Dewey's Rejection of the Emotion/Expression Distinction

Joel Krueger

University of Exeter

Introduction

In two short essays (Dewey 1894, 1895), Dewey develops what we might call a "hybrid" model of emotions. Drawing on both Darwin and James, Dewey rejects the supposition—still common in emotion research today—that emotions are comprised of states or processes physically located within the individual subject, and specifically within the subject's brain (see, for example, Damasio 1999; LeDoux 1996; Nussbaum 2001; Panksepp 2004; Prinz 2004; Russell 2009; Schwarz and Clore 1988). Instead, Dewey argues that emotions are made up of both internal (neural and physiological activity, phenomenal properties, cognitive judgments) *and* external processes (expressive behavior, ongoing "transactions" with the surrounding environment). All of these aspects are composite parts of emotions. Accordingly, to give one aspect explanatory priority at the expense of the others is to artificially sever a dynamically interrelated, distributed process spanning brain, expressive body, and world—what Dewey terms the "concrete whole" of emotional experience.

I specifically consider Dewey's rejection of the distinction between an emotion and its behavioral expression. I show that, for Dewey, the latter is a constituent part of the former; the expressive behavior is part of the ontology of some emotions. I argue that Dewey's hybrid model not only receives support from current research in cognitive and neuroscience but, additionally, that it highlights the central role that agency and the social world play in the development and experiential character of our emotional life.

Darwin, James, and the "functional coordination" between emotion and expression

Dewey's hybrid model of emotions stems from the integration of what he thinks are the most valuable parts of theories of emotion developed by Darwin (1872) and James (1884, 1890). Dewey accepts Darwin's evolutionary naturalism as a general principle. As he writes elsewhere, "[t]o see the

1

organism *in* nature, the brain in the nervous system, the cortex in the brain is the answer to the problems which haunt philosophy". More specifically, Dewey appropriates Darwin's naturalistic portrayal of emotions as reflected in bodily habits, or still-developing habits, oriented toward some practical end. For Dewey—following Darwin—emotions are aspects of ongoing patterns of action through which an organism successfully negotiates its biosocial world. This is their adaptive utility.<sup>2</sup>

Dewey argues further that this *agentive* characterization of emotions, as we might term it, helps clarify their intentional character. Emotions involve an orientation or attitude toward some object or state of affairs: "[T]he full emotional experience...is always "about" or "toward" something; it is "at" or "on account of" something, and this prepositional reference is an integral phase of the single pulse of emotion". Their teleological mooring is what distinguishes emotions from free-floating affect. For Dewey, emotions are thus both directed toward, and responsive to, features of the environment.

Accordingly, highlighting the agentive and intentional character of emotions, Dewey insists, helps account both for the rationality of the behaviors associated with them as well as their capacity to further individual and communal life (i.e., their evolutionary significance) (Cunningham 1995, 866). As Dewey puts it—again following Darwin—emotional behaviors have been selected in virtue of their usefulness not merely for expressing felt experiences but rather for their utility "qua acts—as serving life", that is, as acts that have proven useful in the larger struggle for survival. Emotions are in this way part and parcel of our situated agency.

Despite this positive appropriation, Dewey nevertheless rejects parts of Darwin's theory. Specifically, Dewey rejects Darwin's serial characterization of "the relation of emotion to organic peripheral action [i.e., expression], in that it assumes the former as prior and the latter as secondary". According to Darwin, the emotion itself—its affective core, its felt aspect—exists antecedently to and independently from its behavioral expression. While bodily habits and specific behaviors *reflect* emotions, they are not, strictly speaking, *parts* of the emotions they reflect. Accordingly, emotions are

functionally discrete processes; they are distinct from both stimulus (a charging bear) and response (facially expressing fear; judgment that the bear is fearful, etc.) (cf. Garrison 2003, 406).

Dewey rejects this assumption. He argues that such an atomistic and, in particular, *internalist* conception of emotions is problematic for several reasons (Cunningham 1995). First, it generates an artificially simplified, serial account of a phenomenon that, in its lived fullness, rather exhibits an integrated, dynamic, and multidimensional reality. I say more about this below.

Second, this reductive distortion mischaracterizes the causal relations linking stimulus, mental state, and response. Dewy observes that, in order for a stimulus (a charging bear) to be judged as fearful, say, the stimulus must already be colored with an affective quality; it must already be perceived *as* fearful. On its own, the cold cognitive judgment that a particular stimulus is fearful is not sufficient to trigger the resultant cascade of emotion-related responses (physiological, behavioral, and expressive reactions associated with fear). In other words, if the perceptual stimulus is to be part of the emotion, it must be given with an affective valence in order to explain how it is that we respond to it the way that we do.

It is here that Dewey turns to James, looking to establish an "organic connection", as he puts it, between Darwin's evolutionary naturalism and James' somatic theory of emotion—and in particular, James' dual-emphasis on the neurophysiological and action-oriented dimensions of emotions. Dewey is particularly drawn to James because James rejects the thesis that an emotion is causally prior to and thus distinct from its expression. Instead, he famously argues that emotional experience arises within, and is in fact *constituted* by, the associated neurophysiological responses and expressive action.

# James writes:

Our natural way of thinking about these coarser emotions is that the mental perception of some fact excites the mental affection called the emotion, and that this latter state of mind gives rise to the bodily expression. *My theory, on the contrary, is that the bodily changes follow directly the* 

perception of the exciting fact and that our feeling of the same changes as they occur IS the emotion. Common-sense says...we meet bear, are frightened and run...The hypothesis here to be defended says that this order of sequence is incorrect, that the one mental state is not immediately induced by the other, that the bodily manifestations must first be interposed between, and that the more rational statement is that we first feel sorry because we cry, angry because we strike...Without the bodily states following on the perception, the latter would be purely cognitive in form, pale, colorless, destitute of emotional warmth. We might then see the bear, and judge it best to run...but we should not actually feel afraid or angry.<sup>11</sup>

For James, then, the perception of, say, a fearful stimulus (a bear) first triggers various instinctive neurophysiological responses. These responses—and the actions they feed into—form the basis of both our judgments (running away, we get the idea of "bear-as-thing-to-be-run-away-from") as well as our emotional phenomenology. As Dewey glosses James, our "beating heart, trembling and running legs, sinking in stomach, looseness of bowels, etc." are part of "a certain act of seeing, which by habit, whether inherited or acquired, sets up other acts" such as turning and running away or judging that the bear is fearful. The important point is that, from the start, perception and action are coupled processes. The process of my seeing the bear as fearful—and experiencing the bear I see as fearful, or judging it to be so—is "constituted via the organic co-ordination of certain sensorimotor (or ideo-motor) activities, on the one side, and of certain vegetative-motor activities on the other". In other words, our agency underwrites both our emotional experience and associated evaluative judgments.

