

The Deep Bodily Roots of Emotion

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Published online: 4 July 2012
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Abstract This article explores emotions and their relationship to “somatic responses”, i.e., one’s automatic responses to sensations of pain, cold, warmth, sudden intensity. To this end, it undertakes a Husserlian phenomenological analysis of the first-hand experience of eight basic emotions, briefly exploring their essential aspects: their holistic nature, their identifying dynamic transformation of the lived body, their two-layered intentionality, their involuntary initiation and voluntary espousal. The fact that the involuntary tensional shifts initiating emotions are irreplicable voluntarily is taken to show that all emotions have an innate core, a conclusion corroborated by their strong similarities to somatic responses in dynamics, hedonic tone, and topology. The fact that emotions may be culturally reworked is shown to be explicable in terms of their complex nature: their dependence on belief, their voluntary espousal, and their ready social transmittability. Finally, it is argued that emotions may plausibly be deemed the evolutionary descendants of somatic responses.

1 Introduction: The Task

In academic circles in recent years it has become more widely acknowledged that emotion necessarily involves the body. The depth of that involvement, however, remains much less widely recognized. More specifically, what goes unacknowledged is the fact that emotions are rooted in involuntary, innate bodily responses, responses that are initiated with tensional shifts not replicable voluntarily, and that

Earlier versions of this article were presented as an invited lecture at the Affectivity and Embodiment Workshop at the University of Exeter (16/09/2011), and as a guest lecture at the Universidad Nacional, Bogota, Columbia (18/05/2012).

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consequently are pan-cultural, and remain so despite subsequent cultural overlay. Furthermore, the hedonic, tensional, and topological dynamics of these innate responses are highly congruent with the reflex-like responses elicited by various types of sensations such as cold, pain, warmth, or sudden intensity. Indeed, the match with these “somatic responses” is so close as to strongly support the notion that emotions have their evolutionary origins in these more rudimentary responses.

Such are the findings that emerge from a close investigation of the salient features both of somatic responses as they are experienced first-hand, and of directed emotions, or emotions directed at “an object”, i.e., at a particular individual, event, deed, or situation, perceived, imagined, or thought, that elicits the emotion. A brief version of this investigation is undertaken in what follows, one sufficiently broad, it is hoped, to make a convincing case. The approach adopted is an examination of first-person experience of affectivity. It draws heavily on a method initiated by René Descartes (1985a, p. 216), and subsequently amended and perfected by Edmund Husserl (Hua III, pp. 53–57, 138–139; 1982, pp. 57–62, 166–167). It consists roughly of a suspension of belief in preconceived notions on the part of the observer, close observation and description of what is actually present in first-person experience and, through imaginative variation, an uncovering of the essential traits of the type of phenomenon being investigated. The main character involved in the investigation turns out to be one figuring in Husserl’s *Ideas II*: one’s own body as it is experienced in a feeling mode—or “the lived body”, as it is widely termed in the phenomenological literature in accordance with phrases coined by Jean-Paul Sartre (1948, p. 75; 1956, pp. 427–428, 434–436).

Although the investigation centers on two particular forms of affectivity, many of its findings apply to forms of affectivity in general. At times emotions are not directed at an object, as is the case with lingering emotions that have lost their object (Husserl 1970, p. 395), or emotions induced by the dynamics of some aspect of the perceptual situation—perhaps the weather, perhaps the atmosphere of the surrounds, perhaps the tempo of music being played (Prinz 2004, p. 40), or transmitted emotions which simply echo the feelings of other persons present (Brennan 2004). Nor is there a sharp line between emotions and their fainter counterparts such as sentiments, likes and dislikes; or between emotions and moods, which shift so readily into each other that emotions might be termed focused moods, and moods responses in search of a stimulus. Deeper moods, or the general attitudes towards the world that Ratcliffe terms “existential feelings” (2008, p. 38), hover somewhere between the two categories. Directed emotions consequently share many of their traits with these other forms of affectivity. Certain traits are also shared with somatic attitudes or Daniel Stern’s “vitality affects” (1985, p. 53), the feelings present when one is feeling energetic, tired, calm, alert, agitated, rheumatic, or fuzzy-headed.

An inspection of the relevant experience finds directed emotions to have a number of essential features: they are holistic in the sense that they involve the whole organism; they each imbue the lived body with their own particular dynamic of kinesthetic and hedonic shifts; they display two distinct forms of intentionality, affective and cognitive; they arise involuntarily, but become emotions fully only when subsequently espoused. Let us look at each of these features in turn.

2 The Holistic Nature of Emotion

Any form of affectivity is holistic in the sense that it touches all facets of one's conscious life to which it imparts a specific type of synergic, tensional, and hedonic dynamic. It is first of all, a "whole-body experience" (Sheets-Johnstone 2008, p. 460); one's entire body is infused with the various congruent tensions and hedonic tone characteristic of the feeling. When in high spirits, whether from good news, a good night's sleep, or a sunny disposition, one's entire body is infused with buoyant lightness and ripples of joy. When in the grip of depression, whatever its source, a disengaged listlessness and dull heaviness pervades one's whole body making any activity forced and unpleasant.

Moreover, whatever the feeling, it seeps into the very fabric of one's surrounding world. As Husserl remarks (1970, p. 574), an emotion may bathe an event in a rosy gleam, or clothe it in sadness, or, as Sartre more dramatically states the matter, an emotion is "a transformation of the world" (1948, p. 58). That transformation is multifaceted. To begin with the obvious, the object of a directed emotion is suffused with the experienced feeling, and becomes adorable, hateful, surprising, or terrifying in function of the emotion it elicits. Likewise, passing events tend to take on characteristics that echo one's feelings, becoming loveable when one is in love, wondrous when one is dazzled, hostile and uncaring when one is deeply wronged. Even faint feelings spill over onto one's surrounds, as is shown by the fact that a charming smile from a cashier can remodel one's impression of the store. Indeed, the very sensuous texture and structure of the perceived world varies in function of the feelings present. One's visual field, for instance, may become wide and bright, or then again, restricted and dull according to the tenor and intensity of one's feelings. Certainly, the appeal exercised by encountered events also varies with one's feelings. A sound or sight that is a welcome enhancement in the context of good humor, becomes an unpleasant imposition in one of exhaustion.

Naturally enough, the tensional and hedonic dynamics of one's feelings, unless voluntarily countered, infuse any activity undertaken. One's movements are easy and flowing when one is pleased, slow and listless when one is sad, tense and sporadic when one is fearful. Since voluntary activity requires some degree of monitoring, it is difficult to be totally unaware of how one is feeling. The specific dynamics of the emotion also permeate one's thinking and reasoning, a point much stressed by psychiatrist Luc Ciompi (1997). Not only does the flow of one's thoughts—their agitation, lethargy, or buoyancy—echo that of one's feelings, but the hedonic tone of one's feelings is reflected in one's expectations, in what is considered plausible, in the weight attributed to the views and beliefs acting as premises in support of conclusions. Future prospects always seem better when viewed in the glow of a present success. Positive possibilities seem more plausible, negative ones more implausible when viewed through the medium of a positive mood, while a negative mood tilts evaluations in the opposite direction. In sum, one's feelings, and one's emotions in particular, permeate every aspect of one's conscious life.

