Though this is the way that Searle would want to have it in his social ontology (2010). The reason not to follow Searle here is that an account such as Searle's, which makes collective representation of something *as* something the constitutive principle of the social world, cannot account for DEE and SEE when it comes to our representing social rules or the violation of them. To fit the constraints on an embodied account, we need to think of the social world, as it comes to be represented in emotions, as being ontologically prior to the emotional responses in question.

can come to be a locally recurrent source of natural information through which the infant can detect that she has violated a rule or norm.[10] The normative property would in that case be detected through the facial expression or the tone of voice. It would supervene on the situation the caregiver is complaining about and could be grasped through natural information such as a stern face that frequently co-occurs with that property in the environment of the infant in question. While having transgressed a norm is the relational property that guilt is about, the relevant action tendency is to-make-amends-for. The affordance that guilt is about is therefore a transgression-of-a-rule-to-make-amends-for. Of course, this is just a tentative suggestion for how to think about the relational properties that social emotions appear to be about. A more detailed account would require a developed social ontology of rules and rule violations and how we are set up to deal with them, in order to explain emotional content within a naturalist externalist framework.

But it should be clear that in principle such an account assumes that (a) the norm violations that these emotions are about can be described as social constructions that we collectively make up without being aware of it. This is an explanation of the norms in question that fits within a naturalist framework. Furthermore it allows us to say that (b) the relevant relational properties can be in place prior to our ability to respond to them or represent them, which does justice to the proposed externalism including DEE and SEE. Finally, (c) the emotional responses to these properties can be understood as action-oriented representations that directly respond to recurring natural signs such as the stern face of a caregiver and grasp the relational property in question by perceiving the facial expression. This allows us to say that guilt is about a norm violation without embracing the claim that this presupposes an explicit representation of the self in relation to others and an explicit representation of social norms. In other words, we do not need to embrace vehicle-internalism in order to explain guilt.

A further example should clarify these points. Consider studies that suggest that shame occurs in apes as a rank-related emotion that motivates them to show subordinate behavior towards higher-ranked animals (Clark 2010). Baboons establish complex social rank hierarchies in their interactions and can come to behave accordingly in their social environments. The social structures in question can be understood as networks of social relations between the animals. Being a parent of, being higher-ranked than, or being a permanent grooming partner of another are relational properties that animals can have *qua* occupying a place in the social order (and not *qua* collectively representing that somebody is a parent or a grooming partner).[11] Social relations are constituted through re-occurring patterns of behavior. Practices relate the animals to each other and the material world. Given such a scenario, it makes sense to say that rank hierarchy as a social structure probably developed first and produced an adaptive pressure for members of the group to develop new skills to behave appropriately in

[10] A notion of natural information that allows conventional signs to serve as natural information as well is developed by Millikan (2004) and Chemero (2009).

[11] I follow Haslanger's (2015) description of social structure here. Such a description, again, has the advantage that it is not limited to Searle's view that social entities can only be constituted by our collectively representing them as such. Haslanger does not apply the notion of social structure to animals. But as far as I can see, there is no in-principle reason why this should not be possible.

the group. Shame in apes is thus an embodied action-oriented representation of the social affordance of a "status-rule-violation-to-be-hidden." Obviously the group of rule violations that can be adequately represented in shame by humans is at least a little broader, as shame in humans does not appear to be restricted to rule-violations that concern one's status. Yet the animal example nicely shows how in principle a complex arrangement of rules of behavior can be established without being collectively represented by the social group as such. The whole rank hierarchy of a group can be established through such behavioral reactions and does not need to be represented by any of the animals participating in the social system. Instead the animals make up the rules in the interaction and implicitly represent parts of the system through the others' behavior.

Such an account is not meant to cover the complex dimensions that shame-related reasoning can have in human adults. It is merely meant to cash out the content of shame understood as an action-oriented representation in a naturalist externalist context: Shame understood as an adaptive response that developed in a social context is about the violation of a social norm. Understood as an action-oriented representation, the object can be described as a rule-violation-to-be-hidden, which is a bit of a shortened way of putting it, since in shame it is the person who committed the rule-violation who feels the urge to hide herself and not the fact that she violated the rule.

A naturalist can integrate the intentional objects of these emotions into her ontology by taking them to be the results of a social construction. In particular, on the view I have developed here, their being real and causally effective depends on their being present in recurring forms of social behavior, and not on their being collectively represented as such.

