

Situating the Intentionality of Emotions

Uniting Situated Cognitive Science
with the Philosophy of Emotions

Dissertation

zur Erlangung des Grades Ph.D. in Cognitive Science
des Fachbereichs Humanwissenschaften
der Universität Osnabrück

vorgelegt von

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Osnabrück, 2015

Abstract

The dual nature of emotions as both bodily and cognitive phenomena has posed quite a conundrum for the cognitive sciences, as it does not square well with the long-held conviction that bodily phenomena are not cognitive and that cognitive phenomena do not take place in the body. This stark divide between the bodily and the cognitive has been called into question by so-called situated approaches to cognition that have taken over cognitive science in the last three decades. The framework of situated cognition claims to present a viable alternative to the classical cognitivist position in cognitive science, which regards cognitive processes as disembodied computations over symbolic representations. Instead, proponents of situated cognition aim at showing how cognitive processes crucially depend on an agent's active engagements with the environment through her body, whereby bodily processes and interactions with the environment become parts of the cognitive process itself, thus lifting the barrier between body and cognition.

This Ph.D.-Thesis explores how these recent developments in cognitive science may be applied to emotion theories, so that here too bodily and cognitive aspects of the phenomenon of emotion can be united. In this endeavor a particular focus will be laid on emotions' intentionality, to explore how an embodied agent's interactions with the environment impact how they are directed at the world and what emotions are about. After a cursory overview of the history of emotion theories and a brief introduction to situated cognition in section one, the articles in section two provide the necessary terminological and conceptual clarifications and render initial attempts to look into what it means for affective phenomena such as emotions to be situated. Section three draws the focus to the intentionality of emotions and demonstrates how a situated perspective provides a more adequate construal of emotions' intentionality than the classical cognitivist conceptions. Finally, in section 4, the utility of situated affectivity is exemplified by showing how the embodiment and embeddedness of affective phenomena provides a deeper understanding of the structure of experiences in affective disorders such as depression.

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1. Prof. Dr. Achim Stephan
2. Prof. Dr. Sven Walter
3. Dr. Kerrin Jacobs
4. Asena Paskaleva-Yankova, M.Sc.

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Acknowledgments

Aside from the due acknowledgments to be paid for the financial support granted by the Ministry for Science and Culture of Lower Saxony, who awarded me a Georg-Christoph-Lichtenberg Stipend, as well as the Pool Frauenförderung of the University of Osnabrück, who awarded me a stipend for the completion of this thesis, I would like to thank ...

maybe somewhat surprisingly, Reza Maleeh – for encouraging me and boosting my confidence in my abilities early on, without which I may never have set out on my endeavor towards a Ph.D.,

obviously, my supervisor, Achim Stephan – who has always encouraged me, fostered my work, constantly reassured me, and never doubted me,

equally obviously, my other supervisor, Sven Walter – whose greatest support, besides the invaluable academic and philosophical contribution to my work, may have come from the continued reassurance and understanding that there are by far more important things in life than philosophy and academia,

Giovanna Colombetti and Andrea Scarantino – for your comments, criticisms and discussions, as well as your lovely personalities,

Sascha Fink, Tarek Besold, Ulf Krumnack, Martin Schmidt, Frank Jäkel, Uwe Meyer, Asena Paskaleva, Petra Diessel, Tim Kietzmann and all the other pleasant and inspiring members of the Institute for Cognitive Science at the University of Osnabrück – for providing such an amicable and stimulating environment in which to work,

Rita Hidalgo, Jessika Reissland, Urs Schüffelgen and Roland Wilutzky – for making it clear that doing a Ph.D. is a choice, not a requirement in life,

Michael Baumgartner – for the good, the bad and the ugly,

... and, finally, ...

even before I have gotten to know you, Fabian Baumgartner – for providing the motivation and temporal necessity to finish, as well as reminding me of what really is important.

Contents

Abstract	i
Erklärung über die Eigenständigkeit der erbrachten wissenschaftlichen Leistung	ii
Acknowledgments	iii
Contents	iv
1. Introduction	
1.1 Whizzing through emotion theories – from Aristotle to today	1
1.2 Situated cognition	6
1.3 Synopsis	9
2. Situating affectivity – What does it mean to embody, embed, extend, enact or distribute emotions?	13
2.1 Situierete affektivität (Situating affectivity)	15
2.2 Emotions beyond brain and body	17
3. The situated intentionality of emotions	18
3.1 Emotions as pragmatic and epistemic actions in social contexts	22
3.2 In search of the correct intentional objects of emotions	24
3.3 Integrating evaluation and affectivity in the intentionality of emotions	40
4. The utility of studying the situatedness of affective phenomena: an example of its application in the understanding of mental illness	41
5. Appendix	42
5.1 Poster: Every emBODIment needs some body	43
5.2 Poster: Moral in the face of disgust	44

1. Introduction

1.1 Whizzing through emotion theories – from Aristotle to today

An emotion is a many-splendored thing. On the one hand, it is a pronounced bodily phenomenon: In emotion we are aroused, our heart- and breathing rates are affected, visceral and hormonal changes take place, and there are alterations in muscle tension as well as facial expressions, so that an emotion is distinctively felt in the body. On the other hand, an emotion also comes with that distinctive ‘mark of the mental’, in Franz Brentano’s words, meaning that it has intentionality: Emotions are directed at objects, so that one is angry *at* someone, disgusted *with* something, happy or sad *about* a particular event, afraid *of* a barking dog and so on. Therefore, an emotion is also a mental or cognitive phenomenon, just as much as it is a bodily one.

Given this dual nature of emotions, any adequate theory of emotions should acknowledge both of these facets. Already Aristotle recognized and pointed out this necessity for any viable emotion theory in his discussion of emotions – or ‘affections of the soul’, as he referred to them – in the following passage of his *de anima*:

[A] physicist would define an affection of soul differently from a dialectician; the latter would define e.g. anger as the appetite for returning pain for pain, or something like that, while the former would define it as a boiling of the blood or warm substance surrounding the hear. The latter assigns the material conditions, the former the form or formulable essence; for what he states is the formulable essence of the fact, though for its actual existence there must be embodiment of it in a material such as is described by the other. [...] Which, then, among these is entitled to be regarded as the genuine physicist? The one who confines himself to the material, or the one who restricts himself to the formulable essence alone? Is it not rather the one who combines both in a single formula?

(*de anima*, Book 1, Chapter 1, 403 a/b; translation J.A. Smith)

Here, both the bodily and the mental characteristics are defined as inherent to the phenomenon of emotion, so that the neglect of either of these facets is bound to yield an incomplete view of emotions.

However, there is a long-standing tradition in the philosophy of mind and philosophy of cognition to sharply distinguish between bodily and mental phenomena. Often this need to classify experiential phenomena exclusively as either bodily or mental is attributed to the Cartesian heritage of our modern philosophy of mind (cf. e.g. Varela, Thompson & Rosch 1991; Wheeler 2005). The aspect of René Descartes’ philosophy being referred to in this context that

1.1 Whizzing through emotion theories

has been so influential in the philosophy of mind and the cognitive sciences, is the distinction between the *res cogitans* and the *res extensa*, which forms the basis of Descartes' dualism. In a (very small) nutshell, the mind (or soul or sometimes self) is essentially a *res cogitans*, i.e. a thinking thing, which is not extended in space and therefore has no physical manifestation. In contrast, our bodies and other material substances belong to the *rei extensae*, i.e. the non-thinking substances extended in space. Since these two kinds of substances are fundamentally different in nature, the body is not considered to be part of the mind (or soul) and, conversely, the mind is not a physical thing (Descartes [1641] 1988, 6th meditation). Therefore, bodily phenomena are not cognitive phenomena and cognitive phenomena are distinct from bodily phenomena.

The Cartesian divide between the bodily and the cognitive poses quite a puzzle for the case of emotions. Given that emotions are both bodily and cognitive phenomena, it is not at all clear on what side of the Cartesian divide they fall, while it seems that they must fall on one of them. As a result, emotion theories of the last centuries have assigned emotions to either one of these camps, where the allocation of emotions to the realm of the bodily or that of the cognitive phenomena appears to have been quite evenly distributed. That is, as many theories as there are claiming that emotions are purely bodily and hardly or not cognitive phenomena, it appears there are equally many theories claiming the opposite, that emotions are cognitive phenomena while the bodily aspects are merely of secondary relevance.¹

Of the theories that have laid claim to emotions as bodily phenomena, the to date most influential theories have been those following in the footsteps of Charles Darwin's construal of emotions as evolved physiological programs that are common to humans and animals. This idea can be traced back to Darwin's seminal work "The Expression of the Emotions in Man and Animals" (1965), in which Darwin not only demonstrated that human expressions of emotion – in particular facial expressions – bear resemblance to various bodily manifestations of emotions observable in animals, but that the forms in which emotions are expressed, albeit involuntary, are not arbitrary but serve a purpose, i.e. have evolutionary functions. For example, Darwin described how the raising of the eyebrows in both humans and animals, characteristic of a startle reaction that often accompanies fear, facilitates the widening of the eyes. Thereby, the field of vision is increased and the eyeballs are allowed to "move easily in every

¹ It is interesting to note that Descartes himself also saw emotions as initially bodily phenomena. Although Descartes in his *Les Passions de l'Âme* took great care in studying the interface of body and soul during emotion, he saw emotions as originating from the stirring of animal spirits in the body. The movements of the animal spirits in the body affect or act on the soul via the pineal gland, so that emotions are also perceived in the soul. However, Descartes is rather clear on the matter that the emotion originates in the body and the soul only reacts to this bodily phenomenon.

1.1 Whizzing through emotion theories

direction”, which is of great advantage when trying “to perceive the cause as quickly as possible” (Darwin 1965, 168). Darwin meticulously gathered observations on the physiological and behavioral characteristics of many emotions, so that, on the surface, his work appears to be somewhat of a catalogue of discrete emotion categories with their corresponding bodily features. It is this characterization of emotions which has inspired the most prominent strand of emotion theories in the 20th century, namely, basic emotion theories, which with the increased interest in the neurosciences evolved to affect program theories. Either of these theories assume that the class of emotion phenomena consists of a set of discrete emotion kinds, which are each characterized by a distinctive physiology that is innate, i.e. present at birth (Izard et al. 1993), and universal, i.e. invariant across cultures (Ekman & Friesen 1969). The sets of physiological changes, consisting in the concerted activation of the facial muscles and changes in the autonomic nervous system (e.g. heart rate, body temperature), are assumed to be elicited by genetically hard-wired neural connections in anatomically ancient structures of the brain that are referred to as affect programs. When activated, these affect programs are considered to be short-lived events that are highly automated and triggered in the very early stages of perception processing (Griffiths 2004, 236). In sum, emotions are defined as affect programs that are evolutionarily developed, very basic and fixed patterns of reaction mechanisms.

This excursion into some of the details of the basic emotion and affect program theories is meant to show that emotions, when they are studied and described as physiological mechanisms, have few, if any, characteristics of cognitions. That is, on these theories emotions are exclusively characterized as automatically triggered bodily (or neurophysiological) reaction mechanisms, and are often outrightly denied any cognitive nature. For instance, it is claimed by these theorists that emotions occur independently of any cognitive processes (cf. e.g. Zajonc 1980) and do not even need a cognitive elicitor to occur in the first place (cf. e.g. Ekman 1984, 383; Izard 1994, 69). Thereby, these theories miss to capture the intentional facet of emotions, without which many important characteristics and complex instances of emotions, which clearly belong to the folk psychological concept of emotions, are failed to be accounted for. To sketch just one of several possible objections: mixed physiological reactions such as crying for joy or laughing nervously out of fear or anxiety are neither instances of sadness nor of joy. Yet, if emotions are to be equated with affect programs, a one-to-one mapping of one to the other should be possible. As this is, however, not the case, the affect program theories of emotion appear to be unable to account for that very phenomenon for which an explanation is demanded. Hence, the emotion theories following in the Darwinian tradition

1.1 Whizzing through emotion theories

and clearly allocating emotions to the bodily side of the Cartesian divide, apprehend only a scanty notion of emotions by doing so.