3 Bodily Involvement in Emotion

When one is experiencing feelings of any sort, a shift of attention to one's lived body will find it infused with a particular hedonic and tensional dynamic—perhaps a pained thoracic contraction or a warm tracheal glow accompanied by congruent sensations and tensional shifts throughout one's body. In third-person accounts, facial expression is a crucial feature, but in lived experience the face is but one participant in a larger bodily event. For instance, the bulging eyes and retracted jaw elicited by an encountered bear are usually no more salient in my marginal awareness than are my rigidified stance, arrested breath, and sinking stomach. This experienced bodily dynamic is usually the means whereby one identifies one's feelings—a point made some years back by Descartes, who deemed bodily changes to be identifying marks for the passions (1985b, p. 363). Through Husserl's practice of free variation, it is possible to determine the nature of the hedonic and tensional shifts essential to a particular type of emotion, i.e., the invariant features that make the emotion the type of emotion it is. The undertaking of such a task is particularly worthwhile in the present context since it will permit a subsequent cogent comparison of particular emotions with somatic responses.

To simplify a complex task, only a few of the simpler types of emotion will be considered, those that might be termed "personal" since they conceivably may occur without involving other persons. As Husserl notes (Hua XXXI, p. 9; 2001, p. 282), most emotions fall naturally into one of two groups, negative or positive according to their hedonic tone, i.e., according to whether unpleasant or pleasant feelings predominate. The various degrees of sorrow, anger, fear, and aversion fall into the first group, whereas those of gladness, affection, enthusiasm, and appreciation fall into the second. Surprise falls into neither, and so requires a third group, the neutral emotions.

Negative emotions are usually contractive in nature, and involve a general stiffening of the body that constrains movement, together with an inner tightening in chest and throat that constrains respiration and hinders speech. Both contractions feed into a movement of withdrawal. The topology of the contractions and the accompanying unpleasantness is specific to each type of negative emotion. Consider sadness. Any type of sadness, even mild disappointment, features some degree of pained tightness in one's chest and throat, a tightness accompanied by a loss of energy and alertness that leaves one's shoulders, neck, and face feeling limp and heavy. With grief the response is more dramatic. Its onset often resembles a painful blow that takes one's breath away, stiffens one's back, and in extreme cases pulls one's head back and jaw down in a gape. Subsequently, one feels as if a tight band were compressing one's breast, or a weight one's chest. A shift of attention to the object of one's sorrow often elicits a contraction so painfully intense as to incline one to writhe and flail about fruitlessly. The irreparability of the situation leaves one with nowhere to direct one's energies, and one's body is left feeling heavy and drained, disposed to curl up and ignore the world outside.

Anger comes in degrees varying from annoyance to rage, all of which are elicited, as is sorrow, through the awareness of an unpleasant or painful event—perhaps a thwarted action, a disappointment, an injury or loss—an event that

occasions a similar instant of immobilization and a general stiffening of one's body accompanied by an inner contraction in breast and throat. With greater hurt comes an energetic surge, as in the case of grief, but instead of being released in aimless twisting and flailing, that energy is channeled towards violent action: one's heart begins to race, one's arms and face tighten. Since pain has tensed up one's body, the urge to act comes into play on a background of tension. Any movement executed, instead of flowing smoothly from the surge of energy, encounters pervasive constraints, and so becomes explosive and erratic. One's breathing must overcome the pained contraction in chest and throat and so is made irregular, often spasmodic, just as one's speech is made harsh and rasping. Whereas grief focuses on the irreparability of the situation, anger focuses on the presumed cause of the hurt, and metes out violence in return for injury. In this regard, it is akin to a primitive form of retributive justice that exacts an eye for an eye. The scowls, clenched fists, and red face often judged typical of anger are typical rather of obstructed anger with its bottled up energy that has nowhere to go.

Despite commonalities with other negative emotions, fear is different again. When frightened, I typically find my body suddenly immobile, not just tensed up but frozen in a stiff, retracted stance with back arched and breath arrested, a sinking feeling in my upper abdomen, gaze riveted, jaw drawn back. Any movement requires great effort. Consequently, if I follow the impulse implicit in my drawing back and attempt to flee the premises, I must await the arrival of an exceptionally great energetic surge that given the stiffness present makes my movements sudden, erratic, frenetic, unpredictable. If I fight, I do so with uncustomary strength. In less intense instances of fear, such as apprehension or anxiety, a similar rigidity and sinking feeling suffices to identify the feeling as one of fear. Terror accentuates the various tensional shifts to the point of caricature: my body becomes petrified, incapable of movement; breathing ceases, a feeling of urgency invades my abdomen, my eyes and mouth gape, my face and limbs go numb, my legs and jaw tremble in a tensional paroxysm of sorts.

Aversion differs again in that it features an involuntary movement of withdrawal, one that takes different forms depending on the sense modality of the encountered noxious elicitor. I may find, for instance, my tongue protesting and my jaw straining back, or my sinuses tingling and my head jerked back, or my eyes tightened into a squint, or my ears ringing and my whole body hunched up with my head sunk down into the protective custody of my shoulders. In each case, I also find I feel uneasy, tensed up somewhat generally, and am perhaps inclined to shudder.

Clearly, each of the negative emotions has its own specific hedonic/tensional regime, one that distinguishes it from the others. A particularly salient aspect of that regime is what might be termed "the hedonic center", the region of greatest hedonic and tensional shift, most often the chest and belly: with grief comes a painful constriction about the lungs and throat; with anger, a thoracic constriction on which supervenes an energetic surge; with fear, a rigidification, and a sinking feeling. These three emotions might be termed "vital" emotions to distinguish them from aversion, the hedonic center of which is usually situated in the proximity of the sense organ involved rather than in the breast. Since aversion is elicited by some combination of the sensuous and cognitive aspects of its intentional object, it might be termed an

“aesthetic” emotion. The distinction may appear somewhat trivial, but it captures a deeper division, to wit, the fact that whereas vital emotions presuppose the possession of certain values or concerns, aesthetic emotions discover them.

An analogous situation holds for positive emotions. The latter are usually expansive, and involve a pervasive invasion by pleasurable feelings coupled with a dissolving of tensions throughout the body, particularly in the chest, resulting in relaxed, easy, and fluid respiration and movement. With feelings of satisfaction and contentment, the hedonic center is one’s upper breast and lower throat. Not only have inner tensions disappeared, but one’s body has a pleasurable buoyancy easily refueled by refocusing attention on the source of contentment. Vocalizations are consequently soft, one’s face feels relaxed except for certain modest contractions, particularly an upward lift at the corners of one’s mouth, and a crinkling about the corners of the eyes.

