

John P. Falcone  
Boston College School of Theology and Ministry  
REA:APPRRE 2011

A Performative Aesthetics for RE: Theater of the Oppressed and Neuroscience

Abstract

The Theater of the Oppressed (TO) is a practice of embodied social analysis developed by the Brazilian activist and director Augusto Boal. It relies on an aesthetics of critical creativity which is antithetical to many contemporary theories of beauty and art. By inviting spectators into the performative space, TO can shatter the bonds that hold back participant's problem-solving capacities and their God-given faculties of self-expression. Recent discoveries in neural and cognitive science seem to validate this aesthetics of creativity. They underline the importance of physical or embodied thinking in the process of social and personal liberation from oppression. Religious education, too, would benefit from employing such embodied pedagogies for change.

## **I. Introduction**

The Theater of the Oppressed (TO) is an embodied process of popular theatrical improvisation that allows participants to analyze social, organizational and inter-personal power. Because it is accessible to people of all educational levels, and because it embraces various intelligences and learning styles,<sup>1</sup> it can be a powerful method of critical pedagogy. As David White and Victoria Rue have recently suggested, it can also be a powerful tool for religious educators who want to work in critical, liberative and holistic ways.<sup>2</sup>

It is also a fairly under-theorized educational methodology. But subsuming TO under the typical categories of contemporary “theological aesthetics” would be a grave mistake. TO is radically at odds with the “spectatorly” perspective that underlies much of theological aesthetic theory, at least as exemplified in the oeuvre of Hans Urs von Balthasar and in numerous recent articles from in the field of Practical Theology.<sup>3</sup> Even liberation theologians like Roberto Goizueta tend to bifurcate “praxis” from “poiēsis.” For Goizueta, for example, praxis signifies a human activity that is valuable in itself; it is characterized by “interaction, empathic fusion and mutual understanding.” Poiēsis, on the other hand, is an activity valued only for its product: it is a practice of “instrumentalization, coercion and violence.”<sup>4</sup> This misleading bifurcation ignores both the humanizing effects of labor, and the meaningful, interpersonal, and truth-revealing power that is employed in the shaping a communicative work.

Such aesthetic theories uphold an insidious bifurcation between the “production” and “consumption” of beauty; and they contradict the performative aesthetics of TO. For TO, the subject of aesthetic experience is neither a *consumer* of artistic truth, nor an *object* to be shaped by religious and artistic canons. TO presumes that humans are interdependent *subjects*, for whom art and aesthetic expression is a fundamental vocation. In this view, creating, interpreting, and appreciating human expression is an ethical and political necessity for people of every station in life. In this paper, then, I propose that recent advances in neuroscience and cognitional theory support this performative, non-bifurcated vision of aesthetics that is represented in a TO pedagogy, rather than the spectatorly aesthetics that dominates much of aesthetic thinking today.

## **II. Theater of the Oppressed**

The Theater of the Oppressed was originally developed by Augusto Boal, a Brazilian director and popular educator. Its roots lie in the Marxist theater of Bertolt Brecht, who believed that drama should instigate conflict instead of resolving it. Boal invites spectators to become spect-ACTORS. While other artists “break down the fourth wall” by having characters address the audience, Boal invites spect-actors onto the stage.

In the first level of TO, participants stretch and explore their bodies in new ways: they make the body expressive by using it to generate images, sounds and words. In the second stage, they use these expressions in reflective exercises and games. In the third and final stage, they create visual and auditory artworks or “embodied texts.” They then analyze, interpret and use these texts in order to brainstorm solutions to intractable social and personal oppressions.<sup>5</sup>

Describing some of the basic exercises and games can suggest the kind of physical, mental and emotion “limbering” that TO seeks to provide. In the “Hypnosis” exercise, one participant is mesmerized by a spot in the middle of the other’s hand. As the hypnotizer moves her hand, the follower maintains his distance and spatial orientation towards it; after five minutes of gentle but rigorous movement and contortion, the hypnotizer and the hypnotized switch roles. Participants then describe what they noticed, and how they felt.<sup>6</sup> Reflections typically include: “I

felt safe / I felt vulnerable” (the follower); “I felt powerful / I felt responsible” (the hypnotizer); “I felt all of the above and more” (both). On the next level, “Complete the Image” is one of TO’s basic theatrical games:

