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# The Turn to Affect: A Critique

Ruth Leys

If you don't understand try to feel. According to Massumi it works.<sup>1</sup>

In this essay I plan to discuss the general turn to affect, particularly the turn to the neurosciences of emotion, that has recently taken place in the humanities and social sciences.<sup>2</sup> The rise of interest in the emotions among historians has been well documented.<sup>3</sup> My concern is somewhat different. I want to consider the turn to the emotions that has been occurring in a broad range of fields, including history, political theory, human geography, urban and environmental studies, architecture, literary studies, art history and criticism, media theory, and cultural studies. The work of Daniel Lord Smail, who has recently inaugurated neurohistory by arguing for the integration of history and the brain sciences, including the sciences of emotion, is a case in point.<sup>4</sup> But my inquiry will also consider the claims of those cultural critics and others who, even before historians ventured into this terrain, in such newly designated fields as neuropolitics, neuro-

My thanks to Isobel Armstrong, Jennifer Ashton, Benjamin DeForest, Michael Fried, Walter Benn Michaels, and Robert Pippin for their helpful comments on this paper. My thanks also to Lauren Berlant and W. J. T. Mitchell for constructive suggestions at a late stage in the preparation of this article and to Henning Schmidgen for useful conversations about the work of Benjamin Libet.

1. Elad Anlen, "Reflections on SCT 2009," *In Theory* (Fall 2009): 9, a participant in the School of Criticism and Theory reporting on Brian Massumi's miniseminar.

2. In the course of my essay, I explain why many of the new affect theorists make a distinction between affect and emotion and why I think the distinction cannot be sustained.

3. See especially William Reddy, *The Navigation of Feeling: Framework for the History of Emotions* (Cambridge, 2001), and Barbara H. Rosenwein, "Worrying about Emotions in History," *American Historical Review* 107 (June 2002): 821–45.

4. See Daniel Lord Smail, *On Deep History and the Brain* (Berkeley, 2008). Compare Michael L. Fitzhugh and William H. Leckie, Jr., "Agency, Postmodernism, and the Causes of Change," *History and Theory* 40, no. 4 (2001): 59–81.

geography, and neuroaesthetics, have not only emphasized the importance of affect but have called for a renewal of their disciplines based on the findings of scientists working in the emotion field. In a short compass, I cannot do justice to the entire scope of the literature on affect or to the full range of issues that I find interesting; instead I shall focus on topics that seem to me to go most directly to the heart of what is at stake in the general turn to affect.

Let me begin by posing a simple question: Why are so many scholars today in the humanities and social sciences fascinated by the idea of affect? In an obvious sense an answer is not difficult to find; one has only to attend to what those scholars say. "In this paper I want to think about affect in cities and about affective cities," geographer Nigel Thrift explains, "and, above all, about what the political consequences of thinking more explicitly about these topics might be—once it is accepted that the 'political decision is itself produced by a series of inhuman or pre-subjective forces and intensities.'"<sup>5</sup> Similarly, cultural critic Eric Shouse states that "the importance of affect rests upon the fact that in many cases the message consciously received may be of less import to the receiver of that message than his or her nonconscious affective resonances with the source of the message." He adds that the power of many forms of media lies "not so much in their ideological effects, but in their ability to create affective resonances independent of content or meaning."<sup>6</sup> In the same spirit, political philosopher and social theorist Brian Massumi, one of the most influential affect theorists in the humanities and social sciences today, attributes Ronald Reagan's success as a politician to his ability to "produce ideological effects by nonideological means. . . . His means were affective." Characterizing Reagan as "brainless" and without content, Massumi asserts that "the statement that ideology—like every actual structure—is produced by operations that do not occur at its level and do not follow its logic is simply a

5. Nigel Thrift, "Intensities of Feeling: Towards a Spatial Politics of Affect," *Geografiska Annaler* 86 (2004): 58; hereafter "IF." In this passage Thrift is quoting Lee Spinks, "Thinking the Post-Human: Literature, Affect, and the Politics of Style," *Textual Practice* 15, no. 1 (2001): 24.

6. Eric Shouse, "Feeling, Emotion, Affect," *M/C Journal* 8 (Dec. 2005): journal.media-culture.org.au/0512/03-shouse.php, ¶¶2, 3; hereafter abbreviated "FEA."

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reminder that it is necessary to integrate infolding, or . . . ‘implicate order,’ into the account. This is necessary to avoid capture and closure on the plane of signification.”<sup>7</sup> Likewise, political theorist William Connolly criticizes the “insufficiency of what might be called intellectualist and deliberationist models of thinking,” asserting that “culture involves practices in which the porosity of argument is inhabited by more noise, unstated habit, and differential intensities of affect than adamant rationalists acknowledge.”<sup>8</sup>

It is clear from such remarks—many others could be cited—that what motivates these scholars is the desire to contest a certain account of how, in their view, political argument and rationality have been thought to operate. These theorists are gripped by the notion that most philosophers and critics in the past (Kantians, neo-Kantians, Habermasians) have overvalued the role of reason and rationality in politics, ethics, and aesthetics, with the result that they have given too flat or “unlayered” or disembodied an account of the ways in which people actually form their political opinions and judgments. The claim is that we human beings are corporeal creatures imbued with subliminal affective intensities and resonances that so decisively influence or condition our political and other beliefs that we ignore those affective intensities and resonances at our peril—not only because doing so leads us to underestimate the political harm that the deliberate manipulation of our affective lives can do but also because we will otherwise miss the potential for ethical creativity and transformation that “technologies of the self” designed to work on our embodied being can help bring about. As Thrift has put it in still another statement of the position: “The envelope of what we call the political must increasingly expand to take note of ‘the way that political attitudes and statements are partly conditioned by intense autonomic bodily reactions that do not simply reproduce the trace of a political intention and cannot be wholly recuperated within an ideological regime of truth’” (“IF,” p. 64).<sup>9</sup>

Now if it is true, as the authors I have just quoted affirm, that philosophers and critics have largely neglected the important role our corporeal-affective dispositions play in thinking, reasoning, and reflection, then it seems to follow that an account of affect and its place in our lives and

7. Brian Massumi, *Parables for the Virtual: Movement, Affect, Sensation* (Durham, N.C., 2002), pp. 39, 40, 41, 263; hereafter abbreviated *PV*. Massumi continues in the passage I have just quoted: “Ideology is construed here in both the commonsense meaning as a structure of belief, and in the cultural-theoretical sense of an interpellative subject positioning” (*PV*, p. 263).

8. William E. Connolly, *Neuropolitics: Thinking, Culture, Speed* (Minneapolis, 2002), pp. 10, 44; hereafter abbreviated *N*.

9. Thrift is again citing Spinks, “Thinking the Post-Human,” p. 23.

institutions is called for. The passages I have cited give a preliminary glimpse of what that account will look like. They suggest that the affects must be viewed as independent of, and in an important sense prior to, ideology—that is, prior to intentions, meanings, reasons, and beliefs—because they are nonsignifying, autonomic processes that take place below the threshold of conscious awareness and meaning. For the theorists in question, affects are “inhuman,” “pre-subjective,” “visceral” forces and intensities that influence our thinking and judgments but are separate from these. Whatever else may be meant by the terms *affect* and *emotion*—more on this in a moment—it seems from the remarks quoted above that the affects must be noncognitive, corporeal processes or states. For such theorists, affect is, as Massumi asserts, “irreducibly bodily and autonomic” (PV, p. 28).