Affection resembles contentment dynamically in its relaxed calm, but it involves in addition a warm thoracic stirring absent from contentment, one sometimes characterized as a “melting” feeling. Any tightness in one’s chest is replaced by something akin to a pleasant, warm glow, from which calm and pleasant feeling radiate out through one’s body, inclining one perhaps to approach the object of one’s affection. More intense affection “moves” or “chokes up”, that is, it elicits an involuntary and temporary closing off of one’s throat near the larynx, often coupled with a tensing up that brings immobility, and contractions about one’s eyes that bring tears.

Joy is plausibly deemed an energized version of contentment. Typically, when joyous one finds oneself alert, breath arrested, back straight, head erect, mouth open and eyes crinkled. Simultaneously, one feels a delightful effervescence in one’s upper chest and throat somewhat on the order of an internal tickling that constricts respiration, while a surge of energy impels one to exhale, resulting in a shriek or a staccato release. One feels light and buoyant, impelled to move about with pointless gestures and activity.

Enthusiasm closely resembles joy, but differs in being not only anticipatory and preparatory, but also assured or confident. It features a directed alertness, a surge of energy that lifts one’s stance, lightens one’s face, expands one’s lungs, infuses one’s chest with mild ripples of joy, leaving one ready for action, bereft of hesitancy or reservations. It might plausibly be viewed as the default response of health and success, just as anxiety is that of debility and failure.

Enthusiasm and joy, along with contentment and affection, clearly qualify as vital emotions given that their hedonic/tensional center is in breast and throat. Popular idiom would put that center in the heart, since according to it, hearts may leap or sink, break or harden. Yet, while heart-rate certainly plays a role in emotion, the breast and lower throat are the emotional center, the site where the typical identifying activity takes place, hence the site best consulted introspectively in order to gauge the quality and depth of one’s feelings.

Typically, with appreciation, one’s attention is riveted on the charming object, and one is actively engaged cognitively with certain of its features. One’s body is immobilized, inwardly calm and relaxed, while pleasurable feelings radiate out through one’s flesh from the hedonic center. As is the case with aversion, that center

is often that region of the body where the relevant sense organ is located since the intentional object is usually something both sensuous and cognitive, situated in some field of perception or imagination.

A minimal implication of the above delineations is that a specific hedonic and tensional bodily dynamic is present in any emotion, and is that in virtue of which one identifies the emotion. Oddly enough, some authors persist in claiming that certain types of affectivity do not involve the body. For instance, as instances of alleged non-bodily feelings, Michael Stocker proposes care, concern, and interest (1983, pp. 5, 9–10), to which Peter Goldie adds pride and what he terms “feeling toward” (2000, pp. 52, 56). Yet, as one may readily verify by shifting attention to one’s lived body when experiencing the proposed feelings, they all fail in their assigned role of counter-examples. Interest, for instance, involves alertness, intent focusing on the interesting event, and held immobility, all of which operations are bodily in nature. Husserl’s fine descriptive analyses conclusively show bodily involvement to be integral to the most rudimentary form of perceptual interest (Husserl 1973b, pp. 76–79). The various bodily feelings are often experienced only faintly since one’s attention is focused elsewhere on the eliciting object out in the world. Nevertheless, they are present in the background of one’s experience, particularly in the dynamics of one’s activity. The proof is that when uncertain, one may often, by looking back at the past event, say how one was feeling.

Not only is the characteristic hedonic and tensional bodily dynamic always present, but it is indispensable in the sense that without it, the feeling would not be present. The point was energetically advanced by William James who argued that if the felt bodily commotion typical of an emotion were deleted, the resulting experience would be one of mere cognition devoid of emotion (James 1950, p. 451). James overstated the case slightly since emotion is holistic, and the earlier-noted perceptual and cognitive transformations specific to emotion would remain. Nevertheless, in the absence of the typical bodily commotion, these transformations would simply be features of the world and of the flow of cognitive symbols, and would not qualify as one’s emotion.

If a need for modest support from experimental psychology is felt at this point, appeal might be made to the work of psychologist Nina Bull who found that one cannot experience two different emotions at the same time (Bull 1951, p. 78 et seq.), a fact explicable in terms of necessary bodily involvement. One’s breast, for instance, cannot be simultaneously both the expanded one of joy and the contracted one of sorrow. In addition, the emotions experienced by paraplegics are apparently less intense than the normal (Hohmann 1966), a fact explicable in terms of lesser bodily involvement when bodily feeling is present only from the neck up.

The conclusion may be extended readily enough to encompass any form of affectivity—moods, induced emotions, even somatic attitudes and responses. Interestingly enough, Husserl advances just such a broader claim when he speaks of feelings generally, such as those of well-being, of pleasure or pain, of tension or relaxation, inner restraint or liberation, as having an immediate location in the lived body (Hua IV, p. 153; 1989, p. 160). Conversely, he characterizes the lived body as “a localization field for sensations and for stirrings of feelings” (Hua IV, p. 158; 1989, p. 165). More broadly still, he speaks of human consciousness as bound to the

body “by means of its hyletic substrate” (Hua IV, p. 153; 1989, p. 160), and points out that all psychic acts are built upon a somatically sensuous support, and consequently are interwoven with something localized (Hua IX, p. 132; 1977, pp. 100–101). The body is not only involved in emotion, but it is a condition *sine qua non* of any conscious life. As one might put the matter, animate life is built on feeling, and feeling is bodily in nature.

4 Affective Intentionality

Most consciousness is intentional in Husserl’s sense: consciousness of something, directed toward something (Hua III, pp. 64ff, 168ff; 1982, pp. 73ff, 199ff). That something, it should be specified, is not anything actually present sensuously in the experience. Intentionality is properly speaking not “the mind’s capacity to be directed at something beyond itself” (Slaby 2008, p. 429), for such a definition simply makes the mind relational. Intentionality, as viewed in a first-person mode, involves what Descartes termed “thought”, and Husserl termed “meaning”, that is, something present in experience but not present sensuously. Perceptual or cognitive intentionality, for instance, fleshes out an experienced sensuous form with further properties and propensities not actually present sensuously in the experience—e.g., a hidden side, an interior, weight, taste. “Praxic” intentionality, or the intentionality of action, introduces an aim or goal, a state of affairs that does not as yet exist, and which, moreover, in the experience of one’s action need not even be represented linguistically or imaginatively. Now, if we follow Husserl on the matter, affectivity or feeling features a further “novel” intentionality, an intentionality of feeling (Hua XXXI, p. 5; 2001, p. 278) that Husserl characterizes as “an unfolding of feeling” (Hua XXXI, p. 8; 2001, p. 281). That unfolding is directed toward some state of affairs beyond what is actually present sensuously. A sense of lack, to cite Husserl’s example (Hua XXXI, p. 9; 2001, p. 281), is directed toward its gratification. Feeling, in this sense, is dynamic, and never a mere present sensuous state akin to coldness in one’s feet. Emotion, for instance, arises in a tensional shift integrated most often into a hedonic shift, a shift elicited by an encounter with an “object” of some sort. Since the feelings arise when attention is directed at the object and tend to fade away when attention is directed elsewhere, the object is readily and rightly viewed to be the elicitor of the feeling. It is deemed to be feeling-producing, hence maddening, charming, frightening, heartening, or disgusting in accordance with the type of feeling it elicits. The affective intentionality of the emotion, however, resides not in the directedness to the object but in the direction taken by the affective response to the object. Since that response is structurally rather complex, the affective intentionality it harbors is perhaps best viewed through an example.

