

The Experience of Emotion: An Intentionalist Theory

The experience of emotion is a fundamental part of human consciousness. Think, for example, of how different our conscious lives would be without such experiences as joy, anger, fear, disgust, pity, anxiety, and embarrassment. It is uncontroversial that these experiences typically have an intentional content. Anger, for example, is normally directed at someone or something. One may feel angry at one's stock broker for providing bad advice or angry with the cleaning lady for dropping the vase. But it is not uncontroversial that emotional experiences are *always* intentional. John Searle, for example, remarks, "Many conscious states are not Intentional, e.g., a sudden sense of elation . . ." (1983, p. 2). Moreover, many animals experience emotions and it is natural to suppose that such emotions lack the sophistication of beliefs or thoughts. When a dog experiences delight in seeing its master after an absence of several days, the suggestion that at least part of the dog's experience of delight is a belief (or thought) that its master has returned home seems to import into the experience something that at best is associated with it and perhaps is not really a state to which the dog is subject at all. And even in the case of human beings, emotional experience often does not seem to involve thought. Consider the experience of disgust, to take one obvious example.¹ Nor is a salient belief required. One may have a strong fear of spiders and yet not believe that spiders typically pose any risk to humans. But if emotional experiences need not involve beliefs or thoughts, then just how are they intentional?²

Recent theories of consciousness have not devoted as much attention to the case of emotional experiences as they have to the cases of perceptual experiences and bodily sensations. This is understandable insofar as consciousness is a singularly perplexing topic and it behooves us to try to get as clear as possible about the less problematic cases before taking up the more challenging ones. However, the need for a further account of emotional experiences is especially pressing for representationalist or intentionalist

1. For the opposing view, see Solomon 1980, Neu 2000, Nussbaum 2001.

2. One general answer to this question is that emotions are really feelings and feelings can be intentional without thereby becoming beliefs or judgements. See here Goldie 2000. The decoupling of intentionality from cognitive states such as belief is something that is insisted upon in the theory that follows as is the contention that there is an important connection between emotions and feelings.

theories of phenomenal character (Byrne 2001; Dretske 1995; Jackson 2002; Lycan 1996; Tye 1995, 2000). These theories have been articulated in detail for sensory experiences; but it has not been made fully clear how the phenomenal 'feel' of emotional experiences is to be handled.³ The aim of the present paper is to make some progress towards filling this gap.

My focus is on what are sometimes called "primary emotions". These are emotions that are universally felt, emotions liability to which is inherited. Such emotions are usually divided into the following types: anger, fear, happiness, sadness and disgust. My discussion is made up of five sections. Section I addresses the account of emotions proposed by William James. This account is rejected, but it is seen to contain an important insight into emotional experience which can be put to use by the intentionalist about consciousness. Section II presents the basic outlines of an account of the 'outward directedness' of emotions. Section III sketches an account of pain and explains how pain can be viewed as an emotional experience. Section IV presents the overall intentionalist theory for primary emotional experiences and their phenomenal character; the theory is defended against a number of objections and some brief remarks are made concerning the extension of the theory to secondary emotions. The final section is devoted to showing how the theory on offer can handle the case of endogenous felt emotions and further how the so-called "transparency of experience" applies not just to sensory experiences but also to emotional experiences.

I

According to William James (1884, 1890), emotions are perceptions of bodily changes. He comments:

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 that we have nothing left behind. . . . (1890)

3. There is a very brief discussion of emotional experiences in Tye 1995, Chapter 4.

James continues:

What kind of emotion of fear would be left if the feeling neither of quickened heart beats nor of shallow breathing, neither of trembling lips nor of weakened limbs, neither of goose flesh nor of visceral stirrings, were present, it is quite impossible for me to think. Can one fancy the state of rage and picture no ebullition in the chest, no flushing of the face, no dilatation of the nostrils, no clenching of the teeth, no impulse to vigorous action, but in their stead limp muscles, calm breathing, and a placid face? (1890)

There seems much that is right in these remarks. Suppose you suddenly feel *extremely* angry. As you do so, your body changes in the sorts of ways James notes as well as in others (for example, your arteries constrict and your blood pressure rises, your heart pounds, your voice becomes louder). These physical changes are registered in the sensory receptors distributed throughout your body. Via the activity in these receptors, you sense the bodily changes that are taking place. Intuitively, in feeling anger, you are sensing these changes.

James' theory goes beyond this, however. According to James, the experience of anger *just is* the perception of the relevant bodily changes. And here there is a difficulty, first raised by William Cannon (1929). For surely, on at least some occasions, there is very little difference in the bodily reactions associated with different emotions. Take the following case, for example. I have what I think is the winning lottery ticket, as I see the string of winning numbers for the lottery appear on the television screen before me. In my excitement, I misread the eighth number in the string; and a moment or two later, as I look at the screen again, I realize my error. I experience immediate anguish. I am subject to two different emotional experiences, but my state of bodily arousal immediately after I realize my error is similar to my state before. Alternatively, suppose I am on a roller coaster ride and I am scared stiff. A day later, I am experiencing great anger, as I see a man across the street beating a dog with a baseball bat. My internal bodily states in both cases are very much alike but again the emotions experienced are different.

The point that different emotional experiences can involve the perception of similar bodily changes is supported by experiments in psychology, the most famous of which was performed by Stanley Schacter and Jerome Singer (1962). In this experiment, subjects were injected with the stimulant, epinephrine. They were then placed in different settings. Some of the subjects were put in a room with a confederate who acted out anger; others were sent off to a room with a confederate who played the part of someone euphoric and amusing. The subjects reported experiencing emotions mimicking those of the confederate.