This is an interesting claim, not least because in certain obvious ways it matches the way in which today’s psychologists and neuroscientists tend to conceptualize the emotions. For the past twenty years or more the dominant paradigm in the field of emotions, stemming from the work of Silvan S. Tomkins and his follower, Paul Ekman, assumes that affective processes occur independently of intention or meaning. According to that paradigm, our basic emotions do not involve cognitions or beliefs about the objects in our world. Rather, they are rapid, phylogenetically old, automatic responses of the organism that have evolved for survival purposes and lack the cognitive characteristics of the higher-order mental processes. On this view, whose origins are frequently traced back to the work of Charles Darwin and William James, the affects can and do combine with the cognitive processing systems of the brain, but they are essentially separate from those. In contrast to Freud and “appraisal theorists,” for whom emotions are embodied, intentional states governed by our beliefs, cognitions, and desires, Tomkins and his followers interpret the affects as non-intentional, bodily reactions. They thus posit a constitutive disjunction between our emotions on the one hand and our knowledge of what causes and maintains them on the other, because according to them affect and cognition are two separate systems. As Tomkins has put it, there is a gap or “radical dichotomy between the ‘real’ causes of affect and the individual’s own interpretation of these causes.”<sup>10</sup>

The result of Tomkins’s approach is to suggest that the affects are only contingently related to objects in the world; our basic emotions operate blindly because they have no inherent knowledge of, or relation to, the objects or situations that trigger them. Unlike appraisal theorists, for

10. Silvan S. Tomkins, *Affect Imagery Consciousness*, 2 vols. (New York, 1962–63), 1:248.

whom emotions are intentional states directed toward objects and dependent on our beliefs and desires, Tomkins-inspired theorists consider the affects to be capable of discharging themselves in a self-rewarding or self-punishing manner without regard to the objects that elicit them. On this model, the way to understand fear or joy is that they are “triggered” by various objects, but the latter are nothing more than tripwires for an in-built behavioral-physiological response. Donald Nathanson, a leading exponent of Tomkins’s ideas, observes that “the affects are . . . completely free of inherent meaning or association to their triggering source. There is nothing about sobbing that tells us anything about the steady-state stimulus that has triggered it; sobbing itself has nothing to do with hunger or cold or loneliness. Only the fact that we grow up with an increasing experience of sobbing lets us form some ideas about its meaning.”<sup>11</sup> Or as philosopher of biology Paul Griffiths has likewise remarked in reference to Ekman’s views, the basic affects are “sources of motivation not integrated into the system of beliefs or desires. The characteristic properties of the affect program system states, their informational encapsulation and their involuntary triggering, necessitate the introduction of a concept of mental state separate from the concepts of belief and desire.”<sup>12</sup>

Such a view goes hand in hand with a conception of the emotions as comprising six or seven or eight or nine “affect programs” located subcortically in the brain and defined in evolutionary terms as universal or pan-cultural categories or “natural kinds.” These basic emotions, which minimally include the emotions of fear, anger, disgust, joy, sadness, and surprise, are viewed as genetically hard-wired, reflexlike responses, each of which manifests itself in distinct physiological-autonomic and behavioral patterns of response, especially in characteristic facial expressions. On this conception, when our facial expressions are not masked by culturally determined or conventional “display” rules that control for appropriate social behavior, our faces express our affects, which is to say that our facial displays are authentic read-outs of the discrete internal states that constitute our basic emotions. The work of Joseph LeDoux and other neuroscientists has helped consolidate this view by suggesting that the basic emotions, such as fear, are subserved by neural circuits in the brain, such as the subcortical group of neurons known as the amygdalae, which operate automatically and more quickly than the higher, more slowly acting cog-

11. Donald L. Nathanson, *Shame and Pride: Affect, Sex, and the Birth of the Self* (New York, 1992), p. 66.

12. Paul E. Griffiths, *What Emotions Really Are: The Problem of Psychological Categories* (Chicago, 1997), p. 243.

nitive systems.<sup>13</sup> Throughout this essay I shall call this the Basic Emotions paradigm.

Many of the most influential researchers in the field of affective neuroscience, such as Antonio Damasio, accept the Basic Emotions paradigm. So do certain recent scholars in the humanities and social sciences. Eve Kosofsky Sedgwick and Smail are two such scholars, and, directly or indirectly, they both are indebted to that paradigm precisely because it seems to provide the empirical evidence they seek for a nonintentionalist, corporeal account of the emotions.<sup>14</sup> In a recent book and elsewhere, I have given my reasons for questioning the validity of the Basic Emotions view of the affects.<sup>15</sup> Specifically, I have argued in relation to Sedgwick's take-up of Tomkins's ideas that the experimental evidence for the existence of six or seven (or is it eight or nine or even fifteen?) discrete emotions or "affect programs" located subcortically in the brain and characterized by distinct, universal facial expressions is seriously flawed and that the theory underlying the paradigm is incoherent. Nor am I alone in my criticisms. When a few years ago I began to assess Tomkins's and Ekman's work, I quickly developed some reservations about the soundness of their research program and was soon encouraged to discover that my suspicions were justified and that several scientists in the emotion field had already questioned that approach. Ekman's former student Alan Fridlund and psychologists James A. Russell and Jose-Miguel Fernandez-Dols are among those who have launched powerful critiques of the Tomkins-Ekman position by showing that the experimental evidence cited in its support is inadequate, and the interpretation given of the experimental results is unsupportable. Recently, building on the work of Fridlund, Russell, and others, psychologist Lisa Feldman Barrett has published an impressive series of reviews of the growing body of empirical evidence inconsistent with the idea that there are six, or seven, basic emotions in nature. She concludes that the emotion categories posited by Tomkins and Ekman do not have an ontological status that can support induction and scientific generalization or

13. See Joseph LeDoux, *The Emotional Brain: The Mysterious Underpinnings of Emotional Life* (New York, 1996).

14. See Smail, *On Deep History and the Brain*; *Shame and Its Sisters: A Silvan Tomkins Reader*, ed. Eve Kosofsky Sedgwick and Adam Frank (Durham, N.C., 1995); and Sedgwick, *Touching Feeling: Affect, Pedagogy, Performativity* (Durham, N.C., 2003).

15. See Ruth Leys, *From Guilt to Shame: Auschwitz and After* (Princeton, N.J., 2007), pp. 133–50; "How Did Fear Become a Scientific Object and What Kind of Object Is It?" *Representations*, no. 110 (Spring 2010): 66–104; "Navigating the Genealogies of Trauma, Guilt, and Affect: An Interview with Ruth Leys," interview by Marlene Goldman, *University of Toronto Quarterly* 79 (Spring 2010): 42–65; and "'Both of Us Disgusted in My Insula,' Or, How Is Emotional Empathy Supposed to Work?" *Science in Context* (forthcoming).

allow for the accumulation of knowledge. The consensus among this group of well-informed scientists is that a new scientific paradigm for research on the emotions is needed. All the indications are that, whatever new model or paradigm gains acceptance—if this indeed happens—it will be based on assumptions that make the question of affective meaning to the organism or subject of the objects in its world a central issue and concern.<sup>16</sup> Nevertheless, the Basic Emotions paradigm continues to dominate the research field.