A fine illustration of elicited feeling is to be found in an earlier-mentioned somatic response crucial to perception, and discussed as such by Husserl (Hua XXXI, pp. 149–151; 1973b, pp. 76–79; 2001, pp. 196–198). It is a response often elicited by something salient in a perceptual field (a “salience-response”) or by something striking that stands out, perhaps through contrast or intensity, and so exercises a pull on one’s attention. It consists essentially of an increase in alertness

coupled with a felt kinesthetic pull in the direction of the salient object. Compliance with the pull results in a subsequent automatic shift of attention that focuses on the object, relevant eye and/or body activity accompanied by an imposed immobility elsewhere. The increased alertness and felt pull of the initial response have no conscious aim, and are involuntary in the strict sense that they are not under one's control. In this regard, they resemble reflex action more than they do an activity undertaken, or even an activity executed from habit. The subsequent shift in attention with its attendant kinesthetic tensions and kinetic activity falls into the category of habit: as Husserl notes (1973b, pp. 84–86), it is automatic and unthinking but not a reflex, since it is within one's power not to do. It feeds into a third phase of activity, a cognitive investigation of the salience, which activity is both voluntary and goal-directed.

The affective intentionality in this example is the directedness present in the alertness and felt pull of the initial automatic response. That response is a movement, a shift-towards, and as such is directed toward some future state. Since the response is automatic and consequently devoid of intent, it might be thought inappropriate to speak of intentionality in such a case; the falling of an apple from a tree is likewise automatic and directed, yet without intentionality. However, the context in the two cases is quite different. The automatic activity elicited by salience is not something pointless, like a muscular spasm. It feeds seamlessly into dynamically congruent habitual responses acquired through past goal-directed activity executed with an intent in mind. Typically it also feeds into dynamically congruent goal-directed activity that is practically intentional and hence has an intent. The alertness and felt pull may thus be plausibly viewed as the initial stage of a three-staged event that is clearly intentional; such is not the case with a falling apple.

Otherwise stated, the initial automatic response may be plausibly viewed as having an "implicit purpose". The second and third stages are properly purposive in that the activity they feature has a conscious aim, which is to better understand a particular aspect of the world. The first stage alters the state of the body in a way that prepares it for the other stages. Being attentive and drawn towards something salient is preparatory to observation of that salience. It is implicitly purposive in that although not executed with an aim in mind, it nevertheless serves the aim present in subsequent stages. Indeed, it is an activity that one might willingly execute voluntarily, supposing this possible, in order to achieve that aim.

Directed emotions follow a similar pattern. The tensional shift initiating an emotion is automatic, but due to its participation in a larger event may be deemed to have an affective intentionality and implicit purpose, which vary according to the dynamics of the particular emotion involved. Surprise puts the body in a state appropriate to observation of the surprising occurrence: eyes open wide and focused, body held immobile so as not to disturb observation. The affective intention and implicit purpose of surprise is thus to observe. Negative emotions such as disgust, grief, and fear, even anger, are initiated by an involuntary movement of pained contraction coupled with withdrawal and an inclination to distance oneself. Contraction toughens flesh while withdrawal distances it from the source of the negative feeling. The affective intention is to protect and withdraw. In the case of anger, a surge of energy supervenes on the bodily tightness, a surge that inclines one

to act, and is readily vented through violent action against what is perceived to be the source of hurt. The affective intention is violent activity.

Indeed, unless countered, it coalesces immediately with habit-ruled activity joined by a voluntary effort to achieve what has become an explicit aim. The initial stage has an implicit aim in the sense that it achieves unthinkingly what one might well consciously choose to do, given the circumstances.

Positive emotions are likewise directed towards an end, to wit, a relaxed state in which commerce with the world is open, in which the inclination is simply to enjoy the situation with the treasured object present, to let the present last, and to draw closer to the valued object. The same is true, with appropriate variations, whether the object is an achievement, a stroke of luck, a loved one, a work of art. Unless countered, the direction of the initial automatic stage subsequently becomes the conscious aim of voluntary action. For positive as well as negative emotions, whatever the subsequent action, its dynamics is congruent with that of the initial response, a point nicely illustrated by Sheets-Johnstone (1999, pp. 269ff).

Affective intentionality is thus very close to the praxic intentionality of desire and action. However, it would be inaccurate to conclude, as is often the case (Frijda 1986, p. 5; Frijda 2007, p. 27; Oakley and Jenkins 1996, p. 96; Varela 1999; Thompson 2007, p. 361), that emotion prepares for action or the achieving of an aim. Joy and sorrow both generate pointless activity that hardly qualifies as action, while contentment, awe, and aesthetic appreciation all involve a bodily dynamic more aptly characterized as inactivity than as action.

5 Cognitive Assessment in Directed Emotion

Directed emotions differ from other forms of affectivity in that they are not only elicited, but elicited by a cognized object or event, i.e., by a sensuous presence endowed with meaning or further features beyond those actually present sensuously. Attention is focused on the eliciting object, a necessary condition for concepts and cognitive awareness to come into play. If attention shifts, cognitive involvement diminishes, and the emotion starts to fade. A shift of attention back to the elicitor usually rekindles the emotion. This cognitive fleshing out of the object is essential to any directed emotion. A bear encountered on one's hiking path, for instance, is frightening only because of what one believes about bears. Anger presupposes a belief as to the cause of one's pain, and deep grief requires an awareness of irreparability. If the relevant beliefs were removed, then *ceteris paribus*, the emotion would collapse.

If it is found mysterious that belief and emotion are thus interconnected, the mystery may be heightened by noting that not only is emotion dependent upon belief, but on occasion it is dependent also on expectation. A positive result may disappoint instead of please simply because one expected something better. A mere passing thought may likewise suffice to change the nature of an emotion. For instance, a negative event may be given a positive cast through the mere suggestion of a possible worse outcome that failed to materialize, just as a positive event may be given a negative cast through the suggestion of a failed superior possibility.