In stark contrast to the position that emotions are bodily phenomena devoid of any intentionality, stands the view that emotions are first and foremost cognitive in nature, while the bodily aspects of emotions are either negligible or only of secondary importance. Although such cognitivist theories of emotions have been present throughout the history of emotion theories (e.g. already the Stoics viewed emotions as a particular kind of judgment), the most recent upsurge of cognitive theories presumably came in direct succession of the existentialist movement of the 20th century, which Robert Solomon (1976) avidly picked up and purported, as well as Anthony Kenny (1963) and, later on, Martha Nussbaum (2004), Sabine Döring (2007) and Kevin Mulligan (2007), among others. Julien Deonna and Fabrice Teroni's (2012) very recent defense of emotions as mental attitudes also continues in the same vein. Although these theories differ considerably from one another in detail, all of them have in common that they equate emotions with other kinds of cognitions: Whether they view emotions as judgments (Solomon, Nussbaum), acts of the will (Kenny), perceptions (Döring), instances of knowledge (Mulligan) or mental attitudes (Deonna & Teroni), all of these theorists regard emotions as representations of value (or an object's evaluative properties), which clearly places emotions on the cognitive side of the Cartesian divide. As if knowingly adhering to Descartes proposed dualism, emotions (qua mental phenomena) are stripped off their inherently bodily nature in these theories, or, at least, the bodily features of an emotion are reduced to an after-effect of the otherwise disembodied mental phenomenon that is the emotion. Thus, Martha Nussbaum (2004, 194), for instance, refers to the bodily activities that accompany the formed judgment, which she equates with emotion, as a "mimesis of the movement of my thought", as if the bodily changes have no other role than merely echoing the mental aspect of an emotion. Similarly, Kevin Mulligan (2007, 223) describes the bodily phenomenality of an emotion as a reaction to an experienced value, which plays no role in the knowledge yielding process which proper emotions contribute to. Similar statements can be found in the other cognitivists' writings (cf. e.g. Döring 2007, 373; Deonna & Teroni 2012, 78f.).²

² Though not strictly speaking cognitivists, other philosophers have downplayed the role of the bodily contributions to emotions, such as, e.g., Bennett Helm 2009, 254, who refers to the particular bodily changes occurring in emotion as "accidental accompaniment to human emotions"; or Jesse Prinz (2004) who, although he sees a correlation of some set of bodily changes with a mental content necessary for emotion, does not regard the quality of the actual bodily changes as relevant for the occurring emotion kind. That is, in Prinz's rendition of the emotion process too, the kinds of bodily changes that occur are arbitrary.

1.1 Whizzing through emotion theories

Paralleling the critique of the allocation of emotions to the bodily side of the Cartesian divide above, ascribing emotions only to the realm of cognition and thereby denying them their pronounced bodily characteristics is equally unsatisfying. Frankly, the maneuver to equate emotions with other kinds of cognitions and dissecting them from any bodily facet, is simply odd: It begs the question why there should be any need to account for the phenomenon of emotion in the first place, if they are no different from other “regular” cognitions. What is it that sets emotions apart from other cognitions if not their pronounced bodily phenomenality? William James made this point in his famous subtraction argument:

If we fancy some strong emotion, and then try to abstract from our consciousness of it all the feelings of its bodily symptoms, we find we have nothing left behind, no ‘mind-stuff’ out of which the emotion can be constituted, and that a cold and neutral state of intellectual perception is all that remains.

(Principles of Psychology, 1890, p452)

James makes evident in this passage that by subtracting the bodily aspects from the phenomenon of emotion, what remains is no longer an emotion.³ Again, what a Cartesianly one-sided depiction of emotions ends up as, is not the phenomenon that should, according to folk psychological concepts, be under investigation.

Within the bounds of this spectrum of emotion theories from the exclusively bodily ones to the purely cognitive ones, there have, of course, also been attempts to incorporate both a bodily and a cognitive facet into one theory of emotions. In this category, the most noteworthy strand of theories are the so-called appraisal theories, which have been highly influential in the field of psychology and many different varieties of appraisal theories have been put forward. Although, again, there are considerable differences in the particulars, what unites all appraisal theories is that they consider a simple, yet still decidedly cognitive appraisal process either as a necessary antecedent (cf., e.g., Arnold 1960, Vol.1, 176-7; Smith & Lazarus 1993) or even a constituent of an emotion (cf. Scherer 2000). In this appraisal process, a stimulus is assessed according to a number of appraisal dimensions or stimulus evaluation checks, such as goal-

³ It is interesting to note that one of the cognitivist positions’ main proponent Robert Solomon even retreated from his originally radical position in his last book on emotions, in which he concedes that in his endeavor to oppose the position that emotions are only bodily and non-cognitive phenomena, he may have steered too far in denying emotions any corporal essence (cf. Solomon 2004, 76). This historical nugget on the development of emotion theories over the last half century demonstrates just how much irreconcilable the bodily and cognitivist theories of emotions were assumed to be.

1.1 Whizzing through emotion theories

congruence or motive consistency, relevance, self- or other-caused, coping potentials and other dimensions, depending on the appraisal theory in question. Importantly, in addition to the eponymous appraisal process, which may or may not belong to the emotion proper, all appraisal theories regard the physiological changes that are triggered by an appraisal as necessary for an emotion, meaning, without occurring bodily changes there is no emotion. Thus, *prima facie*, it might appear that a component theory such as an appraisal theory bridges the gap gaping between the bodily and cognitive emotion theories. However, critics have pointed out that, although component theories may address both the bodily and the cognitive facet of emotions, the bodily and cognitive aspects of an emotion remain strictly separate from one another in the proposed models of these theories (cf. e.g. Goldie 2000, Colombetti 2013). That is, although emotions incorporate both a bodily and a cognitive component, these two components remain clearly distinct from one another and only minimal causal interaction between them is assumed (e.g. in the form of the appraisal triggering a bodily response, without any further interaction subsequently). Hence, also within emotion theories the Cartesian divide between the cognitive and the bodily seems to be maintained.

Summing up so far, the Cartesian divide between the bodily and the cognitive appears to have been adopted in the study of emotions, so that emotions have commonly been classified as either bodily or cognitive phenomena. Either one-sided depiction of emotions appears inadequate, as it neglects the other, equally essential facet of emotions. Also, attempts at ascribing both bodily and cognitive characteristics to emotions have difficulties combining the bodily and cognitive aspects of emotion, so that here too the stark separation between the bodily and the mental is maintained.

1.2 Situated Cognition

Although the difficulties arising from the Cartesian heritage in our modern philosophy of mind and cognitive science come to the fore most noticeably in the philosophy of emotions, due to emotions' pronounced dual nature, the Cartesian divide has also proven difficult to square with several other areas in cognitive science, so that it has been vehemently challenged throughout the past three decades (see e.g. Varela, Thompson & Rosch 1991; Clark 1998, 2001, 2008; Hurley 1998; Noë 2004; Wheeler 2005; Rowlands 2006, 2010). In cognitive science, so the critical claim, a sort of Cartesian position has been preserved, so that cognitive processes are still confined to a seat distinct from the body, where this seat of cognition has become the brain. Cognitivism, as this position is referred to, maintains that cognition is brain-bound information-processing sandwiched between inputs from and outputs to the body. Endorsing

1.2 Situated cognition

a computer model of the mind, cognitive processes are regarded as rule-based and syntactically driven transformations of symbolic representations, whose connectedness with the physical environment is insignificant aside from the deliverance of in- and outputs.

Under the heading of situated cognition, or situatedness, the cognitivist conception of disembodied and displaced cognitive processes has been called into question, claiming instead that no view of cognition can be adequate without taking into account the indispensable ways in which the body and the environment contribute to and are involved in cognitive processes. Especially the cognitivist characterization of cognitive processes as decoupled transformations of symbolic representations is contrasted with the view that cognition results from reciprocal real-time interactions of an embodied agent with her environment. For example, studies on the human tendency to gesture when speaking or performing spacial reasoning tasks suggests that gesturing has a function beyond the merely communicative. When subjects in an experimental setup (Rauscher, Krauss & Chen 1996) were asked to freely recount animated action cartoons they had watched earlier, the speakers gestured more often during phrases with spatial content than during phrases with other content. When subjects were not permitted to gesture freely, speech with spatial content was less fluent than before, while speech with no spatial content remained unaffected. The authors of the study suggest that these findings indicate that gesturing to spontaneous speech facilitates access to the mental lexicon pertaining to spatial content. This interpretation fits neatly into the situated approach, as it implies that cognitive processes are not necessarily distinct from bodily processes, but can in fact be in part constituted by these.

Beyond the incorporation of bodily processes into cognitive processes, also the coupling of an agent with her environment may be regarded as an integral part of a cognitive process. Often cited in support of this view are the results generated in Rodney Brooks' robot laboratory at MIT: Since the 1980's Rodney Brooks and his team have been constructing robots which are capable of performing various tasks, such as Herbert, who collects cans, the insect-like Attila, who can walk over uneven terrain, or COG, who is equipped with arms, hands, a head, eyes and other humanoid devices, which he can use and move in a coordinated manner. The accomplished feats of these robots are due to a rejection of the classical AI-approach, where a central controlling unit receives all relevant inputs, processes this data by performing calculations over an internal model and only then generates an output. Instead of such a central controller, the robots in Brooks' laboratory make use of distributed processing units which allow the robots to react to their environment in real-time. For example, Attila manages to maneuver up and down slopes and over obstacles by detecting the forces exerted onto each of his legs independently and respond to

1.2 Situated cognition

that force with each leg individually. Thereby, in lieu of performing costly calculations over an internal model of the world, the robots use the world itself “as its own best model”, as Rodney Brooks famously phrased it, hence allowing the robots to react precisely and immediately (Clark 1998, chapter 1).

Similarly, human cognitive behaviors have been modelled in far less cumbersome ways than a cognitivist model of internal manipulation of representations would allow: In a game of tetris, players will rather physically rotate the appearing shapes to determine where best to place them than performing this rotation mentally (Kirsh & Maglio 1994). Likewise, scrabble players will rearrange the tiles in front of them to search for possible words to form with the letters, rather than solving this problem without the use of external resources (Maglio et al. 1999). Hence, not only the contribution of bodily processes but also the coupling of an agent with her environment may be regarded as an integral part of a cognitive process. Thereby, not only the Cartesian divide between the bodily and the cognitive abrogated in the framework of situated cognition, but, what is more, the bounds of cognition are extended beyond a single agent’s boundaries, so as to encompass parts of the physical and also the social environment.

Although the link between situated cognition and the conundrum of emotion theories about how to square the bodily and cognitive aspects of emotions with one another are rather apparent (hopefully, after the above presented contemplations), these two themes have only recently begun to be investigated in relation to one another (in the philosophy of emotions, cf. Paul Griffiths and Andrea Scarantino’s 2009 seminal paper on emotions from a situated cognition perspective, Giovanna Colombetti’s work on enactive emotion – e.g. Colombetti 2014 –, or Joel Krueger’s work on extended emotions – e.g. Krueger 2014; in addition, several empirical investigations of the situatedness of emotions are reviewed and discussed in section 2.1 of this thesis). The aim of this PhD-Thesis is to provide another stepping stone to join the strands of emotion theory and situated cognition together into one constructive discussion of the phenomenon of emotion and its reliance on the body and environment. As this introduction indicates, the idea that emotions are inherently both bodily and cognitive in nature is taken as a given for the outset of this thesis. The question to be explored here, is whether and in what way the toolkit provided by the framework of situated cognition can be utilized in making sense of emotions’ dual nature, so that the cognitive and bodily aspects of emotions no longer stand at odds with one another but are united into one coherent and commensal whole. The following synopsis offers an overview of the course of action to be expected as well as a more thorough description of the exact aims of this thesis.

1.3 Synopsis

The main aim of this thesis is to apply the concepts and ideas of situated cognition to emotions, in order to yield novel and fruitful approaches to understanding the intentionality of emotions, where the cognitivist approach in the philosophy of emotions has come to an impasse. Given that the synthesis of the two topic areas is a rather novel endeavor in the philosophy of emotions, the second section aims at providing the necessary clarifications of the terms and concepts involved in this venture. To this end, it will be elucidated which various theses are possible about the interactions and dependencies of cognition with or on the body and the environment, so that distinct definitions of embodied, embedded, extended, enacted and distributed cognitive processes will come to the fore. As will become apparent, these clarifications are much needed since the debates surrounding situated cognition are themselves plagued by terminological and conceptual confusion and obscurity. With these rendered clarificatory efforts the question of what it entails for emotions qua cognitions to be embodied, embedded, extended, enacted or distributed is explored: on the one hand, by assessing in what respects emotion theories already acknowledge the contributions of the body and environment to affective processes such as emotions; on the other hand, by looking into possible scenarios of how emotions could further comply with the various theses of situatedness. These are already the first substantial attempts at uncovering how the insights of the debate on situated cognition can be applied to emotions, so that the dual nature of emotions, i.e. as both cognitive and bodily phenomena, can be recognized, without giving rise to conflict due to the usually presumed incompatibility of these aspects, but actually profiting from this twofold character of affective phenomena in the richness of their explanations.