Dewey does not accept James' view wholeheartedly, however. In particular, he accuses James of failing to offer a more comprehensive account of how "to connect the emotional seizure [the experience] with the other phases of the concrete emotion-experience". For Dewey, instinctive responses are only a part of emotional functioning; other phases that must be accounted for include higher cognitive functioning, communication, and interpretation (Garrison 2003, 409). Nevertheless, Dewey notes that

James was mainly concerned with the phenomenology of emotional experience and likely did not intend his theory to be taken as "dealing with emotion as a concrete whole". <sup>16</sup>

In sum, Dewey accepts Darwinian naturalism and, in particular, Darwin's association of emotions with adaptively useful actions. This characterization emphasizes both their agentive character and social function. But Dewey rejects Darwin's implicit assumption that an emotion is distinct from the behavior expressing it. This is where Dewey turns to James, who rather argues that behavioral expressions are a constitutive part of the emotion itself. Experience and expression are "functionally coordinated" within the larger dynamic of the emotion considered as a concrete whole.

## The character of expression

For Dewey, then, an emotion is partially constituted by its bodily expression. Before considering empirical evidence that appears to support this idea, I first consider how we might understand "expression" in this context. I also situate Dewey next to some similar ideas developed within the phenomenological tradition.

Peter Goldie argues that an expression of emotion is only genuine if it isn't performed as a means to some further end (Goldie 2000a, 2000b). There are three ways that an expression of emotion can fail to satisfy this condition. First, it can be done insincerely—such as when I smile and feign happiness upon shaking hands with someone I strongly dislike. In this situation, there is no authentic emotion motivating the expression. Rather, it is performed mechanically out of respect for the social norms governing that encounter. Second, an expression can be genuine (a frown expressing anger) but performed calculatingly, that is, to intentionally convey to others that one is experiencing *this* emotion—a communicative intention which becomes the true end of the expressive act. This calculative performance removes the spontaneity at the heart of authentic emotional expression and transforms the expression from an end to a means.

Third, an expression cannot be done simply for pleasure: for example, kicking a table leg out of anger to

feel better. Again, this would transform the expressive act from an end to a means—namely, the goal of slightly alleviating one's anger. So, for Goldie a genuine expression of emotion must be *sincere*, *spontaneous*, and *self-contained* (i.e., an end in itself).

Even with these conditions in place, the class of actions which are authentic expressions of emotion is fairly broad. It includes things like facial expressions, gestures, whole-body movements, spontaneous touches, gaze or breathing patterns, and prosody. Characterized thusly, genuine expressions of emotion seem to inhabit a middle space between mere *bodily changes* (responses of the autonomic nervous system, hormonal changes, muscular reactions, etc.) and *reasoned actions* that flow from emotions (actions made rationally intelligible by appealing to some combination of beliefs and desires) (Goldie 2000b). They have an experiential significance that renders them more meaningful than the former; yet they don't lend themselves to belief-desire rationalization quite like the latter. However, as we will see—and as Dewey emphasizes—they seem to be a constitutive aspect of emotional experience and thus require explicit consideration.

A number of phenomenologists make a similar claim (see Krueger and Overgaard 2012).

Consider the following well-known remark by Max Scheler:

[W]e certainly believe ourselves to be directly acquainted with another person's joy in his laughter, with his sorrow and pain in his tears, within his shame in his blushing, with his entreaty in his outstretched hands, with his love in his look of affection, with his rage in his gnashing of his teeth, with his threats in the clenching of his fist, and with the tenor of this thoughts in the sound of his words. If anyone tells me that this is not 'perception' [of the emotion itself], for it cannot be so, in view of the fact that a perception is simply a 'complex of physical sensations', and that there is certainly on sensation of another person's mind nor any stimulus from such a source, I would be him to turn aside from such questionable theories and address himself to the phenomenological facts.<sup>18</sup>

According to Scheler, we see the mental states of others within the dynamics of their expressive behavior. This is significant because it means that there is no need to posit an additional extra-perceptual cognitive mechanism (analogical inference, etc.) purportedly responsible for our detection of others' mentality. Rather, since mental states are observable, they can be directly perceived. This sort of direct, non-inferential social perception, Scheler argues, is sufficient for accessing others minds directly and securing our knowledge of them (Gallagher 2008; Krueger 2012).

Maurice Merleau-Ponty defends a similar view. Although he doesn't say much about emotions explicitly—his discussions of emotions are generally part of his larger treatments of aesthetics, infant cognition, intersubjectivity, and bodily expressivity (Cataldi 2008)—his dogged advocacy of a thoroughly embodied approach to cognition makes him highly relevant. Like Scheler, Merleau-Ponty insists that mental phenomena are often directly visible in another's expressive behavior and manner of bodily comportment. He writes that

We must abandon the fundamental prejudice according to which the psyche is that which is accessible only to myself and cannot be seen from the outside. My "psyche" is not a series of "states of consciousness" that are rigorously closed in on themselves and inaccessible to anyone but me. My consciousness is turned primarily toward the world, turned toward things; it is above all a relation to the world. The other's consciousness as well is chiefly a certain way of comporting himself toward the world. Thus it is in his conduct, in the manner in which the other deals with the world, that I will be able to discover his consciousness.<sup>19</sup>

But not only is our body "our general medium for having a world", according to Merleau-Ponty; additionally, "the body is essentially an expressive space". <sup>20</sup> He writes elsewhere that

I do not see anger or a threatening attitude as a psychic fact hidden behind the gesture, I read anger in it. The gesture *does not make me think* of anger, it is anger itself.<sup>21</sup>

I perceive the grief or anger of the other in his conduct, in the face or his hands, without recourse to any 'inner' experience of suffering or anger, and because grief and anger are variations of belonging to the world, undivided between the body and consciousness, and equally applicable to the other's conduct, visible in his phenomenal body, as in my own conduct as it is presented to me.<sup>22</sup>

By insisting that anger, for example, isn't a psychic fact hidden behind the gesture but that it is, rather, the gesture itself—and that emotions such as anger and grief are thus "undivided between the body and consciousness"—Merleau-Ponty rejects the idea of a split between an inner emotion and its outer expression. Like Dewey and Scheler, Merleau-Ponty denies that emotion and expression are merely *causally* related (in the sense that the former is causally antecedent to the latter) but instead insists that their relation is one of *constitution*.<sup>23</sup> Seeing another's angry gesture is therefore to see an outward-facing feature of their anger itself.

To return to Dewey: one argument Dewey gives in support of this idea is that, from the standpoint of the subject undergoing the emotion, there is, strictly speaking, no such thing as an expression of emotion. Rather, there is simply the emotion *as lived through*—part of which includes an "expressive" component: the emotional experience as articulated through a particular piece of overt behavior or pattern of "serviceable associated habits.<sup>24</sup> But Dewey argues further that "[t]o rate such movements as primarily expressive is to fall into the psychologist's fallacy: it is to confuse the standpoint of the observer and explainer with that of the fact observed".<sup>25</sup> From the first-person perspective we simply live through our emotions. We only speak of an emotion's "expression" when "looking at it from the standpoint of an observer—whether a spectator or the person himself as scientifically reflecting upon his movements, or aesthetically enjoying them".<sup>26</sup> But this distinction between an emotion and its expression—insofar as it is taken to refer to a basic fact about the ontology of emotions—conflates the 1<sup>st</sup> and 3<sup>rd</sup> person perspective. It "names the facts not as they are, but in their second intention" (i.e., from an external vantage point).<sup>27</sup> This is because an emotion and its expression are originally "one organic pulse…whose reality is the

whole concrete co-ordination of eye-leg-heart, etc....within this one whole of action". Again, emotions for Dewey are temporally-extended modes of behavior constituted by the functional coordination of inner and outer components. This is their concrete reality.

