

# EMOTION AND EMOTION SCIENCE

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## ABSTRACT

For a long time most philosophers and some psychologists sought to understand emotions in terms of the thoughts they characteristically involve. Recent achievements in neuroscience and experimental psychology have encouraged radical change: it has become easier to see emotions as essentially visceral experiences that are sometimes flanked by thoughts at one remove but are sometimes quite unmediated by thought. The neophysiological understanding of emotion has started to attract philosophers, who have sharpened its theoretical claims and extended its reach. The primary reliance now in understanding emotions must be on science and therefore on its investigative format and preferred vocabulary. In this paper I will contend that this approach to emotion carries costs, that while revealing much it also, and inevitably, obscures much. Indeed, some of the aspects of the emotional life that it pushes towards oblivion are ones that we should most care about.

**Key words:** emotion, science, feeling theory, embodiment, intentionality

“His melancholy, which was settling into a secondary stage, like a healing wound, had in it a certain acrid, palatable sweetness.”

Henry James, *The American*

“Anger produces a larger increase in finger temperature than fear.”

Robert Levenson

For a long time most philosophers and some psychologists sought to understand emotions in terms of the thoughts they characteristically involve. This preoccupation with emotional cognition sometimes stretched to identifying the content of emotions with the thoughts characteristic of them, with the latter assumed to be beliefs and judgments on the affected person's part, e.g., that a thing I fear poses a threat to me. Critics often complained that this picture of emotion was overly cerebral; and the response was to tinker with the conception of the kind of cognitions that emotions were supposed to be, or to supplement cognition with a flanking hedonic attitude of some kind. Recent achievements in neurosci-

ence and experimental psychology have encouraged radical change: it has become easier to see emotions as essentially visceral experiences that are sometimes flanked by thoughts at one remove but are sometimes quite unmediated by thought. Bolstered especially by recent work in neuroscience, notably that of J.E. LeDoux and A. Damasio<sup>1</sup>, the idea that emotion is the experience of physiological change has been reborn. In the form originally proposed by James and Lange, this idea lay, it seemed, comfortably buried under familiar arguments with which cognitivists liked to preface their work—arguments which now look too simple.

The neophysiological understanding of emotion has also started to attract philosophers, who have sharpened its theoretical claims and extended its reach. The former happens in Jesse Prinz's *Gut Reactions* (Prinz 2004), which offers a carefully crafted invitation to return to physiology. The latter is done in Jenefer Robinson's *Deeper than Reason* (Robinson 2005), which applies the theory to the arts. Between them, these books serve, so to speak, to articulate the paradigm. For what is offered is more than a change in emphasis in what emotions are conceived to be. The change is also one of the method, the concepts, and the language to be employed in understanding that massive, intimate and yet elusive part of ourselves, our emotional being. The primary reliance now in understanding emotions must be on science and therefore on its investigative format and preferred vocabulary. In this paper I will contend that this approach to emotion carries costs, that while revealing much it also, and inevitably, obscures much. Indeed, some of the aspects of the emotional life that it pushes towards oblivion are ones that we should most care about.

## ***1. Embodiment: restoring the somatic sounding board***

I will begin by outlining a picture of emotional response that many see emerging from the recent strides in experimental psychology and especially brain science. I will then consider a few of its features in more detail.

At least some emotion-types recognized in folk-psychology have distinct physiological realisations<sup>2</sup>. At present this is known in only a few cases, and it would be wrong to expect the emotional palette we recognise and have canonised in our vocabulary ever to be neatly plotted in our neuro-motor economy, but there seem to be basic emotions out of which others are confected, sometimes by culture<sup>3</sup>; and these might admit of mapping<sup>4</sup>. The physiology in question is bewilderingly diverse, but it appears to be distributed along a surface-to-depth axis. That is, the bodily changes that occur in the

<sup>1</sup> See especially LeDoux 1996, Damasio 2000.

<sup>2</sup> Robinson 2005, pp. 72-74.

<sup>3</sup> See, for instance Ekman 1999, Prinz 2004, ch. 4.

<sup>4</sup> Prinz 2004, ch. 4-6.

course of an emotional response may be deeply internal (seated in the brain, especially in various of its subcortical regions); or they can be closer to the surface and visceral (as in changing endocrine levels); or they can manifest at the surface in expressive changes of the body, notably (but not exclusively) in the face, a veritable repository of emotional information which allows us to discern that and how a person is “all worked up”. A response may involve connected physiological events at all of these levels. Accordingly, changes at these levels are partially integrated into “affect programmes”. There is two-way traffic in an affect programme: if one mimes the surface bodily responses, i.e., the physiognomy and gestures characteristic of a particular type of emotion, such as anger or fear, the changes in the deeper layers that normally *issue* in these manifestations are themselves awakened. And so an affect programme allows one to induce inward feelings of that emotion<sup>5</sup>.

It is important, however, that the core changes can also be produced in the absence of any of the usual input from the body’s periphery and viscera. The brain itself can provide its emotion initiator centres with facsimilies of the input that normally arrives from the rest of the body. Antonio Damasio has called this the “as if body loop”:

...the body landscape is changed and is subsequently represented in somatosensory structures of the central nervous system, from the brain stem on up. The change in the representation of the body landscape can be partly achieved by another mechanism, which involves the “as if body loop.” In this alternate mechanism, the representation of body-related changes is created directly in sensory body maps, under the control of other neural sites, for instance, in the pre-frontal cortices. It is “as if” the body had really been changed, but it has not. The “as if body loop” mechanism bypasses the body proper, partially or entirely...The “as if” mechanisms are not only important for emotion and feeling, but also for a class of cognitive processes one might designate as “internal simulation.” (Damasio 2000, p. 284)

Prinz cites this to save the physiological theory of emotion from the traditional objection to William James that often there just *isn’t* any visceral excitement or surface eruption (such as crying) that one experiences when experiencing an emotion (such as sadness) (Prinz 2004, p. 57). The counter-claim is that in emotional arousal, virtual visceral excitation can stand in for (missing) real visceral excitation. The “as if bodily loop” emotion allows emotion to reside in an internal “appearance” of bodily changes even when there are none. In this sense, it is indeed no longer quite true to claim, as Peter Hacker does in his discussion of the experimental study of emotion, that “One can feel an emotion E without any E-type perturbation” (Hacker 2004, p. 206). This would seem, however, to have an important but little noted consequence: that the sufficiency for emotion of central arousal via the “as if body loop” reveals that the only physiology