These points do not refute James' theory. More recent research (LeDoux 1996) has shown that where different primary emotions are experienced, the bodily states perceived or felt, although importantly alike at a coarse grained level, nonetheless vary along a number of underlying physical dimensions. Still, there remains a serious objection. Emotional experiences are typically directed on things in the world outside the body. This is evident not just in from the ways in which we normally describe such experiences but also from their phenomenology. Perceptions of bodily changes, however, are directed inwards. It seems, then, that there is more to an emotional experience than the perception of an appropriate set of bodily changes. Even so, James had an important insight: for primary emotions at least, the experience of the emotion *partly* involves a feeling or perception of changes in the body.

II

Emotions, as I noted in the introduction, are typically directed at things or persons. This is true not only of human emotions but also of those experienced by creatures belonging to other species. A dog with the hair on its neck standing upright, a dog that growls at you and bares its teeth as you walk into its territory, is a dog of which you should be very wary; for such a dog is angry and its anger is directed at you. The dog has detected your presence -- it has seen you -- and this perception has triggered in the dog a state of bodily arousal which it is feeling.

But why should your presence make the dog angry? After all, if the owner of the dog had been there in your place, the dog would have been subject to a very different emotion. Intuitively, the dog senses the *invasiveness* of your behavior.⁴ You have the look of an intruder to the dog. It is via this perception of you that the dog's anger gets to be directed *at* you.

Here is another example. Suppose you are in a dark parking lot, late at night, walking towards your car. You hear someone (or something) moving behind you. Suddenly you feel very scared. In these circumstances, your body changes both internally and externally. For example, your face goes white, your stomach churns, your heart rate speeds up, your legs go weak. These changes are ones you sense; but why do they occur? What causes them? The obvious answer is: your auditory perception of the person (or thing) behind you. That person (or thing) sounds threatening. You are thereby fearful of whomever (or whatever) it is that sounds that way. Your experience of fear gets to be directed on an entity outside you by means of a sensory experience of that entity, an experience that represents the entity as threatening or dangerous.

One straightforward proposal, then, is that primary emotional experiences acquire their (typical) outward directedness via the corresponding directedness of a perceptual experience. This proposal, in my view, is ultimately unsatisfactory, but it can be developed in such a way that it covers a surprisingly large number of cases and it will play a role in the theory to be presented later. So, let us consider it further.

To begin with, it is important that the term 'perceptual experience', as it is used in the above proposal, be understood broadly to include not just experiences produced by the use of sensory receptors but also experiences of the same general phenomenal type as the experiences so produced. In particular, experiences of a sort undergone in mental imagery should be included. Suppose, for example, I am reading a medical book and I come across an article warning of the risks of eating uncooked fish. I suddenly remem-

4. Cp. Deigh forthcoming.

ber the large quantity of sushi I ate last night and I feel a twinge of fear. Here, I have a phenomenal memory image of uncooked fish -- an image similar in character to the perceptual experiences I underwent as I ate the sushi. This memory image is influenced by my current conceptual activity.⁵ In particular, it is impacted by the thoughts, produced by reading the article, of the bad effects of eating uncooked fish. So, my image is not value-neutral: it represents the sushi I ate as dangerous. Thereby my experience of fear is directed on sushi and its effects.

In the example just described, the mental image is a memory image. But this need not always be the case. Suppose I am flying over the Atlantic in the Concorde. I am queasy about flying and I cannot help but form a visual image of the plane crashing at great speed into the ocean. Doing so alarms me greatly and I feel a wave of fear which subsides as the image passes. The image in this instance is not a memory image, but it is a perceptual experience in my terms, and it anchors my experience of fear.

Images relevant to primary emotional experiences need not be restricted to a single sense modality. Furthermore, they can sometimes be kinesthetic, as when I imagine myself locked in combat with an intruder to my home. Finally, they need not have real objects. The happiness a potential Nobel Prize winner experiences as he images himself receiving the Nobel Prize, is happiness directed at the object of his image, namely the event of his being the winner, and that event may never actually occur.

Still, even on the above broad understanding of perceptual experience, the proposal that emotional experiences get to be directed on things via perceptual experiences of those things faces difficulty. Suppose, for example, that in the sushi case just presented, I form no mental images at all. Even so, I may experience fear upon reading the article. Alternatively, suppose that a graduate student in philosophy is reading through a journal and encounters an essay with the same title as the thesis which he has just com-

5. Evidence for the influence of thought on the generation of mental images is presented in Kosslyn 1980. See also Tye 1993.

pleted. He suddenly feels fear that he has been scooped. Again, no mental image need be present.

One response to this difficulty is to maintain that, in both of these cases, a relevant perceptual experience *is* present. This needs a little explanation. Consider my seeing that the gas tank is nearly empty by seeing the gas gauge or my seeing that the door has been forced by seeing the marks on the door. I do not see the gas tank nor do I see the forcing of the door. My seeing-that is secondary or displaced. I am not aware -- I am not conscious -- of either the gas tank or the forcing of the door. I am aware of something else -- the gas gauge or the marks on the door -- and by being aware of this other thing, I am aware that (judge that) so-and-so is the case. Secondary seeing-that, or more generally, secondary perceiving-that, is a partly experiential state; for it is part and parcel of such a state that something is perceived.

Corresponding to secondary seeing-that, there is what we might call "secondary appearing-that". Suppose, for example, the gas gauge is broken. I see the gauge and by doing so it appears to me that the tank is empty, but in reality it is not. Secondary appearing-that allows error to intrude in a way that secondary seeing-that does not. Consider now the modified sushi example. In this case, I see the article I am reading, and it appears to me (in the secondary sense) that eating sushi is dangerous. In the case of the graduate student who sees the essay title, it appears to him (again in the secondary sense) that his thesis is threatened. In both cases, then, the emotional experience gets to be directed on something outside via a perceptual state.

In these cases, however, the emotional experience is directed upon something that the perceptual experience proper (that is, the part of the secondary perception that is distinctively perceptual) is not. In the case of the graduate student, for example, the perceptual experience proper is directed on the essay title but the experience of fear is directed on his thesis. So, the directedness of the emotional experience is achieved not by the perceptual experience itself but by the directedness of the judgement that is a component of the secondary perceptual state.