- 1) Two actors silently improvise a static image by shaking hands; the group then projects meanings onto the image by free association.
- 2) Each actor in turn steps out of the image and then returns with a different stance, replacing one character in the changing scene, and then the other, always at a brisk pace. Each replacement invents a new way to “complete” the developing image as the incoming spect-actor positions his body in a different way.
- 3) All the participants repeat the process, without projecting meanings, in groupings of twos, threes or more.<sup>7</sup>

As Marie-Claire Picher points out, this game explores how the same image can embody a variety of meanings; it exemplifies the creativity and shrewdness inherent in bodily interventions; and it demonstrates the power of an individual actor to transform a social setting by simply adjusting her “stance.”<sup>8</sup>

Other TO games develop these skills of critical and creative embodiment through the media of sound, word and narrative. Each of these dimensions – physical, visual, oral/aural, and verbal – can then be incorporated into the modality called “Image Theater,” where limbs, faces, rhythmic actions, sounds and words create *readable and interrogable texts*. Boal describes a “Tree” of modalities that branch off from this central Image Theater trunk:

- In “Rainbow of Desire,” internalized oppressions are turned into images so that they can be examined, de-constructed and transformed.
- In “Newspaper Theater,” media presentations are analyzed from a critical point of view.
- In “Forum Theater,” participants develop short skits, then invite audience members to jump into the action and overcome an oppressive situation by developing their own variations on the plot.
- “Legislative Theater” combines Forum Theater and parliamentary procedures to generate bills and laws.
- “Invisible Theater” presents the mini-dramas of Forum Theater in public, as real-life eruptions of conflict on the street; while passersby watch the drama unfold, other TO participants strike up a conversation about what should be done.

### Underlying Assumptions of TO

Although Boal is no systematician, he does present a coherent practice of TO, from which we can extract at least three foundational axioms: that humans think with their bodies, that human thoughts and expressions arise from our quality as natural born artists, and that human expressions are interpretable works of art.<sup>9</sup>

TO presumes that *humans think with their bodies*. All thinking is an embodied process, and the brain is a dynamic feedback system which is organically engaged with its environment. What is more, *our bodies and minds become canalized*: socialization, habit and oppression (of both the physical and mental kind) channel and limit our behavior and thought. Words and imaginary structures can often mask our perception of reality; as Boal remarks, “We sometimes override our own senses – through which, without the intervention of words, we would perceive the signals of the world more clearly.”<sup>10</sup>

In TO, participants dig deep into patterns of everyday movement in order to discover – and break out of – the rhythmic prisons they have built:

Over a period of some time, they must execute these [TO exercise] movements in a magnified way, then in a minimized way; in a very quick movement and in a slow movement, taking time to see and feel what the quotidian movement hides – to see and feel how each movement acts on their bodies, excites them, stimulates them or causes them pain or pleasure.<sup>11</sup>

The goal is to *de-mechanize the body in order to de-mechanize the mind*: to act our way into new ways of thinking.

Secondly, TO presumes that humans are *natural born artists*. Being creative, artistic and expressive is a fundamental part of human nature; only sustained coercion and repression can subdue this human trait. “Even though some may not be capable of creating an aesthetic product which enlightens all of us,” TO practitioners believe that “all are capable of developing an aesthetic process which enriches themselves.”<sup>12</sup> As a corollary, it is clear that humans need an *attentive audience* to receive and engage their expressions.