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<sup>5</sup> See Robinson 2005, p. 36, and Ekman 1984, pp. 324-8.

actually *necessary* to the formation of emotions, and therefore the only candidate for being *identical* with these, are those deeper quickenings in the brain's affective cores.<sup>6</sup> That is, the manifest physical trademarks of emotion (glaring, gasping, blanching, being tongue-tied, etc.) are actually not the *necessary* physical levels of emotion responses, however revealing, well-worn, and indispensable to the social aspects of the emotional life they may be. But if palpable peripheral responses are not necessary to emotional arousal, then even when manifest peripheral arousal *is* present (the person is overtly “worked up”), the emotion itself, as distinct from these reverberations, is still actually realised in the brain. The physiological approach to emotion is stranger than it looks.

Yet it is also open to question whether emotion should be *identified* even with the kinds of event that constitute its physiological core. Such an assumption would be obviously unsound in the case of other mental phenomena. Consider mathematical thoughts. Deep somatic processes, this time cortical, presumably also form the vehicle of mathematical thought and are necessary and sufficient, in us, for solving mathematical problems. But no strictly *physiological* description of what happens as a mathematical problem is solved could, on its own, entail or be translated into a perspicuous description of the reasoning to the solution of that problem. Still less could such a description be the content of its solution. No depiction of a neuro-chemical processing, as such, however finely drawn, could rank as a proof of a theorem. We might learn a lot about the brain from studying maths (e.g., that it is non-algorithmic); but we couldn't learn maths by studying the brain, if that was all we had to start with. Neurology couldn't replace maths. On the contrary, when a neural process occurs by which a mathematical thought is entertained, the content of that thought lies not in what the *process* is but in what the thought achieved through this process represents, e.g., that the circumference of a circle =  $2\pi r$ . (And the same thought might be realisable by processes and in mediums of quite different kinds, not just neural.) Now, one feature emotions share with mathematical thoughts is that of representing something. Emotions also appraise what they represent, and bodily feelings often loom large in this. The question, then, is whether *emotive* representing and appraising of elements of the world that affect our interests might consist in somatic changes. I turn, accordingly, to the idea that emotions are “embodied appraisals” as set out by Jesse Prinz (Prinz 2004, ch. 3). For this theory precisely denies that emotions represent and appraise by incorporating propositional attitudes.

<sup>6</sup> Not, as Robinson, for instance, suggests, in the rest of the body, “When—at the sight of my lost 2-year-old toddling towards me out of the crowd—I respond by running towards him, crying out, gasping, laughing, trembling, and turning white, in a heady mixture of fear and joy, that set of gestures, behaviour, and physiological responses *is* my emotional response” (Robinson 2005, p. 36).

## 2. *The body resounding*

I will examine some of the central tenets of this theory that feed the disquiet I feel about it. I hope my renditions remain accurate despite the necessary omission of the meticulous elaboration that Prinz provides.

The first claim to notice is methodological. Philosophy is admonished to mend its easy, free-wheeling ways in discussing this area of the philosophy of mind (and presumably other areas, perhaps all). Left to themselves, we are told, philosophers tend to rely heavily, indeed almost exclusively, on “intuition”, i.e., on reflective examination of what it seems right or necessary to say about a given case. This appeal may be to linguistic constraints or to introspection. Prinz observes that

Philosophical arguments for cognitive theories often rely on modal intuitions. A philosopher will insist that guilt just cannot occur without thinking about the self and anger cannot occur without judging that someone has delivered an insult. These assertions are based on intuitions. The philosopher will first try to imagine cases of emotion occurring without a particular concept or propositional attitude. If no case comes to mind, she will stipulate that the link between the emotion and that concept or propositional attitude is analytic. It is a conceptual truth that guilt presupposes the a concept of the self. (Prinz 2004, p. 28)

Prinz thinks that there is every reason to distrust such intuitive reflection together with the conceptual truths they seem to yield, the very stock and trade of philosophy.<sup>7</sup> For, intuitions can conflict from one person to another. Intuitions often reflect (limited) personal experience or inherited folk psychology. These are corrigible in ways that are often hidden to those who are immersed in them. So this sort of probing for logical structure in psychology is best minimized in favour of less deceptive and more testable forms of enquiry, ones which could yield sounder generalities: “If one wants to explain something other than one’s own personal beliefs, one should exploit more objective methods” (Prinz 2004, p. 29). The authority, and with it the enterprise, of “conceptual analysis” is a broken reed. Reflection and testimony may have a necessary part to play in emotion research, as when subjects are asked to identify their emotions or the emotions they would attribute to others in specified settings. But these reports that feed the experimental processes should not be made to bear too much weight, let alone all of it. (And they do seem usually confined to rather simple classificatory jobs.)

For Prinz, these methodological strictures, together with other arguments (see Prinz 2004, chapter 2), have a material consequence: we should abandon the notion that

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<sup>7</sup> This challenges Peter Hacker’s presumption, which many philosophers would doubtless like to endorse, that the task of philosophy “is to describe the conceptual structures in terms of which we articulate our experience and its objects”, Hacker 2004, p. 199.

emotions have *conceptual* content (and therefore conceptual conditions) waiting for us to sit back and tease out intuitively. Instead, the relation of types of emotion to the conditions in which they arise is extensional. That is, the ways in which different kinds of emotion align with the world are ultimately empirical and could have been different (they reflect contingencies of natural history):

Let's assume dogs lack a concept of the self. Now imagine a dog who hangs its head down low after making a mess on the carpet. Is it *conceptually* impossible that the dog is ashamed? I don't think so. The most we can infer from the fact that emotions are organized into different classes is that emotions arise under different classes of situations. Some emotions arise under circumstances having to do with the self; but it doesn't follow that they require or contain a self-concept. (Prinz 2004, p. 28)

Since the relation of thoughts to emotions is not conceptual, it must presumably be primarily causal. On this view, emotional responses may be *initiated* by the person's thoughts about what is happening to him but they do not comprise these thoughts. And emotions may also be initiated by other stimuli, such as perceptual images or chemicals. Emotions themselves do not have the structure of propositional attitudes, which incorporate that-clauses.