This conclusion is reinforced by other cases in which not even secondary perceptual states are present. Suppose I am in a sensory deprivation tank and I suddenly realize that I am missing today's rescheduled department meeting. I experience a moment's happiness. In this instance, it seems to me, there is no perceptual experience. Or suppose instead the thought pops into my head that the medical test my mother is having tomorrow will reveal some terrible internal growth and I experience fear for her well-being. In this case, there need be no judgement or belief at all -- the thought is not endorsed by me but rejected as silly -- and so no secondary perceptual state. Of course, one possible response is to insist that images of one sort or another *must* be present and that it is via such images my experience of happiness or fear gets to be directed on the relevant external event. But what if there is no image? Take the sensory deprivation case: even without any images, I might still feel happiness; and here it seems that it is via non-perceptual thought about the meeting that my emotion is directed upon it.

The conclusion I draw is that primary emotional experiences are directed on things in two ways: *either* via perceptual experiences about those things *or* via thoughts about them. The relevant thoughts may be part and parcel of perceptual experiences, construed broadly, but they need not be. As just noted, these thoughts need not be ones that are endorsed in belief. They may simply be thoughts their subjects entertain without definitely accepting as true. Not just any old thought or perceptual experience or thought will do, however.⁶ Where a primary emotion is felt, the perceptual experience or thought must represent the item on which it is directed in one of a range of distinctive ways. I shall say some more on the relevant ways later. For now, it suffices to note that, for some emotional experiences, the relevant way is negative — as with anger and fear. In this respect (and others), these emotional experiences are importantly like the experience of pain. It is to a discussion of pain that I turn next.

6. The question of what counts as a perceptual experience is taken up in Section IV.

III

The *International Association for the Study of Pain* defines pain as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage" (in the journal, *Pain*, 1986). This definition locates pain at least partly in the realm of emotions.

The view that pain has distinct sensory and affective/emotional components, subserved by different neural mechanisms, was first proposed by Melzack and Casey in 1968, and in the thirty or so years since then it has been shown to be well motivated by both a wealth of clinical data and neuroscientific evidence.⁷

Normally, in a pain experience, both components are present. But in some cases, the affective component is missing. For example, people who undergo prefrontal leukotomies (operations that sever the neural connections in the deep white matter in the frontal lobes) as a last resort for their intractable, constant, severe pain are typically cheerful and relaxed afterwards. They report still having pains, but they no longer *mind* them.

Similar reports come from people suffering pain who are under hypnotic suggestion or nitrous oxide. Such cases of "reactive disassociation", as Dennett (1978) calls them, are ones in which the distinctive sensory dimension of pain is present but the aversive component is gone. Is pain itself still present? It seems so. The patients *say* that they continue to feel pain. I see no reason not to take these reports at face value. What they show, I suggest, is that pain is not *essentially* an aversive experience.

Pain is essentially a sensory experience, however. Whatever else pain is, at its core, it is a bodily sensation. Take away the characteristic sensory component, and no pain remains. Certain abnormal unpleasant experiences, for example, dysaesthesia, lack any sensory component, and they are not classified by their subjects as pains. Other un-

7. For useful summaries here, see Melzack and Wall 1983, Price, 1999, 2000.

pleasant experiences, for example, an irritating itch, are sensory, but they aren't pains since the *distinctive* sensory content of pain is missing.

In any event, a *typical* pain experience has both a sensory and an affective dimension. Consider first the sensory side of pain. I have argued elsewhere (Tye2003) that pains are experiences that represent tissue damage in bodily parts. Phantom limb pains are experiences whose subjects hallucinate the relevant bodily parts. The case of phantom limb pain is thus one of experiential misrepresentation. Similarly, with referred pain. One can feel a pain in the left arm, when there is nothing wrong with the arm, the cause of the experience being a disturbance in the heart. Such a pain intuitively is inaccurate or misleading; for without additional information, on the basis of the pain, one would be disposed to nurse the arm, to rub it, to believe that something is awry in the arm itself. The obvious explanation again is that there is experiential misrepresentation. Here the bodily part exists, but the case is one in which the subject is under an illusion. Her experience represents (in part) that there is tissue damage at a certain bodily location, when in reality the damage is elsewhere in the body.

Pains typically differ with respect to the species of tissue damage represented. As I noted in my 1995, a twinge of pain represents a mild, brief case of damage. A throbbing pain represents a rapidly pulsing disorder. Aches represent regions of damage inside the body rather than on the surface. These regions are represented as having volume, as gradually beginning and ending, as increasing in severity, as slowly fading away.⁸ The volumes so represented are not represented as precise or sharply bounded. This is why aches are not felt to have precise locations, unlike pricking pains, for example. A stabbing pain is one that represents sudden damage over a particular well-defined bodily region. This region is represented as having volume (rather than being two-dimensional), as being the shape of something sharp-edged and pointed (like that of a

8. Cp. Armstrong 1962.

dagger).⁹ In the case of a pricking pain, the relevant damage is represented as having a sudden beginning and ending on the surface or just below, and as covering a very tiny area. A racking pain is one that represents that the damage involves the stretching of internal body parts (e.g., muscles).

Consider next the affective dimension of pain. Pain is normally very unpleasant. People in pain try to get rid of it or to diminish it. Why? The answer surely is because pain *feels* unpleasant or bad, because it is *experienced* as such. But what exactly is experienced as unpleasant? One's attention, when one feels pain, goes to a place different from the one in which the experience of pain is located. The qualities that are experienced as unpleasant are located in the bodily location to which one attends (in normal circumstances). People whose pains lack the affective dimension undergo purely sensory, non-evaluative representations of tissue damage of one sort or another in a localized bodily region. Those whose pains are normal experience the same qualities, but now those qualities are experienced by them as unpleasant. It is precisely *because* the qualities are experienced as unpleasant or bad that people have the cognitive reactions to them they do, reactions such as desiring to stop the pain.