Finally, TO presumes that *all human expressions are artworks*, and that they require an appropriate aesthetical practice to be adequately interpreted. In philosophical terms, this is perhaps the most exciting of TO’s assumptions, because it *roots aesthetic theory firmly in a matrix of populist, embodied and critical creativity*. TO affirms that our movements, sounds and artifacts can carry multiple possible meanings which come to light when reviewed at a critical distance. In TO, “all images” including the actor’s body itself must be “*aestheticised*” – that is, they must be “modified” and “transformed” by presentation through creative action.<sup>13</sup>

The act of presentation is key. As Boal notes, the presenter sees “the situation and sees himself in that situation” – “that is theatre: seeing oneself seeing, observing oneself doing.”<sup>14</sup> Presentation allows participants to develop artistic and expressive human capacities. It allows the group to project opinions and meanings onto the image. It presents the audience with embodied social texts to be analyzed and unpacked.<sup>15</sup>

Simply to absorb impressions, simply to accept what the mass media feed us (along with the sauce of assumptions which makes their pabulum more palatable) would constitute a “passive” theatrical experience – the antithesis of liberation for Boal. If we do not engage in meaning-making, he argues, we will be carried along with someone else’s meaning. Thus aesthetics is never simply the dispassionate and distanced appreciation of someone else’s creative endeavor; it is an emotional and physical enactment of creativity that always includes critical ethical and political discernment.

### **III. Neuroscience**

Advances in the study of emotional embodiment, “mirror neurons,” and the theory of “cognitive blending” appear to validate the undergirding assumptions of TO. For a long time, cognitive science – and aesthetic theory – have jumped very quickly from embodied experience to the world of conceptual abstraction.<sup>16</sup> As Paula Niedenthal and her colleagues point out, the majority of cognitive theories have focused on the *abstraction* of concepts from our daily activities and lives. In this view, the mind turns sense, emotions and experiences into abstract concepts, which are stored and later retrieved. Although our bodily states may echo an emotional memory, or even help us to simulate it if we try (as in the case of method acting), such psychosomatic effects are essentially “appendages” to our mental concepts.<sup>17</sup> Recently,

cognitive scientists have begun to discover that human embodiment is actually much more foundational to our thinking, feeling and remembering processes.

### Embodied Emotions

For example, neurological research suggests that emotional memories are the partial reactivation of the original embodied experiences: not an idea of the experience, but a reliving of the experience itself.<sup>18</sup> What is more, there is strong evidence that our ability to empathize with others – to imagine how stimuli generate basic feelings, complex emotions, and cognitive responses within other people – “relies primarily on our ability to embody others’ emotional states.”<sup>19</sup> As Niedenthal et al. point out, “People embody the emotional behaviors of others. These behaviors may include, but are not limited to, facial expressions, postures, and vocal parameters that convey emotion.”<sup>20</sup> This tendency is “ubiquitous,” “very subtle” and practically “automatic,”<sup>21</sup> although conscious decisions can “enhance or suppress” the process.<sup>22</sup> Simulating an emotional state produces an emotional effect; and emotional simulation smoothes the path to thinking about, recognizing and expressing the “symbols” associated with “affective meanings.”<sup>23</sup>

### Mirror Neurons

The discovery of so-called “mirror neurons” further clarifies how embodiment, perception and action are intimately linked.<sup>24</sup> In 2005, Vittorio Gallese and George Lakoff published their research on the dynamics of vision and action in macaque monkeys. One of their key findings was the discovery of two types of neurons associated with the grasping action: “canonical” motor neurons, which fired whenever a monkey attempted to grasp an object, and “mirror” motor neurons, which fired both during the actual grasping, *and* when the monkey saw someone else grasp the object. “With mirror neurons, . . . the retrieved action is not necessarily executed. It is only *represented* in the motor system.”<sup>25</sup> This work has been widely replicated and discussed, and similar neurons have been identified within the human brain;<sup>26</sup> but mirror neurons are only one example of the intimate link between seeing, thinking and doing. For example, Pierre Jacob and Marc Jeannerod report that people observing or planning a behavior actually activate their muscles in subtle ways: thinking about or imagining exercise even increases muscle performance.<sup>27</sup> In sum, viewing an action or an emotion, considering an action or emotion, and performing an action or emotion, are all inextricably and neurologically linked.<sup>28</sup>