So it seems that we have found an account that does justice to the fact that emotions are about values and that these values have to be response-independent, without making ontological assumptions that are not coherent with naturalism. Yet a non-naturalist might still be unsatisfied with the claim that all there is to the normativity of emotional objects is that they are appropriate with regard to biological or social norms. As Bennett Helm puts it, "[an] appeal to biological fitness presupposes rather than explains import [of emotional objects]. For food, water, and shelter, as instrumentally necessary for my (or my genes') survival, are worth pursuing only insofar as my life or my genes are worth preserving, and the worth of these has simply been presupposed rather than accounted for" (Helm 2001, p. 51). This leads Helm to conclude: "This all suggests that we should try to answer the modified Euthyphro question the other way around: things have import to us because we evaluate them as good or bad" (Helm 2001, p. 51).

In response to Helm, an embodied theorist can say the following. First, it is not an option for a naturalist externalist account committed to DEE and SEE to answer the Euthyphro question the other way around. The example of species being surrounded by dangerous objects they are not even able to detect or of the apes setting up social rules without needing to understand them suggests that Helm's approach might indeed be an inadequate way of describing the objects of our emotions. Rather, what is of import to us seems to be structured (at least to a significant degree) by relations between living organisms and their environment independently of their abilities to respond to these environments. Moreover, Helm's further conclusion that "pleasure

and pain are, plausibly, such fundamental conations, automatically constituting their causes as good or bad" (Helm 2001, p. 52) simply replaces the grounding of good and bad in biological survival values and posits an ad hoc mechanism of mental value constitution. What Helm suggests here is not an option for a naturalist account if the values are supposed to be anything else then entirely subjective. So without purporting to resolve the long-running metaethical controversy between naturalist and non-naturalist approaches to value, I propose instead to judge the present approach by its explanatory power with respect to the objects in question, in particular by its ability to account for the normativity of emotional objects within a naturalist framework without ending up with inadequate descriptions of those objects and without adding elements to our ontology that cannot be accounted for in naturalist terms.

5.3 The intensionality of emotions

Emotions, I have argued so far, are about affordances such as a danger-to-be-avoided. The emotions' aboutness is constituted by the bodily reactions they involve. These bodily reactions are set up by evolution or a learning history to respond to relational properties such as "being dangerous." Assuming that emotions are about objectively existing relational properties allows for the claim that these properties can be instantiated and individuated regardless of whether the organism is able to perceive them. As an externalist account, an embodied account is committed to the claim that an emotion is appropriate if the relevant relational property is actually present.

Yet emotions are not only about something, emotions also present their objects in a particular way. The way in which an emotional object is given to us is what is called the intensionality of emotions. According to the present approach, the pattern of bodily reactions that develops in response to a relational property turns this property into an affordance and constitutes its intensionality. An affordance is a property that is not only related to us as living organisms but also related to our abilities to respond to that property. We do not only see something as dangerous but as a danger-to-be-avoided. Fear is thereby not only *intentional* (about the relational property "being dangerous") but also *intensional* (presenting something's being dangerous *as* something that should be avoided). The embodied action tendencies involved in emotions can be described as "modes of bodily attunement" (Fuchs 2013) that determine the kind of access we have to the object in question and the way we feel motivated to act towards it.

Furthermore, these embodied modes of presentation explain why through fear we are not able to recognize dangerous objects in all their possible disguises. I am not afraid of the danger that the wolf in sheep's clothing constitutes, because I don't see him *as* a danger-to-be-avoided, but it would, in principle, be appropriate to be afraid. In the same way the dodo is not able to see certain predators as dangers-to-be-avoided, although it would be helpful if he could. Following this approach, emotions can be seen as intensional without thereby entailing conceptual representations that represent something "under a certain description." Rather, it is a bodily mode of urgent avoidance tendencies that constitutes the way an object is given to us in fear, and this also gives a hint as to why emotions are not entirely penetrable by rational thought. Fear does not always vanish when we judge something to be harmless, because the way something is

presented to us in fear is via an embodied mode that is often better accessible through deep breathing or associations than through the cognitive judgment that everything is fine.

5.4 Interrelations among affordances

We can think of affordances not only as being externally given, but also as standing in relations to each other. Affordances constitute the structure of our environment and motivate one to behave in certain ways with regard to our needs and concerns. We are surrounded by things that are dangerous and by situations in which we could violate a norm. Moreover, affordances also stand in relations to each other and to us that determine which emotions are appropriate in which context. Many things can be dangerous and disgusting at the same time, and it is therefore common to feel fear and disgust at the same time. But the same objects do not merit fear and relief at the same time. Relief is rather an appropriate response to a situation where a danger has been removed. So it is not only the case that the intentional object of relief (as Helm would put it) is a backward-looking emotion that stands in a rational relation to a forward-looking emotion, namely, fear, but it is the presence of the intentional object of fear, the affordance of being a-danger-to-be-avoided, that makes fear appropriate when it is present, and that also makes relief appropriate if it is removed.