To experience tissue damage as bad is to undergo an experience which represents that damage as bad. Accordingly, in my view, the affective dimension of pain is as much a part of the representational content of pain as the sensory dimension is.

The representational content of pain, in my view, is nonconceptual. Admittedly, my talk above of the unpleasantness of pain, of its experienced badness may sound cognitive. But I do not intend it to be understood in this way. It seems to me that the most plausible view is that we are hard-wired to experience pain as bad for us from an extremely early age.

Consider the other side of the coin for a moment. A child as young as two months, upon tasting a little chocolate, typically behaves in a way that signifies that he/she wants

⁹I am not suggesting here that one cannot have a stabbing pain unless one has the concept of a dagger.

more. The child will open and close its lips, push forward towards the chocolate, look happy. Why? The answer is that the chocolate tastes good. *That's* why the child wants more. The child's gustatory experience represents a certain taste and the child experiences that taste as good. The taste is experienced as good by the child in that the child undergoes an overall experience which represents the presence of the taste in the mouth and represents it as good.

Intuitively, this is not a cognitive experience. It does not require concepts. For another example, consider orgasm. Orgasm is a bodily sensation, but it is not only that. The most natural description of an orgasm, and indeed of any pleasant experience is "It feels good." One's orgasm represents a certain change in the region of the genitals as good for one, as something apt to benefit, not to harm one.¹⁰ That isn't a conceptual response. One cannot help but feel the relevant bodily disturbance except as good. One is hard-wired by nature to experience it in this way. It is not difficult to fathom why.

It is not just the affective dimension of pain that does not require concepts. Intuitively, one does not need concepts to have a pain, period. Given the right stimulus, one feels pain, whatever concepts one has in one's repertoire. This is not to say that one's cognitive assessment of a situation can never influence or affect one's experience of pain. Obviously, it can. The point is simply that the basic experience of pain requires no cognitive sophistication. Humans are hard-wired to experience pain when they undergo tissue damage, whatever they think or believe.

On the above account, pains are experiences having a complex, nonconceptual representational content. But intuitively, it must be admitted they are not only this. Intuitively, if I feel a pain in a leg, and I attend to *what* I am feeling, I attend to a quality that *seems* to be tokened in my leg, a quality that I strongly dislike and that, in one ordinary sense of the term 'pain', is surely pain. A theory that denies this categorically is at odds

10. The suggestion that the pleasingness of orgasms is part of their representational content is made in Tye 1995a. It is also the view taken by William Seager (forthcoming).

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with what we ordinarily believe. How can this claim be accommodated? The answer, I suggest, is to acknowledge that pain is not only a certain sort of experience but also a certain quality or type (tissue damage) insofar as that quality or type is experientially represented.¹¹

We are now ready to return to the case of primary emotional experiences.

IV

My general proposal, in a nutshell, is this: primary emotional experiences are experiences directed upon items that are typically external to the body and that represent those items 1) as having an evaluative feature (for example, as being threatening or dangerous) and 2) as causing (or, in some cases, as merely being accompanied by) a certain, broadly distributed, internal bodily disturbance. The external item *E* is initially represented by a perceptual state or a non-perceptual thought. That representation then normally triggers a bodily response *R*, which is sensed. The emotional state represents *E*, via its evaluative feature, as causing *R* (or alternatively in some cases as being accompanied by) *R*. The phenomenal 'feel' of an emotional experience is fixed by its representational content: emotional experiences that are exactly alike representationally *must* be alike phenomenally. This needs some fleshing out.

Consider first the case of your smelling someone else's vomit on the sidewalk and feeling disgust, as you do so. You remark: "Boy, that smells bad!". Here, you undergo an olfactory experience, directed on the vomit and its odor. Your experience represents the odor of the vomit as *bad*. But it does not merely represent the odor as bad. It represents the odor as bad in a certain way, namely as rotten or putrid or foul. This olfactory experience triggers in you a bodily reaction, which you sense; your experience of disgust is a further experience that represents the rotten or foul odor as causing the given negative bodily reaction.

11.Cp. Harman 1990.

Both the bodily feeling and the olfactory experience have nonconceptual representational contents.¹² One does not need the concept of rottenness or foulness in order to undergo an experience as of something rotten or foul, any more than one needs concepts of various bodily changes in order to experience those changes. This is true too of the experience of disgust. I am not suggesting here that in experiencing disgust, one's disgust cannot have a conceptual content. But insofar as such a content is present, it is due to a relevant evaluative, nonperceptual thought. Such a thought is not *required* in order to undergo the experience of disgust.

Perhaps it will be objected that it is implausible to suppose that things can smell rotten or foul to us without our conceiving of them as rotten or foul, since sensory experience of things and qualities outside comes first and then evaluations get made later by means of the cognitive, conceptual faculty. I reject this view for several reasons.

First, it has been established that there is an important connection between the amygdala-- a small, almond shaped structure, located far beneath the surfaces of the two hemispheres -- and emotional experience (Davis 1992; LeDoux 1992; Damasio 1994, 1999). The amygdala is very basic and ancient, and by way of it, the brain is wired to detect dangers both of a sort commonly encountered by our distant ancestors and of a sort we learn about as individuals today. It is also centrally implicated in the experience of anger. For example, removal of the amygdala in monkeys produces a total lack of anger and fear.

The amygdala processes information via subcortical pathways that allow for faster transmission than is found in the cerebral hemispheres (within which thought and decision-making occur). It thus permits us "to begin to respond to dangerous stimuli before we fully know what the stimulus is" (LeDoux 1996). This obviously has immediate survival value. The rat that has to take the time to form an appropriate sequence of thoughts before acting in the face of a cat about to pounce is a dead rat. Not so the rat

12. For essays on nonconceptual content, see Gunther 2003.

that is wired to feel fear automatically in response to certain large moving shapes, of which the shape of the cat is one.