After these clarifications of the terminology and concepts framing the situated cognition approach, section three explores how the insights of the debate on situated cognition can be applied to the intentionality of emotions more specifically. The main focus will be to acquire an understanding of how a re-construal of emotions' intentionality in terms of the situated cognition framework differs from the classical cognitivist picture of emotions' intentionality. That is, while it is confirmed that the cognitivist approaches to emotions rightfully recognize emotions as cognitive phenomena concerning the evaluative nature of objects or situations, it is called into question whether the intentionality of emotions must necessarily be cashed out in cognitivist terms, i.e. as symbolic and amodal representations that exist offline in an individual rather than coming about through interactions with the environment. In particular, the first two of the three articles making up this section explore in what respects the intentionality of emotions is shaped by their situatedness in the social contexts. Here the coming about of emotions' intentionality is investigated as embodied and goal-directed interactions with the social

1.3 Synopsis

environment, so that emotions' intentionality, it is argued on various fronts, cannot be construed in terms of a mind-to-world directed representation of an object's evaluative properties, as is typically done in cognitivist theories of emotions. The final paper in this section is concerned with portraying the holistic nature of the intentionality of emotions, which eventuates from the concurrence of cognitive, affective and evaluative contents. Thus, in this holistic view the idea that emotions' intentionality can be adequately captured by construing it as an initially "neutral" or un-perspectival and un-evaluative representation, which supposedly makes up the cognitive content, to which an evaluative and affective is then added-on is debunked. Such a componential analysis of a complex intentionality rather appears to be a remnant of classical cognitivism, in which internal models and symbolic representations lie at the heart of all intentional states, but which fails to be applicable to emotions.

In the final section, section four, the utility of studying the situatedness of affective phenomena, especially their embeddedness and embodiment, is demonstrated by means of exemplifying their application in understanding of mental illnesses such as depression. Through the detailed analysis of various autobiographical reports from depressed persons of their experiences in depression, it is elucidated how the affective lives of these individuals are altered during depressive episodes. Adapting the Heideggerian concept of comportment, which is meant to capture the entire engagement of a person with the world, including bodily experiences and interactions with the environment, it is shown how affective experiences are dramatically altered in depression, particularly those related to the own body, the social environment or the world in general. In other words, the interconnectedness of affective intentionality and the embodied individual's engagement with the world, that is, the situatedness of her affective life, is brought to the fore. Hence, the study of the situatedness of emotions and other affective phenomena is not only a theoretically interesting endeavor in the philosophy of emotions, but actually proves to be applicable and yield helpful insights to an area, where the understanding of emotions and other affective phenomena may in fact be of help and use to numerous concerned individuals.

References

- Aristotle. *De Anima (On the Soul)*. Transl. J.A. Smith. *Classics in the History of Psychology*. York University, Toronto, Ontario. retrieved 1 May 2015: <<http://psychclassics.yorku.ca/Aristotle/De-anima/de-anima1.html>>
- Arnold, M. B. (1960). *Emotion and personality* (Vol. 1). New York: Columbia Press.
- Clark, A. (1998) *Being There: Putting Brain, Body, and World Together Again*. Cambridge, MA: The MIT Press.

- Clark, A. (2001) *Mindware: An Introduction to the Philosophy of Cognitive Science*. New York/Oxford: Oxford University Press.
- Clark, A. (2008) *Supersizing the Mind : Embodiment, Action, and Cognitive Extension*. New York/Oxford: Oxford University Press.
- Colombetti, G. (2014) *The Feeling Body*. Cambridge, MA: The MIT Press.
- Darwin, C. (1965) *The Expression of the Emotions in Man and Animals*. University of Chicago Press.
- Deonna, J. and Teroni, F. (2012) *The Emotions: A Philosophical Introduction*. London & New York: Routledge.
- Descartes, R. [1641] (1988) *Meditations on First Philosophy*. In: J. Cottingham, R. Stoothoff and D. Murdoch (eds.): *The Principle Writings of Descartes, vol. II*. Cambridge: Cambridge University Press.
- Döring, S. (2007) Seeing What to Do: Affective Perception and Rational Motivation, *Dialectica* 61(3): 363-394.
- Ekman, P. and W.V. Friesen (1969) The repertoire of nonverbal behavior: Categories, origins, usage, and coding. *Semiotica*, 1(1), 49-98.
- Ekman, P. (1984) Expression and the Nature of Emotion. In: K.Scherer & P. Ekman (eds.) *Approaches to Emotion* (319-344). Hillsdale, NJ: Lawrence Erlbaum.
- Goldie, P. (2000) *The Emotions: A Philosophical Exploration*. Oxford: Oxford University Press.
- Griffiths, P. E. (2004). Is Emotion a Natural Kind? In: R. C. Solomon (Ed.) *Thinking About Feeling: Contemporary Philosophers on Emotion* (233-249). New York/Oxford: Oxford University Press.
- Griffiths, P. & Scarantino, A. (2009) Emotions in the Wild: The Situated Perspective on Emotion. In P. Robbins & M. Ayedede (eds.), *Cambridge Handbook of Situated Cognition* (437-453). Cambridge: Cambridge University Press.
- Helm, B.W. (2009) Emotions as Evaluative Feelings. *Emotion Review*, 1(3): 248-255.
- Hurley, S. L. (1998) *Consciousness in Action*. Cambridge, MA: Harvard University Press.
- Izard, C. E., D.Z. Libero, P. Putnam and O.M. Haynes (1993) Stability of emotion experiences and their relations to traits of personality. *Journal of Personality and Social Psychology*, 64(5): 847-60.
- Izard, C.E. (1994) Cognition is One of Four Types of Emotion Activating Systems. In: R.J. Davidson & P. Ekman (eds.) *The Nature of Emotion* (203-207). Oxford University Press.
- James, W. (1890) Chapter XXV: The Emotions. In: *The Principles of Psychology, Volume 1* (pp. 443-485). New York: Dover.
- Kenny, A. P. (1963) *Emotion, Action and Will*. London: Routledge & Kegan Paul.
- Kirsh, D. & Maglio, P. (1994) On distinguishing epistemic from pragmatic action. *Cognitive Science* 18 (4): 513-549.
- Krueger, J. (2014) Varieties of extended emotions. *Phenomenology and the Cognitive Sciences*. 13.4: 533-555.
- Maglio, P., Matlock, T., Raphaely, D., Chernicky, B. & Kirsh, D. (1999) Interactive skill in Scrabble. *Proceedings of the twenty-first annual conference of the cognitive science society*: 326-330.

- Mulligan, K. (2007) Intentionality, Knowledge and Formal Objects, *Disputatio* 2(23): 205-228.
- Noë, A. (2004) *Action in Perception*. Cambridge, MA: The MIT Press.
- Nussbaum, M. (2004) Emotions as Judgments of Value and Importance, in: R. Solomon (ed.), *Thinking about Feeling* (pp. 183-199). Oxford: Oxford University Press.
- Prinz, J. 2004, Gut Reactions: A Perceptual Theory of Emotions, Oxford University Press.
- Rauscher, F.H., Krauss, R.M. & Chen, Y. (1996) Gesture, Speech, and Lexical Access: The Role of Lexical Movements in Speech Production. *Psychological Science* 7(4): 226-231.
- Rowlands, M. (2006) *Body Language: Representation in Action*. Cambridge, MA: The MIT Press.
- Rowlands, M. (2010) *The New Science of the Mind: From Extended Mind to Embodied Phenomenology*. Cambridge, MA: The MIT Press.
- Scherer, K. (2000) Emotions as Episodes of Subsystem Synchronization Driven by Nonlinear Appraisal Processes. In: M.D. Lewis & I. Granic (eds.) *Emotion, Development and Self-Organization* (pp. 70-99). Cambridge: Cambridge University Press.
- Smith, C. A. & Lazarus, R. S. (1993). Appraisal components, core relational themes, and emotions. *Cognition and Emotion*, 7, 233-269.
- Solomon, R. (1976) *The Passions: Emotions and the Meaning of Life*. New York: Anchor Press/Doubleday.
- Solomon, R. (2004) Emotions, thoughts, and feelings. In: R. C. Solomon (Ed.) *Thinking About Feeling: Contemporary Philosophers on Emotion* (pp. 76-88). Oxford and New York: Oxford University Press.
- de Sousa, R. (1987) *The Rationality of Emotion*. Cambridge, MA: The MIT Press.
- Varela, F.J., Thompson, E. & Rosch, E (1991) *The Embodied Mind: Cognitive Science and Human Experience*. Cambridge, MA: The MIT Press.
- Wheeler, M. (2005) *Reconstructing the Cognitive World: The Next Step*. Cambridge, MA: The MIT Press.
- Zajonc, R.B. (1980) Feeling and Thinking: Preferences Need No Inferences. *American Psychologist*, 35(2): 151-175.

2. Situating Affectivity – What does it mean to embody, embed, extend, enact or distribute emotions?

The articles in this section are concerned with joining together the framework of situated cognition with affective phenomena, foremost emotions. In doing so, both papers clarify and discuss in which sense, body, environment, and our embodied interaction with the world can and do contribute to our affective lives. To this end, the articles offer conceptual clarifications by pointing out wherein these contributions may lie, so that different theses can be formulated when combining the various loosely used terms that frame the debates about situated cognition with emotions. Thereby, precise distinctions are introduced for the claims that emotions are embodied, embedded, extended, enacted, or distributed. Importantly, great care is also taken that each of these theses describing the contributions of body, environment and interaction to affective phenomena amount to claims about the nature of emotions that are not only clearly distinct from one another but also differ substantially from the classical cognitivist view of emotions, and to which the situated cognition approaches aspire to be an alternative. The hope is that these clarifications and introduced distinctions may help structure an unambiguous and fruitful debate about the situatedness of affective phenomena. In order to set the debate about situated affectivity or situated emotions on these desirable tracks, examples of empirical research, as well as conceivable scenarios of the various ways in which emotions could be situated, are reviewed and discussed in light of which of the offered classifications they may be assigned to.

The two papers in this section have similar aims, i.e. those just described above, albeit they place different emphases in their combined efforts. In the first, “Situierete Affektivität” (in German; the title translates to “Situating Affectivity”), the issue of clarifying the vague and sometimes inconsistently used buzzwords that are so enthusiastically used in the debates surrounding situated cognition is the major focus. Thus, great attention is paid in carefully formulating distinct theses for *embodied*, *embedded*, *extended* and *enacted* cognitive processes. These are then applied to examples of affective processes qua cognitive processes, such as emotions. Although a similar approach is taken in the second paper, “Emotions beyond brain and body”, less space is allocated to these thorough considerations concerning the much needed terminological clarity, thereby allowing the discussions of the different possible phenomena to move more quickly. Instead, though, an additional distinction is introduced and discussed, namely that of *distributed* cognition. Overall, a greater attentional focus is placed on the discussions of embodied emotions and a review of empirical studies to this topic in the first paper, while the second paper’s emphasis lies more on the contribution of the environment to affective

2. Situating Affectivity

phenomena, in particular exploring the possibility of extended and distributed emotions.

(It should be pointed out that, in retrospect, the prevalence of a tendency towards profound cognitivism in the philosophy of emotions is somewhat trivialized in the following two articles. Only after or with completion of the work on these papers, my attention was drawn to several recent publications – including those referred to in the introduction – in which more radical cognitivist positions are advocated than I was aware of during the time that the papers in this section were written. Hence, the next section, section 3, offers a somewhat different viewpoint of the current status of cognitivism in emotion theories and the need for the application of ideas and concepts from the approaches to situated cognition to the contemporary discussions of emotions in the philosophy of mind.)

2.1 Situierete Affektivität (Situating affectivity)

This article, written by me, Sven Walter and Achim Stephan, appeared in the anthology *Affektive Intentionalität: Beiträge zur Welterschließenden Funktion der menschlichen Gefühle* (pp. 283-320), edited by Jan Slaby, Achim Stephan, Henrik Walter and Sven Walter and was published 2011 by mentis (in German).