With this phenomenological argument against the emotion/expression distinction, Dewey is thus in good philosophical company. As we will see later on, Dewey's analysis also adds an important social dimension to emotional experience that doesn't appear to be explicitly present in phenomenological treatments of emotions. However, I now discuss some work in cognitive and neuroscience that appears to provide empirical support for Dewey's hybrid model of emotions.

## **Empirical support**

Emotions without a face

The first line of evidence I want to consider involves Moebius Syndrome (MS). MS is a rare form of congenital facial paralysis. It is normally complete and bilateral, and results from maldevelopment of the sixth and seventh cranial nerves (Briegel 2006). People with MS lack facial animation; they also lack ocular abduction and tend to move their entire head when tracking objects in the environment.<sup>29</sup> People with MS thus lack access to basic physical resources that most of us take for granted when expressing emotion: the ability to facially articulate the emotion and in so doing provide face-related social cues to others.

This lack of facial animation affects how people with MS experience emotions. They often report feeling that, generally speaking, their emotional life is somehow less robust than it ought to be; they also report that the phenomenology of particular emotions is diminished. This diminishment is felt to be connected with a lack of facial expressiveness.

Consider the following quotes. One individual with MS, James, puts the point this way:

I have a notion which has stayed with me over much of my life—that it is possible to live in your head, entirely in your head. I think I get trapped in my mind or my head. I sort of *think* happy or I *think* sad, not really saying or recognizing actually feeling happy or feeling sad...maybe I have to intellectualize mood...I'm *thinking* rather than *feeling* it.<sup>30</sup>

James' narrative suggests that he has adopted a kind of mentalizing stance with respect to his emotion; it becomes a process he reflectively thinks through, rather than something he experiences. Accordingly, the qualitative component of his emotional experience, if not missing entirely, is diminished. Even the process of falling in love with his wife becomes, at least at the beginning, a predominantly cognitive enterprise: "I was probably thinking [of being in love] initially. It was some years later when I really felt in love". This feeling of disconnectedness from his emotions—which carries over into a more pervasive feeling of disconnectedness from others—leads James to summarize his relationship to his own emotions this way: "I've often thought of myself as a spectator rather than a participant". The second summarize his relationship to his own emotions this way: "I've often thought of myself as a spectator rather than a participant".

Other individuals with MS report similarly diminished emotional experience. Speaking of her childhood, one woman reports that, "I did not express emotion. I am not sure that I felt emotion, as a defined concept".<sup>33</sup> Another woman describes the experience of playing the piano:

By 13 I was quite competent and I found that my fingers unleashed emotion and expression in me, even though I did not know what they were. I would play one piece again and again in various ways; happy, sad, cheeky, all jumbled up inside...I might have been in one mood but another would come out through my fingers, there were channels of all sorts of different things inside me". <sup>34</sup>

This mode of expression allowed her to discover a novel way to articulate—and thus experience—previously inaccessible emotional experiences.

The idea of recruiting compensatory strategies to overcome a lack of facial animation—and, in so doing, recalibrate the phenomenology of emotional experience—appears in other MS narratives. For

example, another woman reports that she learned to experience certain emotions only after traveling to Spain and, after careful scrutiny, teaching herself to mimic the gestures she encountered there. She writes:

I do not think I had emotion when I was a child but now I have it. How did I get it? From Spain. I learnt Spanish in two months but—more—they are very graphic in their emotional expression. The body language I had learnt and used at university could be exaggerated in Spain, using the whole body to express one's feelings...because of this I learnt to feel within me...because of the cultural up regulation of feeling in gesture I learnt to feel. I am not sure how I mapped gesture and feeling onto my body, but I was starting to feel then. I could feel really ecstatic, happy, for the first time ever.<sup>35</sup>

Others with MS tell similar stories. Many adopt alternative compensatory strategies of embodied expression—prosody, gestures, and verbalization, along with energetic artistic activities such as painting, dancing, and (as we've seen) playing the piano—to scaffold their emotional experience and support its emergence in a new and more intense format (Bogart and Matsumoto 2010; cf. Krueger 2013a, Krueger and Michael 2012).

At this point, one might object that people with MS lack a reliable criterion for assessing their purported emotional diminishment (or, for that matter, its subsequent recalibration). In other words, since MS is congenital, how can they know if their emotional experience is genuinely diminished? They simply aren't in a position to provide a reliable assessment when it comes to this part of their psychological economy. However, there are other sources of evidence that appear to support MS narratives.

Consider the case of Oliver, an individual who developed Bell's Palsy—a form of facial paralysis affecting the seventh cranial nerve—while at university (Cole 1999). Oliver is instructive because he systematically developed facial immobility whilst at university, lived with it for a period of six months, and then recovered. Like those with MS, Oliver experienced bilateral paralysis; over a period of several weeks, he lost the ability to move either side of his face except for some slight movement around the eyes

and eyebrows. What is particularly illuminating about this case is that, because his condition was progressive and not congenital, Oliver was in a unique position to track the diminishment of his emotional life commensurate with his gradual loss of facial animation. He describes settling into a kind of emotional limbo with his loss of facial expressivity:

I suppose I didn't feel constantly happy, but then I didn't feel constantly sad...I felt almost as if in a limbo between feelings---just non-emotional...it was within myself, an emotion limbo. I still felt happy to see or hear something I liked, but I didn't think that I felt it as much because I was not actually smiling. I started to write a diary...writing helped a lot. Such and such has happened and I feel this. Writing allowed me to express.<sup>36</sup>

For Oliver, it thus appears that the physical act of writing is another kind of compensatory strategy—a "surrogate scaffolding", as we might put it, functioning in place of an animated face—enabling Oliver to externally express his emotions and recalibrate at least part of their diminished phenomenology.

Moreover, his experience seems to lend further support to the idea that the facial expression of emotion is in fact part of the emotion itself, a kind of external material scaffolding that plays a central role in supporting its emergence.

### Further evidence

In considering the idea the idea of a reciprocal link between emotional expression and experience, we need not confine ourselves to MS narratives or other forms of facial paralysis. A wealth of other studies indicates that the manipulation of expressive behavior produces a corresponding change in emotional phenomenology.

The largest and most consistent body of evidence concerns facial expressions. For example, multiple studies have found that when subjects are induced to adopt a particular posture or emotion-

specific facial expression (grimacing, frowning, etc.), they report experiencing the corresponding emotion (disgust, anger, etc.) (Duclos and Laird 2001; Duclos et al. 1989; Edelman 1984; Flack et al. 1999; Kellerman and Laird 1982; for reviews, see Laird 2007; Niedenthal 2007; Niedenthal and Maringer 2009). Paula Niedenthal has surveyed extensive research indicating both that (1) that adopting emotion-specific facial expressions and postures influences preferences and attitudes (for example, subjects judge comic strips funnier when smiling, less funny when frowning, etc.), and (2) inhibition of bodily expression leads to diminished emotional experience, as well as interference in processing emotional information (Niedenthal 2007; Niedenthal et al. 2005). With respect to (1), unconsciously mimicking a conversation partner's facial expressions appears to generate a similar experience as well as a mutual feeling of empathy and rapport (Chartrand and Bargh 1999). However, with respect to (2), deficits in spontaneous facial mimicry—in autism (Hermans et al 2009) or some instances of severe depression or melancholia (Fuchs 2005)—can lead to diminished affect more generally, as well as an impaired ability to process emotional expressions in others (see also Clark et al 2008; McIntosh et al 2006).