Regarding the beliefs integral to an emotion, or “appraisals” as they are termed in current literature (Scherer et al. 2001), several caveats are in order. One is that while a belief or appraisal may be necessary for a directed emotion to occur, it is not always sufficient. On occasion, the relevant feelings may simply fail to arise. One may be aware of having succeeded but feel no joy, or be aware of being in grave danger but experience no fear.

Another point to note is that the relevant appraisals need not be formulated. They may consist simply of unformulated expectations that arise automatically together with correlated feelings given past experiences of a similar sort. Hence they may (and most often do) involve beliefs of the sort Husserl terms “pre-predicative judgments” (Husserl 1973b, p. 61), which operate in perception devoid of words, images, and gestures, or what might be termed “nonsymbolic cognition” (Johnstone 1999a, b).

A further point to note is that the requisite appraisals need not include affective predicates such as “frightening”, “delightful”, “disgusting”, or “loveable” that attribute an emotion-eliciting property to the object or event. Ultimately evaluations of the sort are grounded epistemologically in the experience of the emotion. As Husserl points out (Hua IV, pp. 5–9; 1989, pp. 6–10), it is possible to experience feeling at two distinct levels, one “living”, the other “reflective”. At the “living” level, one is immersed in the feeling, the rapture, fear, or despair, simply letting it arise and take its course while making no judgment about it. At the “reflective” level, one continues to live in the feeling but with a change of attitude: one distances oneself slightly in order to make judgments about the situation—in particular, to confer an evaluative predicate on the elicitor of the feeling. The reflective level is grounded in affective experience rather than being a prerequisite for it. Such is necessarily the case in any cogent aesthetic evaluation: I do not feel moved because I know something to be lovely; I know something to be lovely because I feel moved by it.

6 The Involuntary/Voluntary Mix in Affectivity

Involuntary and voluntary tensions are curiously interwoven in feelings. Genuine feelings arise involuntarily. Voluntarily generated ones have an ulterior motive, and are somewhat akin to lying. The involuntary nature of genuine feelings is experientially obvious. I discover my liveliness or fatigue, my depression, anxiety, or contentment; they are simply present, and involve real bodily dynamics to be accommodated as I choose. My emotions, at least at their onset, are likewise not my doing. My heart leaps up, or a sudden surge of lassitude, indignation, or affection invades my body. The delight, the surprise, the sinking feeling, or the stiffening up all occur involuntarily. For this reason, although I subsequently enter into the emotion, and voluntarily promote it, I may with considerable plausibility lay responsibility for my emotions elsewhere than on myself through declarations of the sort, “she annoyed me”, or “he frightened me”, or “it disgusted me”.

The voluntary/involuntary dichotomy is in fact the earlier-noted trichotomy involving three differing sorts of activity: an initial reflex-like response, habit-ruled

activity, and aim-directed activity. This circumstance generates a problem of terminology. Husserl speaks of feeling as having two “modes of execution”, passivity and activity (Hua XXXI, p. 8; 2001, p. 280), and describes the first of the three sorts of activity as passive, and the two others as active. He also terms the first two sorts “involuntary”, characterizing activity from habit as a doing that is not an “I do” (1973b, p. 85), and reserving the term “voluntary” for activity involving action and choice (Hua XXXI, p. 10; 2001, p. 282). However, in the present context it is important to distinguish the first two sorts of activity. Hence it is better to follow Ricoeur who aptly characterizes actions from habit as “monitored automatism” (*automatismes surveillés*), and speaks of them as voluntary (1963, p. 286), thus restricting the term “involuntary” to the initial automatic response.

Such a ruling runs contrary to currently accepted wisdom, but is nevertheless supported by the experiential data. Close observation of the experience of letting a habitual activity run its course invariably finds some degree of marginal monitoring to be present. When engaged in two activities such as driving and talking, knitting and watching TV, working and listening to the radio, one’s attention is split, directed partly to each activity, and never fully concentrated on either. If attention focuses solely on one, the attention-deprived activity fails. Too often, with regard to habitual activity the claim is made that one is aware of it only when something goes wrong, a claim that in fact states matters backwards: it is when one ceases altogether to monitor habitual activity, that something goes wrong. Consequently, it is a misleading overstatement to define a body schema as “a nonconscious system of processes that constantly regulate posture and movement” (Gallagher 2005, p. 234), or to declare that “[M]ost of motor control and body schematic processes are non-conscious and automatic” (Gallagher and Zahavi 2008, p. 165). Declarations of the sort ignore the element of monitoring present in habitual activity, and necessary for its success, and so they foster an oversimplified and misleading view of a complex phenomenon. By the same token, they skew an understanding of one’s usual awareness of one’s lived body—“body image” in Gallagher’s third-person, or rather fourth-person (Johnstone 2011, p. 185) terminology—by removing from it one’s awareness of one’s habitual activity.

An even more important and usually ignored point regarding the involuntary tensional shifts initiating an emotion is that they have the peculiar feature of not being fully replicatable voluntarily. For instance, when I am genuinely pleased to meet someone, my face livens up on its own. The corners of my mouth pull back and up, the corners of my eyes crinkle, and my face feels lighter. All of this is part of an involuntary response, termed “the Duchenne smile” after the French investigator who first studied it (Duchenne 1876). Now, if I attempt to create that same delight voluntarily, I find that I can at best produce a superficially resemblant facsimile, one lacking the spontaneous verve and pleased buoyancy of the genuine article. Although I may pretend to be gripped with delight, and be sufficiently adept as to deceive others, I cannot honestly deceive myself. The reason is that the kinesthesia generated through my voluntary efforts do not feel the same as the involuntary, irreplicatable ones of a genuine emotion. Consequently, if I appraise the matter honestly, I know the emotion to be insincere.

What is true of smiles holds also of the tensing up and energetic surge one feels when annoyed, or of the arrested breath and quiet stillness an awesome spectacle elicits. As one may readily verify through personal experience, the internal shift with its various releases, contractions, and surges, the hedonic and kinesthetically unfolding pattern typical of the emotion, is, in each case irreducibly involuntary. It contains involuntary tensional and hedonic shifts that may be imitated but never quite matched by voluntary shifts, a fact readily obvious to close inspection of the tensions present in the two cases. The same is true of other forms of affectivity, of moods, induced emotions, somatic attitudes: the genuine article involves irreducible kinesthetic patterns recognizable as such that arise involuntarily.