ABSTRACT:

This article starts from the consideration that any theory of emotion that regards affective processes as inherently cognitive in nature can be related to the debate concerning the situatedness of cognition, which has dominated much of cognitive science over the past decades. According to the approaches of situated cognition, the classical characterization of cognitive processes as operations over internal representations, as was advocated during the heydays of the computer model of the mind, ignores how cognition is essentially situated, meaning that cognitive processes crucially depend on bodily processes and their embedding in an environment as well as our interactions with the environment. Understanding cognitive processes therefore also entails understanding how cognitive processes come about due to their dependence on (1.) our *embodiment* and (2.) our *embeddedness* in the environment, so that their boundaries conceivably (3.) *extend* beyond the bounds of our bodies and (4.) possibly only come about due to our interactions with the environment in the first place, i.e. are *enacted*. Insofar as affective processes also comprise cognitive processes, the question arises in what respects affectivity itself is situated, i.e. causally or constitutionally depends on bodily processes as well as our embeddedness in and interactions with the environment. Since the buzzwords “embodied”, “embedded”, “extended” and “enacted” are currently eagerly appropriated into both the philosophical and empirical study of emotions, though unfortunately without any prior established conceptual foundation, while, at the same time, there is equal discordance and indefiniteness concerning their exact meaning and usage in the philosophy of situated cognition itself, the topic *situated affectivity* is approached from two disparate directions in this article: On the one hand, concrete suggestions are offered on how to construe the terms in such a way that four distinct theses of different strength come about, of which some are incompatible and others imply one another. On the other hand, it is explored how the terms “embodied”, “embedded”, “extended” and “enacted” are currently being used in the empirical study of emotions, so as to determine which of these usages are in fact useful and which are rather misleading. From this assessment, suggestions are made on what sort of phenomena must be investigated or

2.1 Situierte Affektivität (Situating affectivity)

found in order to rightfully speak of “embodied emotions”, “embedded emotions”, “extended emotions” and “enacted emotions”, if these conceptual classifications are to be taken seriously given the backdrop of their origin in the philosophy of cognition.

2.2 Emotions beyond brain and body

This article was written by Achim Stephan, Sven Walter and me. It appeared as part of the special issue “Extended Cognition: New philosophical perspectives” in the journal *Philosophical Perspectives* (Volume 27, Issue 1, pp. 65-81), where it was published in 2014.

ABSTRACT

The emerging consensus in the philosophy of cognition is that cognition is situated, i.e., dependent upon or co-constituted by the body, the environment, and/or the embodied interaction with it. But what about emotions? If the brain alone cannot do much thinking, can the brain alone do some emoting? If not, what else is needed? Do (some) emotions (sometimes) cross an individual’s boundary? If so, what kinds of supra-individual systems can be bearers of affective states, and why? And does that make emotions “embedded” or “extended” in the sense cognition is said to be embedded and extended? Section 2 shows why it is important to understand in which sense body, environment, and our embodied interaction with the world contribute to our affective life. Section 3 introduces some key concepts of the debate about situated cognition. Section 4 draws attention to an important disanalogy between cognition and emotion with regard to the role of the body. Section 5 shows under which conditions a contribution by the environment results in non-trivial cases of “embedded” emotions. Section 6 is concerned with affective phenomena that seem to cross the organismic boundaries of an individual, in particular with the idea that emotions are “extended” or “distributed.”

3. The Situated Intentionality of Emotions

The articles in this section explore alternative ways to the typically cognitivist ways of understanding emotions' intentionality, where these alternatives are inspired by the framework of situated cognition. That is, in each article it is shown that the classical cognitivist view, which cashes out intentionality in terms of amodal, symbolic and abstract representations of the world, does not adequately portray the intentional structure of emotions. Instead, the ineliminable contributions of an individual's body and interactions with her environment must be taken into account, as is demanded by the situated cognition approach, in order to comprehend what emotions are directed at and what they are about. All three of the following articles regard emotions' intentionality as inherently evaluative in nature, yet this evaluative character does not come about as a result of representations that are devoid of action-relatedness, motivation or affect. Rather, all these bodily aspects are inherent to the intentionality of emotions and therefore cannot be added on to or be regarded as an aftereffect of an otherwise un-situated intentional or cognitive state.

Subsections 3.1 and 3.2 look into the situatedness of emotions in social contexts by construing emotions as goal-directed or functional ways of interacting with the social environment. Despite the attempted terminological clarifications in the previous chapter, it is left open whether emotions are socially embedded or enacted or both, yet it is made evident that it is only with great difficulty, if at all, that the intentionality of emotions occurring in social contexts can be accounted for in cognitivist terms, i.e. as mind-to-world directed re-presentations of the world ("re-presentation" in the sense that a subject merely receives a presentation of the world, in which the world is simply reiterated, i.e. presented again). Rather, a far richer notion and a much simpler way of capturing emotions' intentionality is arrived at when emotions are instead regarded as ways of interacting with the social environment. While it is pointed out that the question whether the bodily changes and action tendencies coinciding with emotions are causal consequences or actual constituents of the emotion process is an ontological issue, for which there might not be a satisfactory metaphysical argument to decide the matter, there are ample pragmatic reasons for favoring the situated view of emotions in social contexts over the cognitivist one. That is, as just pointed out, there are explanatory advantages, which speak in favor of the situated construal of emotions in social contexts. But, moreover, a construal of the intentionality of emotions in social contexts as goal-directed ways of interacting with one's social surroundings yields assessments of an emotion's (pragmatic) appropriateness, which seem far more desirable and adequate than the conclusions the cognitivist would be obliged to draw. For this and other reasons, the view of emotions in social contexts as situated cognitive phenomena also coincides far better with any folk-

3. *The Situated Intentionality of Emotions*

psychological concept of emotions than the artificially constructed definition of emotions rendered by the cognitivist accounts.

The first article, “Emotions as Pragmatic and Epistemic Actions in Social Contexts”, bears the most obvious connections to the situatedness-approaches in cognitive science. This is especially due to the fact that it makes use of a distinction originally introduced by David Kirsh and Paul Maglio (1994), that has henceforth inspired much of the situated cognition research: the distinction between pragmatic and epistemic actions. Emotions in social contexts, it is argued, can be seen as either one of these types of actions, so that their intentionality is inherently characterized by a world-to-mind direction of fit. In the cases where emotions resemble pragmatic actions, emotions are aimed at achieving certain goal states in a social context. In other cases, emotions can be convincingly construed as acts of probing or exploring the social environment so as to extract or uncover important information, whereby they comply with the functions of epistemic actions. The concept of epistemic action is repeatedly used in the literature on situated cognition, as it presents an excellent exemplification of how relevant information can simply be retrieved from the environment through quick interactions at that point in time when it is needed, instead of constantly and laboriously re-presenting it (cf. e.g. Clark 2008). To my knowledge, the concept of epistemic actions has never been applied to emotions, so that this article offers a novel insight and significant contribution to uniting emotion theory and situated cognition.

Subsection 3.2, consisting of the article “In Search of the Correct Intentional Objects of Emotion”, continues with arguing for a world-to-mind direction of fit of emotions’ intentionality. Here too the social context is used to explore how emotions depend upon interactive processes with the environment in which an individual is embedded and it is shown in what respects this view of emotions conflicts with the cognitivist construal of emotions. In particular, the claim that emotions’ intentional content can be equated with the representation of an object’s evaluative properties, or its formal object, which is maintained in all cognitivist theories and is also generally a prevalent idea in the philosophy of emotions, is called into question, by showing that it cannot be or maybe even *should* not be maintained when applying this view to emotions that arise in social contexts: On the one hand, a reference to the formal object alone cannot explain several emotional reactions individuals tend to have in social contexts; on the other hand, an assessment of the appropriateness of an emotion only with regard to whether or not it correctly represents a formal object is shown to be utterly misguided. Instead, it is argued that a construal of emotions as goal-directed engagements with the social environment provides a far more plausible, adequate and explanatorily powerful account of the intentionality of emotions in social contexts.

3. *The Situated Intentionality of Emotions*

The final article in this section, “Integrating Evaluation and Affectivity in the Intentionality of Emotions”, admittedly seems not quite as evidently linked to the theme of situated cognition as the previous articles. It is indeed less about the situatedness of emotions’ intentionality and rather about the defense of a holistic account of emotions’ intentionality, in which affective, cognitive and evaluative contents are inseparable. However, common themes with the previous articles are easily made out, and thereby also the connection to the situatedness of emotions. That is, one of the main claims in the article is that emotions’ intentionality is structured in such a way, that it simply is implausible to assume that a “neutral” or un-evaluative and un-perspectival representation of a state of affairs in the world is established first and, only in a second step, the emotional components such as evaluative and affective content are added on. Rather, as is the case with the world-to-mind direction of fit for emotions’ intentionality argued for in the previous articles, where the evaluative and bodily aspects of an emotion’s intentionality are ingrained in the action-relatedness of the emotion that makes up part of its intentionality, here too evaluative and bodily aspects (in form of the affective content) figure in an emotion’s intentionality from the very start. Thus, emotions’ intentionality is cognitive, evaluative and affective through and through, so that the cognitive content cannot be made out in isolation from the other dimensions of an emotion’s intentionality. To substantiate this claim, the paper takes issue with an account of emotions’ intentionality put forward by Michelle Montague (2009), in which three different types of intentional content are distinguished and subsequently attempted to reassemble. Montague’s endeavor is attacked on two fronts: First, the separation of the cognitive from the evaluative content fails because evaluative features must already be present in the cognitive content, in order to represent the state of affairs adequately. Second, the separation of the three types of contents undertaken by Montague is not only phenomenologically implausible but also neglects the way in which affective content – or the feeling of an emotion – informs the cognitive and evaluative contents. In these respects, although not explicitly arguing in favor of a situated view of emotions, this paper is highly compatible with a situated view of emotions and attacks the very position to which situated cognition is supposed to be a viable alternative, namely cognitivism. Furthermore, the defense of affective intentionality in this article links this section to the following section four, where the idea of affective intentionality is drawn on heavily.

3. *The Situated Intentionality of Emotions*

REFERENCES

- Clark, A. (2008) *Supersizing the Mind: Embodiment, Action, and Cognitive Extension*, Oxford: Oxford University Press.
- Kirsh, D. & Maglio, P. (1994) On Distinguishing Epistemic from Pragmatic Action. *Cognitive Science* 18(4): 513-549.
- Montague, M. (2009) The Logic, Intentionality and Phenomenology of Emotions. *Philosophical Studies* 145(2):171-192.

3.1 Emotions as pragmatic and epistemic actions in social contexts

This article was published in a *Frontiers* special issue on the topic “Affectivity beyond the skin”, edited by Giovanna Colombetti, Joel Krueger and Tom Roberts. It appeared in October 2015 (Volume 6).

Several ideas in this article are based on a contribution originally intended for the workshop “Emotion and Perception” held at the University of Tübingen in November 2012, which I developed together with my supervisor Achim Stephan. After presenting a heavily revised version of the contribution at the workshop “Dimensions of Intentionality” at the Ruhr-Universität Bochum in October 2014, I restructured the contents into two separate themes, developing each in an individual paper, of which this is one. (The other follows in section 3.2.) Although born from the same seed, the articles have since then taken on very different shapes.

I would also like to thank Michael Baumgartner for his thoughts and comments on an earlier version of this article.

ABSTRACT

This paper explores the idea that emotions in social contexts and their intentionality may be conceived of as pragmatic or epistemic actions. That is, emotions are often aimed at achieving certain goals within a social context, so that they resemble pragmatic actions; and in other cases emotions can be plausibly construed as acts of probing the social environment so as to extract or uncover important information, thus complying with the functions of epistemic actions (cf. Kirsh & Maglio 1994). This view of emotions stands at odds with the wide-held cognitivist conception that emotions' intentionality can be cashed out in terms of representations of value. On such a cognitivist position, emotions' intentionality have only a mind-to-world direction of fit while any world-to-mind direction of fit is deemed secondary or is even outright denied. However, acknowledging that emotions (qua actions) also have a world-to-mind direction fit has several advantages over the cognitivist rendition of emotions as representations of value, such as accounting for emotions' sensitivity to contextual factors, variations in emotion expression and, most importantly, assessing the appropriateness of emotional reactions. To substantiate this claim, several cases of emotions in social contexts are discussed, as the social dimension of emotions highlights that emotions are inherently ways of interacting with other social members. In sum, the construal of emotions in social contexts as pragmatic or epistemic actions yields a more fine-grained and deeper understanding of emotions' intentionality and their roles in social contexts

3.1 Emotions as pragmatic and epistemic actions in social contexts

than the cognitivist's insistence on a purely mind-to-world direction of fit of emotions.

3.2 In search of the correct intentional objects of emotions

This essay lay the groundwork for a related article that is currently under review by the journal *Philosophia*.

In its conception I am, again, indebted to my supervisor Achim Stephan, together with whom I developed a contribution for the workshop “Emotion and Perception” held at the University of Tübingen, on which some ideas in this article are based.

Great thanks also go to Andrea Scarantino, who’s careful and critical commentary has helped whip this paper into far better shape.