Secondly, experiments on split brain patients also connect emotional experiences with primitive, subcortical regions of the brain -- regions not associated with conceptual activity. The operation of cutting the many connections of the corpus callosum between the two hemispheres was originally performed by Roger Sperry in the 1960s on some epileptic patients, with the aim of controlling epileptic seizures. This operation had a remarkable consequence. In addition to reducing greatly the number and intensity of the seizures themselves, it also produced a kind of mental bifurcation in the epileptic patients.

Here is an illustration. A subject, *S*, is told to stare fixedly at the center of a translucent screen which fills his visual field. Two words are flashed onto the screen by means of a projector located behind, one to the left of the fixation point and one to the right, e.g., the words 'pen' and 'knife'. The words are flashed very quickly (for just 1/10 of second) so that eye movements from one word to the other are not possible. This arrangement is one that ensures that the word on the left provides input only to the right hemisphere of the brain and the word on the right provides input only to the left.

S is then asked what he saw. *S* shows no awareness, in his verbal responses, of 'pen'. However, if *S* is asked to retrieve the object corresponding to the word he saw from a group of objects concealed from sight, using his left hand alone, he will pick out a pen while rejecting knives. Alternatively, if *S* is asked to point with his left hand to the object corresponding to the word he saw, he will point to a pen. Moreover, if *S* is asked to sort through the group of objects using both hands, he will pick out a pen with his left and a knife with his right. In this case, the two hands work independently with the left rejecting the knives in the group and the right rejecting the pens.

Now once the corpus callosum is cut, the two hemispheres are not wholly divorced from one another; for the subcortical pathways still link the two. And this allows for emotional experiences to be passed along intact from one hemisphere to the other. For

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example, if a pornographic picture is presented only to the right hemisphere, the subject reports feeling differently. 'That's quite a machine you've got there,' one split brain patient remarked. Since verbal responses are controlled by the left hemisphere, information about the picture is evidently getting there. In another experiment, the subject saw, with his right hemisphere only, a picture of a frightening scene of a fire. Afterwards, he commented, 'I don't really know what I saw; I think just a white flash. Maybe some trees, red trees like in the Fall. I don't know why, but I feel kind of scared. I feel jumpy. I don't like this room, or maybe it's you guys getting me nervous'. Again, what seems to have happened is that the emotion of fear triggered by the right hemisphere had an effect, via the pathways in the brainstem, on the verbal left hemisphere.¹³

In general, the basic purpose of primary emotional experiences, in my view, is to give us quick 'assessments' of the value (positive or negative) of things and their impact (positive or negative) on our bodies. We need not merely 'assessments' of where things are in order to find our way in the world but also 'assessments' of their value (understood very broadly) and their impact on us. We need to know where it would be *worthwhile* to go and what it would be *worthwhile* to do (Seager, forthcoming). So, nature wired into us (and many other creatures) value-tracking detectors — detectors that enable us to assess value in a primitive way and thereby to act in a fashion most conducive to our survival.

Here is a nonhuman example of perceptual value. Caterpillars of the gray shoulder moth reflect light maximally in the UV range. In the human visible range, they reflect a large percentage of light in the short wavelength region and more in the middle than the long. Furthermore, gray shoulder moth caterpillars are typically found on oak leaves in Northern Europe, and oak leaves reflect only minimal percentages of UV light, but a large percentage of light in the short wave length region and more in the middle than in the long. The result is that to humans, a caterpillar on an oak leaf looks to be very simi-

13. For a detailed discussion of the consciousness of split brain subjects, see Tye 2003, Chapter 5.

lar in color to its background. But, to birds, whose color vision systems are sensitive to UV light, they look very different color-wise.¹⁴ This information, in and of itself, does not tell birds whether it is a good idea to eat gray shoulder moth caterpillars. And that information is needed by hungry birds faced with such caterpillars. So, one possibility is that nature wired birds with a primitive value-assessment capability too. The caterpillars are represented as foul to eat: the caterpillars *look* bad-to-eat to the birds (in much the same way perhaps that poison dart frogs look bad-to-eat to other predators in the rain forest via their bright red markings). The result is that the birds stay away from the caterpillars.¹⁵

I should stress that I am not suggesting that in all cases in which a primary emotion is felt, the stimulus for the emotion triggers it in a preset way. Obviously, humans are not wired to respond with an emotion, even a primary one, whenever they do so — even if they are functioning normally. But it does seem likely that human beings (and many other creatures) are wired to respond to *certain* stimuli with an emotion. For example, as we sense a heart attack, we automatically experience fear¹⁶; as we hear a loud, growling sound, we respond similarly. A male mountain goat, faced with a competitor for a mate, automatically responds with a display of anger. A baby chick in a nest, seeing a large wing span flying overhead (of a sort found in eagles) hides its head in alarm (Damasio 1994, p. 132). The chick here need not conceptualize the shape as that of an eagle. It need not recognize the thing overhead *as* an eagle. Information provided by the early sensory cortices about shape and motion is passed to the amygdala and an emotional response generated quickly without the intervention of thought.

14. For more on the color vision of birds and on the nature of color, see Bradley and Tye 2002.

15. I am not suggesting that the birds need experience any emotion in such a case. Evaluative perceptions (and thoughts) can certainly occur without emotions. A carpenter, for example, may visually experience a joint as a good fit — it may *look* to be a good fit to him — without his experiencing any emotion.

16. Note that this case is atypical in that the emotion of fear is directed inwards to the heart.

I should also note that in saying that emotional experiences involve representations of value, I do not mean *moral* value. In the case of the feeling of disgust at the vomit on the sidewalk, the experience represents the vomit and its odor as having a kind of negative value, as being foul. Patently, this value is not moral. Similarly, the experience of fear represents the feared object as having another kind of negative value, as being threatening or dangerous. For the experience of anger, the relevant value is that of being invasive or injurious. In the case of the experiences of happiness and sadness, the values are very general positive and negative ones, species of which have just been adumbrated for anger, fear, and disgust.¹⁷

These values, I claim, are represented to us in our basic perceptual experience of the world. Things look red and square; they sound loud; they taste sweet and sour. But they also look dangerous or encroaching; they smell foul; they look good or they taste bad. These evaluative qualities are as directly given to us in our perceptual experiences as are such qualities as colors and shapes.