### Blending Theory

It is important to remember this intimate linkage between biology and thinking when we make the move from bodily actuation to conceptual thought. The human organism is an emergent dynamism, whose functions are grounded in, but exceed, the sum of its constituent parts.<sup>29</sup> Gilles Fauconnier and Mark Turner argue convincingly that humans generate and manipulate concepts in emergent ways – ways that neurology cannot fully model. For example, it may seem as though the cup of coffee on one’s desk is “out there” and that “perceiving” it simply means connecting the neuro-visual image of that object with an associated neural memory or network of cultural meanings. In fact, however, the process of distinguishing relevant perceptual elements from irrelevant ones, and the process of unifying these into a perduring and meaningful “coffee cup,” is exceedingly subtle and complicated: it presents profound and consistent difficulties to computer programmers, to grasping robots equipped with

“artificial intelligence,” and to people whose neurological functions have been compromised by specific local lesions in the brain.<sup>30</sup>

For Fauconnier and Turner, concepts such as unity and identity provide an emergent ideational “space” where perceptions can “blend” together and produce something new – the cup of coffee on one’s desk. Such blends are “inventive constructions:” emergent combinations of selected elements from different conceptual frames.<sup>31</sup> They become “third” spaces in which unforeseen possibilities and conceptual tools can be elaborated or can emerge.<sup>32</sup> The blending process undergirds seemingly simple behaviors like talking, walking, and seeing, and more complex behaviors like planning, playing, story-telling, ritual, and theater. Though normally unconscious, it can be brought to consciousness. And “what the mind has blended together, the mind can take apart.”<sup>33</sup>

The dynamics of conceptual blending are particularly relevant to our understanding of aesthetic and theatrical presentation. As Erving Goffman points out, when we see a play, we are simultaneously aware of more than one perceptual and conceptual frame: the power of a drama “comes from the integration” of selected elements into this unique, “theatrical” blend.<sup>34</sup> But while “oscillating in and out of blends is mostly unconscious” in everyday life, it is clear that theater participants “can and do use blending” with some intention and “flexibility.”<sup>35</sup> Actors “say just what the character says and are surprised night after night by the same events.”<sup>36</sup> “Spectators can slip out of the blend of performance to adjust their bodies in their seats or to mentally note that an actor’s costume fits poorly.”<sup>37</sup> Theater makes it clear that we can mix and unmix our blended frameworks;<sup>38</sup> it is an ideal setting for participants to “see themselves seeing, and observe themselves doing,” as Boal exhorts.

Blending theory has important implications for the way we understand the aesthetic experience. In 1817 Samuel Taylor Coleridge popularized the now commonplace the notion that “the reader’s immersion in a good poem... should involve ‘that willing suspension of disbelief for the moment, which constitutes poetic faith.’”<sup>39</sup> But as theater scholar Bruce McConachie notes, “engaging with an actor/character onstage according to conceptual blending theory” involves the *active* creation of a meaningful and generative third space: it involves “imaginative addition, not subtraction.”<sup>40</sup>

#### **IV. Conclusion**

The science of emotions and mirror neurons, and the theory of cognitive blending, underline the role played by biological and intellectual *doing* within the realm of human consciousness. Cognition and consciousness are rooted in action: material transformations on the macroscopic and neurological levels, and creative mental constructions on that more intangible level of conceptual thought.

If this is true, we can surmise that creativity and critical reflection may actually best be pursued by digging deep into the materiality of the body. As Michel Foucault has noted, to escape the regimes of mass control and spurious “rationality” is profoundly difficult. If we wish to pry up the edge of that discursive blanket with which our societies try so desperately to muffle us – if we hope to wriggle free from their efforts to channel even our very desires – it is necessary “to counter the grips of power with the claims of bodies, pleasures and [resistant] knowledges.”<sup>41</sup>

Since Boal is not very effective as a systematic expositor of his own aesthetic theory, there are areas in which he fails to draw out the full implications of his creative insights. One of these is the role that bricolage or intellectual poaching plays in people’s creative process. By

focusing predominantly on the colonizing and massifying power of the media and its marketing, Boal misses an opportunity to explore the ways in which the objects in our cultural field resist “aesthetization” – as well as the ways in which spect-actors either harness, or succumb to that resistance. Exploring the power and the limits of embodied thinking can guide religious educators in their facilitation of personal and communal growth.