ABSTRACT

In the philosophy of emotions it is commonly assumed that a formal object is an essential element in the intentional structure of emotions: It makes emotions intelligible by type-identifying an instance of emotion, and it allows the appropriateness of emotional reactions to be assessed. However, an analysis of emotions in social contexts reveals that the formal object cannot fulfill those roles it is ascribed. That is, it is neither a sufficient nor a necessary element for making emotions intelligible, and it is inapt to assess the appropriateness of emotions. Instead of a strictly mind-to-world direction of fit of the intentionality of emotions that is usually postulated by formal-object-based accounts, emotions’ world-to-mind directedness must be taken into account.

1. Introduction

This paper takes issue with a widely held view in the philosophy of emotions that regards emotions as representations of an object’s evaluative properties in form of so-called formal objects. In the following, theories supporting this view will be referred to as formal object centred theories of emotion (FOCTs). According to FOCTs, emotions are cognitive states whose intentionality is mainly structured by two objects: a target and a formal object. The target of an emotion is that particular object which an emotion is directed at, e.g. a barking dog in the case of fear or someone’s issued verbal insult in the case of anger. The formal object is that set of evaluative properties of the target which an emotion represents (de Sousa 1987, 20; Prinz 2004a; Teroni 2007; Mulligan 2007; Deonna & Teroni 2012, 41, 53)¹. Thus, in anger, for example, a target object such as an insult is evaluated as a considerable offense against me; or, in

¹ Although originally introduced by Anthony Kenny (1963) to logically restrict the kinds of objects towards which emotions can be directed, in the now prevalent usage within the philosophy of emotions the formal object refers to a set of evaluative properties which a target object of a certain emotion-type exhibits (de Sousa 1987, 123; Deonna and Teroni 2012, 41; cf. also Teroni 2007, 398, on the reconceptualization of the term since Kenny’s original conception).

3.2 In search of the correct intentional objects of emotions

fear a target object like a barking dog exhibits the evaluative property, i.e. has the formal object, of being dangerous. (Further formal objects of emotions include: joy – a benefit or success; sadness – an irretrievable loss; happiness – a benefit; embarrassment – a transgression of a social norm.)

Often emotions are equated with other mental states in FOCTs, such as judgments (Solomon 1976; Nussbaum 2004), evaluations (Mulligan 2007) or perceptions (de Sousa 1987; Prinz 2004; Döring 2007, 2009). In these judgments, evaluations or perceptions a particular target object is judged, evaluated or perceived as exhibiting a formal object, i.e. as having certain evaluative properties. But also in accounts that do not try to equate emotions with other kinds of mental states, emotions' intentionality is often expounded by use of the formal object. On Julien Deonna and Fabrice Teroni's theory, for instance, an emotion comes about because a situation or an object is assessed as exhibiting a formal object and an individual subsequently takes a mental attitude towards this assessed evaluative content (Deonna & Teroni 2012, 41). Also on Jesse Prinz's (2004) account emotions are depicted as bodily feelings representing so-called core relational themes, which may be considered the equivalent of the formal object in the psychological tradition of emotion theories (see Deonna & Teroni 2012, 51). The formal object thus lies at the heart of explanations of emotions' intentionality in numerous emotion theories, and debunking this cornerstone is bound to have major repercussions on present theoretical research on emotions.

The general theme of this paper is that FOCTs fail because they neglect that emotions are not only representations of state of affairs in the world qua formal objects and targets, but that emotions are also aimed at producing changes in an individual's environment. In other words, emotions are not only mind-to-world directed mental states but are also world-to-mind directed in their intentionality. This proposal is not a novel one: In various psychological theories of emotions, among which are the notable theories of Magda Arnold (1960), Nico Frijda (1986) and Klaus Scherer (2009), emotions are identified as states with action tendencies and strong motivational forces. Also, the idea of construing emotions as complexes of beliefs and desires was widely discussed towards the end of the last century. Yet, despite these well founded endeavors to argue for a world-to-mind direction of fit of emotions, several of the contemporary proponents of FOCTs explicitly reject the idea that emotions are anything but mind-to-world directed (cf. Deonna & Teroni 2012, 53, 83; Döring 2007, 384; Mulligan 2007, 210-211). The following discussions aim at attacking FOCTs at its very core, i.e. the formal object itself, in the hope that this will lead to a rethinking of the scientifically isolated path many FOCTs have chosen to take. But the following discussion is also addressed at those proponents FOCTs who allow for a world-to-mind direction of fit for emotions (e.g. de Sousa 1987;

3.2 In search of the correct intentional objects of emotions

Prinz 2004): The world-to-mind directedness which these theories allow for follows from an initially established mind-to-world directed intentional state which is structured by the formal object. That is, on these theories it is assumed that an emotional reaction is initiated by the representation of a formal object, and from this representational state further aspects of an emotion's intentionality are constructed. Thus, here too the formal object is a central and necessary element to all emotions. As the following discussions will show, in some cases such a derivation of world-to-mind directed aspects of emotions from the representation of a formal object is implausible, for instance in those cases where the representation of a formal object is unnecessary for an emotion to occur. Therefore, these theories too are affected by the claim of this paper that emotions' intentionality can sometimes be only understood by referring to their world-to-mind direction of fit.

This paper is organized as follows. In section 2 some the roles which the formal object plays in FOCTs will be described in more detail. The remainder of the paper then aims at refuting that the formal object can fulfill those explanatory roles ascribed to it in FOCTs. In order to do so, the discussion of emotions will be moved to the social contexts. This move will be motivated in section 3. In order to understand emotions' intentionality in social situations, it is argued, they must be seen as goal-directed ways of interacting with the social environment, i.e. as having also a world-to-mind direction of fit, rather than only having a mind-to-world direction of fit when representing formal objects. In particular, section 4 will show that, first, a social-functional description renders a more fine-grained analysis of emotions' intentionality, which makes decisive aspects of an emotion's intentionality intelligible that are missed by FOCTs. Second, what type of emotion is elicited can also rather depend on factors of the social context in which it arises than on the evaluative properties of a target object qua formal object. Consequently, the formal object appears insufficient to render a satisfactory account of emotions' intentionality. Section 5 demonstrates that by referring to the social functions that emotions perform instances of emotions can be made intelligible when a corresponding formal object cannot be identified. Thus, contrary to the claim made by FOCTs, the formal object is sometimes unnecessary in explanations of emotions' intentionality. Finally, section 6 demonstrates that understanding what an emotion is directed at by referencing its social function has critical implications for the assessment of an emotion's correctness or appropriateness: Instances of emotions which would wrongly count as inappropriate on an analysis according to FOCTs, will reveal themselves as appropriate when assessed with regard to their social functional nature. Therefore, an emotion's correctness or appropriateness cannot be determined with the formal object alone. In sum, these considerations show that the prevalent view in the philosophy of

3.2 In search of the correct intentional objects of emotions

emotions that emotions are representations of an object's evaluative properties qua formal object, and hence foremost mind-to-world directed in their intentionality, is untenable.

2. The central role of the formal object in FOCTs

From the various different functions the formal object is assumed to perform in FOCTs, presumably the most important one is to make emotions intelligible by type-identifying different instances of emotions. By relating the target object of an emotion to a formal object, FOCTs make an emotion feasible and explain why very different target objects can elicit the same type of emotion (de Sousa 1987, 122). For example, someone's fear of a barking dog and the fear of losing money with unsafe stock market investments are directed at very different things which bear little superficial similarities. Yet both are instances of fear, i.e. they are of one and the same emotion-type, because in both cases the same formal object ("a threat or danger") applies to the target. This prima facie reasonable account of emotions' intentionality comes with two implications concerning the role of the formal object. First, the formal object is considered sufficient to identify the type of a particular instance of emotion: As pointed out above, for each emotion-type there exists one corresponding formal object. When a target object is represented as exhibiting a certain formal object, an emotion of the corresponding type is elicited (cf., e.g., de Sousa 1987, 20; Prinz 2004a, 2004b; Deonna & Teroni 2012, 41). It follows that, whenever one knows the formal object of an emotion, one can deduce what type the emotion is of. Secondly, the pairing of a formal object with a target object is considered necessary for an emotion of a certain type to occur: FOCTs consider formal objects to be necessary elements in the intentional structure of emotions. De Sousa (1987, 22), for instance, claims that the "formal object is an essential element in the structure of emotions", and, similarly, Deonna and Teroni (2012, 41) write that an emotion "consists in" apprehending a particular object exhibiting a formal object. Moreover, it appears that an instance of a particular type of emotion can occur only if the target is evaluated with the formal object corresponding to that emotion-type. Prinz (2004b, 54) states this explicitly when he writes that "[a]ll fears concern dangers (the formal object)". In other words, there cannot be an instance of fear which does not concern danger. Accordingly, anger should only arise when a target is evaluated as an offense, joy only when a target is evaluated as a benefit, and so on for each emotion-type.

Another central role the formal object plays in FOCTs is its use in the assessment of the correctness of emotions (de Sousa 1987, 108; Prinz 2004b, 56; Mulligan 2007, 209; Döring 2009; Deonna & Teroni 2012, 41, 53, 81). The logic here is that emotions are thought to have exact epistemic correctness conditions that are defined by the formal object. That is, the formal object

3.2 In search of the correct intentional objects of emotions

defines a set of evaluative properties a target has and if a target does not in fact have those evaluative properties postulated by the formal object that corresponds to the occurring emotion, the emotion is deemed to be incorrect. So, for example, if I were to be afraid of a regular mouse, my emotion of fear would be incorrect, as a mouse has none of the evaluative properties that present a danger or a threat to me. It is by use of the formal object that cognitivist theories of emotion discern whether or not an emotion represents the world correctly or not, and thereby also renders an exhibited emotion appropriate or inappropriate. (For the equation of correctness and appropriateness of emotions see Deonna & Teroni, 2012, index entry for appropriateness which reads “see correctness”, or Döring 2007, 382 and Döring 2009, 245. Also, de Sousa 1987, 108 discusses how appropriateness follows directly from the formal object, which gives conditions for correctness.) With regard to the stipulated correctness conditions of emotions that are given by the formal object, it should also be pointed out that, according to FOCTs, emotions have epistemic correctness conditions only, but no fulfillment conditions (cf. Deonna & Teroni 2012, 53, 83; Döring 2007, 384; Mulligan 2007, 210-211). Emotions are thus assumed to be mental states with solely a mind-to-world direction of fit that represent the world in a certain way, and these representations can be correct or incorrect, which makes the emotion appropriate or inappropriate, respectively.

In what follows, after motivating the discussion of emotions in social contexts, each of the just presented roles of the formal object for emotions is challenged. That is, it will be contested that the formal object is (i) sufficient for making emotions intelligible by identifying the type of an instance of emotion, (ii) necessary for an emotion of a certain type to occur, and (iii) alone what determines the correctness (or appropriateness) conditions of an emotion.

3. Emotions in Social Contexts as World-to-Mind Directed

What appears to be neglected in FOCTs, is that emotions are not only evaluations of single objects but that they are important social phenomena: Not only are the most frequent causes of emotions other people (Parkinson 1995, 182; Clark, Pataki & Carver 1996, 247), but many emotions necessarily require a social context in order for them to occur in the first place, as is the case for embarrassment, shame, guilt or pride. Furthermore, emotions are expressed most often and also strongest when an individual is among people she is intimate with (e.g., guilt: Baumeister, Stillwell & Heatherton 1994; anger: Fischer & Roseman 2007; sadness with crying: Buss 1992), and overall one's embedding in a social context influences what kind of emotion one is likely to exhibit (Brody & Hall 2008), as well as how one feels or experiences these emotions (Neckel 2009). Given this strong dependence of emotions on the social setting

3.2 In search of the correct intentional objects of emotions

in which they arise, studying emotions in social contexts appears key to understanding the nature of emotions and any adequate theory of emotions should be applicable to social contexts.

When examining emotions in social settings, it becomes apparent that emotions are ways for an individual to interact with her environment. Emotions can bring about changes in an individual's social relations with others and often also in others' behaviors. In this light, the social psychologists Agneta Fischer and Antony Manstead (2008; see also Parkinson 1995 or Clark, Pataki & Carver 1996) have put forward the view that emotions in social contexts perform certain functions, that is, they configure one's standing and relations within a social group. Joy, for instance, aims at affiliating with others, as it can be an invitation to share positive experiences, while anger serves the function of imposing change upon another person's behavior, so that, e.g., a threatening gesture to someone approaching you unwantedly can cause that someone to back off, or telling off a friend because he is late for an appointment is meant to make him not be late the next time (Fischer & Manstead 2008, 457). Emotions thus play a key functional role in modifying or maintaining an individual's social relations and are part of an interactive process between an individual and her social environment.