Prinz's concept of emotions as embodied appraisals arises against this background. More particularly, it is an attempt to secure a physiological understanding of emotion against a major difficulty in Damasio's theory. Prinz proposes what might be called an *outward-facing* view of embodied appraisal. Damasio draws attention to the fact that formations in the brain known to initiate many emotions are also receptors of signals from the body indicating the state of the various organ systems, as well as being receptors of perceptual information about external happenings (the amygdala being the best known). Study of these connections has led Damasio to the belief that emotions are a way of perceiving changes in ensembles of internal organs and processes as they respond to what we are encountering in the world. We experience a few of these physical changes directly, such as increased pulse and breathing rates in anger, but most are not overt to us in this way, such as the endocrinal changes behind the pulse and breathing rates and certainly the activity in brain regions. Emotions are said to be these deeper neural configurations, which are the somatic shadows of the impinging world. Making these the locus of emotional responses, again, offers to circumvent the traditional objection to physiological conceptions of emotion: that we can experience (lots of) emotions even where there is no experience of overt bodily perturbations, when the body feels to us perfectly quiet. We are wrong to think this. Plenty of otherwise mute but measurable and distinctive physiology co-occurs with every emotional response. From this, Damasio concludes that

Feeling an emotion is a simple matter. It consists of having mental images arising from the neural patterns which represent the changes in body and brain that *make up* an emotion. (Damasio 2000, p. 280, my italics)

Damasio even holds that our notion that emotions are diaphanous states somehow focused on the extra-bodily world (on such things as my life, your remark, honour, his craven betrayal) is quaintly deluded

The alleged vagueness, elusiveness, and intangibility of emotions and feelings is...an indication of how we cover the representation of our bodies, of how much mental imagery based on nonbody objects and events masks the reality of the body. Otherwise we would easily know that the emotions and feelings are tangibly about the body. Sometimes we use our minds to hide a part of our beings from another part of our beings. (Damasio 2000, p. 29)

The assumption here seems to be that because emotions are realised in a cascade of physiological events, these events are what the emotions are about. (Presumably this would have to apply equally to mathematical thoughts, scientific beliefs, and moral judgments.) Yet this is a fundamental distortion of the intentionality of emotion, of a type that Peter Hacker brings out well:

One's blush of shame does not inform one of the state of one's facial arteries, although it may inform one that one is more ashamed than one thought, and one's tears of grief do not inform one of the state of one's lachrymal glands, although they may inform one that one loved Daisy more than one thought. (Hacker 2004, p. 200)

What a person is proud of may be his achievements, lineage, children, possessions, etc., but not any somatic changes that may occur when he thinks of them. What a person feels guilty about are his wrongdoings, not any bodily perturbations that may occur when he thinks about them....One is indignant at A's action because it is unjust, not because one flushes in anger when one hears of it. One knows it to be unjust because it rides roughshod over someone's rights, not because one flushes in anger. Indeed, the flush is only a flush of anger in so far as one is thus indignant... my tears of grief may make me realize how much I loved Daisy. Far from one's emotions informing one about the state of one's body, the state of one's body informs one about one's emotions. (Hacker 2004, pp. 204-5)

Now, Jess Prinz's notion of "embodied appraisal" can be seen as an attempt to circumvent this sort of objection. He seeks to preserve the idea that emotions are really physical events but without Damasio's implausibly reductive corporeal solipsism with regard

to their content, which Prinz himself deems “a strange hypothesis”.<sup>8</sup> The world and our relations to it must figure somehow in the content of emotions, even where the latter is understood physically rather than cognitively. Couldn’t we, Prinz asks, “accept the premise that emotions are bodily perceptions” whilst insisting “that emotions detect something more than the vicissitudes of vasculature”?<sup>9</sup>

A delicate task. Here is how Prinz proposes to execute it (Prinz 2004, pp. 60-9). When something is represented, the nominal content of the representation can be an *appearance* of the real content (or essence) of what is represented. Thus, the nominal content of our normal representation of *dog* might be something like: “furry, panting barker” (my example). Similarly, emotions represent their themes of concern (e.g., danger, loss, success) only via their appearances, not by their essences. They *track* their themes but without *describing* them (they are not “essence detectors”). They track real essences, but only in terms of more superficial nominal content. What happens is that the relevant impinging emotive themes (relational properties affecting personal well-being, including thoughts about these) cause dedicated reactions in the body, and these somatic echoes of what is bearing in from outside the body are the nominal content of the emotions we then feel. The emotions are reactions to the somatic echoes and are themselves neural states, generated in the brain. The somatic upheavals are the print of external events, the form in which these events appear within (to?) the body. The emotion “represents” impinging events (the real content) in terms of these appearances (the nominal content) just as we “represent” (track) dogs by appearances such as “furry, panting barker” rather than in terms of canine DNA, which is the dog’s essence, or as we represent the sun in terms of its being a hot, luminous ball in the sky or of its being the god Aton, rather than in terms of the nuclear processes in its core, in which its starry essence actually consists. So do emotions “represent” the world (and thus they have the right sort of aboutness), but at one remove (i.e., via nominal content) and not as it is (so that they are not descriptive and not cognitions fitted out with cognitive content).

What is strange about this model is how very opaque it leaves the emotions themselves. This is a double opacity which occurs at both levels of emotional representation (i.e., representation of world and of internal body state), though, importantly, this is concealed by how the theory is presented. First, an emotion “represents” the worldly theme which “it is set up to be set off by” but without *describing* it (Prinz 2004, p. 65). And this is because, secondly, the “appearance” of the emotion’s worldly theme (its nominal content) in the shape of proprietary visceral and neural reverberations is not actually descriptive of that theme either. Notice, by contrast, that properties such as “furry, panting barker” and “dazzling ball in the sky” *are* directly present to us: even if not essences, they *are* descriptive, and as such obtrude into experience. It is here that we can see how misleading is the picture of representation that comes with the embodied

<sup>8</sup> See Prinz’s comment on Damasio, Prinz 2004, p. 57.