This may seem strange, especially to those who think of sense experience on the model of the British Empiricists as involving the sensing of sense data. But, as already noted, the proposal I am making fits well with the ways we ordinarily think and speak about experience. In everyday life, we say things like "That feels good; that smells bad; that looks harmful; that sounds threatening. "There is, I suggest, no good reason not to take this talk at face value.

Of course, in some cases we come to learn through trial and error that certain things possess positive or negative values. We learn, for example, that certain things are dangerous which did not previously look dangerous. Subsequently, we come to see them *as* dangerous. In so doing, we subsume them under the concept *dangerous*. And thoughts that things are dangerous may take the place of perceptual experiences in generating

17. In Tye 1995, I did not make clearly this connection between value and the emotions. But see Tye 2003, chapter 3. See also Seager forthcoming.

experiences of fear, as when, for example, out of the blue I suddenly fear that someone I love many miles away from me is in danger.

In presenting my view of emotional experiences, I have said that for each emotional experience, there is a perceptual experience (or a thought) typically directed on something external and a bodily sensation or feeling. What the emotional experience does is to bring together the content of the former and the content of the latter. In many cases, the link is achieved causally within the overall content of the emotional experience. To the subject, it *seems* that the external event is causing the internal, bodily change. Typically, things will be as represented: the former will indeed cause the latter. But error is possible. There is no obvious reason to deny that suitably stimulated brains in vats can experience fear or anger, even though there is no accompanying body; and in more mundane cases, emotional experiences can be wrongly directed, as when, for example, my anger is displaced upon something other than its real cause.

Perhaps it will be replied that in the case of animal emotions, the above causal proposal is too sophisticated. Surely, it does not *seem* to a baby chick in a nest, say, that the eagle shape above is causing its heart to pound quickly, its blood pressure to rise, and so on. One response to this point is to note that the representation in such a case is non-conceptual through and through. So, on my proposal, it is no more necessary that the chick, in experiencing fear, as it sees the eagle, conceive of the shape as causing its bodily reaction than it is for the chick to conceive of the bodily reaction as involving increased heart rate and blood pressure. Still, even granting this, it may well be right to say that in the case of a creature as simple as a chick, the experience of fear represents the external shape along with the internal change without drawing a causal link between the two. In this way, fear for such a creature is different from fear, as we usually experience it. For me, as I view a very large drunken Scotsman running towards me with fists clenched, I experience an immediate bodily reaction to the sight of him. It is part of the phenomenology of my experience of fear that the sudden trembling in my legs, the pal-

pitations of my heart, and so on are *brought about by* his threatening behavior. Not so arguably for the chick and the eagle shape.

I want now to say something in connection with the suggestion that emotional experiences are (at least in part) about emotions. If one feels angry, it is anger that one feels. Anger is an experience. But anger intuitively is also what one experiences. If I am angry at someone I see, I undergo an experience that represents aspects of my own bodily state and also an evaluative feature of the person against whom my anger is directed, along with a causal connection between the two. My experience thus represents a causal complex of internal and external properties. Furthermore, experiences that represent an appropriately similar complex of properties are experiences of anger. This complex, insofar as it is experientially represented, *is* anger, I maintain. Terms for emotions in ordinary language thus do double duty: sometimes they pick out experiences; at other times, they denote complex entities in the contents of experiences. Indeed, terms for emotions do more than double duty; for upon occasion we allow that emotional states to exist at times at which there is no experience of them, as, for example, when I report that Cecily is a happy child. In this respect, emotions are unlike pains. Emotions, understood in this way, are dispositions or tendencies to undergo emotional experiences. I shall return to this point in Section V.

Emotional experiences are also states of a sort that can be rationally justified (Taylor 1975). For example, upon seeing that the teacher at a kindergarten school has made several children stand with their noses touching chalk circles on a blackboard, I feel anger; and in the given circumstances my feeling of anger directed at this person is justified. How, on the proposed theory is this to be accounted for?

Part of the reply is to note that I have not denied that emotional experiences sometimes have conceptual contents in addition to their nonconceptual contents. Thus, in the above case, I may feel angry *that* the teacher has handed out an inappropriate punishment, and here there is a conceptual content which attaches to my state. Another part of the reply is to insist that justification comes in more than one form. To be sure,

justification often consists in giving propositional reasons for something. Justification of this sort requires premises and conclusions and these, in turn, demand conceptual contents — contents of a sort that can be asserted and denied. However, on other occasions, justification consists in evidential warrant, construed as a reliable basis for the justified state. For example, an object's looking red to me justifies my belief that it is red, assuming that I am a normal perceiver in normal conditions, since in these circumstances my belief is produced by a reliable mechanism that takes the look of the object as input and delivers as output the given belief. Here the evidential relation is a basing relation of an externalist sort.

Corresponding justifications are often available for emotional experiences. For example, suppose a loud, growling noise is heard. That noise provides the input to a reliable process that generates a perceptual experience directed at the creature making the noise — an experience of the creature as dangerous. That experience, in turn, triggers a bodily response, which is sensed, and on the basis of the perceptual and bodily experiences, an overarching experience of fear is generated via a further reliable process.