A related strand of research has investigated the experiential effects of exaggerating or minimizing emotional expressions. In one study, subjects were asked to endure a series of painful electric shocks (Lanzetta et al 1976). During some of the trials, subjects were asked to exaggerate their expressive reactions to the shocks; during other trials, they were asked to inhibit them. Skin conductance was measured during these different trials. In the exaggeration condition, skin conductance was higher and subjects reported more intense feelings of pain. In the inhibition condition, skin conductance and pain reports were diminished. Other studies of a similar form replicated these results (Gross 1999; Kleck et al 1976; Kraut 1982; Zuckerman et al 1981). These findings suggest that exaggerating emotional expressions intensifies emotional phenomenology whereas inhibiting expressive behavior diminishes it.

The idea of a reciprocal link between facial expression and the experience of emotion receives further powerful support from studies of individuals who receive Botox injections, which inhibits facial expressiveness (i.e., a kind of voluntary MS). Individuals who receive Botox injections report a decrease

in the intensity of emotional experience (Davis et al. 2010) and are slower in processing emotional language referring to expressions (such as anger and frowning) requiring the paralyzed muscle (Havas et al. 2010). Hennenlotter et al. (2009) found that patients who receive Botox injections in frowning muscles show reduced activity in the amygdala and brainstem during the imitation of angry facial expressions. As a result, both the sensory input and visceromotor output controlled by these structures is inhibited, leading to a diminished emotional experience (Caruana and Gallese 2012).

But it is likely that emotional experience isn't just tied to facial expressivity. The "sensorimotor activities" that Dewey argues are constitutive of certain emotional experiences extend beyond an emotion's facial signature into gestures, movement, and more general modes of bodily comportment. Additional evidence seems to support the idea that emotional experiences harbor a motor component. For example, individuals who have suffered severe spinal cord injuries report less intense feelings of high-arousal emotions such as fear, anger, or sexual arousal (Chwalisz et al. 1988; Hohmann 1966; see also Laird 2007, 74–76; Mack et al. 2005). A similar effect can be found in cases that don't involve paralysis. A number of other studies have manipulated postures and observed changes in feeling of depression, anger, fear, sadness, confidence and pride (see Berkowitz 1994; Duclos and Laird 2001; Duclos et al 1989; Flack et al 1999; Riskind 1984; Riskind and Gotay 1982; Stepper and Strack 1993).

Finally, Caruana et al (2011) found that intracortical microstimulation (ICMS) of two different sectors of the macaque insula—a part of the brain involved in the representation of bodily sensations, as well as emotion and emotion recognition—resulted in distinct emotion-specific behaviors (disgust and affiliative states) and autonomic responses. ICMS of the anterior sector of the insula evoked disgust-related behavior comprised of both a specific motor component (grimace) and more complex context-dependent behavior (refusal of food). ICMS applied to a posterior sector evoked affiliative behavior (lipsmacking). This functional data suggests the insula plays an important role in determining both the external and internal aspects of a given emotion (i.e., both experience and behavior). The more general point is that emotional experience is shaped even at the neural level by a motor component.

In sum, the wide-ranging evidence surveyed above provides compelling support for Dewey's hybrid model of emotions. While the empirical details of the precise relation between emotion and expression have yet to be clarified, it does seem that the expression of an emotion is sufficient to bring about its experience. There exists, to return to Dewey's expression, a functional coordination between internal (neurophysiological and phenomenological) and external (expressive and behavioral) parts of the concrete whole of emotion. The outward-facing visible expression of emotion is thus part of the emotion itself. Publically perceivable behavior doesn't merely carry information about "private" emotions (i.e., my facial expression conveys the anger I feel inside). Rather, the latter is, at least at times, a proper part of the former; to see the expression is to see part of the emotional mind in action.

## Beyond expression: emotions, agency, and the social niche

There is a further implication of Dewey's hybrid model worth discussing. It stems from the Dewey's more general contention that agency is a core feature of emotional experience. Emotions aren't things that simply happen to us. They are often things that we *do*. We enact emotions (Colombetti and Thompson 2008). And as Dewey reminds us with his criticism of James—a criticism that might also apply to some phenomenologists—there is generally more to an emotion than an involuntary neurophysiological or even a gestural response. Since agency is always situated—that is, embedded in encompassing physical and social contexts—other people play a material role in helping us to enact our shared emotional experiences. However, by focusing exclusively on the neurophysiological and/or gestural aspects of emotional experience, there is a danger of overlooking the extent to which emotions are socially mediated over both short and long-term time scales. But by following Dewey's lead and stressing the agentive and socially-situated character of emotional performance, we can get a clearer picture of how social and emotional processes intertwine dynamically in real time.

Dewey emphasizes this point by first pointing out the *dialogical* character of infant emotions. From the start of life, others are intimately involved in the development and negotiation of our emotional experiences. Infants use laughter and positive emotions, for example, as affiliative and communicative displays intended to prompt further interaction. Dewey observes that, within free play episodes, "[r]hythmical activities, as peek-a-boo, call out a laugh at every culmination of the transition, in an infant. A child of from one and a half to two years uses the laugh as a sign of assent; it is his emphatic "I do" or "yes" to any suggested idea to which he agrees or which suddenly meets his expectations". But the caregiver's physical interventions (gestures, facial expressions, direction of gaze, body orientation, patterns of touch and vocalization, etc.) play a critical role in mediating this process (cf. Krueger 2013b). Both agents thus co-regulate this exchange. The experience and expression of happiness arises within this shared dynamic; the emotion has both a social origin and function. Much evidence from developmental psychology supports Dewey's observation (see Reddy 2008, Stern 1999, and Trevarthen 1993).

This dialogical process doesn't end in childhood. As Dewey observes, emotions remain socially mediated throughout our lives. <sup>39</sup> Consider the following scenario: I am angry. I suspect that my wife has been unfaithful. As I brood, my imagination swells with images of how I suspect this betrayal has unfolded. Each new image intensifies my anger. But things aren't quite that simple. For anger is rarely a free-standing state. Along with my anger, I actually experience an interrelated constellation of various other emotions: *jealousy* in the face of her betrayal; *shame* at my naïve trust; *humiliation* at the thought of others finding out; *sadness* at the dissolution of a long-term commitment; *disgust* at the thought of her being physically intimate with another, etc. Within the throes of this episode, any of these emotions may at any moment take precedence over the others without thereby cancelling out their phenomenal presence. The particular phenomenology of my anger in this context is thus conditioned by the simultaneous upwelling of a flurry of other emotions. Later, however, after some reflection and cooling off, a weary sadness may assume phenomenological prominence without completely effacing the anger that had previously burned so intensely. And when discussing the situation even later with friends, my shame and

humiliation may come to the fore, preserving the anger but modifying its felt texture by diminishing its intensity and introducing a more prominent shame-dimension.