Now at first sight the Tomkins-Ekman account of the emotions would appear to be too reductive for the purposes of the theorists in the humanities and social sciences whose turn to affect I am considering. It is true that, like Tomkins and Ekman, many of them are committed to understanding the affects in biological terms. As Constantina Papoulias and Felicity Callard have helpfully observed, fifteen years ago cultural theorists influenced by social constructionism, psychoanalysis, and especially deconstruction tended to exclude the findings of biology from their models of subjectivity and culture for fear of falling into an essentialism they deemed hostile to the possibilities of cultural transformation.<sup>17</sup> But during the past several years there has been a widespread reaction against what has come to be seen as the straitjacket imposed by the poststructuralist emphasis on language and psychoanalysis, a reaction also motivated by the view that the body in its lived materiality has been neglected in the human-

16. In a very large literature, see especially Alan Fridlund, *Human Facial Expression: An Evolutionary View* (San Diego, 1994); James A. Russell, "Is There Universal Recognition of Emotion from Facial Expression? A Review of the Cross-Cultural Studies," *Psychological Bulletin* 115 (Jan. 1994): 102–41; *The Psychology of Facial Expression*, ed. Russell and José-Miguel Fernández-Dols (New York, 1997); and Lisa Feldman Barrett, "Are Emotions Natural Kinds?" *Perspectives on Psychological Science* 1 (Mar. 2006): 28–58 and "Solving the Emotion Paradox: Categorization and the Experience of Emotion," *Personality and Social Psychology Review* 10 (Feb. 2006): 20–46.

17. Constantina Papoulias and Felicity Callard, "Biology's Gift: Interrogating the Turn to Affect," *Body and Society* 16, no. 1 (2010): 30; hereafter abbreviated "BG." In this impressive article, the authors criticize the selective ways in which cultural theorists such as Massumi and Connolly have used the work of Damasio and other scientists to theorize affect. For another skeptical response to the work of the new affect theorists, especially Sedgwick and Massumi, see also Claire Hemmings, "Invoking Affect: Cultural Theory and the Ontological Turn," *Cultural Studies* 19, no. 5 (2005): 548–67. The authors on whom I am focusing my critique constitute one highly influential wing of a theoretically diverse movement to integrate affect into cultural and social studies. Recent scholars who on various grounds oppose that tendency to separate affect from meaning which is the focus of my critique include Daniel Gross, *The Secret History of Emotion: From Aristotle's "Rhetoric" to Modern Brain Science* (Chicago, 2006); Martha Nussbaum, *Upheavals of Thought: The Intelligence of Emotions* (Cambridge, 2001); and Barbara Rosenwein in Reddy, Rosenwein, and Peter Stearns, "The History of Emotions: An Interview with William Reddy, Barbara Rosenwein, and Peter Stearns," interview by Jan Plamper, *History and Theory* 49 (May 2010): 260.



ities and social sciences. Within the field of literature, Sedgwick, a brilliant critic who died in 2009, has been especially influential in emphasizing the value of Tomkins's approach to the affects for understanding the role of embodiment in (queer) identity formation and change. The general result of these developments has been that, as Thrift has put it, "distance from biology is no longer seen as a prime marker of social and cultural theory. It has become increasingly evident that the biological constitution of being . . . has to be taken into account if performative force is ever to be understood, and in particular, the dynamics of birth (and creativity) rather than death" (quoted in "BG," p. 31).<sup>18</sup>

Thrift's reference to the dynamics of birth and creativity suggests that, in embracing biology, many of today's affect theorists hope to avoid the charge of falling into a crude reductionism by positioning themselves at a distance from the geneticism and determinism that were a target of the previous phase of cultural theory. Instead, they seek to recast biology in dynamic, energistic, nondeterministic terms that emphasize its unpredictable and potentially emancipatory qualities (see "BG," p. 33).<sup>19</sup> Moreover, drawing on writings by Lucretius, Baruch Spinoza, Henri Bergson, William James, Alfred North Whitehead, and other dissenting philosophers of nature, especially two recent figures, Gilles Deleuze and Félix Guattari, many of these theorists make a distinction between affect and emotion in terms that, again at first sight, seem different from those of the Basic Emotions paradigm.<sup>20</sup> Massumi, widely credited with emphasizing that distinction, defines *affect* as a nonsignifying, nonconscious "intensity" disconnected from the subjective, signifying, functional-meaning axis to which the more familiar categories of emotion belong. "In the absence of an asignifying philosophy of affect," Massumi writes, "it is all too easy for received psychological categories to slip back in, undoing the considerable deconstructive work that has been effectively carried out by poststructuralism. Affect is most often used

18. For further examples of the shift from deconstruction, language, and psychoanalysis to affect and embodiment, see *The Affective Turn: Theorizing the Social*, ed. Patricia Ticineto Clough and Jean Halley (Durham, N.C., 2007); Maria Angel, "Brainfood: Rationality, Aesthetics, and Economies of Affect," *Textual Practice* 19 (Summer 2005): 323–48; Elizabeth Wilson, *Psychosomatic: Feminism and the Neurological Body* (Durham, N.C., 2004); Teresa Brennan, *The Transmission of Affect* (Ithaca, N.Y., 2004); and Derek P. McCormack, "Molecular Affects in Human Geographies," *Environment and Planning* 39, no. 2 (2007): 359–77.

19. For a discussion of the influence of ideas about chaos and complexity, associated with the work of Ilya Prigogine and Isabelle Stengers, on the theorization of affect, see Clough, introduction to *The Affective Turn: Theorizing the Social*, pp. 1–33.

20. Probably the most influential figure in the rise of the new affect theory is Deleuze, but it is invariably an open question as to the accuracy with which one or another affect theory represents his views. I shall leave this question to the side in order to focus on the claims made by the theorists under consideration here.

loosely as a synonym for emotion. But . . . emotion and affect—if affect is intensity—follow different logics and pertain to different orders” (PV, p. 27).<sup>21</sup> Similarly, Thrift rejects or sets aside approaches that “tend to work with a notion of individualised emotions (such as are often found in certain forms of empirical sociology and psychology)” in favor of approaches that posit “broad tendencies and lines of force” and in which, adhering to an “inhuman” or “transhuman” framework, “individuals are generally understood as effects of the events to which their body parts (broadly understood) respond and in which they participate” (“IF,” p. 60). Likewise, Shouse follows Massumi by remarking that “it is important not to confuse affect with feelings and emotions. . . . Affect is not a personal feeling. Feelings are *personal and biographical*, emotions are *social*, . . . and affects are *pre-personal*. . . . An affect is a non-conscious experience of intensity; it is a moment of unformed and unstructured potential. . . . Affect cannot be fully realised in language . . . because affect is always prior to and/or outside consciousness. . . . Affect is the body’s way of preparing itself for action in a given circumstance by adding a quantitative dimension of intensity to the quality of an experience. The body has a grammar of its own that cannot be fully captured in language” (“FEA,” ¶¶1, 5).<sup>22</sup>

The claim that affect is a formless, unstructured, nonsignifying force or “intensity” that escapes the categories of the psychologists suggests that Tomkins’s or Ekman’s or Damasio’s talk about the existence of six or seven or eight or nine structured, evolved categories of innate emotions is incompatible with the views of writers such as Massumi who espouse Spinozist-Deleuzian ideas about affect. Yet it is striking how compatible Deleuze-inspired definitions of affect as a nonlinguistic, bodily “intensity” turn out to be with the Tomkins-Ekman paradigm. To take just one example, Thrift states that he wants to avoid the emotion categories of the empirical psychologists and social scientists. But he then proceeds to draw on four “translations” of affect that include references to the ideas of Tomkins, Ekman, and Damasio—the last of whom, in spite of a declared Spinozism and antidualism that makes his work especially attractive to many

21. Massumi continues: “An emotion is a subjective content, the sociolinguistic fixing of the quality of an experience which is from that point onward defined as personal. Emotion is qualified intensity, the conventional, consensual point of insertion of intensity into semantically and semiotically formed progressions, into narrativizable action-reaction circuits, into function and meaning. It is intensity owned and recognized” (PV, p. 28). On the basis of this distinction between affect and emotion, Massumi states that the affective “is not about empathy or emotive identification, or any form of identification for that matter” (PV, p. 40).