<sup>9</sup> See especially Prinz 2004, ch. 3.

appraisal view of emotion. For the supposed nominal content of emotion envisaged by this theory, the rise in hormone levels, changes in the subcortical areas of the brain and much of the rest of the deep physiology of emotional response through which we are said to track the emotion's theme, are *not* descriptively present to us when we are emotionally affected; *they* do not reveal themselves to us but are inaccessible. In this they differ crucially from the nominal content of dog or sun. To avoid this problem, the theory would have to rest all its weight on the fact that there *are* palpable physical changes variously characteristic of emotional responses, as their nominal content: heart palpitation in fear, heavy breathing in anger, raised eyebrows in astonishment and so much else. Yet these obtrusive somatic travails, it is admitted by all, while frequent are not actually necessary either to all types of emotion (serenity, nostalgia, quiet sadness) nor to all episodes of the types of emotion that *can* feature them. And the *deep* processes necessary to the emotions and their surface eruptions—the tectonics and magma, so to speak—are, again, as remote from experience or reflection as can be. (It takes objective methods, such as scanning, to monitor the amygdala and its brethren; and not even Damasio would suppose scanning to be part of feeling any emotion.)

I suggest that *if* we wanted to apply the distinction between apparent (nominal) and real (essential) content of emotions, its correct application would be as follows. When an emotion is experienced, the feelings, imagery, and thoughts that flood in then, and whatever palpable and witnessable bodily arousals there are, together with any behaviour (such as exclaiming, recoiling, sharply fixing or averting attention), constitute the appearance (nominal content) of the deeper, concealed somatic emotional processes. The real content tracked by these manifestations that we find in ourselves are the silent, internal neurochemical perturbations of the central nervous system. That is how the analogies of the relation of furriness to canine DNA or of sunshine to nuclear processes in the solar core translate for the relation of nominal to essential content of emotion events. These experiences are the glass through which the internal state of the body, *not* the worldly theme of emotive concern, shows itself darkly. But *that* seems very like Damasio's position! In other words, Prinz's attempt at introducing the external world by appealing to the distinction between nominal and essential kinds of representation must slip back into the somatic solipsism it was meant to overcome. The relation of emotions to the world (i.e., to their themes) is not a transposed version of the relation between the manifest aspects of emotional responses and their visceral undersides.

Notice that the double opacity of emotions, when they are understood in Prinz's way, flows directly from the general claim, noted earlier, that the tie between given emotion-types and given sorts of environmental circumstances is merely extensional, fixed only by established patterns of cooccurrence. For it was just because an emotion was *not* an "essence detector" that it could be paired up with just any circumstance that happened to attend it. This would indeed mean that emotions themselves lack conceptual content. But that returns us to the problem with Damasio's model: most emotions are not about our bodies at all, much less about the body's more arcane internal workings, and they

would be grotesquely maladaptive if they were, capturing our attention just when we needed to cope, often quickly, with the slings and arrows of the surrounding world.

Note, too, that the bodily feelings of which we *are* sensible in emotive arousal, as in fear or anger, seem world-directed rather than body-directed. Yet even these do not account for the full content of the emotions in question. For the world-directedness of the bodily feelings on their own is apt to be narrowly referential and thus too unspecific: these feelings just register *a* source in the world for what we are feeling. As Peter Goldie puts it in distinguishing bodily feelings from “feeling towards” in emotion, “Bodily feelings alone cannot reveal to you what your emotion is about...the most they can reveal is that you are feeling an emotion about *something or other*, which has a certain determinable property” (Goldie 2002).

Thus, it still isn't clear how, or whether, the idea of somatic appraisal could do justice to the intentionality of emotion.

### 3. *Aboutness and content*

Representing changes in the body (by tracking them) does not secure the focus on the world of which emotions seem clearly capable. What, then, does? We can approach this by assessing the pure extensionality claim. This was the claim that emotion-world ties that strike common understanding as so perspicuous and inevitable (fear-to-harm, hope-to-deliverance, etc.) are just embedded empirical alignments and can be understood by empirical study of the natural and social contingencies that have aligned them in the ways so familiar to us. (Recall that this was why “intuition” was deemed too naïve and ensnaring a methodology.) In contrast to cognitive theories of emotion, the embodied appraisal view holds that the relation of an emotion to its object or theme of concern is causal. This would follow from the claim that their tie is ultimately external and empirical: “Associative learning can probably forge a link between emotions and any perceptual experience that occurs in conjunction with them.” (Prinz 2004, p. 75) Once thus linked, perceptions of the given kind and such appropriate thoughts as we may have about them will “trigger” the entrenched emotional responses.

Now, let us recognise that such mechanisms are possible but ask whether this is all there is to the relation of emotion to world? Obviously no type of creature could *evolve* to find joy in unmitigated personal calamity (unless they also found joy aversive); they wouldn't last a generation. But quite apart from being dysfunctional, it isn't clear how what unmitigated calamity *is* could be comprehensibly—one wants to add, *sanely*—greeted with the attitude that *joy is*: how the undoing of all one most cares about could possibly be viewed as an uplifting consummation of goodness? The vectors of care and goodness clash puzzlingly here. In saying this am I just appealing here to something like conceptual intuition (thus begging the question in dispute)? Not quite. I think

the presence of a conceptual connection here can be defended. Is it really plausible to claim that one's bafflement at the idea of joyous agonised ruin merely reflects a lack of any exposure to that correlation? If that were all, then any kind of emotion *could* come to be elicited by any kind of circumstance. But for all emotion to lend itself equally to any circumstance, emotion would need always to be much the same. For if emotions distinguished themselves into distinct kinds, some would fit a given kind of circumstance better than others. In other words, if all emotions were equally accessible in all circumstances, then there couldn't really *be* distinctive types of emotion. There would be a kind of anything-goes-emotional-monism, AGEM for short. Now, if AGEM were true and emotion was homogenous in all circumstances (a kind of psychic white noise), emotional response could serve no discernable function beyond general excitation. Or, at most, there might be just one distinction dividing emotional states, that of good-to-have and not-good-to-have, positive versus negative motivating valence. But that is nothing like what we do have; and Prinz himself rejects the thesis that emotional valence is a *sui generis* experience and holds that valence comes down to the specific ways in which different kinds of emotional experience are good or bad<sup>10</sup>, and I agree with him about this. I conclude that AGEM is nothing like what we have and therefore that there are types of emotion marked by features that fit them respectively more to one kind of circumstance than to another (thus giving a certain purchase to intuitions about this after all).