My intention in this paper has been – not to break new territory in the practice and theory of TO or of religious education – but to argue that recent scientific data support the strongly embodied and constructivist intuitions upon which Boal has grounded his pedagogical work. As McConachie notes of his own scholarly field, “To proceed without linking our scholarship to falsifiability undercuts the credibility of our discipline and disables the political possibilities of our scholarship. ... We ought to rely on ... scientifically validated theories when we can.”<sup>42</sup> I would argue the same for the field of liberative Religious Education. This is not a paean to positivism, but a call for a rigorously pragmatist approach to pedagogical theory. Such approaches will explore the facts of the human condition with every means at our disposal, and will embrace what actually gets the job done.

### Bibliography

- Boal, Augusto. *Theatre of the Oppressed*. Trans. by Charles A. and Maria-Odilia Leal McBride. London: Pluto Press, 1993.
- \_\_\_\_\_. *The Aesthetics of the Oppressed*. London / New York: Routledge, 2006.
- Cook, Amy. "Staging Nothing: 'Hamlet' and Cognitive Science." *SubStance* #110, Vol. 35, no. 2 (2006): 83-99.
- Coleridge, Samuel Taylor. "Biographia Literaria." In *Samuel Taylor Coleridge: The Major Works*. Ed. by H. J. Jackson. Oxford: Oxford University Press, 1985. P. 314. Cited in Bruce McConachie. "Falsifiable Theories for Theatre and Performance Studies." *Theatre Journal* 59 (2007): 558.
- Fauconnier, Gilles and Mark Turner. *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities*. New York: Basic, 2002.
- Foucault, Michel. *The History of Sexuality, Vol. 1: An Introduction*. Trans. by Robert Hurley. New York: Vintage, 1990.
- Friere, Paulo. *Pedagogy of the Oppressed*. 30<sup>th</sup> Anniversary Edition. New York: Continuum, 2000.
- Gardner, Howard. *Frames of Mind: The Theory of Multiple Intelligences*. 2<sup>nd</sup> Edition. New York: Basic Books, 1993.
- Goizueta, Roberto. *Caminemos con Jesús: Towards a Hispanic/Latino Theology of Accompaniment*. Maryknoll, NY: Orbis, 1995.
- \_\_\_\_\_. *Christ Our Companion: A Liberation Theological Aesthetic*. Maryknoll, NY: Orbis, 2009.
- Gräb-Schmidt, Elisabeth. "Ethics and Aesthetics: A Plea for a Realistic Ethics." *International Journal of Practical Theology* 7 no 2 (2003): 151-171.
- Heitink, Gerben. *Practical Theology: History, Theory, Action Domains: Manual for Practical Theology*. Grand Rapids, MI: Eerdmans, 1999.
- Hickok, Gregory. "Eight Problems for the Mirror Neuron Theory of Action Understanding in Monkeys and Humans." *Journal of Cognitive Neuroscience* 21 no 7 (2009): 1229-1243.
- Jacob, Pierre and Marc Jeannerod. *Ways of Seeing: The Scope and Limits of Visual Cognition*. New York: Oxford University Press, 2003.

Immanuel Kant. *Critique of Pure Reason*. Trans. and ed. by Paul Guyer and Allen W. Wood. Cambridge and New York: Cambridge University Press, 1999 / 1781.

\_\_\_\_\_. *Critique of Practical Reason*. Trans. by Werner S. Pluhar. Intro. by Stephen Engstrom. Indianapolis : Hackett, 2002 / 1788.

\_\_\_\_\_. *Critique of Judgment*. Trans. and intro. by Werner S. Pluhar. Indianapolis: Hackett., 1987 [1790].

Louw, Daniël J. "Creative Hope And Imagination in a Practical Theology of Aesthetic (Artistic) Reason." *Religion & Theology* 8 nos. 3-4 (2001): 327-344.

McConachie, Bruce. "Falsifiable Theories for Theatre and Performance Studies." *Theatre Journal* 59 (2007) 553-577.

Niedenthal, Paula M. and Lawrence W. Barsalou, François Ric, Silvia Krauth-Gruber. "Embodiment in the Acquisition and Use of Emotion Knowledge." In *Emotion and Consciousness*, ed. Lisa Feldman Barrett, Paula M. Niedenthal, and Piotr Winkielman. New York: Guilford Press, 2005. 21-50.