22. In many texts, the concept of affect is tied to a “nonrepresentationalist” ontology that defines affect in terms derived from Spinoza as *the capacity to affect and be affected*. Characterized in this way, affect is then seen to function as a layer of preconscious “priming to act” such that embodied action is a matter of being attuned to and coping with the world without the input of rational content.

cultural critics, follows the Tomkins-Ekman paradigm in his approach to the study of the basic emotions (see "IF," pp. 61–64).<sup>23</sup>

The regularity with which Deleuze-inspired affect theorists find a use for such scientific approaches to the emotions suggests that however complex the negotiations between such theorists and neuroscientists are said to be, and however those negotiations are described—as involving a renewed “conversation” between the humanities and neurosciences or as involving a more inventive and shameless form of borrowing by the humanities from the sciences<sup>24</sup>—what fundamentally binds together the new affect theorists and the neuroscientists is their *shared anti-intentionalism*. My claim is that whatever differences of philosophical-intellectual orientation there may be among the new affect theorists themselves, and between them and the neuroscientists whose findings they wish to appropriate (differences do of course exist), the important point to recognize is that they all share a single belief: the belief that affect is independent of signification and meaning. In short, I propose that although at first sight the work of Tomkins—or Ekman, or Damasio—might appear to be too reductive for the purposes of those cultural theorists indebted to Deleuzean ideas about affect, there is in fact a deep coherence between the views of both groups. That coherence concerns precisely the separation presumed to obtain between the affect system on the one hand and intention or meaning or cognition on the other. For both the new affect theorists and the neuroscientists from whom they variously borrow—and transcending differences of philosophical background, approach, and orientation—affect is a matter of autonomic responses that are held to occur below the threshold of consciousness and cognition and to be rooted in the body. What the new affect theorists and the neuroscientists share is a commitment to the idea that there is a gap between the subject’s affects and its cognition or appraisal of the affective situation or object, such that cognition or thinking comes “too late” for reasons, beliefs, intentions, and meanings to play the role in action and behavior usually accorded to them. The result is that action and behavior are held to be determined by affective dispositions that are independent of consciousness and the mind’s control.

This is the thesis I wish to test in the remainder of this essay. What I propose to do is to examine the interface between the new affect theory and

23. Similarly, Shouse clarifies the distinction between affect and emotion by citing the work of both Ekman and Tomkins; see “FEA,” ¶¶1, 4.

24. Connolly states that his aim is not to “derive the logic of cultural activity” from the neurosciences but to “pursue *conversations* between cultural theory and neuroscience” (N, p. 9); Massumi declares that the point is to “borrow from science in order to make a difference in the humanities,” a process he also characterizes as a kind of “piracy” or “poaching” (PV, pp. 21, 20).

the neurosciences by examining some experimental studies that play strategic roles in recent arguments about affect. Much of the time, Massumi, whose use of experiments I shall be examining, engages in rather opaque philosophical-speculative reflections in which the neurosciences make only fleeting appearances. In texts by Connolly, whose employment of experiment I shall also briefly consider, the neurosciences play a more prominent role. But not only do both scholars argue for the importance of the neurosciences in the study of affect, they also appeal to particular neuroscientific experiments in order to justify their views, and it is this that interests me. In selecting for analysis and discussion three such experiments and the uses that have been made of them I shall be following the method of working through examples advocated by Massumi, a method whose success, he observes, “hinges on the details” (PV, p. 18).

### The Snowman Experiment

My first example comes from Massumi’s influential essay “The Autonomy of Affect,” which from the outset plunges us into the minutiae of a little-known 1980 German study of the emotional effects of the media.<sup>25</sup> The study in question was undertaken when a short film with sound but no words was shown on Munich TV as a filler between programs. The basic plot was simple. “A man builds a snowman on his roof garden. It starts to melt in the afternoon sun. He watches. After a time, he takes the snowman to the cool of the mountains where it stops melting. He bids it good-bye and leaves” (PV, p. 29). The film drew protests from parents complaining that it had frightened their children. A team of investigators, headed by media researcher Hertha Sturm, decided to assess the film’s emotional impact by conducting several experiments. The team used three versions of the film: the original version, a version with a “factual” soundtrack commenting on the various situations and actions, and a version in which the factual text was further (slightly) supplemented with emotional attributions. The verbal material added to the original film consisted of fifteen short sentences of fifty seconds each; each version of the film was twenty-eight minutes long.<sup>26</sup>

The emotional reactions of nine-year-old children from an elementary

25. Massumi’s essay “The Autonomy of Affect” was first published in 1995 and is reprinted in a slightly revised form as chapter 1 of *Parables for the Virtual*.

26. See Hertha Sturm and Marianne Grewe-Partsch, “Television—The Emotional Medium: Results from Three Studies,” in *Emotional Effects of Media: The Work of Hertha Sturm*, ed. Gertrude Joch Robinson (Montreal, 1987), pp. 25–36; hereafter abbreviated “TEM.” In fact, Massumi gives a somewhat simplified account of the film’s content. Without specifying further, Sturm and Grewe-Partsch note that “after some thought and complications” the man takes the snowman into the high mountains where the snowman will not melt (“TEM,” p. 30).

school in Vienna were tested on three levels: the physiological, the verbal-cognitive, and the motor. On the *physiological level*, the variables of heart rate, respiration, and skin conductance were measured by using peripheral recording devices: a clip on the middle finger monitored the children's heart rates; a belt measured respiration frequency; and electrodes on the children's hands recorded the galvanic skin responses. On the *verbal-cognitive level*, three variables were selected for testing. Inquiries were made during the presentation of the film versions about whether a given scene was "pleasant" or "unpleasant." A disc showing laughing and weeping faces on the ends of a scale allowed the children to choose between degrees of "happy" or "sad." Also, the children's recollections of what they had seen were registered by asking them to "reproduce" as many of the film scenes as possible (meaning what exactly? it is not clear). Finally, the *motor level* of response was measured by making video recordings of the children's "mimic" reactions while they were watching one of the film versions (I take this to mean that the children's facial-bodily movements were [secretly?] videotaped during the screenings). In addition, the investigators collected various kinds of personal data about the children and their television viewing habits through personality tests and parent interviews. Different groups of the children were exposed to the three different versions of the film, and the results were compared. The experiment was also designed to assess the impact of repetition by reshowing the films after an interval of three weeks (see "TEM," p. 31).