An important lesson here is that emotions are often structurally complex both in terms of their ontology (i.e., they are hybrid, as we've previous discussed, composed of features both internal and external to the skin) as well as their phenomenology. It is therefore misleading to speak of "anger or "sadness" as though these terms pick out neatly circumscribed experiential states. The phenomenology of our emotional life is much messier than this way of speaking would suggest. This is because emotions are very often long-term processes "lasting even for years or a lifetime and occupying several levels or dimensions of consciousness". Moreover, as the above example affirms—and as Dewey also observes —emotions evolve as we negotiate various social contexts. They are interactively constituted in the sense that they are deeply interwoven with those of other people, along with the material and ideological structures of our social niche (Downing 2000; Parkinson et al 2005).

These observations further affirm Dewey's emphasis on the *dynamic* and *transactional* character of emotional experience—the idea, once more, that emotions are both structurally complex (i.e., interwoven with other emotions, and comprised of different dimensions like physiological arousal, cognitive judgments, intentionality, felt affect, etc.) as well as essentially temporal (i.e., they evolve and develop over time). When sharing my anger over my wife's infidelity with friends, my anger solicits an angry response from them, which heightens my own anger, which in turn further animates theirs, etc.

Many emotions thus emerge quite literally *between* interactants, within this ongoing mutual adjustment of action, emotion, expression, and intention (Fogel and Garvey 2007).

Moreover, as interactively constituted, emotions are forms of engagement or "variations of belonging to the world". <sup>43</sup> They are part of our social agency. We use emotions to construct, modify and negotiate various aspects of our relationships with other people and with the surrounding context (Hinde 1985; Maclaren 2011). This is their social function, their adaptive utility. Emotional expressions are

therefore more than simply the external aspect of an intensely felt feeling or physiological reaction; rather, they motivate interaction and sustain our ongoing relationships with others. They enable us to negotiate our social niche (Krueger forthcoming).

As with Dewey's contention that an expression is part of the emotion, there is empirical support for this view. Consider audience effects. Ten-pin bowling players, for example, smile significantly more after producing a positive event (such as bowling a strike or spare) when they turn to face their friends than when they are still facing the pins (Kraut and Johnston 1979). The physical presence of others provides a social niche in which a smile articulates a strong social motivation: an intention to share one's happiness and to relish the further development of this experience as mediated by the affiliative displays of others. A similar effect was observed in Spanish soccer fans who issue authentic ("Duchenne") smiles in response to goals only when facing one another (Fernández-Dols and Ruiz-Belda 1997). Even Olympic athletes, whom one would presume could barely contain their joy at reaching the pinnacle of their field, smile during medal ceremonies almost exclusively when actually receiving their gold medal—that is, when interacting with officials and the public—as opposed to non-interactive contexts such as before the ceremony (by themselves in the tunnel, away from TV cameras) or while facing their country's flag during the playing of the National Anthem (Fernández-Dols and Ruiz-Belda 1995).

Studies of audience effects on emotional experience are in this way one line of research suggesting that facial displays and other bodily expressions of emotion are mediated by the extent to which individuals can fully interact in social situations (Chovil 1991).<sup>44</sup> It often takes the presence of others—as well as the appropriate context—to draw an emotion out of us and help us complete it. Of course, the emotion may be initially comprised of an instinctive physiological response and behavioral expression, which gives way to subsequent appraisals, judgments, and further associated behavior. These, too, are constituents of some emotional experiences. But the central point is that, very often, we sustain this initial impulse by following through with the emotion's affective and evaluative trajectory. We exert our agency and enact the experience by falling to our knees and bodily giving ourselves over to our

sobbing, unleashing our rage in an extravagant display of clenched fists and contorted facial expressions, or willfully subduing our rising joy by taking a deep breath and adopting a relaxed posture. And crucially, we do this with others, within varying social contexts. Again, our emotional agency is always situated. Others thus enter into and play a central role in shaping the affective, evaluative, and agentive trajectory of our emotional performances. The external processes within Dewey's hybrid model of emotions are therefore not merely circumscribed by the gestures and movements of individual agents. Beyond this, the people and structures of our social niches are likewise part of the external processes responsible for the emergence of many of our emotional experiences. They, too, are part of our hybrid emotional mind.

To conclude, I have tried to sketch out Dewey's hybrid model of emotion and show not only that it receives robust support from current research in cognitive and neuroscience but, additionally, that it highlights the central role that agency and the social world play in the development and character of our emotional life. This is not to deny, of course, that emotions are partially composed of intraindividual or nonsocial components or processes. Nor am I suggesting that an individual-centered approach to emotion research is never appropriate. Nevertheless, Dewey's hybrid model reminds us that emotions are dynamic, structurally complex and multi-dimensional. Ultimately, then, for a clearer picture of the "concrete whole" of our emotional life, we must resist an excessively brain-centered prejudice and be mindful of the larger embodied, social, and interactive contexts within which we are always situated and from which our emotions inevitably emerge and take shape.

### **NOTES**

- 1. Dewey, "Nature, Life, and Body-Mind" in *The Later Works of John Dewey*, vol. 1, ed. Jo Ann Boydston (Carbondale: Southern Illinois University Press, 2008), p. 224.
- 2. Dewey, "The Theory of Emotion", in *The Early Works of John Dewey*, vol. 4, ed. Jo Ann Boydston (Carbondale: Southern Illinois University Press, 2008), p. 155.
- 3. *Ibid.*, p. 173.
- 4. Ibid., pp. 154, 160.
- 5. Ibid., p. 152.
- 6. Susan Hurley (1998) terms this the "classical sandwich model" of cognition: the idea that "meat" of cognition (including, for our purposes, emotion) is distinct from the "bread" of perception and action.
- 7. Dewey, "The Theory of Emotion", in *The Early Works of John Dewey*, vol. 4, ed. Jo Ann Boydston (Carbondale: Southern Illinois University Press, 2008), pp. 176-180.
- 8. *Ibid.*, p. 175.
- 9. *Ibid.*, p. 152.
- 10. Ibid., p. 152.
- 11. James, The Principles of Psychology, vol. 2, (New York: Dover, 1890), p. 449.
- 12. Dewey, "The Theory of Emotion", in *The Early Works of John Dewey*, vol. 4, ed. Jo Ann Boydston (Carbondale: Southern Illinois University Press, 2008), p. 178.
- 13. Ibid., p. 175.
- 14. Ibid., p. 180.

15. *Ibid.*, p. 172.

16. *Ibid.*, pp. 171-172.