However, to date the inherently social nature of emotions has been grossly neglected in emotion research (cf. Fischer & van Kleef 2010). Both in the psychological and philosophical tradition, the main concern has been to explain an emotion as a private phenomenon, one which occurs in isolation from others (Parkinson 1995). Typical examples in the wonted study of emotions include a fear of heights or testing subjects' reactions to pictures of snakes and spiders in a laboratory. In such scenarios, the emotion stimulus is unresponsive, i.e. there is no possibility for the emotional individual to interact with it, so that the construal of an emotion as a representation of the object's evaluative properties admittedly seems feasible and a mind-to-world direction of fit may suffice to cover all relevant aspects of the emotion's intentionality in these cases. Yet in social settings the objects emotions are directed at are not unresponsive but other social members who react to an individual's emotions. That is, as indicated with the functional description of emotions above, it is an inherent aspect of emotions that they impact the social environment. In this light, an emotion's intentionality also comprises a world-to-mind direction of fit, since it is aimed at bringing about changes in the world.

FOCTs construal of emotions as mind-to-world directed misses the crucial social and interactive dimension of an emotion's intentionality. The following sections will show how problematic the neglect of emotions' world-to-mind direction of fit and the insistence on the formal object as the crucial determiner of an emotion's intentional content is.

3.2 In search of the correct intentional objects of emotions

4. The Formal Object: Insufficient for Explaining Emotions' Intentionality

When comparing the functional analysis of emotions with FOCTs' construal of emotions as representations of formal objects, it becomes evident that the functional description can account for differences in emotional reactions that cannot be captured by reference to a formal object alone. This is in part due to the fact that the function an emotion performs depends not only on the type of emotion that occurs, but also on the way in which that emotion is expressed. For example, sadness, when there is no crying involved (a slightly protruded lower lip, a wrinkled forehead, a lowered gaze and a closed off posture), can get others to back off and thereby serves a distancing function, whereas sadness with crying signals to one's affiliates that one is vulnerable and in need of protection and support, thereby serving an affiliation function (Fischer and Manstead, 2008, 459). Likewise, the function of anger is a different one, depending on the way it is expressed: Anger with a threat reaction serves the function of imposing change upon another person's behavior, e.g. a threatening gesture to someone approaching you unwantedly can cause that someone to back off or scolding a child is meant to encourage that child not to do whatever he is not supposed to do again (Fischer & Manstead 2008, 457). Anger with sulking, on the other hand, is a way of showing that one has been offended and to consequently deny all offers of transaction until appropriate concessions are obtained (cf. Griffiths & Scarantino 2009, 440). Especially in the case of sulking it becomes clear that emotions can be employed means to attain certain goals in social contexts, which indicates a clear world-to-mind direction of fit of emotions.²

Note that, in the given examples, the formal object remains identical for each variant of one emotion-type, while the function which the emotion performs differs greatly with the different ways that emotion is expressed. That is, irrespective of whether or not an individual cries when sad, or whether she will begin to sulk instead of issuing a threat response when angry, the formal objects will be the same, i.e. "a considerable loss" and "an offense", respectively. Any analysis in terms of FOCTs will not be able to draw the distinctions made possible by the social-functional analysis in the above depicted cases, as its main tool in the analysis of emotions' intentionality is the formal object.

This limitation is a symptom of FOCTs' insistence on a purely mind-to-world direction of fit and disregard for the world-to-mind directedness of emotions' intentionality. The way in which an emotion is manifested in the

² See also Scarantino (2014 169f.) on a similar concept of relational goals, i.e. the end result an emotion and its action tendencies are aimed at. However, in the discussion of relational goals it appears that each emotion-type is correlated with one relational goal, so that the possibility to distinguish emotional reactions more finely than merely by their type is lost.

3.2 In search of the correct intentional objects of emotions

expressive behavior and which social functions it thereby performs, all pertain to the world-to-mind directed aspect of an emotion's intentionality. As shown above, depending on their expression, emotions of one and the same type, and hence with one and the same formal object, can be aimed at fulfilling vastly different goals. Thus, the exhibited emotion (which includes its expression) is not merely a representation of the evaluative properties (the formal object) of a state of affairs in the world, but also an undertaking to act in the world and produce a certain outcome there: An agent who begins to cry instead of expressing her sadness by retreating does not merely register a loss in the world, but aims at gaining support from her affiliates through her emotional reaction (Fischer & Manstead 2008, 459). Similarly, an agent who begins to sulk is not only reacting to a perceived, judged or evaluated offense, but reacts in this particular way because she sees a possibility for regaining her status or getting something she wanted. Taking into consideration these world-to-mind directed aspects of emotions' intentionality allows for a more distinguished understanding of emotional reactions within one emotion-type than any FOCT can provide. Importantly, these captured distinctions are not trivial differences but have significant implications on the social interactions in which the emotions arise. Arguably, then, one of the tasks which the formal object is assigned to in FOCTs, namely to render emotional reactions intelligible, is not performed satisfactorily.³

In their defence FOCTs might insist that their claim about the formal object making emotions intelligible only pertains to the formal object reliably individuating the type of an instance of emotion. But even this weaker understanding of how the formal object makes emotions intelligible is untenable in light of the following examples: In one study (Stein, Trabasso & Liwag 1993), when subjects were asked to describe situations in which they had become angry or sad, it was found that a perceived loss could elicit either anger or sadness. Interestingly, which emotion was elicited depended on the subjects' prospects of obtaining compensation from the agent who caused the loss in the remembered situation. That is, subjects rather tended to become angry if they had the prospects of obtaining compensations, whereas they experienced sadness, if no such prospects presented themselves. These findings are inexplicable if anger were merely the evaluation that one has been wronged, but intelligible if anger is seen as a strategy to elicit a certain reaction in others.

³ Some contenders of FOCTs maintain that the expression of an emotion is not a proper part of the emotions itself but only a consequence of the evaluative representation, which truly is the emotion. Hence, the task to account for the varying expressions of emotions falls not to a philosophical theory of emotions but requires a separate theory of emotion expression. Such a severance of the cognitive and bodily aspects of emotions is severely misguided (cf. Colombetti 2014). Further, it owes an explanation as to why an intentional state causes one particular expression of an emotion and not another.

3.2 In search of the correct intentional objects of emotions

Another study (Fischer & Roseman, 2007) focussed on distinguishing the anger from contempt, not only in terms of their expression and physiological characteristics, but especially in their social functions. The authors of the study found that whether subjects react to someone's action with anger or contempt involves more than finding the other blameworthy or perceiving an offense in the other's behavior. Whether subjects reacted with contempt or anger correlated significantly with the desired long-term effects that emotion would have on the interpersonal relationship in question: Whereas anger is characterized by a short-term attack response but has the effect of long-term reconciliation, contempt is characterized by rejection and social exclusion in both short- and long-term. Just like the previous study, these findings too show that what type of emotion is elicited, can rather depend on factors of the social context in which the emotion arises, than on the evaluative properties of a target object qua formal object.

Consequently, FOCTs' claim that reference to a formal object can make emotional reactions intelligible and that the formal object makes up the essential aspects of an emotion's intentionality falls through. Even when only demanding that the formal object makes emotions intelligible by reliably individuating the emotion-type, the formal object reveals itself as insufficient to perform this task. Again, the reason for the formal object's insufficiency in making an emotion's intentionality intelligible is that it misses emotions' world-to-mind direction of fit. Construing the intentionality of emotions exhibited in social contexts instead as performing social functions allows capturing aspects of emotions' world-to-mind directed intentionality, with which decisive differences in emotional reactions can be made intelligible that go unexplained in FOCTs.

5. The Formal Object: Unnecessary for Explaining Emotions' Intentionality

Often the social function of an emotion will coincide with the emotion's evaluative intentional content, so that it seems the social function follows from the mind-to-world directed aspect of the emotion's intentionality. For example, if one evaluates a certain target as an offense, it seems to suggest itself that one should try to alter the offender's behavior in order to prevent further offenses. Here the social function of anger (to change another person's behavior) appears to be the consequence of the evaluation of the emotion stimulus (an offense).

However, an emotion may also arise without requiring the evaluation of a target in terms of a formal object at all, meaning that, contrary to what is claimed by FOCTs, the formal object is not a necessary element in the intentional structure of an emotion. Consider the following example: Anger can arise without an individual having evaluated a target as an offense, for instance when one becomes angry and frustrated at a computer program for not

3.2 In search of the correct intentional objects of emotions

performing the task one wishes it to. It is difficult to fathom how such an emotional reaction comes about because one evaluates the program's behavior as offensive, even when anthropomorphising the computer program. (A similar scenario is easily conceivable when dealing with stubborn and pedantic bureaucrats.) It is rather the opposition to one's intentions or the incongruence with one's motivations, i.e. the target's relation to world-to-mind directed aspects, which most likely produces the anger.⁴ Returning to the social context, consider a parent's instant angry reaction, even yelling, when her child starts to run out into the street. The parent's exhibited anger clearly does not pertain to a perceived offense in the child's behavior, but it does pertain to the goal of getting the child to alter his behavior. Here, once again, a reference to the social function of emotions, i.e. the emotion's world-to-mind directedness, appears to be what causes the emotion, not, though, the evaluation of a target as exhibiting that formal object which coincides with the occurring emotion-type.

In their defense, FOCTs may raise the following objections: First, it might be argued that the child did offend the parent after all by breaking previously established rules of road safety and is thereby an attack on the parent's authoritative status. Yet, it seems questionable that such a meandering explanation, which must resort to serious pedantry on the parent's side, can surpass the straightforward explanation that the parent simply wanted to prevent the child from running out into the street. Especially when considering the fact that emotions typically are responses to core concerns of an individual, FOCTs must offer many additional explanations in defense of this maneuver (e.g. how the child's breaking of a rule presents a core concern for the parent). Another move might be to claim that the parent is not really angry but only shows an expression of anger while actually experiencing fear. But such an attempt at segregating the emotion's bodily manifestation from its cognitive content would wrongly sever the bodily aspect of an emotion from the rest of the emotion process, thereby also begging the question why something that looks, sounds and feels like anger should not be anger. Furthermore, it owes an explanation as to how it comes to the angry reaction, when the occurring emotion is supposedly not anger. This is an assumption that is difficult to square with any evolutionarily based theory of emotion.

The given examples of emotional reactions that do not coincide with the formal object associated with that emotion-type are not extraordinary cases for which an exceptional explanation could be acceptable. The utilization of anger in social situations to either coerce one's counterpart to perform a certain action or to divert blame or avert someone else's disapproval is not an

⁴ Goal-incongruence is an appraisal-dimension found in many appraisal theories of emotions, see, e.g., Scherer 2009, whose analysis of emotions' intentionality is not centred on formal objects.

3.2 In search of the correct intentional objects of emotions

uncommon practice and a well-studied socio-psychological phenomenon (see Clark, Pataki & Carver 1996 for a succinct review of several studies). There are also examples of emotion-types other than anger, which demonstrate a similar independence of emotional reactions from the pairing of a target with a formal object. These include experiencing and expressing sadness because of helplessness or frustration and thereby signalling to one's affiliates that one is in need of support, rather than because one has suffered a considerable loss (Parkinson, Fischer & Manstead 2005). Also, in joy that is present in children's play or the sharing of pleasant stories and jokes, both of which serve the function of strengthening social bonds, neither running away in a game of tag nor the punch-line of a joke is paired with the evaluation of a benefit for oneself. Yet in all these cases a reference to the emotion's social function, can correctly individuate the type of the occurring emotion and make the emotion intelligible, i.e. perform exactly those tasks typically assigned to the formal object in the cognitivist theories.

Therefore, it seems that the formal object is not only insufficient to account for all aspects of an emotion's intentionality, but sometimes even unnecessary to type-identify and make an emotion intelligible. Acknowledging instead a world-to-mind direction of fit in emotions' intentionality can make emotional reactions intelligible when an analysis in terms of a formal object is inapplicable. The occasional necessity to construe the intentionality of emotions independently of a formal object and instead in terms of the goals and fulfillment conditions emotions have, demonstrates that emotions are not only representations of target objects' evaluative properties with a mind-to-world direction of fit.

To be clear, the proposal that emotions have a world-to-mind direction of fit is not meant to negate the fact that emotions do also have a mind-to-world direction of fit and involve evaluative representations. Although these two directions of fit are typically presented as opposing and mutually exclusive characterizations of intentional states, such contraposition need not necessarily be maintained. Bennett Helm (2009), for instance, has argued that emotions have both a world-to-mind and a mind-to-world direction of fit, and that any interpretation of emotions with only one of these directions of fit will be inapt. Helm illustrates that by feeling a certain way and desiring certain things, emotions represent the world in an evaluated way to us; and, vice versa, emotions feel a certain way to us and make us desire certain things because the world is represented and evaluated in a particular way. Thus, emotions exhibit both a world-to-mind and a mind-to-world direction of fit, but rather than mutually excluding one another the contents of the two directions of fit fuel each other. Importantly, neither the mind-to-world nor the world-to-mind direction of fit comes prior to or takes precedence over the other. They are two

3.2 In search of the correct intentional objects of emotions

equivalent sides of the same coin that is an emotion's intentionality (cf. Slaby & Stephan 2008).