In their overview of the experiments, Sturm and coauthor Marianne Grewe-Partscht remark that the findings were "extremely complex" ("TEM," p. 31).<sup>27</sup> The summary of the physiological data obtained from the first film presentations reports that the children who saw the factual version of the film had a higher heart rate than the children who saw the other versions. According to the authors, the higher heart rate indicated a higher activation level during the presentation of the film, suggesting that the children were more aroused by the factual version than by the other two versions. This result was reinforced by the finding that skin resistance decreased during the presentation of the factual version. Sturm and Grewe-Partscht observe that such a decrease in skin resistance (or increase in skin conductance) is usually linked to an increase in the general activa-

27. In researching the effects of television Sturm and Grewe-Partscht made use of a concept of arousal that distinguished between two arousal systems: a "reticular" activating system, viewed as a primary apparatus for producing cortical arousal, and a "limbic" system responsible for vegetative processes, including the emotions. They suggested that an interplay and potential interference occurs between the two systems ("TEM," p. 29). Massumi, however, makes no reference to this distinction.

tion level. No significant differences in respiration frequency between the three film versions were found. The verbal-cognitive data showed that the children judged the factual version of the film to be significantly less pleasant than the other versions, whereas the original, wordless version was considered the most agreeable. The authors report that the highest level of galvanic skin-response accompanied the original version (I take this to mean that skin resistance was high, indicating lower conductance owing to the lower level of arousal or activation). No differences in the “happy-sad” evaluation of the three versions were found. As for recall, the emotional version of the film was clearly the most easily remembered.

In order to explore further the effects of dramaturgy—such as cuts, zooms, and lighting—the investigators divided the three film versions into ten segments. No differences in physiological reactions to these segments were found except that, as expected, respiration seemed to run parallel to dramaturgy. Decreases in skin resistance during the ten scenes were interpreted as an increase in activation owing to increased attention to and interest in the film segments being presented. On the cognitive level, however, the ten segments received different ratings of “pleasant-unpleasant” and “happy-sad,” showing a similar trend in all three versions. Thus the children scaled scenes 1–3 as “sad,” scenes 4–8 as more “happy,” and scenes 9–10 as “sad.” The authors report an inverse relationship between the judgment “happy-sad” and the scaling of “pleasant-unpleasant” in that the sadder the scene was perceived to be, the more pleasant it was rated. Retention of the ten scenes was related to these ratings in that the more pleasantly experienced scenes were the ones that were better remembered (see “TEM,” p. 32).

The authors further observe that the repetition produced some unanticipated and interesting results. Whereas the second viewing of the nonverbal and emotional versions of the films decreased heart rate, it increased heart rate in the factual version, even reaching a higher level than in the first presentation, while respiration and skin responses showed no significant differences. Moreover, all three versions were rated more pleasant the second time around, though the factual one was again rated as least pleasant.

In their report, the authors express surprise that the factual film version produced the highest level of activation in the viewers in spite of the fact that it differed from the emotional version by only a minimal substitution of words. They observe that all these findings were congruent with physiological theories according to which moderate increases in arousal are perceived as pleasant, whereas extreme increases in arousal are perceived as unpleasant. They note in this regard that these findings had been cor-

roborated by D. E. Berlyne, who had shown that a sequential decrease of arousal after short activation is experienced as “pleasant,” while an increase in activation that lasts longer is experienced as “unpleasant.” “This explains why the factual version was perceived as more ‘unpleasant’ than the two other versions. The viewers remained on a higher activation level for a long period of time” (“TEM,” p. 32). The authors suggest that the same high activation level appeared to be the cause of the poorer recall because it inhibited memory.

On the basis of these findings, the investigators conclude that very slight verbal changes in the form of the presentation resulted in quite different viewer experiences. The results demonstrated that viewers reacted to minute changes in word-picture relationships and that narrative connections were extremely important—a finding of importance for those interested in understanding the effects of the media. The authors especially note the clear results obtained in the case of the factual version because viewers of that version experienced a distinctly higher physiological arousal than that of the other groups of children. The authors suggest that the latter effect might be the result of a discrepancy between the emotional-visual presentation and the factual text, a discrepancy apparently experienced as “unpleasant” since the viewers rated this version as such. This result confirmed Berlyne’s hypothesis: a strong increase of activation is experienced as unpleasant. On the other hand, viewers experienced presentations as pleasant when pictures and language coincided. The investigators propose that their results also might explain the well-documented finding that viewers recall TV news programs poorly, suggesting that the discrepancy between emotional pictures and the factual language employed in such programs interferes with comprehension and recall. Nevertheless, Sturm and Grewe-Partsch state that it was a “total surprise” to realize that the children judged the “sad” scenes in the film segments as “pleasant”: “The sadder the segment the higher was the positive estimation and the deeper was the respiration” (“TEM,” p. 33).

These are the findings that interest Massumi and that he uses to help establish his views on affect. What immediately attracts Massumi’s attention is the apparent discrepancy between the children’s “happy-sad” and “pleasant-unpleasant” responses to the snowman film segments—the fact that the saddest film segments were also rated the most pleasant. Rejecting the possibility of any ambiguity or vagueness in the scales or tests used to test the children’s verbal-cognitive responses (how would one quantify the scale “pleasant-unpleasant”? would a “more pleasant” rating mean that the child experienced more affect?) and evidently regarding as inherently contradictory the idea that someone could simultaneously experience



something as both sad and pleasant (but are not sad films sometimes also pleasurable or enjoyable?), Massumi locates affect in the alleged incongruity between the children's responses on these two scales. According to him, the experimental data suggest the existence of a bifurcation between two different responses or systems or what he characterizes as a gap between the "content" of the image and its "effect." He writes, "the primacy of the affective is marked by a gap between *content* and *effect*: it would appear that the strength or duration of an image's effect is not logically connected to the content in any straightforward way" (PV, p. 24).

Taking the research findings in a direction not envisaged by Sturm and her team, Massumi therefore claims that the content of the image is "its indexing to conventional meanings in an intersubjective context, its sociolinguistic qualification. This indexing fixes the determinate *qualities* of the image" (PV, p. 24). (It's unclear to me, though, what he thinks the "conventional meanings" of such images might be—the man leaving the snowman in the mountains, for example). But "the strength or duration of the image's effect" or what he calls "*intensity*" is characterized by him as involving an asignifying logic or "crossing of semantic wires: on it, sadness is pleasant" (PV, p. 24). Massumi argues that there is an immediate "bifurcation in response" into two systems:

The level of intensity is organized according to a logic that does not admit the excluded middle. This is to say that it is not semantically or semiotically ordered. It does not fix distinctions. Instead, it vaguely but insistently connects what is normally indexed as separate. When asked to signify itself, it can only do so in a paradox. [PV, p. 24]

Furthermore, Massumi states that this gap between content (in the form of signification) and effect (which appears as intensity) is matched by a comparable gap between two different kinds of embodiment.<sup>28</sup> In a move seemingly unwarranted by the experimental results, Massumi claims that the children in the experiment were "physiologically split" because "factuality made their heart beat faster and deepened their breathing, but it also made their skin resistance fall" (PV, p. 24). Sturm and her group of researchers did not view these results as incoherent or contradictory because, they suggested, both decreased skin resistance—that is, increased skin conductance—and increased heart and lung responses are usually linked to an increase in emotional-cognitive activation (see "TEM," p. 30).

28. For Massumi, intensity is the form in which the effects of stimuli are manifested. Similarly, "signification as a conventional system of distinctive difference" is the form in which content is manifested or, as Massumi puts it, it is "the form of content" (PV, p. 25).