It might be thought the conclusion is overstated. Many people, good actors in particular, are quite skilled at imitating emotions, so much so that they manage to experience the emotion they are attempting to imitate—to shed tears or to flush with rage—and thus apparently generate a genuine emotion willfully. The exception to the rule is, however, only apparent. It is made possible by the nature of belief. Belief is essential to emotion, and by its very nature belief is to some degree voluntary, a leap beyond the evidence. There results the paradoxical fact that a belief may be espoused even when known to be false. Sartre terms such lying to oneself “bad faith” (1956, p. 89), and finds it worth discussing at length. By believing firmly enough in something one knows to be false, one makes it real for oneself and able to figure among the beliefs that elicit emotion. An actor who experiences the emotions of the character he is playing has managed to believe in the reality of the story he is acting out. In this he is joined by members of the audience who respond emotionally to events in the story despite knowing that they are fictitious. The emotions elicited are nevertheless genuine emotions in virtue of the fact that they involve voluntarily irreducible tensional shifts elicited by what is believed to be the situation.

Paradoxically enough too, while a genuine emotion cannot be created voluntarily, it requires a voluntary assist for it to become fully an emotion. Any emotion, indeed any form of affectivity, must be not only involuntarily elicited but also be voluntarily espoused if it is to fully qualify as how one is feeling. Such espousal is a matter of entering into the feeling, identifying with it, or in Husserl’s terms, “living in the feeling” (Hua IV, pp. 5–9; 1989, pp 10, 14). More specifically, it is a matter first of not resisting the affective response or attitude, of allowing it to invade one’s lived body unimpeded, and so infuse that body with its hedonic tone, tensional kinesthetics, and energetic dynamics. It means in addition supplementing the attitude or response with voluntary tensions and releases congruent with the dynamics of the former. It also means infusing any subsequent activity with the tensional dynamics of the feeling while incorporating the feeling into one’s motivation. Since the feeling at its onset is involuntary, having an emotion or feeling a certain way is akin to boarding a moving train in order to become the engineer. In his *Phaedrus*, Plato says as much (1937, pp. 246ff).

Although usually the easiest course to follow is to espouse the feelings elicited in one’s body and the habitual activity they suggest, nevertheless feelings need not be espoused. Just as it is possible to resist a desire by not joining the incipient kinesthetic propensities toward specific movements, it is also possible to stop the progress of a budding emotion by not joining it, by turning attention elsewhere

instead. The emotion then remains simply something bodily present in a manner analogous to a discomfort in one's stomach or an itch in one's foot. It is even possible in principle to take up the uninvolved stance of a detached observer toward one's elicited feelings, as the experience of practiced Vipassana meditators amply confirms. If, on the contrary, I espouse a feeling, it becomes how I am feeling; it enters into the dynamics of my activity, and into the motivation of the action I undertake. I make it into something I cannot cogently repudiate as the work of something other than me. Through my espousal of the feeling, I make it an inalienable aspect of myself; I identify with it, and thus give it the ontological status of being me. It is no longer simply a feeling in my body, it has become what I am. While it is not quite all that I am, and is certainly not a permanent me, it is nevertheless who I am at that particular moment in time (Johnstone 1991, pp. 262–267; 1992, pp. 31–39; 2011, pp. 177–182).

It might be found tempting to follow current fashion and construe the espousal of emotion and feeling as an act of embodiment, but such a construal would border on absurdity given that one always already has a body infused with some degree of animation and feeling. Worse still, to speak of embodiment would grammatically imply one's possible existence apart from the lived body, although what such an existence could possibly be defies explanation. In his fine paper on the lived body in mental illness, Fuchs seems to suggest otherwise when he speaks of "a disembodiment of the self," and concludes that "the schizophrenic patient does not inhabit his body any more" (2005, pp. 101, 105). However, Fuchs is speaking in a relative sense of what the patient's existence is like compared to one of normal engagement in the world. To the extent that the schizophrenic continues to be emotionally engaged to some degree, whether in response to his plight of detachment from the world, or to the efforts of a psychiatrist, he retains his identity with some aspect of the lived body. As Husserl notes, "In any act some mode of heedfulness dominates" (Hua III, p. 67; 1982 p. 77), which heedfulness is invariably found to be a mode of the lived body.

Since the espousal of feeling makes the latter what one is at that particular time, it follows that the feelings present prior to being espoused, cannot be oneself in the same sense. Indeed, not all the feelings present in the lived body are properly considered to be oneself, e.g., feelings of heaviness or soreness, of the cold in one's fingers, or the congestion in one's face. Neither does one animate all aspects of the lived body with one's voluntary efforts and activities (Johnstone 2011, p. 181). On this point Slaby rightly proposes drawing a distinction between the lived body and the particular "hedonic subregion" of that body which is "the vehicle of the intentional feeling," and which might be termed "the living body" (Slaby 2008, pp. 440–441). Admittedly, the line of demarcation is nebulous.

The subject of one's experience, as Husserl cogently notes, the "I" that according to Kant accompanies all one's awarenesses, is precisely this "I of affections and actions" (Hua IX, pp. 208–209; 1977, pp. 159–160). Schmitz makes a similar point when he speaks of the "absolute" identity (an identity needing no confirming identification) of the conscious subject with its affective involvement (2011, p. 249). It is unfortunate that Schmitz, whose findings on multiple points so often match those of Husserl, mistakenly attributes to Husserl the view that the conscious self is

an immaterial soul, whose experience takes place in a private inner sphere (2011, pp. 247–248). As support for the attribution, Schmitz cites (without giving its context) Husserl’s characterization of the ego or subject of experience as “pure Ego and nothing more” (Hua III, p. 161; 1982, p. 191). The characterization applies in fact to an abstraction (Hua IV, p. 99; 1989, p. 105) and is what can be said of a particular structure of experience, to wit, that the ego is in fact always “actionally there” (Hua III, p. 160; 1982, pp. 190–191). As Husserl states a few pages later, that ego lives freely in its acts, its spontaneous doings, affected, suffering, etc. (Hua III, p. 193; 1982, pp 225–256), and “cannot be thought of as something separate from these lived experiences” (Hua IV, p. 99; 1989, p. 105). One positive consequence of Schmitz’s precipitous rift with Husserl is that the congruence of their independent findings may be seen as a validation of the phenomenological enterprise in general.

In his finely analyzed and meticulously argued account of self-awareness, Husserl scholar Dan Zahavi claims that the self involved in affection and action presupposes a more primitive form of self (1999, p. 151), one arising from the fact that experience has what he terms “an irreducible first-personal mode of presentation” (p. 12). What Zahavi means by “a first-personal mode”, a mode he states to be necessary and sufficient to make an experience one’s own (1999, pp. 12, 80, 143, 144, 151), turns out to be the inaccessibility of one’s experience to others (1999, p. 143). Zahavi claims that this inaccessibility is Husserl’s reason for disavowing an egoless consciousness (1999, p. 143), but the claim is tenuous since the reason Husserl explicitly gives is that the presence of a subject is adequately confirmed by the ego “carrying out a self-evident cogito” (1970, p. 544, note 1. See also Hua IV, p. 103; 1989, p. 109). Such an ego, it might be noted, is constantly present and active, if only in maintaining one’s stance and wakeful state.