The bodily reactions that constitute relief are in an analogous way connected to those that constitute fear. The action tendency that comes with relief does not occur out of the blue. Rather, the feeling of relaxation that accompanies relief is a follow-up response to the tension that comes with fear, where one prepares for urgent action, whereas the feeling of relief brings the organism back to normal. The lesson to learn from this example is that the holistic structure that Helm analyzes might to a significant part be constituted by the relations in which affordances stand to each other and to us—again—independently of our being able to represent these relations. And what might look like rational relations between patterns of emotions and their objects might just as well be described as well-adapted skillful responses to situations our ancestors encountered over and over. So, if we ask why it is not rational to envy oneself or to feel fear and relief with regard to the same object at the same time, part of the reason must be that another's-good-to-be-obtained is not a property that one can possibly have oneself, because it is a property that can be had only in relation to oneself and thus can be had only by others. The objects of fear and relief are such that they cannot be instantiated in the same object at the same time. And this explains why it is never appropriate to envy oneself or to feel fear and relief about the same object at the same time.

6 Contemporary embodied accounts

To sum up, I will contrast my own embodied account with those I have mentioned so far. The present account is similar to Prinz's account in its taking core relational themes to be relational properties. Yet while Prinz has the same externalist reasons to think of relational properties as being objective, he does not take them as constituting

affordances and thus does not think of emotional responses as being intrinsically motivating for action (Prinz 2004). Prinz instead takes fear to be about something's being dangerous. Our being motivated to avoid that thing is constituted, on Prinz's view, by a further neural appraisal. But this is a surprising and seemingly ad hoc move on Prinz's part, in particular because there seems to be no empirical evidence grounding the assumption that there is any such neural evaluation taking place. Given that an embodied account has the advantage that it can describe the bodily arousal involved in an emotion as being constitutive not only for the emotion's intentionality but also for the action tendency that makes up its motivating potential. Furthermore, Prinz does not discuss whether the relational properties in question are of (dis)value to the organism. It is therefore unclear whether Prinz would be willing to accept a version of normative realism such as the one sketched above. Yet if he would not accept such a view, it would become unclear how he would account for the proposed externalism of core relational themes, given that core relational themes cannot adequately be described in non-normative vocabulary.

The account I have proposed here significantly differs from Hutto (2012) in its commitment to representations. While I am sympathetic to the claim that emotions are subject to semantic norms and that these norms can be understood within a biosemantic framework, I did not argue for that claim in this paper and the view on affordances I have developed here is in principle largely compatible with Hutto's view. One point of difference between our views, however, is Hutto's commitment to emotions being divided into basic and higher cognitive emotions, such that he takes them to belong to different psychological categories, where basic emotions are not representational while higher cognitive emotions are (Hutto 2012, p. 176). In Hutto's broader account, this distinction puts emotions like fear and anger into the basic part of the mind, while emotions such as guilt and shame are put into the contentful part of the mind. Such an approach has been defended by Griffiths (1997), but has been criticized by many authors since then (see e.g., Prinz 2004; Clark 2010; Colombetti 2014; Hufendiek 2016). As these authors show, the aim of understanding emotions as a single psychological category is backed up by plenty of current empirical evidence. It is a virtue of a naturalist approach to be able to account for the most recent empirical evidence with regard to emotions, and as far as I can see, the evidence largely speaks in favor of a unified picture of emotions.

Furthermore, regarding so-called higher cognitive emotions in infants and apes, it remains to be explained on a view like Hutto's how they can have emotions such as guilt and shame, without ascribing complex conceptual representations like an explicit understanding of social norms to them. On this score I submit that the present account does slightly better than Hutto's, insofar as I suggest that these emotions are representational, but then I explain why it suffices to presuppose embodied action-oriented representations in order to account for emotions such as guilt and shame. Hutto seems to embrace both naturalism and externalism, but he does not clearly stake out a position himself with regard to the normativity of the intentional objects of emotions. I have argued that emotional affordances are constituted by relational properties that are of instrumental value to the organism. Hutto is not very explicit on the ontological status of the properties in question, but expresses doubts as to whether it is necessary to assume relational properties in order to account for emotional objects

(Hutto 2012, p. 178). The present approach argues that the ontological commitment to relational properties and instrumental norms does an important explanatory job for the externalist.