- 17. Goldie (2000b) further divides expressions of emotions into those which are actions (voluntary behavior like stroking the face of one's beloved) and those which are not (involuntary behavior like facial expressions). For reasons I discuss later, within the context of emotional experience, this distinction is helpful but relatively fuzzy.
- 18. Scheler, *The Nature of Sympathy*, trans. Peter Heath (London: Routledge and Kegan Paul, 1954), p. 260.
- 19. Merleau-Ponty, "The Child's Relations with Others", in *The Primacy of Perception and Other Essays on Phenomenological Psychology, the Philosophy of Art, History, and Politics*, ed. James Edie (Evanston: Northwestern University Press, 1964), pp. 116-117.
- 20. Merleau-Ponty, *Phenomenology of Perception*, trans. Colin Smith (New York: Routledge, 2002), p. 169.
- 21. Ibid., p. 214.
- 22. *Ibid.*, p. 415.
- 23. To be clear, Merleau-Ponty—like Dewey—isn't saying that one's anger is *identical* to one's gesture in the sense that it is wholly *reducible* to it. This would be a crude behaviorism; Merleau-Ponty's view is more subtle than this, and readily concedes that interiority is an essential part my own and others' experience (Merleau-Ponty 2002, pp. 415, 424). See Krueger and Overgaard (2012) for further discussion.
- 24. Dewey, "The Theory of Emotion", in *The Early Works of John Dewey*, vol. 4, ed. Jo Ann Boydston (Carbondale: Southern Illinois University Press, 2008), p. 154.

- 25. Ibid., p. 154.
- 26. Ibid., p. 154.
- 27. Ibid., p. 154.
- 28. Ibid., p. 177.
- 29. Other parts of the condition include small tongue (which can lead to difficulties with feeding and speaking), breathing difficulties, malformation of arms or legs (missing fingers, underdeveloped calf muscles and extremely high arched feet), associated movement difficulties (clumsiness, late development sitting and standing, difficulties in running, jumping, and hopping, etc.) (Cole and Spalding 2009, pp. 2-5).
- 30. Jonathan Cole, "Empathy Needs a Face", Journal of Consciousness Studies 5-7 (2001), p. 62.
- 31. Jonathan Cole, About Face (Cambridge, MA: MIT Press, 1998) p. 122.
- 32. Ibid., p. 28.
- 33. Jonathan Cole, "Impaired Embodiment and Intersubjectivity", *Phenomenology and the Cognitive Sciences* 3 (2009), p. 354.
- 34. *Ibid.*, p. 354.
- 35. Ibid., p. 355.
- 36. Jonathan Cole, "On Being Faceless: Selfhood and Facial Embodiment", in *Models of the Self*, ed. S. Gallagher and J. Shear (Exeter: Imprint Academic, 1999), p. 310.
- 37. Dewey, "The Theory of Emotion", in *The Early Works of John Dewey*, vol. 4, ed. Jo Ann Boydston (Carbondale: Southern Illinois University Press, 2008), p. 180.

- 38. *Ibid.*, p. 157.
- 39. Ibid., p. 158.
- 40. Robert Solomon, "Emotions in Phenomenology and Existentialism", in *A Companion to Phenomenology and Existentialism*, eds. H. Dreyfus and M. Wrathall (Oxford: Blackwell Publishing, 2006), p. 303.
- 41. Dewey, "The Theory of Emotion", in *The Early Works of John Dewey*, vol. 4, ed. Jo Ann Boydston (Carbondale: Southern Illinois University Press, 2008), pp. 155-156.
- 42. This Deweyan perspective contrasts with Carroll Izard's characterization of emotions as "brief...responses" (Izard 1974) and Joseph LeDoux's characterization of emotions as rapid neurological (amygdala) responses distinct from the cerebral activity that generally follows them (LeDoux 1996; cf. Damasio 1999; Panksepp 1992).
- 43. Merleau-Ponty, *Phenomenology of Perception*, trans. Colin Smith (New York: Routledge, 2002), p. 415.
- 44. This is not to deny that we never smile or feel happy, for example, when alone. But audience effects are also present in these solitary contexts, which are often shaped by an implicit sociality (Fridlund 1991). Even when alone, we interact with others via imagination or memory, anticipation or forecast—or we might even take ourselves as an interactant.

### **BIBLIOGRAPHY**

- Berkowitz, L. 1994. "Is Something Missing? Some Observations Prompted the Cognitive-Neuroassociationist View of Anger and Emotional Agression." In *Aggressive Behavior: Current Perspectives*, edited by L.R. Huesmann, 35–58. New York: Plenum.
- Bogart, Kathleen, and David Matsumoto. 2010. "Living with Moebius Syndrome: Adjustment, Social Competence, and Satisfaction with Life." *The Cleft Palate-Craniofacial Journal* 47 (2): 134–142.
- Briegel, Wolfgang. 2006. "Neuropsychiatric Findings of Mobius Sequence: A Review." *Clinical Genetics* 70 (2): 91–97. doi:10.1111/j.1399-0004.2006.00649.x.
- Caruana, Fausto, and Vittorio Gallese. 2012. "Overcoming the Emotion Experience/Expression Dichotomy." *Behavioral and Brain Sciences* 35 (03): 145–146. doi:10.1017/S0140525X11001476.
- Caruana, Fausto, Ahmad Jezzini, Beatrice Sbriscia-Fioretti, Giacomo Rizzolatti, and Vittorio Gallese. 2011. "Emotional and Social Behaviors Elicited by Electrical Stimulation of the Insula in the Macaque Monkey." *Current Biology* 21 (3) (February 8): 195–199. doi:10.1016/j.cub.2010.12.042.
- Cataldi, Suzanne L. 2008. "Affect and Sensibility." In *Merleau-Ponty: Key Concepts*, edited by Rosalyn Diprose and Jack Reynolds, 163–173. Stocksfield: Acumen.
- Chartrand, Tanya, and John. A. Bargh. 1999. "The Chameleon Effect: The Perception-Behavior Link and Social Interaction." *Journal of Personality and Social Psychology* 76 (6): 893–910.
- Chovil, Nicole. 1991. "Social Determinants of Facial Displays." *Journal of Nonverbal Behavior* 15 (3): 141–154.
- Chwalisz, K., E. Diener, and D. Gallagher. 1988. "Autonomic Arousal Feedback and Emotional Experience: Evidence from the Spinal Cord Injured." *Journal of Personality and Social Psychology* 54 (5) (May): 820–828.
- Clark, Tedra F., Piotr Winkielman, and Daniel N. McIntosh. 2008. "Autism and the Extraction of Emotion from Briefly Presented Facial Expressions: Stumbling at the First Step of Empathy." *Emotion* 8 (6): 803–809. doi:10.1037/a0014124.
- Cole, Jonathan. 1998. About Face. Cambridge: MIT Press.
- ——. 1999. "On 'Being Faceless': Selfhood and Facial Embodiment." In *Models of the Self*, edited by Shaun Gallagher and Jonathan Shear, 301–318. Exeter: Imprint Academic.
- ——. 2001. "Empathy Needs a Face." *Journal of Consciousness Studies* 8 (5-7): 51–68.
- ———. 2009. "Impaired Embodiment and Intersubjectivity." *Phenomenology and the Cognitive Sciences* 8 (3): 343–360. doi:10.1007/s11097-009-9119-5.
- Cole, Jonathan, and Henrietta Spalding. 2009. *The Invisible Smile: Living without Facial Expression*. Oxford: Oxford University Press.
- Colombetti, Giovanna, and Evan Thompson. 2008. "The Feeling Body: Toward an Enactive Approach to Emotion." In *Developmental Perspectives on Embodiment and Consciousness*, edited by Willis F. Overton, Ulrich Müller, and Judith Newman, 45–68. New York: Lawrence Erlbaum Associates.
- Cunningham, Suzanne. 1995. "Dewey on Emotions: Recent Experimental Evidence." *Transactions of the Charles S. Peirce Society* 31 (4) (October 1): 865–874.
- Damasio, Antonio. 1999. The Feeling of What Happens: Body and Emotion in the Making of Consciousness. New York: Harcourt Brace.