But Massumi takes these findings to demonstrate the existence of a bifurcation or distinction between the depth of the heart and lungs and the surface of the skin to match the distinction between “qualification” (or meaning) on the one hand and “intensity” on the other. He asserts that although both qualification (or meaning) and intensity (or nonsignifying affective intensity) are embodied, depth reactions “belong more to the form/content (qualification) level, even though they also involve autonomic functions such as heartbeat and breathing,” whereas intensity is “embodied in purely autonomic reactions most directly manifested in the skin—at the surface of the body, at its interface with things” (*PV*, p. 25). Massumi then uses this distinction between depth and surface to buttress the idea of the existence of two different systems: the one, a “conscious-automatic” system functioning on a depth or vertical axis and linked by him to signification, expectation, common sense, and narrative continuity and associated with modulations of heart and breathing; the other, an intensity system functioning on a horizontal or surface axis “spreading over the generalized body surface like a lateral backwash from the function-meaning interloops that travel the vertical path between head and heart” and defined by him as an autonomic reaction system that is separate from meaning and signification. “Intensity is . . . a nonconscious, never-to-be-conscious autonomic remainder,” he writes. “It is outside expectation and adaptation, as disconnected from meaningful sequencing, from narration, as it is from vital function” (*PV*, p. 25).

The “meaning” and “intensity” (or affect) systems are said by Massumi to resonate or interfere with one another in various ways, but to the system of intensity belong all the attributes so prized by today’s self-professed Deleuzian affect theorists—the attributes of the nonsemantic, the nonlinear, the autonomous, the vital, the singular, the new, the anomalous, the indeterminate, the unpredictable, and the disruption of fixed or “conventional” meanings.<sup>29</sup> For Massumi, the system of intensity is the “system of

29. Thus Massumi says that the factual version of the film “dampens” intensity: “Matter-of-factness dampens intensity. In this case, matter-of-factness was a doubling of the sequence of images with narration expressing in as objective a manner as possible the commonsense function and consensual meaning of the movements perceived on screen. This interfered with the images’ effect” (*PV*, p. 25). Massumi suggests that the phrases or textual “qualifications” added to the emotional film version “enhanced the images’ effect, as if they resonated with the level of intensity rather than interfering with it. An emotional qualification breaks narrative continuity for a moment to register a state—actually to re-register an already felt state, for the skin is faster than the word” (*PV*, p. 25). The impression conveyed by these less than perspicuous remarks is that Massumi thinks the lowered skin resistance in the viewers of the factual film version was a measure of the dampening of intensity; but since lowered skin resistance is a sign of increased skin conductance associated with higher arousal, it is unclear from the data what if anything was dampened in this version.

the inexplicable: emergence, into and against regeneration (the reproduction of a structure). In the case of the snowman, the unexpected and inexplicable that emerged along with the generated responses had to do with the differences between happiness and sadness, children and adults, not being all they're cracked up to be, much to our scientific chagrin: a change in the rules. Intensity is the unassimilable" (*PV*, p. 27). And intensity is another word for affect defined in these asignifying terms. "For present purposes," Massumi writes, "intensity will be equated with affect" (*PV*, p. 27). Further on: "Affect is autonomous to the degree to which it escapes confinement in the particular body whose vitality, or potential for interaction, it is. Formed, qualified, situated perceptions and cognitions fulfilling functions of actual connection or blockage are the capture and closure of affect. Emotion is the most intense (most contracted) expression of that *capture*—and of the fact that something has always and again escaped" (*PV*, p. 35). Affect is the name for what eludes form, cognition, and meaning.

It is important to notice that Massumi imposes on Sturm's experimental findings an interpretation motivated by a set of assumptions about the asignifying nature of affect. These assumptions drive his analysis of Sturm's data in order to produce a distinction between, on the one hand, the conscious, signifying ("emotional" and intellectual) processes held to be captive to the fixity of received meanings and categories and, on the other hand, the nonconscious affective processes of intensity held to be autonomous from signification. *Differently from Tomkins and Ekman but to the same end*, Massumi conceptualizes affect as inherently independent of meaning and intention. What he and other affect theorists share with Tomkins and Ekman—hence also with Sedgwick and Smail—is a commitment to the idea that there is a disjunction or gap between the subject's affective processes and his or her cognition or knowledge of the objects that caused them. The result is that the body not only "senses" and performs a kind of "thinking" below the threshold of conscious recognition and meaning but—as we shall see in a moment—because of the *speed* with which the autonomic, affective processes are said to occur, it does all this before the mind has time to intervene.

And now the larger stakes of Massumi's effort to distinguish "affect" from signification begin to become clear. He is not interested in the cognitive content or meaning political or filmic or fictional or artistic representations may have for the audience or viewer but rather in their effects on the subject regardless of signification. The whole point of the turn to affect by Massumi and like-minded cultural critics is thus to shift attention away from considerations of meaning or "ideology" or indeed representation to the subject's subpersonal material-affective responses, where, it is

claimed, political and other influences do their real work. The disconnect between “ideology” and affect produces as one of its consequences a relative indifference to the role of ideas and beliefs in politics, culture, and art in favor of an “ontological” concern with different people’s corporeal-affective reactions. We find a similar disconnect between meaning and affect in Smail’s neurohistory, where, for example, gossip is said to have nothing to do with meaning, but is a “meaningless social chatter whose only function is the mutual stimulation of peace-and-contentment hormones. Gossip, in this model, remains important as a medium of communication,” as Smail observes, but what get communicated are not “primarily words and their meanings” but “chemical messengers.”<sup>30</sup> For both the affect theorists and Smail, then, political campaigns, advertising, literature, visual images, and the mass media are all mechanisms for producing such effects below the threshold of meaning and ideology.<sup>31</sup> In short, according to such theorists affect has the potential to transform individuals for good or ill without regard to the content of argument or debate. These are the reasons Massumi and the others are interested in scientific studies allegedly showing that affective processes and even a kind

30. Smail, *On Deep History and the Brain*, p. 176.

31. An entire aesthetic is involved here, one that emphasizes the reader’s or viewer’s *experience* of a text or image to the extent that that experience might be said to stand in for the text or image in question. An opposing position would insist that although a work of art might make us feel happy or sad or envious or ashamed, what matters is the meaning of the work itself, which is to say the structure of intentional relationships built into it by the artist. The fact that a novel or painting makes me feel or think a certain way may be a significant aspect of my response to the work, but, simply as my response, it has no standing as an interpretation of it. But cultural theorists who have turned to affect convert questions about the meaning of works of art into ones concerning their affective effect or influence on the reader or viewer. See for example Mark Hansen, “The Time of Affect, or Bearing Witness to Life,” *Critical Inquiry* 30 (Spring 2004): 584–626 and *New Philosophy for New Media* (Cambridge, Mass., 2006); Jill Bennett, *Empathic Vision: Affect, Trauma, and Contemporary Art* (Stanford, Calif., 2005); and Marco Abel, *Violent Affect: Literature, Cinema, and Critique after Representation* (Lincoln, Nebr., 2007). The position adopted by these affect theorists is recognizable as a version of the affective fallacy defined by W. K. Wimsatt and Monroe Beardsley as the error of judging the importance or success of a work of art in terms of its emotional effects on the reader. In art criticism the same issue has been a focus of debate ever since Michael Fried, in “Art and Objecthood,” defended high modernism against minimalism (or, as he also called it, literalism) on the grounds that the minimalist/literalist position made the viewer’s subjective, present-tense experience stand in for—the place of—the work itself (I am simplifying, of course). See Michael Fried, “Art and Objecthood” (1967), *Art and Objecthood: Essays and Reviews* (Chicago, 1996), pp. 148–72. See also Fried, “An Introduction to My Art Criticism,” *Art and Objecthood*, pp. 1–74. Fried’s views are defended and generalized in Walter Benn Michaels, *The Shape of the Signifier: 1967 to the End of History* (Princeton, N.J., 2004). For a critique of the new affective aesthetic, see Leys, “Trauma and the Turn to Affect,” in *Trauma, Memory, and Narrative in the Contemporary South African Novel*, ed. Geoff Davis (forthcoming).