More importantly, inaccessibility is inadequate as a criterion of selfhood. Husserl plausibly speaks of “one’s own essence” as that which could be experienced by someone else only if that person were oneself (Hua I, p. 139; 1973a, p. 109). Such an essence cannot rightly be deemed identical with what is inaccessible to others. A person’s pain is inaccessible to others, but as Wittgenstein points out, it is imaginable for two people to feel pain in the same place, perhaps as Siamese twins (1963, p. 91). Likewise, prior to their espousal, my emotions conceivably could be felt by another person, and felt without that person having to be me. In contrast, my espoused emotions do belong to that essence, and so belong because they involve my voluntary activity, something another person could experience only by being me. Inconceivable accessibility, not factual inaccessibility, determines the line between self and not-self. Zahavi’s alleged more basic self is simply, in Sloby’s terminology, the inaccessible lived body as opposed to the living body. No further self more basic than the self of the cogito is necessary, or apparently even possible.

7 Somatic Responses and Emotion

Let us turn finally to somatic responses, the holistic hedonic/tensional shifts elicited by sensations of various sorts. As stipulated earlier, a somatic response differs from emotion in the nature of its elicitor, a bare sensation, while that of an emotion is an

object of some sort, sensation decked out in cognitive finery. Since sensation shades into cognized sensation, it is not always obvious where to locate the line of demarcation, but fortunately, in most cases the distinction is obvious. Since a somatic response requires no cognition, it also differs from emotion in not requiring one's attention to be focused on its elicitor. In order to shiver from cold, one need not focus attention on the cold one feels.

In other respects, however, somatic responses and emotions are quite similar. Like emotions, somatic responses are holistic, involving one's whole body and coloring one's perception and thinking. They are elicited automatically, as are emotions, quite independently of any voluntary effort on one's part. The rigidification and hunching up elicited by cold are part of an involuntary holistic response, and not a voluntary or habitual one learnt through past experience, a point noted years ago by Darwin (1965, p. 66). A stab of pain makes one tense up automatically, just as moderate heat automatically dissolves tensions in one's back. Moreover, these automatic responses are not replicatable voluntarily in the sense that any attempted replication never feels the same as the original involuntary response.

Likewise, the negative/positive division found in emotions echoes a similar bipartite contractive/expansive division among somatic responses. Cold, for instance, generates a tense, unpleasant contraction of one's whole body, a numbed rigidification that constricts one's chest, respiration, voice, stance, and movements. One's skin contracts, goose-bumps form, muscles tighten up, limbs become less mobile, and one's body in general shrinks in on itself. Warmth, in contrast, relaxes and generates a calm pleasant feeling that pervades one's body, issuing in quiet breathing, a soft voice, an easy stance, and smooth flowing movements.

Somatic responses also resemble emotions in featuring an affective intentionality and in having an implicit purpose. They involve automatic tensional shifts that readily feed into habitual and witting activity directed to an end. I readily espouse the huddled retraction elicited in response to cold, or the pleasant relaxed immobility elicited by warmth. Both are implicitly purposive in the sense that although involuntary they are responses of a type I might reasonably choose to pursue voluntarily given the circumstances.

Particularly striking is the extent to which the hedonic, tensional, and kinetic shifts integral to the above-examined emotions echo those integral to somatic responses. Consider, for instance, the somatic response to pain. Pain of any sort elicits a bodily tensing up that varies considerably in function of the location and intensity of the pain, but usually pervades one's whole body to some degree, immobilizing and impeding activity. Typically, an inner tightening in one's lower chest makes inhaling difficult and speech strained. One's face contracts with brow drawn inward, eyes squinting, mouth ajar, and jaw tight. A sudden pain elicits a brisk movement of withdrawal, for instance, of fingers from contact with a hot pot-cover. A loud noise elicits a crouching stance termed the "startle pattern" (Landis and Hunt 1939), one's body folded forward, breath arrested, thorax tight, gaze riveted, jaw dropped, knees flexed, frozen in a stiff, retracted stance somewhat analogous to that of a disturbed pill-bug. Lasting intense pain inclines one to twist, writhe, and thrash about aimlessly in a manner similar to that of an injured

earthworm. An extremely sharp pain freezes one's body into a state of rigid immobility, with back tightly arched, head thrown back, eyes bulging, mouth gaping. When pain subsides, one feels drained, listless, and limp.

These various tensional shifts are echoed in the earlier-noted ones integral to negative emotions. Disappointment elicits a similar stiffening of one's body and a tightened feeling in one's chest and throat, a contraction in one's features and stance, and a diminishment in energy, alertness, and interest. With grief, the tightening up is more intense, so much so that the inner tightness may incline one to cry out, to twist, squirm, and writhe in pain. Extreme grief, like extreme pain, may temporarily arrest one's breath, even one's heartbeat, freezing one's body in a reversed stance with arched back and head thrown back. The response is in fact not unlike a rather curious reflex present in young infants, the Moro reflex (Young 1973, pp. 221–225), wherein a sudden failure of support for an infant's body elicits an arched back, wide eyes, and arrested breath. Although the reflex allegedly disappears after six months, a similarity in dynamics suggests that it persists as an "excess-response", a response to extreme sensation, whether the pain of bodily mutilation, the cold of icy water, or the pleasure of sexual climax. Extreme grief and horror may be plausibly viewed as echoing that response, a last-ditch effort to keep respiration open in face of intense invasive feeling. The dynamics of anger echo the explosive response elicited by great pain. As in a pain-response, anger features a general tensing up of one's body accompanied by an energetic surge that inclines toward flailing out as if to shake off the source of pain. Given an awareness of the presumed cause of the pain, it is but a short step to direct the surge of energy and violent movements at the presumed cause.

The onset of fear resembles a response of surprise or of startle. When surprised, one's body abruptly takes up an alert, immobile, often wide-eyed stance, attention focused on the surprising event. When startled, the response is more intense, and contractive. Both responses are typical of fear. Other features of fear such as the pinched and numb feeling in one's face and limbs echo those of a response to cold. In both intense fear and cold, one is petrified and incapable of movement, breath is arrested, one's legs may tremble and one's teeth chatter as if one's body were attempting to counter the effects of its own response. Hate and restrained or thwarted anger display an analogous but lesser degree of rigidity. The term "cold" is often used metaphorically in expressions such as "a cold tone of voice", or "a cold stare", or "a cold reception", where it captures the rigidity induced by animosity. The term "warm" likewise captures the dynamic similarity between responses to warmth and feelings of affection.