- Darwin, Charles. 1872. *The Expression of the Emotions in Man and Animals*. Chicago: University of Chicago Press.
- Davis, Joshua Ian, Ann Senghas, Fredric Brandt, and Kevin N. Ochsner. 2010. "The Effects of BOTOX Injections on Emotional Experience." *Emotion* 10 (3): 433–440. doi:10.1037/a0018690.
- Dewey, John. 1894. "The Theory of Emotion I: Emotional Attitudes." *Psychological Review* 1 (6): 553–569.
- ——. 1895. "The Theory of Emotion II: The Significance of Emotions." *Psychological Review* 2 (1): 13–32.
- ——. 2008. "The Theory of Emotion." In *The Early Works, 1882-1898*, edited by Jo Ann Boydston. Vol. 4. Carbondale: Southern Illinois University Press.
- Downing, George. 2000. "Emotion Theory Reconsidered." In *Heidegger, Coping, and Cognitive Science: Essays in Honor of Hubert L. Dreyfus, Volume 2*, edited by Mark Wrathall and Jeff Malpas, 245–270. Cambridge: MIT Press.
- Duclos, Sandra E., and James D. Laird. 2001. "The Deliberate Control of Emotional Experience through Control of Expressions." *Cognition & Emotion* 15 (1): 27–56. doi:10.1080/02699930126057.
- Duclos, Sandra E., James D. Laird, Eric Schneider, Melissa Sexter, Lisa Stern, and Oliver Van Lighten. 1989. "Emotion-Specific Effects of Facial Expressions and Postures on Emotional Experience." *Journal of Personality and Social Psychology* 57 (1) (July): 100–108.
- Edelman, B. 1984. "A Multiple-Factor of Body Weight Control." *Journal of General Psychology* 110: 99–114.
- Fernández-Dols, José-Miguel, and María-Angeles Ruiz-Belda. 1995. "Are Smiles a Sign of Happiness? Gold Medal Winners at the Olympic Games." *Journal of Personality and Social Psychology* 69 (6) (December): 1113–1119.
- . 1997. "Spontaneous Facial Behavior during Intense Emotional Episodes: Artistic Truth and Optical Truth." In *The Psychology of Facial Expression*, edited by James A. Russell and José-Miguel Fernández-Dols, 255–294. Cambridge: Cambridge University Press.
- Flack, William, James D. Laird, and Lorraine A. Cavallaro. 1999. "Separate and Combined Effects of Facial Expressions and Bodily Postures on Emotional Feelings." *European Journal of Social Psychology* 29 (2-3): 203–217. doi:10.1002/(SICI)1099-0992(199903/05)29:2/3<203::AID-EJSP924>3.0.CO;2-8.
- Fogel, Alan, and Andrea Garvey. 2007. "Alive Communication." *Infant Behavior and Development* 30 (2) (May): 251–257. doi:10.1016/j.infbeh.2007.02.007.
- Fridlund, Alan J. 1991. "Sociality of Solitary Smiling: Potentiation by an Implicit Audience." *Journal of Personality and Social Psychology* 60 (2): 229–240.
- Fuchs, Thomas. 2005. "Corporealized and Disembodied Minds: A Phenomenological View of the Body in Melancholia and Schizophrenia." *Philosophy, Psychiatry, & Psychology* 12 (2): 95–107.
- Gallagher, Shaun. 2008. "Direct Perception in the Intersubjective Context." *Consciousness and Cognition* 17 (2) (June): 535–543. doi:10.1016/j.concog.2008.03.003.
- Garrison, Jim. 2003. "Dewey's Theory of Emotions: The Unity of Thought and Emotion in Naturalistic Functional 'Co-Ordination' of Behavior." *Transactions of the Charles S. Peirce Society* 39 (3) (July 1): 405–443.
- Goldie, Peter. 2000a. "Explaining Expressions of Emotion." Mind 109 (433): 25-38.
- ———. 2000b. "The Emotions: A Philosophical Exploration." In Oxford: Oxford University Press.
- Gross, James J. 1999. "Emotion Regulation: Past, Present, Future." *Cognition & Emotion* 13 (5): 551–573.

- Havas, D. A., A. M. Glenberg, K. A. Gutowski, M. J. Lucarelli, and R. J. Davidson. 2010. "Cosmetic Use of Botulinum Toxin-A Affects Processing of Emotional Language." *Psychological Science* 21 (7) (June): 895–900. doi:10.1177/0956797610374742.
- Hennenlotter, Andreas, Christian Dresel, Florian Castrop, Andres O. Ceballos-Baumann, Afra M. Wohlschlager, and Bernhard Haslinger. 2009. "The Link between Facial Feedback and Neural Activity within Central Circuitries of Emotion--New Insights from Botulinum Toxin-Induced Denervation of Frown Muscles." *Cereb. Cortex* 19 (3) (March 1): 537–542. doi:10.1093/cercor/bhn104.
- Hermans, Erno J., Guido van Wingen, Peter A. Bos, Peter Putman, and Jack van Honk. 2009. "Reduced Spontaneous Facial Mimicry in Women with Autistic Traits." *Biological Psychology* 80 (3) (March): 348–353. doi:10.1016/j.biopsycho.2008.12.002.
- Hinde, Robert A. 1985. "Was 'The Expression of the Emotions' a Misleading Phrase?" *Animal Behaviour* 33 (3) (August): 985–992. doi:10.1016/S0003-3472(85)80032-4.
- Hohmann, George W. 1966. "Some Effects of Spinal Cord Lesions on Experienced Emotional Feelings." *Psychophysiology* 3 (2): 143–156. doi:10.1111/j.1469-8986.1966.tb02690.x.
- Hurley, Susan. 1998. Consciousness in Action. Cambridge: Harvard University Press.
- Izard, Carroll E. 1974. "Emotions, Human." Encyclopedia Britannica.
- James, William. 1884. "What Is an Emotion?" Mind 9: 188–205.
- ——. 1890. *The Principles of Psychology, Vols. 1 and 2*. New York: Dover.
- Kellerman, Joan M., and James D. Laird. 1982. "The Effect of Appearance on Self-Perceptions." *Journal of Personality* 50 (3): 296–351. doi:10.1111/j.1467-6494.1982.tb00752.x.
- Kleck, Robert E., Robert C. Vaughan, Jeffrey Cartwright-Smith, Katherine Burns Vaughan, Carl Z. Colby, and John T. Lanzetta. 1976. "Effects of Being Observed on Expressive, Subjective, and Physiological Responses to Painful Stimuli." *Journal of Personality and Social Psychology* 34 (6): 1211–1218. doi:10.1037/0022-3514.34.6.1211.
- Kraut, Robert E. 1982. "Social Presence, Facial Feedback, and Emotion." *Journal of Personality and Social Psychology* 42 (5): 853–863. doi:10.1037/0022-3514.42.5.853.
- Kraut, Robert E., and Robert E. Johnston. 1979. "Social and Emotional Messages of Smiling: An Ethological Approach." *Journal of Personality and Social Psychology* 37 (9): 1539–1553.
- Krueger, Joel. 2012. "Seeing Mind in Action." *Phenomenology and the Cognitive Sciences* 11 (2): 149–173. doi:10.1007/s11097-011-9226-y.
- ——. 2013a. "Affordances and the Musically Extended Mind." *Frontiers in Theoretical and Philosophical Psychology* 4: 1003. doi:10.3389/fpsyg.2013.01003.
- ——. 2013b. "Ontogenesis of the Socially Extended Mind." *Cognitive Systems Research* 25-26: 40–46. doi:10.1016/j.cogsys.2013.03.001.
- ———. Forthcoming. "Emotions and the Social Niche." In *Collective Emotions*, edited by Christian Von Scheve and Mikko Salmela. New York: Oxford University Press.
- Krueger, Joel, and John Michael. 2012. "Gestural Coupling and Social Cognition: Möbius Syndrome as a Case Study." *Frontiers in Human Neuroscience* 6: 1–14. doi:10.3389/fnhum.2012.00081.
- Krueger, Joel, and Søren Overgaard. 2012. "Seeing Subjectivity: Defending a Perceptual Account of Other Minds." Edited by Sofia Miguens and Gerhard Preyer. *ProtoSociology: Consciousness and Subjectivity* 47: 239–262.
- Laird, James D. 2007. Feelings: The Perception of Self. Oxford: Oxford University Press.
- Lanzetta, John T., Jeffrey Cartwright-Smith, and Robert E. Eleck. 1976. "Effects of Nonverbal Dissimulation on Emotional Experience and Autonomic Arousal." *Journal of Personality and Social Psychology* 33 (3): 354.