Given that there is a diversity of emotion kinds, there seems no reason we should not be capable of recognizing the consonances and dissonances between our emotions and their eliciting circumstances (e.g., the presence of something menacing, as opposed to benign, in what I fear). It is true that in the case of some token emotion experiences the tie of an emotion to what it is about is not immediately recognisable. In these situations, one's emotional response is opaque in the sense that one cannot identify precisely what it is about the particular object of this response that elicits (or justifies) this response. One may be uneasy, intimidated, sexually excited, or in love where one cannot at first (or perhaps ever) quite see why. And one may be compelled to probe the source of one's response by tests, e.g., by focusing on particular features of the person in question or imagining certain features were different, in the attempt to see what "clicks". Mostly, however, this is not necessary. Moreover, the very ability sometimes finally to work out what one is finding in another where that does not show through immediately, strongly suggests two things. First, that emotions *can* represent descriptively. One can see what it is about a thing that calls for one sort of emotion more than another. Second, that this is a matter of degree: sometimes, indeed often, we recognise clearly what answers to an emotion we feel (my affronted feeling answers to your insult). There is much room for the reflective exploration of one's emotions and their relations to the world. Emotions represent relations with the world and in doing this they are to some

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<sup>10</sup> Prinz 2004, pp. 176-178.

extent descriptive. Clearly, emotions also involve *appraisals* of what they represent, unlike such embodied and valenced reactions as tickles. I contend that emotive appraisals are also descriptive and are inseparable from the descriptive content that distinguishes emotions from one another.

To appreciate this let us consider the hardest cases, the primitive (“unthinking”) reflex-like emotional reactions. There are, we have noted, well-known emotional responses which are strikingly direct and pre-empt interpretation or conceptualisation of what is happening. They are typified by the “fast, dirty” fear responses that are routed from the sensory receptors straight through the amygdala and thence into immediate bodily mobilisation, initially bypassing the cortical areas. These are hard-wired reactions to the bare appearance of certain shapes, textures, etc. Any sight with the vague configuration of a snake or sudden exposure to height are familiar examples. The physiognomy of cute creatures or the proprietary sights, odours or textures of disgust can provoke similar irresistibly spontaneous reactions. But while the perceptual input to these reactions may consist in the sheer geometry of snake shape, or in the very sight of plunging depths, or in tactile or olfactory qualities (such as sliminess or sickly odour), I suggest there is actually more to the immediate feelings with which one reacts than just the awareness of these as bare perceptual values. The ways we feel at such junctures have content, content that is palpable, various and distinctive. Thus, a wave of *horror* (not of relief or of mellowness) greets the snakish shape as one gasps and recoils; the sight, smell or texture of what disgusts and repels is found *loathsome*; one finds a certain physiognomy *adorable*. These contents of affective psychology are every bit as salient and integral to the response as the cooccurring somatic commotion. Even in these simple, undeliberated emotions, the objects are clothed in affective properties, properties such as *hideous*, *yucky*, *sweet*. The savour is in the flavour, not subsequent to it. It is these *affective* qualities that one learns to detach from the encounter with those very same geometries, sights, and sensations if one develops as a herpetologist, rock climber or medical student. Even in the case of sensory qualities, let alone in the case of emotional responses involving thought and insight, the encounter with an emotively sensitive item will only precipitate an emotional response if the item gets *cast* in suitably evocative terms. My view that a particular refusal of yours amounts to cowardice only passes from cool judgment into contempt when I also find your refusal *pathetic* or *craven*. (To imagine how it could seem pathetic or craven is to imagine finding it contemptible, i.e., despising it.) Whether emotion develops about something depends on what we make of it. To receive it in emotive *terms* is for emotion to have begun. That, too, can happen in primordial form, as fast as you please.

These emotive representations are what Robert Roberts has called “construals” (Roberts 1988, 2002). They are not indeed cognitive in that they needn’t be the objects of propositional attitudes, especially belief, but can take the form of images (the *look* on his face, *that* tone to his voice), and they may be within the capabilities of animals (Roberts 1996). No description in physiological terms (including the physiology that

sustains the formation of construals) can capture their meaning. Yet, construals admit of fine shading and sometimes of considerable elaboration (as in a love sonnet, for example). It is in their terms that we can explore and get closest to the fuller identity of our emotions, which may include what differentiates two experiences of emotion of the same general type, or to trace modulations in the experience of an emotion. And they allow a more natural account of precognitive appraisals by emotion.

#### 4. *Fittingness*

The embodied appraisal conception of emotion offers to account not only for appraisal *by* emotion but also for the appraisal *of* emotion. How does this fare? Emotions are viewed as perceptions of bodily states, and the sort of faults for which emotions can be criticised, it is held, resemble the faults that perceptions can have: making mistakes where one is equipped not to make those mistakes. Thus, Prinz claims that “emotions can be thought of as conclusions to arguments” (Prinz 2004, p. 237). In particular, “there are two places for normativity to get a foothold in our emotional responses. We can be held responsible for having emotions based on bad premises or bad inferences, provided we are responsible for those premises and inferences” (Prinz 2004, p. 239). Sally is proud of being prettier than Jane. But actually she isn’t prettier, as would be obvious if she took a good look. Prinz calls this lack of premise warrant. Obviously, Sally takes pride in looks. But looks are largely involuntary attributes rather than achievements, and pride is warranted only for things that can be and have been achieved. (Which, by the way, seems awfully like a conceptual claim.) Sally would realise this if only she reflected. This is termed lack of inference warrant. Normativity in emotion consists in these two sorts of warrant.