Also, the claim that emotions' intentionality must sometimes be construed as world-to-mind directed does not entail that emotions do not pertain to matters of value. As Paul Griffiths (2004) has argued, emotions track possibilities for interactions and, by doing so, emotions can be an assessment of a situation's meaning as well as an intention to act a certain way. This is so because the significance of a stimulus situation is not only evaluated in terms of what has happened, but also in terms of what will happen if the emotion is produced. That is, an emotion's intentionality can be world-to-mind directed and, therein, at the same time evaluative.

6. The Formal Object: Implications for the Appropriateness of Emotions

Besides making emotions intelligible, the formal object is also meant to determine the correctness and appropriateness of emotional reactions in FOCTs. That is, since emotions are construed as representations of an target's evaluative properties qua formal object, an emotion is assumed to be correct when the target in fact exhibits those evaluative properties explicated by the formal object corresponding to the type of the emotion in question. According to FOCTs, if the target object does not exhibit those evaluative properties defined by the formal object, the emotion is a misrepresentation of the target object and, hence, incorrect. However, as this section is meant to show, it is questionable that the formal object alone can adequately accomplish the task of assessing emotions' appropriateness and, moreover, that the appropriateness of emotions can in fact be assessed with respect to an emotion's mind-to-world direction of fit alone.

In the previous section it was argued that an occurring emotion does not always coincide with an individual's evaluation of a target as exhibiting that formal object associated with the type of her emotional reaction. According to FOCTs, all the described cases in the previous section, in which no corresponding representation of a formal object can be identified, are incorrect and hence inappropriate emotional reactions (e.g. anger at a pedantic bureaucrat, laughing at jokes, children's joyful play). Yet, this reasoning has dire consequences. Resuming discussion of the example of a parent angrily scolding her child for running out into the street: It is not only questionable that the child's behavior actually constitutes an offense to the parent. It is much more likely to be an act of thoughtlessness or impulsiveness. Since, according to FOCTs, anger consists in the representation of an offense, FOCTs are compelled to conclude that the parent's anger is incorrect, as it misrepresents the state of affairs in the world. Moreover, since appropriateness is equated with correctness by FOCTs, the parent's anger is inappropriate.

3.2 In search of the correct intentional objects of emotions

Undoubtedly, this is a rather unsatisfactory conclusion. Recalling anger's social function, the parent's angry reaction is aimed at preventing the child from running into the street and thereby from being harmed. The parent's anger thus serves a reasonable and justified goal, despite not being a reaction to an offense. Rather, failing to react fiercely in the given situation and refraining from altering the child's behavior would arguably constitute a much more inappropriate behavior on the parent's part. The appropriateness of an emotional reaction is thus also to be found in the world-to-mind directed aspects of its intentionality, i.e. how the emotion is meant to produce changes in the world.

Conversely, a target may in fact manifest a formal object, so that an emotion of the corresponding type would be correct and thus appropriate on FOCTs, yet reacting with that emotion may nonetheless be inappropriate given the social context (e.g. pride over a victory in front of a defeated rival, joy at a funeral over the inheritance one is about to receive). Clearly this problem stems from FOCTs' equation of correctness with the appropriateness of an emotion. This common tendency in the philosophy of emotions to construe emotions' appropriateness too narrowly has been conclusively criticised by Justin D'Arms and Daniel Jacobson (2000). The authors point out that there is a crucial difference between "whether some emotion is the right way to feel, and whether that feeling gets it right" (ibid. 66). The offered proposal is to discern an emotion's fittingness from its propriety: An emotion is fitting when it "accurately presents its object as having certain evaluative features" (ibid. 65), i.e. a formal object, but an emotion's propriety depends on ethical considerations, i.e. whether the emotion is morally acceptable. Here too the point is that an emotion's appropriateness cannot be determined alone by whether or not an emotion represents certain evaluative properties correctly. Instead, the authors propose that an emotion's appropriateness must rather be assessed with regard to ethical and pragmatic considerations. In other words, D'Arms and Jacobson argue in favour of taking into consideration emotions' world-to-mind direction of fit in order to adequately assess emotions' appropriateness. FOCTs' appeal to emotions' epistemic correctness conditions alone is insufficient to perform this task.

Concluding, FOCTs' insistence that an emotion's appropriateness follows strictly from whether or not the formal object corresponding to the emotion's type is actually instantiated by the emotion's target, yields very undesirable consequences. Rather than assessing the appropriateness of an emotion only with regard to its aptness to represent formal objects in the world and thus solely its mind-to-world direction of fit, an emotion should also be assessed according to whether or not it is conducive to leading us closer towards a certain goal. If an aggressively angry reaction can evoke change in another's behavior (even though there has been no offense) or crying can signal to others

3.2 In search of the correct intentional objects of emotions

that one is in need of support (even though no considerable loss has been suffered), then whenever these outcomes are desirable for the emoting individual and socially adequate, these emotional reactions are arguably appropriate. That is, the occurring emotion may be regarded as the correct means by which to reach the desired goal. Thus, not only the epistemic but also the pragmatic correctness or appropriateness conditions, which mirror the world-to-mind direction of fit of emotions, must be recognized when assessing the appropriateness of emotions in social interactions.

7. Conclusion

The aim of this paper was to challenge the widely-held assumption in the philosophy of emotions that an emotion's intentionality has only a mind-to-world direction of fit, whose essential content can be explicated in terms of a formal object. By refocusing the discussion of emotions' intentionality on the social context, where the world-to-mind directed nature of emotions can hardly be overlooked (section 3), it was shown that the formal object is often insufficient to make emotions intelligible (section 4) and that the formal object is sometimes even unnecessary in explaining an emotion's intentionality (section 5). Furthermore, FOCTs' construal of emotions' intentionality proved to result in inadequate assessments of which emotional reactions counts as appropriate (section 6). In each of the portrayed shortcomings of FOCTs' reliance on the formal object in their explanations of emotions' intentionality, it was pointed out that a rendition of emotions' intentionality as representations of evaluative properties qua formal objects urgently needs to be complemented with a motivational dimension in form of an analysis of the goals emotions are aimed at. That is, emotions' intentionality can only then be fully and accurately understood if its world-to-mind direction of fit is recognized as equally important as and not derived from a mind-to-world directedness.

References

- Arnold, M. (1960) *Emotion and personality*. New York: Columbia University Press.
- Baumeister, R.F., Stillwell, A.M., & Heatherton, T.F. (1994) Guilt: an interpersonal approach. *Psychological Bulletin*, 115, 243-267.
- Brody, L.R. & Hall, J.A. (2008) Gender and Emotion in Context. In M.Lewis, J.M. Haviland-Jones & L. Feldman Barrett (eds.), *Handbook of Emotions* (395-408). London: The Guilford Press.
- Clark, M. S., Pataki, S. P., & Carver, V. H. (1996) Some thoughts and findings on self-presentation of emotions in relationships. In G. J. O. Fletcher & J. Fitness (Eds.), *Knowledge structures in close relationships: A social psychological approach* (247-274). Mahwah, NJ: Erlbaum.
- Colombetti, G. (2014) *The Feeling Body*. Cambridge, MA: The MIT Press.

3.2 In search of the correct intentional objects of emotions

- D'Arms, J. & Jacobson, D. (2000) The Moralistic Fallacy: On the 'Appropriateness' of Emotions. *Philosophy and Phenomenological Research*, 61, 65-90.
- Deonna, J. & Teroni, F. (2012) *The Emotions: A Philosophical Introduction*. London: Routledge.
- Döring, S. (2007) Seeing What to Do: Affective Perception and Rational Motivation. *Dialectica*, 61: 363-394.
- Döring, S. (2009) The Logic of Emotional Experience: Noninferentiality and the Problem of Conflict Without Contradiction. *Emotion Review*, 1, 240-247
- Fischer, A.H. & Manstead, A.S.R. (2008) Social Functions of Emotion, in M. Lewis, J. M. Haviland-Jones & L.F. Barrett (eds.) *Handbook of Emotions* (456-469). New York: Guilford Press.
- Fischer, A.H. & Roseman, I.J. (2007) Beat them or ban them: The characteristics and social functions of anger and contempt. *Journal of Personality and Social Psychology*, 93, 103-115.
- Fischer, A.H. & van Kleef, G.A. (2010) Where Have All the People Gone? A Plea for including Social Interaction in Emotion Research. *Emotion Review*, 2, 208-211.
- Frijda, N. (1986) *The Emotions*. Cambridge: Cambridge University Press.
- Griffiths, P.E. (2004) Towards a machiavellian theory of emotional appraisal. In P. Cruse and D. Evans (eds.) *Emotion, Evolution and Rationality* (89-105). Oxford: Oxford University Press.
- Griffiths, P.E. & Scarantino, A. (2009) Emotions in the Wild: The Situated Perspective on Emotion. In P. Robins & M. Aydede (eds.), *Cambridge Handbook of Situated Cognition* (437-453). Cambridge: Cambridge University Press.
- Helm, B.W. (2009) Emotions as Evaluative Feelings. *Emotion Review*, 1, 248-255.
- Kenny, A. (1963) *Action, Emotion and Will*. London: Routledge & Kegan Paul
- Leary, M.R., Landel, J.L., and Patton, K.M. (1996). The motivated expression of embarrassment following a self-presentational predicament. *Journal of Personality*, 64, 619-636.
- Mulligan, K. (2007) Intentionality, Knowledge and Formal Objects. *Disputatio*, 2, 205-228.
- Neckel, S. (2009) Emotion by Design: Self-Management of Feelings as a Cultural Program. In B. Röttger-Rössler & H. J. Markowitsch (eds.), *Emotions as Bio-Cultural Processes* (181-198). New York: Springer.
- Nussbaum, M. (2004) Emotions as Judgments of Value and Importance. In: R. Solomon (ed.), *Thinking about Feeling: Contemporary Philosophers on Emotions* (183-199), Oxford: Oxford University Press.
- Parkinson, B. (1995) *Ideas and Realities of Emotion*. London & New York: Routledge.
- Parkinson, B., Fischer, A.H., and Manstead, A.S.R. (2005) *Emotions in Social Relations: Cultural, Group and Interpersonal Processes*. New York: Psychology Press.
- Prinz, J. (2004a) *Gut Reactions: A Perceptual Theory of Emotions*. Oxford: Oxford University Press.
- Prinz, J. (2004b) Embodied Emotions. In R. Solomon (ed.), *Thinking about Feeling: Contemporary Philosophers on Emotions* (44-59). Oxford: Oxford University Press.

3.2 In search of the correct intentional objects of emotions

- Scarantino, A. (2014) The Motivational Theory of Emotions. In D. Jacobson & J. D'Arms (eds.), *Moral Psychology and Human Agency* (156-185). Cambridge: Cambridge University Press.
- Scherer, K. (2009) Coping Potential. In D. Sander & K.R. Scherer (eds.), *The Oxford Companion to Emotion and the Affective Sciences* (103-104). Cambridge: Cambridge University Press.
- Slaby, J. & Stephan, A. Affective Intentionality and Self-Consciousness. *Consciousness and Cognition*, 17(4), 506-513.
- Solomon, R. (1976) *The Passions*. New York: Anchor Press/Doubleday.
- Solomon, R. (2007) *True to Our Feelings: What Our Emotions Are Really Telling Us*. Oxford: Oxford University Press.
- de Sousa, R. (1987) *The Rationality of Emotion*. Cambridge, MA: The MIT Press.
- Stein, N.L., Trabasso, T. & Liwag, M.D (1993) The representation and organisation of emotional experience. Unfolding the emotional episode. In M. Lewis & J. Havilland (eds.), *Handbook of Emotion* (279-300). New York: Guildford Press.
- Teroni, F. (2007) Emotions and Formal Objects. *Dialectica*, 61, 395-415.

3.3 Integrating evaluation and affectivity in the intentionality of emotions

This article was originally intended as a contribution for the triannual international conference of the Gesellschaft für analytische Philosophie, the GAP 8 held at the University of Konstanz in September 2012 with the theme “Was dürfen wir glauben? Was sollen wir tun?”. It was nominated for a best paper award donated by the University of Konstanz and published in the conference proceedings (“GAP.8 Proceedings”), edited by Thomas Spitzley, Miguel Hoeltje and Wolfgang Spohn, which appeared in 2013.