- LeDoux, Joseph E. 1996. The Emotional Brain. New York: Simon and Shuster.
- Mack, H., N. Birbaumer, H. P Kaps, A. Badke, and J. Kaiser. 2005. "Motion and Emotion: Emotion Processing in Quadriplegic Patients and Athletes." *Zeitschrift F\"ur Medizinische Psychologie* 14 (4): 159–166.
- Maclaren, Kym. 2011. "Emotional Clichés and Authentic Passions: A Phenomenological Revision of a Cognitive Theory of Emotion." *Phenomenology and the Cognitive Sciences* 10 (1): 45–65. doi:10.1007/s11097-010-9160-4.
- McIntosh, Daniel N., Aimee Reichmann-Decker, Piotr Winkielman, and Julia L. Wilbarger. 2006. "When the Social Mirror Breaks: Deficits in Automatic, but Not Voluntary, Mimicry of Emotional Facial Expressions in Autism." *Developmental Science* 9 (3): 295–302. doi:10.1111/j.1467-7687.2006.00492.x.
- Merleau-Ponty, Maurice. 1964. *The Primacy of Perception, and Other Essays on Phenomenological Psychology, the Philosophy of Art, History, and Politics*. Edited by James M. Edie. Evanston: Northwestern University Press.
- ——. 2002. *Phenomenology of Perception*. Translated by Colin Smith. New York: Routledge.
- Niedenthal, Paula M. 2007. "Embodying Emotion." Science 316 (5827): 1002–1005.
- Niedenthal, Paula M., Lawrence W. Barsalou, Piotr Winkielman, Silvia Krauth-Gruber, and Francois Ric. 2005. "Embodiment in Attitudes, Social Perception, and Emotion." *Personality and Social Psychology Review* 9 (3) (August 1): 184–211. doi:10.1207/s15327957pspr0903\_1.
- Niedenthal, Paula M., and Marcus Maringer. 2009. "Embodied Emotion Considered." *Emotion Review* 1 (2): 122–128. doi:10.1177/1754073908100437.
- Nussbaum, Martha. 2001. *Upheavals of Thought: The Intelligence of Emotions*. Cambridge: Cambridge University Press.
- Panksepp, Jaak. 1992. Affective Neurology. New York: Oxford University Press.
- ——. 2004. *Affective Neuroscience: The Foundations of Human and Animal Emotions*. 1st ed. Oxford University Press, USA.
- Parkinson, Brian, Agneta H. Fischer, and Antony S.R. Manstead. 2005. *Emotions in Social Relations*. New York: Psychology Press.
- Prinz, Jesse J. 2004. *Gut Reactions: A Perceptual Theory of Emotions*. Oxford: Oxford University Press.
- Reddy, Vasudevi. 2008. How Infants Know Minds. Cambridge: Harvard University Press.
- Riskind, John H. 1984. "They Stoop to Conquer: Guiding and Self-Regulatory Functions of Physical Posture after Success and Failure." *Journal of Personality and Social Psychology* 47 (3): 479–493.
- Riskind, John H., and Carolyn C. Gotay. 1982. "Physical Posture: Could It Have Regulatory or Feedback Effects on Motivation and Emotion?" *Motivation and Emotion* 6 (3): 273–298.
- Russell, James A. 2009. "Emotion, Core Affect, and Psychological Construction." *Cognition & Emotion* 23 (7): 1259. doi:10.1080/02699930902809375.
- Scheler, Max. 1954. *The Nature of Sympathy*. Translated by Peter Heath. London: Routledge and Kegan Paul.
- Schwarz, N., and G.L. Clore. 1988. "How Do I Feel about It? Informative Functions of Affective States." In *Affect, Cognition, and Social Behavior*, edited by K. Fiedler and J.P. Forgas, 44–62. Toronto: Hogrefe.
- Solomon, Robert. 2006. "Emotions in Phenomenology and Existentialism." In *A Companion to Phenomenology and Existentialism*, edited by Hubert Dreyfus and Mark Wrathall, 291–309. Oxford: Blackwell Publishing.

- Stepper, Sabine, and Fritz Strack. 1993. "Proprioceptive Determinants of Emotional and Nonemotional Feelings." *Journal of Personality and Social Psychology* 64 (2): 211–220.
- Stern, Daniel. 1999. "Vitality Contours: The Temporal Contour of Feelings as a Basic Unit for Constructing the Infant's Social Experience." In *Early Social Cognition: Understanding Others in the First Months of Life*, edited by Philippe Rochat, 67–80. Mahwah, NJ: Earlbaum.
- Trevarthen, Colwyn. 1993. "The Functions of Emotion in Early Infant Communication and Development." In *New Perspectives in Early Communicative Development*, edited by Jacqueline Nadel and L. Camaioni, 279–308. London: routledge.
- Zuckerman, Miron, Rafael Klorman, Deborah T. Larrance, and Nancy H. Spiegel. 1981. "Facial, Autonomic, and Subjective Components of Emotion: The Facial Feedback Hypothesis versus the Externalizer–internalizer Distinction." *Journal of Personality and Social Psychology* 41 (5): 929–944. doi:10.1037/0022-3514.41.5.929.