O'Connor, Timothy and Hong Yu Wong. "Emergent Properties." *The Stanford Encyclopedia of Philosophy* (Spring 2009 Edition). Ed. by Edward N. Zalta.  
URL = <<http://plato.stanford.edu/archives/spr2009/entries/properties-emergent/>>.

Marie-Claire Picher. "Democratic Process and the Theater of the Oppressed." *New Directions for Adult and Continuing Education*. Number 116, (Winter 2007): 79-88.

Victoria Rue. *Acting Religious: Theatre as Pedagogy in Religious Studies*. Eugene, OR: Wipf and Stock, 2005/2010.

David F. White. *Practicing Discernment with Youth: A Transformative Youth Ministry Approach*. Cleveland, OH: Pilgrim, 2005.

---

<sup>1</sup> See Howard Gardner, *Frames of Mind: The Theory of Multiple Intelligences*, 2<sup>nd</sup> Edition (New York: Basic Books, 1993).

<sup>2</sup> David F. White, *Practicing Discernment with Youth: A Transformative Youth Ministry Approach* (Cleveland, OH: Pilgrim, 2005); Victoria Rue, *Acting Religious: Theatre as Pedagogy in Religious Studies* (Eugene, OR: Wipf and Stock, 2005/2010).

<sup>3</sup> Roberto Goizueta criticizes von Balthazar for ignoring "the intrinsically ethical-political and economic dimensions of aesthetic action" in *Caminemos con Jesús: Towards a Hispanic/Latino Theology of Accompaniment* (Maryknoll, NY: Orbis, 1995), 125 n 36; however, as I argue below, he does not overcome the very bifurcation of activity and receptivity upon which von Balthazar's disconnected aesthetics is based. For spectatorly readings of aesthetics in

the field of Practical Theology see Gerben Heitink, *Practical Theology: History, Theory, Action Domains: Manual for Practical Theology* (Grand Rapids, MI: Eerdmans, 1999), 112, 114-115; Daniël J. Louw, "Creative Hope And Imagination in a Practical Theology of Aesthetic (Artistic) Reason," *Religion & Theology* 8 nos. 3-4 (2001): 327-344, esp. 330, 331, 338, 341; Elisabeth Gräß-Schmidt, "Ethics and aesthetics: a plea for a realistic ethics," *International Journal of Practical Theology* 7 no 2 (2003): 151-171. All of these are deeply influenced by Immanuel Kant's classic and deeply bifurcated treatment of aesthetics in his *Critique of Judgment*, trans. and intro. by Werner S. Pluhar (Indianapolis: Hackett., 1987 / 1790).

<sup>4</sup> See Goizueta, *Caminemos*, 157; idem, chs. 4 and 5 *passim*; Goizueta's *Christ Our Companion: A Liberation Theological Aesthetic* (Maryknoll, NY: Orbis, 2009) does not redress this unhelpful dichotomy: see especially chs 5 and 6.

<sup>5</sup> Augusto Boal, *Theatre of the Oppressed*, trans. by Charles A. and Maria-Odilia Leal McBride (London: Pluto Press, 1993).

<sup>6</sup> See Marie-Claire Picher, "Democratic Process and the Theater of the Oppressed," *New Directions for Adult and Continuing Education*, Number 116 (Winter 2007): 83.

<sup>7</sup> Picher, 84.

<sup>8</sup> Ibid.

<sup>9</sup> See Augusto Boal, *The Aesthetics of the Oppressed* (London / New York: Routledge, 2006).

<sup>10</sup> Boal, *Aesthetics of the Oppressed*, 15.

<sup>11</sup> Boal, *Aesthetics of the Oppressed*, 49.

<sup>12</sup> Boal, *Aesthetics of the Oppressed*, 39.

<sup>13</sup> Boal, *Aesthetics of the Oppressed*, 123.

<sup>14</sup> Boal, *Aesthetics of the Oppressed*, 117.