of intelligence go on in the body independently of cognition or consciousness and that the mind operates too late to intervene.<sup>32</sup>

### The Missing Half Second

To be exact, according to Massumi and many others the mind intervenes *half a second too late* to play the role usually attributed to it in human behavior. In proof of this claim, Massumi in “The Autonomy of Affect” makes use of a well-known experiment on consciousness and the body that has come to play a strategic role in his and other like-minded theorists’ arguments about affect. The experiment in question concerns the relationship between conscious intention and brain activity and belongs to a group of experiments on this topic performed over a stretch of years between the

32. According to Thrift and other like-minded theorists, affective responses involve a kind of “thinking” that takes place in a nonreflective, nonrepresentational manner in the form of embodied habits, that is, in the form of subpersonal bodily thinking that is said to precede cognition and intentionality. “Only the smallest part of thinking is explicitly cognitive,” he states. “Where, then, does all the other thinking lie? It lies in body, understood not as a fixed residence for ‘mind’ but as ‘a dynamic trajectory by which we learn to register and become sensitive to what the world is made of’” (Thrift, “Summoning Life,” in *Envisioning Human Geographies*, ed. Paul Cloke, Philip Crang, and Mark Goodwin [London, 2004], p. 90). The word “explicitly” in this statement might suggest that the author believes bodily thinking is connected to implicitly cognitive capacities. But the rapidity with which Thrift turns to the body as the source of this “thinking” suggests that he imagines such modes of intelligence to be entirely corporeal in nature—as if bodily thinking, embodied habits, and skillful copings can be theorized in entirely nonconceptual terms. The emphasis thus falls on the role of affective neural and neurochemical networks considered to be capable of emergent, unpredictable activity creating possibilities for political and personal change.

It is an interesting question whether Clive Barnett is right when, in his valuable overview and critique of the turn to affect in political theory, he charges Connolly and Thrift with “cryptonormativism” on the grounds that these authors implicitly espouse certain political beliefs and norms, such as the value of democracy, without providing reasons for their beliefs because their theoretical position precludes them from doing so. One can see the appeal of Barnett’s argument, for it can indeed appear that, in advocating various techniques to counter the affective manipulations of the political Right, Connolly invokes the persuasive force of a progressive politics that he characterizes in normative terms as more generous than that of the Right. See Barnett, “Political Affects in Public Space: Normative Blind-Spots in Non-Representational Ontologies,” *Transactions of the Institute for British Geography* n.s. 33 (2008): 186–200.

Yet it could be argued that Connolly’s position is not contradictory but consistent because according to his affective theory political views are nothing but the expression of purely personal preferences, so that preferring democracy to despotism is like preferring tea to coffee. Connolly, Thrift, and other affect theorists can thus be seen as replacing a concern with disagreement over political beliefs with an appeal to affective differences that they take to be independent of belief or meaning. The result is that when people have different affective responses, they don’t disagree, they just are different. From this (to my mind untenable) pluralist point of view, democracy is not a normative value at all but just a personal taste, and what the political activist is seeking to do is subliminally influence or manipulate others through the use of images and other tactics into sharing his or her likings while remaining pluralistically open to the idea that different persons may simply have different inclinations.

1970s and the 1990s by Benjamin Libet. In the experiment briefly described by Massumi, subjects with their hands on a tabletop were asked to flex a finger at a moment of their choosing and to report when they were first aware of their decision or intention to perform that movement by noting the spatial position of a revolving dot on a large clock that measured fractions of a second. Libet found that the actual finger flexes occurred 0.2 seconds after the experimental subject clocked his or her decision but that the EEG machine employed to monitor brain activity registered significant activity 0.3 seconds before the subject registered his awareness of his decision. In other words, there seemed to be a *half-second delay* between the start of the body-brain event and its completion in the form of the movement of the finger. Libet concluded that unconscious cerebral processes initiate voluntary actions before conscious intention appears, although, he proposed, the brain fools us into thinking that we consciously decide matters and that our actions are personal events.<sup>33</sup> As Massumi reports, when Libet was asked to speculate on the implications of his findings for the doctrine of free will, he suggested “we may exert free will not by initiating intentions but by vetoing, acceding or otherwise responding to them after they arise” (PV, p. 29).<sup>34</sup>

On the basis of the “exemplary case” of Libet’s experiment (PV, p. 206), Massumi concludes that the “half second is missed not because it is empty, but because it is overfull, in excess of the actually-performed action and of its ascribed meaning.” As he puts it, during the mysterious half second

what we think of as “free,” “higher” functions, such as volition, are apparently being performed by autonomic, bodily reactions occurring in the brain but outside consciousness, and between brain and finger but prior to action and expression. The formation of a volition is necessarily accompanied and aided by cognitive functions. Perhaps the snowman researchers of our first story couldn’t find cognition because they were looking for it in the wrong place—in the “mind,” rather than in *the body* they were monitoring. [PV, p. 29]<sup>35</sup>

33. See Benjamin Libet, “Unconscious Cerebral Initiative and the Role of Conscious Will in Voluntary Action,” *Behavioral and Brain Sciences* 8 (Dec. 1985): 529–39.

34. Massumi is quoting from John Horgan’s article on Libet, “Can Science Explain Consciousness?” *Scientific American* 271 (July 1994): 76–77. In a note he also gives the reference to Libet’s original 1985 paper.

35. Massumi denies at this juncture that his ideas about affect or intensity involve “an appeal to a reflexive, romantically raw domain of primitive experiential richness—the nature in our culture. It is not that.” It is not that for him, first, “because something happening out of mind in a body directly absorbing its outside cannot exactly said to be experienced” (PV, p. 29); and second, “because volition, cognition, and presumably other ‘higher’ functions usually presumed to be in the mind . . . are present and active in that now not-so-‘raw’ domain.

As in the case of his analysis of the experiments by Sturm and her group, so in the case of his interpretation of Libet's findings, Massumi's emphasis falls on the determining role of subpersonal affective processes in thinking. "Thought lags behind itself," Massumi observes in another reference to Libet's experiment. "It can never catch up with its own beginnings. The half-second of thought-forming is forever lost in darkness. All awareness emerges from a nonconscious thought-o-genic lapse indistinguishable from movements of matter" (*PV*, p. 195). In short, he takes Libet's experiment to prove that the material processes of the body-brain generate our thoughts and that conscious thought or intention arrives too late to do anything other than supervise the results.<sup>36</sup>

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Resonance assumes feedback. 'Higher functions' belonging to the realm of qualified form/content in which identified, self-expressive persons interact in conventionalized action-reaction circuits, following a linear timeline, are fed back into the realm of intensity and recursive causality" (*PV*, pp. 29–30). In some rather opaque remarks Massumi suggests that the body doesn't just absorb pulses or discrete stimulations but rather "infolds" situated volitions and cognitions by mixing and combining these "social elements" with elements belonging to other levels of functioning and combines them "according to different logic." This leads him to suggest that the brain and flesh ("but out of mind and out of body understood as qualifiable interiorities, active and passive respectively") conserve and autonomically reactivate "the *trace* of past actions, *including a trace of their contexts*," in a process of "*incipience*" in which only one pathway of action and expression is selected for complete actualization from among a multitude of competing possibilities (*PV*, p. 30). Massumi's discussion culminates in the claim, based on Libet's experiment, that "the crowd of pretenders to actualization tend toward completion in a new selective context. Its newness means that their incipience cannot *just* be a conservation and reactivation of a past. They are *tendencies*—in other words, pastnesses opening directly onto a future, but with no present to speak of. For the present is lost with the missing half second, passing too quickly to be perceived, too quickly, actually, to have happened." The body is thus rethought as the realm of the virtual or of a "lived paradox" where opposites coexist, coalesce, and connect (*PV*, p. 29). By way of the idea of the missing half second, Massumi thus separates affect as "intensity" from the mental functions, such as cognition and volition, and then attempts to explain how those mental functions feed back into the realm of intensity. The rest of Massumi's paper, "The Autonomy of Affect," is largely given over to reflections on the virtuality of the body with reference to the ideas of Bergson, Spinoza, Deleuze, Gilbert Simondon, and others before returning at the end to a discussion of the ways in which Ronald Reagan achieved his success as a political leader not by ideological but by "affective" means.