A similar relationship holds between positive somatic responses and positive emotions. A soft caress typically initiates a wave of pleasure, issuing in a general feeling of relaxation, deep breathing, and soft voice, features also characteristic of contentment. Caresses can shade into tickles where the intensity of pleasure energizes, inclining one to move or even making one move involuntarily. Intense pleasure can also make the body tense up and one's lower throat contract blocking the passage of air, with the result that one's breath is able to escape only in successive little bursts, i.e., a laugh. Whereas the contraction provoked by pain is generally situated lower in the chest resulting in groans, grunts, and moans, that

provoked by pleasure is higher up, resulting in squeals and high-pitched shrieks. The hedonic and tensional shifts integral to joy echo these various responses to intense pleasure, while adding the further features characteristic of delight or mirth—a bubbly feeling in one's chest and body, a ticklish feeling in one's throat.

The automatic response of one's flesh to warmth, as to pleasure, is to relax and let tensions dissolve. As the warmth spreads and tensions fade, breathing becomes slower and fuller, one's voice more relaxed and flowing. Affection echoes just such changes, as does contentment. If "warmth" is used as a synonym for affection rather than for contentment, it is undoubtedly because of the warm, pleasant glow in one's breast typical of affection. The presence of thoracic feelings of the sort is a characteristic peculiar to "vital" emotions, one not shared with somatic responses.

The situation with regard to the two "aesthetic" emotions of aversion and appreciation is somewhat complex. Both emotions echo the somatic responses elicited by certain tastes, odors, sounds, and sights, whether the tightening up and withdrawal provoked by bitterness, a whiff of hydrogen sulfide, a rasping sound, or a jarring color, or the pleasantness, relaxed acceptance, or enthrallment that almost any sensuous presence may on occasion awaken. Typically aesthetic emotions contain somatic responses to the sensuous elements present, but these are integrated into responses elicited by cognitive relationships that the sensuous display evidences or brings to mind, all of which responses follow roughly the patterns laid down in somatic responses. Typically, the hedonic center of the elicited delight or discomfort is the sense organ involved, rather than in the breast. It should be added, however, that with aesthetic objects the relationships evoked or perceived may be quite elaborate. In the case of music, for instance, a similarity in dynamics may suggest a particular vital emotion, and perhaps be so moving as to elicit a choking up and tears, thus generating a response more akin to a vital emotion than to an aesthetic one.

8 The Depth of Bodily Roots

Let us now leave the domain of phenomenology for that of empirical science, and turn to some of the implications of the above findings. Let us begin with the irreplicability of the tensional shifts that initiate emotion. That irreplicability implies that the shifts must be innate, and cannot be the product of cultural grooming. To realize that such must be the case, one need only ask how social influence and training could possibly result in the formation of voluntarily irreplicable shifts. Imitation and directed repetition may well instill habitual practices through voluntary repetition, but habitual activity is replicable. It defies understanding how voluntary activity of the sort could create an irreplicably involuntary response. Nor can these responses be the fruit of social affective osmosis. Social surrounds may induce or transmit emotion by triggering an innate propensity, but it defies understanding that they could elicit emotions in the absence of any such propensity, and create emotions *ex nihilo*. The only plausible view is that irreplicably involuntary responses are innate.

This conclusion is corroborated by the involuntary nature of one's automatic responses to cold or to pain, to warmth or to sudden or intense sensation. These responses are universally judged to be innate, to be reflex-like responses that, like somatic attitudes, are the work of the body. To claim that they are learnt is in fact no more plausible than to claim that shivering and sneezing are learnt. The strong hedonic and tensional similarities between somatic responses and the initiating responses integral to fear, grief, joy, or affection strongly suggest that the two are similar in this regard, and that the claim that somatic responses are innate and not learnt, should with equal warrant apply to genuine personal emotions.

Thus, since all emotions arise with irreplicable responses, the most plausible account is that all emotions, whether pan-cultural or culturally relative, have innate roots, and that the irreplicably involuntary tensions peculiar to directed emotions figure among the innate responses that involve an infant in its surrounds.

It might be protested that the above line of reasoning claims too much. It is unquestionable that emotions in adults are shaped by interpersonal relationships, social context, and cultural grooming (Katz 1999), and hence are to a considerable extent culturally relative. Certain aspects of emotions are clearly culturally relative—"high fives", raised noses, bowing, and fixed days of mourning—a fact that seems *prima facie* incompatible with emotions being innate. The apparent incompatibility vanishes, however, when one recalls the complex nature of emotions, and the room it allows for innovation and deviance. The initiating involuntary response is innate, but it involves beliefs, which beliefs could well be socially inculcated falsities. The subsequent habit-ruled activity elicited is learnt activity, and consequently activity amenable to social influence. The fact that emotions must be voluntarily espoused opens a space in the progression of events that allows the initial tensional dynamics to be curbed or accentuated according to prevailing social norms. Moreover, espousal of any emotion opens the door to added behavior and activities considered socially fitting. Finally, emotions have the curious, earlier-noted feature of being socially transmittable, a feature that in a context of social solidarity leads to an emotion being endowed unquestioningly with the intentional object it has for the group, whether the object is appropriate for the feelings or not. As a result there is a variety of ways in which an innate response may become part of a larger affective event that is culturally relative. Nevertheless, that event remains at its core an involuntary bodily event, which, if abstraction is made from idiosyncratic genetic variation, is innate and hence (barring personal and racial idiosyncracies) pan-cultural, that is, of a sort familiar to most of one's fellow humans.

During the postmodern cultural wave of the 1980s and 1990s a popular view was that emotions had no roots at all in the body and in biology. Emotions were not simply culturally crafted; they were culturally created (Geertz 1973, p. 81; Averill 1982, p. 6; Lutz 1988, p. 5). In addition to being dogmatic and unsupported by any available evidence, the claim is clearly nothing less than aberrant. If an infant were a blank slate affectively, it would respond to nothing, be interested in nothing, could learn nothing. It must be endowed with certain affective dispositions at the outset if culture is to have any influence whatever on it. Indeed, without such dispositions it would have no interest in objects, no concern with them, and hence no awareness of

them or their interrelationships (Hua XI, pp. 162–175; 2001, pp. 210–224). The cogent question is thus not whether these dispositions are, but what they are. The most plausible answer is that they are the various irreplicable responses discussed above.

It might be added that not only may emotions be rightly deemed pan-cultural but they are also to some extent pan-animate. The same is true to an even wider extent of somatic responses. From an evolutionary perspective, emotions may be plausibly viewed as putative improvements on more primitive somatic responses, modifications that permit more finely tuned adjustments to the world. As noted earlier, somatic responses each have an affective intentionality and an implicit purpose, while emotions have an affective intentionality and, in many cases, an implicit purpose that coincides with that of some somatic response. Emotions may to a considerable degree be reasonably viewed as extensions of such purposive responses. This is not to claim that they are always entirely appropriate to their eliciting situations. The huddling typical of grief, for instance, is scarcely protective against further loss, and the extreme rigidity integral to fear is hardly consistent with flight. However, tidiness is not one of evolution's more salient characteristics, and an explanation of such anomalies is properly the subject of a further paper (Johnstone 2012).

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