<sup>15</sup> Cf. the finely calibrated "codifications" that Paulo Freire uses in his conscientization techniques: Paulo Friere, *Pedagogy of the Oppressed*, 30<sup>th</sup> Anniversary Edition (New York: Continuum, 2000), 96-97, 105-106, 109.

<sup>16</sup> This is a tendency perhaps traceable to the influence of Kant and his 18<sup>th</sup> century work on reason and on aesthetics. See Immanuel Kant, *Critique of Pure Reason*, trans. and ed. by Paul Guyer and Allen W. Wood (Cambridge and New York: Cambridge University Press, 1999); idem, *Critique of Practical Reason*, trans. by Werner S. Pluhar, intro. by Stephen Engstrom. (Indianapolis : Hackett, 2002); and idem, *Critique of Judgment*.

<sup>17</sup> Paula M. Niedenthal, Lawrence W. Barsalou, François Ric, and Silvia Krauth-Gruber, "Embodiment in the Acquisition and Use of Emotion Knowledge," in *Emotion and Consciousness*, ed. Lisa Feldman Barrett, Paula M. Niedenthal, and Piotr Winkielman (New York: Guilford Press, 2005), 21-50.

<sup>18</sup> Paula M. Niedenthal, Lawrence W. Barsalou, François Ric, and Silvia Krauth-Gruber, "Embodiment in the Acquisition and Use of Emotion Knowledge," in *Emotion and Consciousness*, ed. Lisa Feldman Barrett, Paula M. Niedenthal, and Piotr Winkielman (New York: Guilford Press, 2005), 34-40.

<sup>19</sup> Bruce McConachie, "Falsifiable Theories for Theatre and Performance Studies," *Theatre Journal* 59 (2007): 562.

<sup>20</sup> Niedenthal et al., 23.

<sup>21</sup> Niedenthal et al., 25.

<sup>22</sup> Niedenthal et al., 23.

<sup>23</sup> Niedenthal et al., 30.

<sup>24</sup> For an argument against the relevance of motor neurons to an embodied theory of knowledge, see Gregory Hickok, "Eight Problems for the Mirror Neuron Theory of Action Understanding in Monkeys and Humans," *Journal of Cognitive Neuroscience* 21 no 7 (2009): 1229-1243.

<sup>25</sup> Pierre Jacob and Marc Jeannerod, *Ways of Seeing: The Scope and Limits of Visual Cognition* (New York: Oxford University Press, 2003), 229. Emphasis mine.

<sup>26</sup> Jacob and Jeannerod, 228-234.

<sup>27</sup> Jacob and Jeannerod, 228.

<sup>28</sup> Jacob and Jeannerod, 227. Cf. McConachie, 564.

<sup>29</sup> On emergence, see Timothy O'Connor and Hong Yu Wong, "Emergent Properties," *The Stanford Encyclopedia of Philosophy* (Spring 2009 Edition), Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/spr2009/entries/properties-emergent/>.

<sup>30</sup> Gilles Fauconnier and Mark Turner, *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities* (New York: Basic, 2002), 8.

<sup>31</sup> Fauconnier and Turner, 20.

<sup>32</sup> Amy Cook, "Staging Nothing: 'Hamlet' and Cognitive Science," *SubStance* #110, Vol. 35, no. 2 (2006): 85.

<sup>33</sup> McConachie, 559.

---

<sup>34</sup> Fauconnier and Turner, 266-267.

<sup>35</sup> McConachie, 559.

<sup>36</sup> Fauconnier and Turner, 267.

<sup>37</sup> McConachie, 559.

<sup>38</sup> Fauconnier and Turner, 266-7.

<sup>39</sup> Samuel Taylor Coleridge, "Biographia Literaria," in *Samuel Taylor Coleridge: The Major Works*, ed. H. J. Jackson (Oxford: Oxford University Press, 1985), 314. Cited in McConachie, 558.

<sup>40</sup> McConachie, 559.

<sup>41</sup> Michel Foucault, *The History of Sexuality, Vol. 1: An Introduction*, trans. by Robert Hurley (New York: Vintage, 1990), 157.

<sup>42</sup> McConachie, 556.