ABSTRACT

What characterizes all emotions is their pronounced affective and inherently evaluative nature and any adequate theory of emotions must account for how these features characterize the intentionality of emotions. As a case in point I will discuss the account put forward by Michelle Montague (2009). Montague refers to the cognitive, evaluative and affective contents of emotions’ intentionality and attempts to explain how these relate to one another. Central to her account is the notion of *framing*, by which she means to denote not only a *thin* content but a kind of *thick* cognitive content in which a state of affairs is represented as bearing a certain relation to a subject. One and the same state of affairs may be framed in different ways, e.g. as a success for someone or as a failure for someone else. The framing itself, however, is not yet evaluative or has any connection to affective content yet. Instead, the framing first needs to be associated with an evaluative content, which may then bring about a third kind of content, namely the affective phenomenality of emotions. Montague’s account poses two problems. First, the separation of the framing process from the evaluative content of an emotion seems questionable, since the framing of a state of affairs is itself already an evaluation of a situation. Secondly, the affective, evaluative and cognitively framed contents of an emotion appear as distinct objects in emotion experience according to Montague. This is not only phenomenologically implausible but furthermore neglects the way in which the affective content of an emotion may inform the other aspects of an emotion’s intentionality. These two points of criticism will be explicated by contrasting Montague’s account with those of Bennett Helm and Peter Goldie in these respects. The overall conclusion to be drawn from these considerations is that the evaluative and affective contents of emotions are not distinct components that need only be added to an otherwise cold or neutral intentionality. Instead, the evaluative and affective contents of emotion are intertwined and also figure in the cognitive content.

4. The Utility of Studying the Situatedness of Affective Phenomena: An Example of its Application in the Understanding of Mental Illness

The paper in which this section consists was mainly written by Kerrin Jacobs and Achim Stephan, with substantial contributions by Asena Paskaleva-Yankova and me. It was published in the journal *Philosophy, Psychiatry & Psychology* (Volume 21, Number 2, pp. 89-110) in June 2014.

Already an earlier version of this paper was awarded the “Preis für Philosophie in der Psychiatrie” by the *Deutsche Gesellschaft für Psychiatrie und Psychotherapie, Psychosomatik und Nervenheilkunde* in 2012.

ABSTRACT

The goal of this paper is to give an account of typical changes of existential and atmospheric feelings in depressive comportment. It seems quite obvious that patterns of depressive experience and behavior differ in many respects from ‘normal’ patterns of encounters with the world. Although these patterns are manifested by a variety of surface behaviors, our interest lies rather in the general structure that underlies depressive comportment (here, particularly as it is expressed by more specific experiences, evaluative patterns, and behaviors). To understand how severe the changes are that are characteristic of depressive comportment, we first introduce a structure that implicitly underlies most of our encounters with the world, namely affective intentionality. The concept of affective intentionality captures the experiential unity of phenomenality and intentionality, as well as the bodily aspects, which are expressed in human comportments. To develop, eventually, in more detail how depressive comportment differs from nondepressive comportments, we provide a detailed analysis of narratives found in autobiographical reports of depressed persons published over the last 40 years. We also take into account responses to an online survey that was conducted as part of a philosophical study of depression at the University of Durham with the support of SANE, London. The analysis unfolds along the dimensions of both elementary and non-elementary existential feelings, as well as atmospheric feelings.

5. Appendix

In light of the fact that the PhD-program that I have been enrolled in throughout the past years is one centered not only in the philosophy of mind and cognition but on cognitive science in general, I participated in a number of interdisciplinary projects and collaborations. Two of these resulted in poster presentations at interdisciplinary conferences, listed in the following.

5.1 Every embODIment needs some body!

(p. 43)

In this collaboration with Ulf Krumnack, a fellow PhD-student at the Institute of Cognitive Science of the University of Osnabrück, we explored how the concepts and terms employed as well as the claims made by proponents of embodied cognition and the enactivist approach to cognition, i.e. particular strands of the approaches to situated cognition, already are or may be implemented in or translated to AI-research.

Although, admittedly, a rather feeble attempt at gaining conceptual clarity in a very confusing and inconsistent landscape of terms and concepts that makes up situated cognition research, this poster documents the first steps of a long journey towards comprehending the nuts and bolts of situatedness.

The poster was presented on October 3rd, 2010 at the KogWis at the Universität Potsdam.

5.2 Moral in the Face of Disgust

(p. 44)

This empirical study came about in collaboration with Dr. Jan-Peter Lamke (at the time PhD-student at the Universitätsmedizin Charité in Berlin, Division of Mind and Brain Research), Dr. Klas Ihme (at the time PhD-student at the Universität Leipzig, Department of Psychosomatic Medicine and Psychotherapy) and Moritz Lehne, Ph.D. (at the time PhD-student at the Freie Universität Berlin, Languages of Emotion Cluster). In this pilot study the feedback-effect of facial expression on moral judgments, subjects were asked to make of various scenarios, was tested.

Unfortunately, this pilot study was never followed up on, as he required number of participants was too great and the available time too little.

The poster was presented on January 5, 2012 at the Conference “The Evolution of Disgust: From Oral to Moral” at the Zentrum für interdisziplinäre Forschung (ZiF) in Bielefeld.

(Note, that the authors are listed in alphabetical order and not in order of contributory amount.)

Every emBODiment needs some body!

Wendy Wilutzky¹, Ulf Krumnack¹

Introduction

We try to delineate the main conceptual claims of the thesis of embodied cognition, and in particular a certain strand of embodied cognition theory, namely enactivism, and discuss how the conditions for embodiment that are posited by these theoretical frameworks may also be met by artificial systems which lack a physical body.

The concept of embodiment has gained increasing amount of attention in many areas of cognitive science. In a nutshell, the thesis of embodied cognition states that cognition is determined by the cognizer's body. There are many conceivable interpretations of this statement, yet not many of these possible interpretations are conceptually satisfying and empirically fruitful, or prove to be a genuine rival to existing theories (for further discussion see (1)). According to Goldman and de Vignemont (1) the only feasible understanding of the embodied cognition thesis is as the claim that **mental representations in bodily formats** or codes have an important role in cognition. In other words, the mental representations that have the format of a bodily representation are relevant for cognitive processes. This interpretation in turn, however, depends on how the concept of body is construed.

We also focus on a certain strand of embodied cognition theory which has emerged out of a very biologically inspired view of embodiment, and which today is often referred to as **enactivism** (see (2), (3), (4)). This trend focuses mainly on living organisms in the physical world and describes all forms of meaningful

interactions between these two entities as cognitive processes. The meaning of these interactions is the result of the organism's transformation of the world into an **environment**, i.e. certain inputs are recognized as relevant and the effects of these on the state of the organism is evaluated as positive or negative for the organism relative to a certain goal (2, 4). Some details of the relevant concepts of this theoretical framework are described in the graphic below.

The strong focus on biological agents in the embodiment movement has led to the emergence of a new line of artificial intelligence research concentrating mainly on the development of systems, which acquire cognitive capacities through their interactions with the physical world. We challenge the view that the environment of an agent necessarily has to be the physical world (or a certain part of it, or some simulation of it) in order to speak of cognitive processes and that a body necessarily has to be a living organism. Other conceptions of world and body are possible (e.g. a web crawler communicating with servers in the internet, a program using functions from a certain library), through which completely new forms of interaction present themselves, and thereby different forms of cognition come about. What makes these interactions meaningful, and thereby cognitive, is the assessment of the relevance of the interactions for the system's performance of its function or goal. Many further core notions of enactivism can be adapted to this widened concept of embodiment.

Main Concepts and their Interpretations and Applications



Conclusion

The principles of embodiment are not only applicable to biological but also to artificial systems, where an artificial system can be either an agent interacting with a similar environment as our own, or it can create an entirely different cognitive domain for itself. On the engineering side, seeing the system as an embodied agent with the need of sustaining itself may lead to a new development scheme. Furthermore, the extension of the concepts central to the embodiment and enactive theoretical frameworks in this way, allows to integrate the notions of physically and virtually embodied system. Such a synthesis may lead to a deeper, multifarious understanding of the nature of cognition.

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Moral in the Face of Disgust

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Introduction

Many affective or emotional processes are embodied, i.e. they depend on and can be modulated by bodily activity such as facial expressions and posture (cf. facial feedback hypothesis e.g. [1]). Facial expressions can also influence cognitive processes, e.g. memory and categorization. Moral judgment – classically considered a higher-order cognitive process – has long been linked to emotions, in particular disgust ([2],[3],[4]). Since emotional processes can be modulated via the voluntary manipulation of one's facial muscles, by extension, manipulation of facial expressions should also have an impact on moral judgments. To test this hypothesis, we investigated the influence of emotional facial expressions on moral and truth judgment. Moreover, the relation between different ethical stances and moral judgments as well as the adherence of the embodiment effect to these stances were examined.

Methods

36 Osnabrück University undergraduates participated in the experiment for course credit. Participants completed a moral- and truth-judgment task in which they had to rate 30 moral dilemmas and 30 truth statements (presented in 15 blocks of 4 trials) while making one of three different facial expressions (disgusted, happy, or holding a straw between the lips [5], fig. 1). The expressions were trained before the experiment but not specified by name. Participants were told that they would be filmed in order to investigate the interference between facial muscle control and a distracting cognitive task, cf. [3]. After finishing the task participants completed the German Ethics Position Questionnaire [6].



Figure 1: Experimental design.

The above schema shows one experimental trial. Participants were instructed to make a certain facial expression for the duration of an entire block. Each participant had to judge every dilemma/statement once. The assignment of dilemmas/statements to expressions was balanced across participants.

Preliminary Results

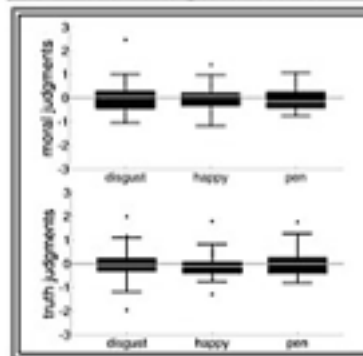


Figure 2: Mean moral and truth judgments.

The box plots show the mean values for moral and truth judgments in the different conditions. To eliminate the variance introduced by the difference between the dilemmas/statements, an average across subjects was calculated for each judgment. This average value was then subtracted from participants' individual ratings.

11 participants were excluded as they inferred the aim of the experimental manipulation. Thus the data of 25 participants (16 female, age: $M=19.8$, $SD=0.9$) were taken into account for analysis.

To determine the effects of the facial expression manipulation, we conducted repeated-measures ANOVAs on moral (1) and truth (2) judgments with sex as a between-subjects factor (1 and 2) and idealism and relativism as covariates (1).

Both ANOVAs did not show a significant effect of expression on moral or truth judgment or any interactions between expression and idealism, relativism, or sex.

Correlation analyses showed a positive correlation between relativism and moral judgment, $r(23) = .59$, $p < .05$, and a negative correlation between idealism and moral judgment, $r(23) = -.43$, $p < .05$.

Discussion

An influence of facial expression on moral or truth judgment was not found. Possible explanations:

- (Facial) embodiment of disgust and happiness as indicated by facial expression has no causal or modulatory role in judgment.
- The effect might be too subtle to detect with the small sample size, i.e. additional participants are needed.

There is a correlation between ethical position and moral judgment.

- Different ethical stances as measured by the Ethics Position Questionnaire influence moral judgment.
- Studies of moral judgment should take this into account! The influence of ethical position on moral judgment is probably stronger than influence of embodiment of disgust

References

- [1] Adelman, P.K. and Zajonc, R.B. (1989) Facial Effluence and the Experience of Emotion. *Annual Review of Psychology*, 40: 243-90.
- [2] Schnall, S., Haidt, J., Clore, G.L. & Jordan, A.H. (2008) Disgust as Embodied Moral Judgment. *Personality and Social Psychology Bulletin* 34:1096-1109.
- [3] Haidt, J., Rozin, P., McCauley, C. & Imada, S. (1997) Body, Psyche and Culture: The Relationship between Disgust and Morality. *Psychology and Developing Societies*, 9: 107.
- [4] Eskine, K., Caciuk, N.A., & Prinz, J. J. (2011). A bad taste in the mouth: Gustatory disgust influences moral judgments. *Psychological Science*, 22: 295-299.
- [5] Ekman, P., R.W. Levenson and W.V. Friesen (1983) 'Autonomic Nervous System Activity distinguishes among Emotions' *Science*, 221(4616): 1205-10.
- [6] Strack, M. & Gerlach, C. (2007) Erfahrung mit Forays's "Ethics Position Questionnaire" (EPQ): Bedeutungsunabhängigkeit von Idealismus und Relativismus oder Aquieszenz und Bipolarität? *Trier, Universität, Fachbereich I – Psychologie*