Many current approaches point out that emotions are situated in a particular environment and argue that the unfolding of emotions in a particular situation as well as their development is *scaffolded* to a large degree by the biological and social environment (Krueger 2014; Colombetti and Krueger 2015; Slaby 2014). These approaches all point in a similar direction as my own account and lay the foundation for my assumption that emotion-relevant affordances are present in our environment and are communicated to us through a wide variety of signs, ranging from facial expressions to written imperatives. At the same time, these accounts lack the ontological ingredients necessary to account for diachronic and synchronic environmental externalism. To be able to account for the normative structure of emotions, we should flesh out the claim that the world is its own best model by accepting the ontological commitments of the normative realism that is needed to account for core relational themes.

Some accounts do better in this respect than others. Enactivist accounts such as Colombetti's agree on the emotions' being valent for the organism. Yet valence is something that is enacted, i.e., only present due to the meaning-generating interaction of the organism with the world. As we have seen, this does not account for diachronic environmental externalism. So at the very least enactivist accounts would have to be more explicit about the adaptive pressure that is prior to the valence of emotional responses (Colombetti 2014). Furthermore, the notion of valence is introduced by Thompson (2010) to highlight that organisms are adapted to respond to things that are of biological value for them. As we have seen, many emotions are about things that are of value for us with regard to social rather than biological norms. There are enactivist accounts that explain how sense-making is supposed to work in the social domain (e.g., De Jaegher and Di Paolo 2007). Yet so far these accounts have not been applied to emotions. So enactivist accounts would need to show that they are as well-equipped as the present approach to account for the objects of all emotions within a naturalist and externalist framework.

To do so, we need to make assumptions about the structure of the world we are surrounded by and our relation to it. We need to assume that things are of value in relation to the organism and that they thereby have the relational properties of being good or bad for the organism. We further need to assume that social groups can make up rules through re-occurring patterns of behavior that acquire an objective status. What good or bad means can be further specified according to the organism's needs and the social structure the organism is situated in. Some things are good because they are nutritious and others bad because they violate a social norm. Core relational themes are value properties that are of central importance for the organism's well-being and therefore give a basic relevance structure to the environment of the organism.

7 Conclusion

Embodied approaches to emotion have not paid sufficient attention to the normativity of the emotions and to the question of how to account for this normativity. This

is a problem, because embodied accounts are constrained in terms of what kinds of explanations they can offer, given that embodied accounts embrace naturalism, externalism, and anti-vehicle-internalism.

To solve this problem, I have argued that we ought to take emotions to be about affordances. Affordances can be described such that they are constituted by relational properties that exist independently of an organism's being able to respond to these properties. By adopting this approach, such an account does justice to externalism (both DEE and SEE). Affordances are taken to be value properties, such that something's being a-danger-to-be-avoided implies that it is of disvalue for the organism with regard to biological standards, and something's being a rule-violation-to-make-amends-for implies that it is of disvalue for the organism with regard to either biological or social standards. In this way, my account offers an explanation of an emotion's being about value in the case of both lower and so-called higher order emotions. Finally, since the values in question are of an instrumental nature, they clearly fit within a naturalist framework and do not require additional ontological assumptions.

Given that even social emotions such as guilt and shame can be taken to be embodied, action-oriented representations that are about affordances, we can replace the vehicle-internalist assumption that these emotions entail inner representations with an account that describes the interaction of a skillful body and an environment to which the organism is adapted. Carefully describing the action tendencies involved in emotions gives us an embodied notion of the intensionality of emotions, that is, of how objects are given to us in emotions. This allows us to account for the fact that we do not respond with fear to every object around us that has the relational property of being dangerous. Finally, the fact that affordances are part of a complex environment and as such are related to each other and to us gives us an explanation of why certain emotional responses (such as envy) only make sense in response to others and why some emotional responses (such as envying oneself) never make sense, but are strictly irrational.

I therefore suggest describing emotions as being about affordances, where affordances are constituted by relational properties and owe their particular action-oriented form to our skillful abilities. Describing the environment as being filled and structured by such affordances means to describe it as an environment that entails value properties in relation to us and our needs and thereby motivates us to action. Emotional representations of such an environment can be appropriate or inappropriate; in particular, they can be about social rule violations taking place in this environment and can therefore also be subject to social norms. In order to fully account for the normative structure of emotions, we need not describe emotions as complex inner representations, but we do need to describe the interplay between a skillful body and a structured environment as an intelligent process.

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