Does it really? A person living in a certain culture might correctly believe himself to have done certain things (e.g., swung lots of sharp deals). Moreover, according to all the rules and reinforcements available to him now and ever since he was young – he has grown up in the bosom of a mafia culture – sharp dealing is a virtue. He does not suffer lack of premise warrant. So he, thus warranted, prides himself on his achievements. He does not lack inference warrant.

Now, unfortunately, none of this seems to me to rule out the following: the things in which he has innocently learned to take pride are just unworthy of it. He is misguided, but not in accepting the premises he has accepted or in making the inferences he has made. And the fault here is more than one of being inadvertently misguided. His grasp of worthiness certainly was at fault, and that might be a lack of premise warrant. But additionally and distinctly, pride of the sort is shoddy and debased, whether this is realised or not. Were he to graduate to a better understanding of worthiness, he would look back on his early self-congratulation not simply as maladroit (and embarrassing) but as base (and shaming). Were he to take refuge in the thought that he hadn’t known better, that

could fault him anew. He would see himself as having been not just clumsy but corrupt. Emotions can have normative features that depend on the relation of what they are to the nature of what they are about. And these normative properties do not belong at all to the bodily changes that occur in emotional responses. As Hacker puts it,

Given appropriate circumstances, we can say that someone ought to, and has good reason to, feel proud or ashamed, but we cannot say that he ought to raise his pulse-rate or increase his psychogalvanic reflex reactions. (Hacker 2004, p. 206)

## 5. Methodologies

I have been concerned so far with a conception of emotion, the embodied appraisal model, that issues in part from applying “objective methods” to the study of emotion. Keeping in mind the reservations about these results outlined above, I now turn to this general approach itself. It is beyond dispute that the examination of emotion responses using the resources of brain science and experimental psychology has many intriguing (and potentially useful) lessons that are not otherwise available. This does not mean it has no limitations. I will focus here on two: (1) the risk of shallow generality and (2) of epistemic self-enclosure.

1. There is often a marked contrast between the task of identifying emotions in the context of experiments or surveys and understanding them through fuller reflection. Much emotion, of course, passes unmonitored. When recognition is sought, sometimes it is easy to say at once what is being felt by indicating the right slots in a ready-to-hand taxonomy (sad or angry?); and this suffices for some purposes. But often, emotions are quite difficult to understand at all edifyingly by means of brief taxonomic classification. Generic labelling may only be the start of what we want to know and needs open out into fine-grained probing. Consider this sentence from one of David Lodge’s novels: “I glimpsed the little metal stud gleaming in the dark hollow of her mouth, like a jewel in the forehead of a toad. There is something faintly reptilian about this young woman—her impassivity, her repose, her unblinking gaze. No doubt I am just projecting my insecurity on to her.”<sup>11</sup> Note the uncertainty of even the first person authority here. (Corrigibility is sometimes unavoidable.) Precisely what emotions toward this young woman are being evoked, in this insecurity, by construing her in this particular way? Not easy to say. Much specific context is needed. A realistic approach to emotional self-knowledge (let alone empathic understanding) needs to meet many challenges at this level. However, the bulk of the attention in emotion science seems to call mainly on the identification of emotions in specified stereotypical circumstances (e.g., pictures

<sup>11</sup> From Lodge 2001, p. 123.

of facial expressions). Surveys and experiments on statistically significant samples *need* to attend to what is general and comparable across the range of the phenomena being studied. And their results, when forthcoming, are impressive precisely for being thus evidence-based. Although still young, emotion science already permits important diagnostic discriminations. However, several things may tend systematically to elude this approach: the peculiarities of individual instances of emotion (*that* fear, *this* anger); or what is distinctive of a particular person's emotion (*my* – curiously feeble—anger, *your* – always rather brittle – calm), qualities that can be distinctive and themselves important. These may be, for example, the exigent themes of psychotherapeutic confessional or of perplexed self-probing.

2. For some purposes, requests for the brief, clear-cut identification of tokens of types of emotion in a straightforward vocabulary, uniform in content across statistically significant samples, may be easily met and be all that is needed. By its very nature, however, the *differentia* that can colour tokens of emotion-types or subtypes, together with complex or subtle emotional unfoldings, may be occluded by this approach. But notice that whether, when, or how far this is so could not be determined by enquiry in this same format. No method can be used to see what it can't see, and, therefore, to see whether there is anything it cannot see (much less to see what that is). "Objective" methods need simplified circumstances in which as many variables as possible can be eliminated, and even then what individuals make of their emotions are apt to be filtered through standardised questions.—These measures serve to sift for what is the same from case to case and are far removed from the free description of what is felt in many of the circumstances in which emotions are naturally experienced. The demonstrable successes such an approach can permit therefore are not a full measure of its adequacy. This method can't be used to assess its own adequacy. No method can be used to reveal what it must omit. Cleaving to any single methodology (*including*, for that matter, the most Proustian self-reflection) generates the Rumsfeld problem: you don't know what you don't know.