Emotional experiences, of course, do not always involve primary emotions. Often we are subject to emotional experiences of a secondary character, experiences that are different variations of the five primary emotional experiences (anger, fear, happiness, sadness, and disgust). For example, as Damasio (1994) notes, "euphoria and ecstasy are variations of happiness; melancholy and wistfulness are variations of sadness; panic and shyness are variations of fear" (p. 149). These emotional experiences can be accommodated quite naturally within the proposal I have made for primary emotions. For each such experience, it seems plausible to suppose that there is a characteristic bodily feeling that represents a distinctive variation on the bodily profile or landscape represented by the primary emotional experience under which the given secondary emotional experience falls. Further, as the second factor in place of the nonconceptual, perceptual experience of something external, there is a salient evaluative thought. In many cases, this thought will exercise a moral concept. For example, it is hard to see how a person

could feel guilt or embarrassment without having (and exercising) such concepts as right and wrong or social propriety. This not to imply that the relevant thought need be *endorsed* by the subject. For example, one may experience phobic guilt without believing that one is guilty. In such a case the *thought* that one has done something wrong is present even though the *belief* is not.

My suggestion, then, is that in the case of a secondary emotional experience, the experience has a complex content, part of which is nonconceptual and part conceptual, with a causal nexus (in typical cases). The evaluative part of the overall content is conceptual. It gets on stage, as it were, via a thought. In the case of primary emotional experiences, the evaluative part of the content can be (and typically is) nonconceptual. From this perspective, the real essence of the distinction between primary and secondary emotions, is as follows: for primary emotions, the evaluative component of the content can be presented nonconceptually. For secondary emotions, a conceptual, evaluative, content component is essential.

It should be obvious that the account developed above of primary emotional experience is one that the intentionalist about phenomenal character can exploit. Intentionalism about consciousness in its most fundamental form (weak intentionalism, as it is sometimes called) is a supervenience thesis: necessarily, experiences that are alike in their representational contents are alike in their phenomenal character. This thesis is fully compatible with the proposal I am making for emotional experiences. Strong intentionalism about consciousness goes further. It identifies phenomenal samenesses and differences with intentional samenesses and differences of an appropriate sort. Intentionalists do not agree on just which the relevant intentional samenesses and differences are. But again it is easy to see how the account on offer allows for a form of strong intentionalism with respect to phenomenal character.

On my own version of strong intentionalism, the phenomenal character of an emotional experience is inherited from the 'feel' of its underlying bodily experience and from the further 'feel' of its underlying perceptual experience (if it has one), along with, in

typical cases, the 'feel' of the relevant external-internal causal connection. More specifically, phenomenal samenesses and differences among the primary emotional experiences are identified with samenesses and differences in their overall poised, abstract, nonconceptual, representational contents.¹⁸ This is certainly not the only way, of course, that strong intentionalism about phenomenal character can be reconciled with the claims of this section. But it is a straightforward reconciliation, and one that falls directly out of the proposals I have made elsewhere about the general nature of phenomenal consciousness (Tye 1995, 2000).

V

Sometimes, we just feel happy. Our happiness does not seem to be directed on anything in particular. To take another example, Californian car drivers are notable for experiencing road rage. This is anger that is not directed against any one particular car driver. It is anger of a more general sort. And some people are just angry people. They feel angry and act aggressively without their anger having any definite focus. *Prima facie*, these emotional experiences are incompatible with intentional theories of experience. Endogenous emotions, according to some philosophers, are not intentional at all.

This is too hasty. Consider first the case of road rage. It is natural to think of this as a dispositional state, namely the disposition to experience anger at other drivers who drive too close or who block one's way. Each actual, token experience of anger in such a case is directed on one (or several) other driver(s). Accordingly, these experiences of anger fit the model proposed in Section IV: there is a perceptual experience of another driver's behavior as being invasive or detrimental; there is a bodily experience of certain internal changes (increased heart rate, tense muscles, higher blood pressure, etc) and an

18. For definitions of 'abstract' and 'poised' in this context, see Tye 1995. The case of the phenomenal character of secondary emotional experiences is more complicated. It deserves separate discussion and treatment.

emotional experience as of the other driver's invasive or adverse behavior being responsible for the bodily changes.

What of entirely generalized anger, for example of the sort exemplified by the lead character in John Osborne's play *Look Back in Anger*? Again, the obvious way to treat this is dispositionally. The man who is angry generally is disposed to experience anger at times when anger is not called for. His experience in each such instance is directed at someone or something. But from instance to instance the object changes. Moreover, the object of each token experience of anger need not be a person or a thing that he is perceiving with his senses. It could be the object of a mental image or a thought. Either way, no difficulty for the view on offer.

Perhaps it will be insisted that this proposal will not handle *all* cases of endogenous emotion. Consider again the example of John Searle's mentioned at the beginning of the paper of a sudden sense of elation. Suppose I have just taken a drug and I am experiencing elation. My experience need not be directed on any particular object or person.

It seems to me that one natural reply is that the experience of endogenous elation is directed on the world generally. The subject thinks that the world is a wonderful place (or something similar); the subject also experiences a certain characteristic bodily state (one that the subject wants to continue); and the contents of both the bodily experience and the thought enter into the overall content of the experience of elation. It does not seem to part of endogenous elation, however, that the subject experience the world as *causing* his or her bodily state. Such a proposal would introduce massive error into the experience of endogenous elation; for the world as a whole patently does not cause the internal changes. In lacking a causal tie in the content, the experience seems different from, say, the elation felt by a young academic who has just heard that he has gotten a paper accepted by a major journal. In this case, it surely does *feel* to the academic that the wonderful news is the source of the glow in his cheeks, the quickening of his step, the smile on his lips, etc.

An alternative way of handling the case of endogenous elation is to say that the source of our inclination to suppose that there is no intentional object in cases such as this derives from the fact that the object that is the focus of the experience varies through time. So, it might be held that, as I experience elation, initially my experience is directed on the blueness of the sky, say; a moment later, my continuing experience of elation is directed on melodious sounds of music; after that, my attention is grabbed by a spider and I experience elation at the wonderful pattern of the spider web; and so on. Perhaps at some moments, my experience is directed on the whole scene before my eyes rather than some particular thing in the scene (or the whole field of sound, for example). On this view, as my experience of elation continues, its object changes. But even though there is no single object, each object is represented in the same way — as wonderful.