It is, of course, true that even "intuitive" lay or philosophical reflection on emotion that does not avail itself of the controlled study of uniform responses often itself aspires to a certain generality. Are the more localised and involved features of emotional responses adverted to above likewise out of range of this sort of reflection? The claim above, that not all useful truths about emotions are quasi-nomological (necessary and sufficient conditions of responses across statistically significant samples), is not the claim that emotional experiences, closely viewed, are ultimately idiosyncratic or esoteric. That choice would reflect a poverty of alternatives. What kinds of generality can claims about emotions have? I suggest that the important distinction here, hinted at above, is between *identifying* descriptions of emotions and *individuating* descriptions of them. The first seek commonality, the second specificity. An interest in identification aspires to the nomological: e.g., what configuration of facial muscles accompanies and expresses which type of emotional excitation? Which kinds of fear (or other) response initially bypass

higher cortical processing? This involves the identification of emotional responses as instances of types or subtypes under conditions that show their relations to attendant phenomena, such as perceptual contents or social contexts. This will sometimes be the pertinent level of truth: what matters is just that I am anxious or ashamed—home truths, so to speak (and anything further amounts to distraction and irresponsible navel-gazing). An account of an emotional response or disposition that individuates it, on the other hand, takes account not just of its type or subtype but of what may be distinctive about it. Shakespeare's *Sonnets* are serviceable examples of an individuated accounts of emotion. They deal with refinements of emotion which are not usefully regarded as cases of widely surveyable types. The differentia of emotional responses or dispositions may be an important expression of individual character, of personal psychological style and thus be vital to who an individual is, and their range of incidence may not be at all wide. What individuates occurrences of emotion also reflects the character and complexity of those parts of a person's world that elicit his emotions. Emotions are not like atoms, effectively uniform instances of their types and subtypes. Nor are they like leaves or snowflakes, with no two quite alike, with real molar differences but not such as are normally very important. Emotions are more like (other) historical events: they may indeed fall into broad categories, such as revolution or recession, but some of what is important about each specimen is specific to it.

The features that individuate an emotional response cannot be exhaustively specified in advance of a given case and may not be uniform from case to case. They may include (1) phenomenological features, what the emotion feels like (as in the unfurling despair chronicled by William Styron in *Darkness Visible*<sup>12</sup>), (2) specifics of a particular relationship (e.g., dismay at betrayal by a friend with whom one has had *these* bonds; delight in often elusive qualities of personality or style unique to a particular person), (3) other kinds of personal history (the charm of places that were scenes of certain childhood experiences), (4) qualities distinctive of particular objects of emotion that do not necessarily relate to oneself personally (the peculiar pity of *that* person's death). The localised shapes that emotional experiences may have in virtue of such properties are not shared by all or even most other instances of emotions of the same generic types. That does not make them esoteric, however. They needn't be incommunicable or logically private. They, or the susceptibility to them, will be shared to a degree, even by people who never come actually to experience them. The human capacity for empathy allows us to reconstruct and to feel intimations of experiences that are not our own and of which we would otherwise remain innocent. Understanding of non-iterative emotional experiences, in ourselves and in others, is possible, though by its nature it is only possible by reflection on individual cases, real or imagined. Epistemic generality is possible even where ontic generality is lacking.

<sup>12</sup> Styron 1991.

## 6. A Hybrid solution?

Part of the interest of Jenefer Robinson's book is that it seeks to address the distinction between basic identification and individuation introduced above. For she in effect proposes a hybrid theory of emotion that manages to incorporate both of these within the compass of an emotional response. Robinson offers to show how emotions can start as basic pre-cognitive arousals and still emerge as complex differentiated responses. As I understand it, her proposal could be reconstructed as follows: suppose someone approaches impending league-table results with a clear grasp of how very acutely these results will affect him. That background defines particular outcomes as zero-sum failure or triumph, a simple brutal fact either way: *dashed* vs. *redeemed*. Hearing the fateful number jolts and discomposes him in a sharply valenced way ("NO!!" or "YES !!" as the case may be). But this primal visceral surge of disappointment (or of joyful release) can be followed, even while he still palpitates with it, by modulating reflections of a higher order. These might be mollifying rationalisations or further, more sophisticated insights into the misfortune at hand, which could show it in a further, perhaps newly frame-wrenching light ("And *dashed* there, too!!"). Thus, there is plenty of room for emotion that emerges through processes of primal reaction and reflective adjustment to evolve and acquire layering and complexity (as well as fresh bursts of primal force along the way). And it is because unfolding emotional responses can ramify in this way that,

If we really want to understand emotions in all their uniqueness and individuality, if we want to follow the progress of an emotion process as it unfolds, if we want to understand how the different elements of the process feed into one another and interact, and how the streams of emotional life blend and flow into one another, then we would do better to stay away from the generalizations of philosophers and psychologists, and turn instead to the detailed studies of emotion that we find in great literature. (Robinson 2005, p. 99)

There is no doubt that many emotions do involve this cognitive catalysing of sharp initial, physically saturated reactions. And overt bodily arousal is indeed *sufficient* to mark off an emotional response from a dispassionate appraisal. Many individuated reactions may first present in such inchoate arousals: "The sight of the empty hole made his heart leap violently, but the belief that his gold was gone could not come at once – only terror, and the eager effort to put an end to terror."<sup>13</sup> But is being thus thrown into *physical* disequilibrium *necessary* to a response that is genuinely emotional and of an individuated kind? The doubts about this are the old ones: there are notable kinds of emotion, such as serenity, that are precisely *not* wrenching. And in any case, many kinds of emotion that *can* wrench us need not and do not always do so. Bitterness or

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<sup>13</sup> Eliot 1996, p. 43.

misery can be quiet. Felt bodily arousal need not enter into the experience of bitterness or of misery. I could feel these, even acutely, as I am mindful of my bleak lot or of its undeserved background, but without being convulsed by them. Anguish, as well as joy, can be quiet. What *is* true is that I could not be subject to these feelings in any abiding way unless I was *disposed* to physically aroused outbursts of them under circumstances that brought things to a head. Eruptions *do* belong to the dispositional complex of these emotions but not to every experience of them. It is not eruptions per se but susceptibility to them that having these emotions downright entails. The assumption that bodily upheaval is the only form that emotional affection can take seems unwarranted.