Both suggestions fit nicely with the following remarks by Robert Benchley (from his essay entitled "The Tooth, the Whole Tooth, and Nothing But the Tooth") about the general elation felt by one who has just survived his time in the dentist's chair in the 1920s¹⁹:

Heigh-ho! Here's the elevator man! A charming fellow! You wonder if he knows that you have just had a tooth filled. You feel tempted to tell him and slap him on the back. You feel tempted to tell everyone in the bright, cheery street. And what a wonderful street it is too! All full of nice, black snow and water. After all, Life is sweet! (1921, p. 83)

I come finally to the issue of transparency and emotional experience. The thesis that perceptual experience is transparent is quite widely accepted.²⁰ Here is one way of illustrating the thesis of transparency for the perceptual case. Suppose you are standing before a tapestry in an art gallery. As you take in the rich and varied colors of the cloth, you are told to pay close attention to your visual experience and its phenomenology.

19. Brought to my attention by Bill Lycan.

What do you do? Those who accept the transparency thesis say that you attend closely to the *tapestry* and details in it. You are aware of something outside you -- the tapestry -- and of various qualities that you experience as being qualities of parts of the tapestry, and by being aware of these things, you are aware of what it is like for you subjectively or phenomenally. But your awareness of what it is like, of the phenomenology of your experience, is not *de re* awareness *of* the experience or its qualities.²¹ It is *de dicto* awareness *that* you have an experience with a certain phenomenal character or 'feel'.²²

Here is another way to put these points. When you are told to attend closely to your visual experience, what you actually do is to attend closely to the tapestry and the various ways it, or parts of it, look to you. Ways things look to people are typically expressed by predicates (as in 'looks red', 'looks square', 'looks close'), and predicates express qualities — in this case, qualities represented by the relevant experiences of those people, qualities such that if the things seen have them, the experiences are veridical or accurate.

Your visual experience, then, is transparent to you. When you try to attend to it, you 'see' right through it, as it were, to the things and qualities outside that it represents. What is true for vision is true for the other senses. Attending to the phenomenology of a

20. The father of transparency is G.E. Moore 1903. For recent defenses of transparency see Dretske 1995; Tye 2000 and 2003. See also Harman 1990.

21. This claim, it is worth noting, fits well with the linguistic constructions that are naturally employed in connection with such awareness. To talk of our being aware of the phenomenology of an experience or of how an experience 'feels' is to use a generic perceptual verb ('aware of') followed by an abstract noun ('the phenomenology') or an interrogative nominal ('how the experience feels'). In cases of this sort, where there is a perceptual verb, the abstract noun or interrogative nominal typically stands in for a factive clause so that what is being described is (a species) of awareness of some fact. For example, if I am described as hearing the answer to your question or as seeing who is at the door, I do not satisfy the description merely by hearing the sentence that is the answer or seeing the person who is at the door. I must be aware *that* the given sentence is the answer to your question, *that* the given person is the one at the door. In short, I must be aware of some appropriate fact. Likewise, in the case of awareness of the phenomenal character of an current experience. For more here, see Dretske 1993.

perceptual experience, to its felt character, is a matter of attending to the ways things look, smell, taste, sound, or feel by touch.

Bodily experience is transparent too, or so I have argued (in Tye 2003). In this case, the object of your attention is the way a certain part of your body feels.²³ When you feel pain, for example, your attention goes to where in your body you experience pain. It does not go to where your experience of pain is (namely, your head, if materialism is true²⁴). As noted earlier, the qualities you dislike so much, in experiencing pain — the qualities of which you are aware when you introspect are qualities you experience as being in the relevant bodily part. And that is where those qualities are located, if the case is typical, unless there is some massive error in bodily experience.

In the case of emotional experience, the thesis of transparency is less obvious for two reasons. First, if the account of emotional experience for which I have argued is correct, then there is no one place to which one's attention goes, when one tries to attend to an emotional experience, even if transparency holds. For one thing, one's body changes in many ways, as one undergoes a typical emotional experience, so there is no one place inside to focus one's attention, when one introspects, as there is in the case of pain. For another, primary emotional experiences, I have claimed, involve at least in many cases perceptual experiences of things (typically) outside. So, if asked to attend to an emotional experience, one's attention may go either inside or outside; it may move backwards and forwards from one to the other; or it may provide one with an awareness of qualities inside and outside all in one go, as it were, (where these qualities are not qualities *of* emotional experiences). The fact that one's attention does not naturally fall in one

22. Introspection of an experience, on this view, is like secondary seeing-that or displaced perception, although there are some differences.

23. I ignore here the case of phantom limb sensations, for which there is no relevant limb to feel any way.

24. Leaving aside the case of a headache.

place for emotional experiences might suggest that it is not focused on qualities represented by these experiences at all. And this the thesis of transparency cannot allow.

Secondly, some of the qualities represented by emotional experiences, on the account I am proposing, are evaluative qualities of things in the world. Those who deny that we are aware of such qualities in undergoing perceptual experiences in the same sort of way as we aware of color and shape, say, may well respond that the evaluative aspect of emotional experiences is best located elsewhere. Insofar as this aspect is available to us introspectively, it seems then that we must give up transparency.

I hope that my earlier comments on evaluative experience suffice to undermine this reaction. If so, then, once the character of emotional experiences is properly appreciated, it should be clear that, as far as transparency goes, the difference between the case of perceptual experiences and that of emotional experiences or the case of bodily experiences and that of emotional experiences is largely one of complexity.

In the *Tractatus*, 6.43, Wittgenstein remarked, "The world of the happy man is a different one from that of the unhappy man." I do not wish to speculate as to the thought Wittgenstein himself intended to convey with this cryptic comment. But from the perspective of the present essay, there is a straightforward interpretation: the world, as it is represented in the experience of happiness, is different from the world, as it is represented in the experience of unhappiness (or sadness). What is true here for the experiences of happiness and sadness is true for other emotional experiences. The intentionalist about consciousness, in my view, has nothing to fear from the experience of emotion.²⁵

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