The importance of this fact becomes clear in Robinson's discussion of art. One example will have to suffice. In her excellent discussion of how emotional involvement is crucial to understanding works of art,<sup>14</sup> Robinson points to the role of compassion in understanding *Anna Karenina*, in particular the scene of Anna's visit to her son, whom she has abandoned to elope with Vronsky. Robinson quotes from Blum on compassion to bring out what comprehending this scene involves. According to Blum,

One must be able to reconstruct imaginatively what the other person is undergoing. This involves not only imaginatively taking the other person's viewpoint, and involving oneself in the other person's vision of the world, but also having care and concern for that person as a fellow human being.<sup>15</sup>

There must be an "active regard" for the good of that person, which, since actual assistance is ruled out in the case of fiction, must take the form of "hope and desire for the relief of the condition by those in a position to provide it" (Robinson 2004, p. 110). Quite so, but let us now ask what having care and concern for a person as a fellow human being, "as if they were one's own", involves? Clearly one must bring more to the scene than empathy of a prurient or of the clinically probing kind. One must both imagine what she feels and feel for her. Feeling the pity of her plight, however, does not require any reference to one's physiology; nor does it require any actual physiological upheaval (even though, again, a *vulnerability* to this may be involved). It is just not true that I must sob or weep, or even exclaim, to grasp and regret the piteousness of Anna's stolen visit to her son or to regret her plight. (It is clearer in the case of Jane Austen than in that of Tolstoy that one can be awakened and instructed emotionally quite without heavy breathing.) To be sure, somatic markers of pity and sadness doubtlessly are measurable at some level even in the sensitive but dry-eyed reader; but these no more *are* the reader's compassionate grasp of Anna's plight than the neural realization of mathematical thoughts are the contents of these thoughts. In real life, empathy with suffering is indeed apt to be physically affecting, especially at its outset. But, again, this isn't necessary: a concerned friend or a therapist may remain calm whilst empathetic

<sup>14</sup> Robinson 2005, ch. 4

<sup>15</sup> Quoted in Robinson 2005, p. 110. See Blum 1980.

and sharply concerned. The occasion may demand just that, a steady, unheaving shoulder to lean on.

This glance at Robinson reveals two things. That a realistic picture of many emotive responses in adult humans requires the inclusion of complex non-stereotypical kinds of thought and that while emotional sensibility may be primed by “fast, dirty” precognitive appraisals, it need not be.

Both the embodied appraisal theory of emotion and the process that Robinson describes locate the seed of emotion, and even its heart, in its neurology. The attempt to understand emotions as physical processes, those that undoubtedly do sustain them, confuses the basis of a capacity with what that capacity is the capacity for. A familiar criticism of emotive cognitivists is that judgments of appraisal, even those typical of given emotions (“Well, yes, you certainly showed yourself up as a coward”) can be made dispassionately, without any emotion.<sup>16</sup> There is nothing emotional about affixing a predicate to a subject, as such. But one might similarly ask what is emotion-like about the activation of pathways in nervous tissue? After all, mathematical thought involves that. What, then, qualifies activations in the emotion implementation regions of the central nervous system as occurrences of *emotion*? Not just that they serve to mobilise the body to attend and to cope with pressing vital challenges: that happens in the coolest fencer or Formula One driver. At least one answer would be that they are such as to sustain normative attitudes and states of feeling towards impinging events of concern, especially feelings other than bodily sensations, feelings of emotion. This is not to say that feeling is all there is to emotion. However, neural processing capacities that couldn’t or didn’t tend to yield up emotional feeling could not be regarded as capacities of *emotion*. And feelings are reflected in the ways we construe what is happening (“Yuck!”, “Pathetic!”, “The horror, the horror!”, “That look!”, “Can this be me?—How alien it feels.”). No normative attitude can be articulated in purely physiological language. *Any* medium (neural or otherwise) in which feeling and normative attitudes was realised could amount to a capacity for emotion.

Where do these considerations leave our approach to emotion? I submit that we are now in a position to see three major levels on which emotion can be understood (and this might apply to other aspects of mind, such as intention, action and desire):

(1) Emotions undoubtedly arise through biological changes that determine the staging, layering, valence, and other qualities of emotional responses and our experiences of them. Experimental psychology and neuroscience are required to probe these. Although highly (and increasingly) detailed, the form of useful information science can give about these hidden somatic dramas is generic, as already suggested.

(2) There is the individuated understanding of particular emotional responses and a personalised understanding of some types of emotional response (the sadness of *that*

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<sup>16</sup> See Robinson 2005, p. 15.

loss; the love *I* bear *her*). This cannot be registered and understood without reference to introspection and to relevant niceties of personal history and social intercourse. Recourse to reflective experience and even to the amplification of its possibilities in art seems required for this.

So, there are roles for science and for “intuitive” reflection. We might now want to ask what role, if any, is there for philosophy?

(3) It does not seem that just anything could intelligibly or sanely be felt about just anything, as suggested earlier. So there may indeed be conceptual structure to emotions (e.g., gratitude presumes certain things about the intentions behind received benevolence; hope supposes that there is a future and one in which certain things are at least possible). This gives emotions the dimension of rationality which has so transfixed cognitivists. Some emotions also have normative aspects: emotions can be unworthy or morbid, for instance, or they can be well-formed flourishings. (Jealousy is pathetic and diminishing; resentment is sometimes abject, sometimes not.) Furthermore, there can be complexities to emotions that involve both conceptual and normative factors. These features of emotion, the conceptual, the normative, and their entwinings, have a certain generality. However this is not the generality of science, for it must, like common understanding and art, draw in part on what our experience of emotions is like. It is left to philosophy to undertake this.

Knowing lots of things about emotions is not always the same as understanding them. And the second and third of the above three ways of understanding them require reference to the felt and intentional aspects of emotion. Let the following sample (from Bernard Williams’ *Shame and Necessity*) stand as a reminder that the language in which emotions are best understood is not always the language of science:

Shame looks to what I am... Even where it is certainly concerned with an action, it may be a matter of discovery to the agent, and a difficult discovery, what the source of shame is, whether it is to be found in the intention, the action or an outcome... Just because shame can be obscure in this kind of way, we can fruitfully work to make it more perspicuous, and to understand how a certain action or thought stands to ourselves, to what we are and to what realistically we can want ourselves to be. If we come to understand our shame, we may also better understand our guilt. The structures of shame contain the possibility of controlling and learning from our guilt, because they give a conception of one’s ethical identity, in relation to which guilt can make sense. Shame can understand guilt, but guilt cannot understand itself. (Williams 1993, p. 93)

Sometimes the proper study of emotion will indeed move outside the frame of our actual experience of emotions to supplement the voice of emotion itself, as emotion science does, but it can never hope to replace that.

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