36. Similarly, Thrift cites Libet, Damasio, LeDoux, and others in order to claim that "we are 'late for consciousness'" and that "an action is set in motion before we decide to perform it. . . . In other words . . . 'the brain makes us ready for action, then we have the experience of acting' . . . The space of embodiment is expanded by a fleeting but crucial moment, a constantly moving preconscious frontier. . . . Thus we can now understand emotions as a kind of corporeal thinking" ("IF," p. 67). He also observes that "much cognitive thought and knowledge may, indeed, be only be a kind of post-hoc rumination: 'to be aware of an experience means that it has passed'" (Thrift, "Still Life in Nearly Present Time: The Object of Nature," *Nonrepresentational Theory: Space, Politics, Affect* [New York, 2008], p. 58). In another paper in support of similar ideas Thrift cites Tor Norretranders's *The User Illusion*, whose discussion of Libet's experiments and general claim that our consciousness is a user illusion is also cited

But is this interpretation of Libet's findings valid? There are good reasons to doubt it. I will pass over the technical criticisms that have been leveled at Libet's experiment in order to focus on some of the more conceptual-philosophical problems it raises.<sup>37</sup> Massumi and many other cultural theorists present themselves as Spinozists who oppose dualism in all its guises. Yet a little reflection suffices to demonstrate that in fact a classical dualism of mind and body informs Libet's and Massumi's shared interpretation of Libet's experimental findings. Indeed, it is only by adopting a highly idealized or metaphysical picture of the mind as completely separate from the body and brain to which it freely directs its intentions and decisions that they can reach the skeptical conclusions they do. Already in 1985, in discussions Massumi ignores, several of the researchers invited to comment on Libet's results observed that the kinds of finger and wrist movements the subjects in the experiment were asked to perform were those that are normally carried out without one's awareness of the intention to act. They thus suggested that in his experiment Libet had imposed an artificial requirement when he asked his subjects to pay conscious attention to such movements. As these researchers pointed out, skilled pianists are not consciously aware of the innumerable movements their fingers must make during a performance, but this does not make those movements unintentional or negate the fact that the pianists intended to play the music. Indeed, as Libet's critics also argued, the movements Libet's experimental subjects were asked to perform were part of an overall intentional structure or situation that included the subjects' willingness (that is, their intention) to participate in the experiment and to comply with the researcher's expectations.<sup>38</sup> Furthermore, all the subjects went into the experiment knowing what actions they were expected to perform, and if they were uncertain they were allowed to practice them first. As science writer John McCrone has observed of criticisms by the

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favorably by Massumi and many other affect theorists (Norretranders also blurbs Smail's *On Deep History and the Brain*). As Norretranders puts it: "Even when we think we make a conscious decision to act, our brain starts a half second before we do so! Our consciousness is not the initiator—unconscious processes are! . . . Our consciousness dupes us!" (Tor Norretranders, *The User Illusion: Cutting Consciousness Down to Size* [New York, 1999], p. 220).

37. I have found the following collection of essays on Libet to be especially helpful: *Does Consciousness Cause Behavior?* ed. Susan Pickett, William P. Banks, and Shaun Gallagher (Cambridge, Mass., 2006). See also M. R. Bennett and P. M. S. Hacker, *Philosophical Foundations of Neuroscience* (Malden, Mass., 2003), pp. 228–31, and Daniel C. Dennett, *Freedom Evolves* (London, 2004), pp. 221–57.

38. For technical and conceptual criticisms of Libet's experiments by Bruno G. Breitmeyer, Arthur C. Danto, Richard Latt, Donald M. McKay, and others, and for Libet's response, see "Open Peer Commentary," *Behavioral and Brain Sciences* 8 (Dec. 1985): 539–66.



well-known consciousness researcher Bernard Baars: “Baars could . . . see that there was a deceptive simplicity to Libet’s finger-lifting task which was to blame for much of the controversy. People were taking the experiment to mean that lower-level brain processes generate our thoughts and the conscious-level mind arrives too late in the day to do more than supervise the results. Yet that was not the case at all. . . . As Baars put it, there was always a conscious-level context in place, framing whatever occurred.” McCrone adds: “Libet’s subjects knew what action to produce: The point that the students went into the freewill experiment with a consciously-held context was obvious to many commentators.”<sup>39</sup> In short, it is a confusion on both Libet’s and Massumi’s part to think that because such actions usually go on automatically, below the threshold of consciousness, it is necessary to break with the whole idea of intentionality and to assume that they can only be explained in corporeal terms.

The problem here is not the idea that many bodily (and mental) processes take place subliminally, below the threshold of awareness. Who would dream of doubting that they do? Rather, the problem concerns the implications Massumi appears to draw from this state of affairs. Shaun Gallagher has recently argued that it is only when normal motor-control mechanisms fail that people are put in the position of Libet’s experimental subjects. So, for example, patients suffering from deafferentation, the complete loss of proprioceptive feedback, lack the normally automatic processes governing motor behavior, which means they are compelled to think consciously every time they make a normally habitual movement. Such patients find it necessary to make a conscious mental decision for every simple motion, with the result that they can barely move properly at all. As Gallagher points out, such pathological cases require a picture of mental causation that is completely in line with the standard Cartesian account of the mind as a mental space separate from the body in which the subject freely controls his or her own thoughts and actions.<sup>40</sup> In other words, both Massumi and Libet seem to be in the grip of a false picture of how the mind relates to the body. The mistake they make is to idealize the mind by defining it as a purely disembodied consciousness and then, when the artificial requirements of the experimental setup appear to indicate

39. John McCrone, *Going Inside: A Tour Round a Single Moment of Consciousness* (London, 1999), pp. 136–37, 334n.

40. See Gallagher, “Where’s the Action? Epiphenomenalism and the Problem of Free Will,” in *Does Consciousness Cause Behavior?* pp. 109–24. Compare Gallagher, “Body Image and Body Schema in a Deafferented Subject,” *Journal of Mind and Behavior* 16 (Autumn 1995): 369–90 and *How the Body Shapes the Mind* (Oxford, 2005); and Gallagher and Anthony J. Marcel, “The Self in Contextualized Action,” *Journal of Consciousness Studies* 6 (Apr. 1999): 4–30.



that consciousness of the willing or intention comes “too late” in the causal chain to account for the movements under study, to conclude in dualist fashion that intentionality has no place in the initiation of such movements and that therefore it must be the brain which does all the thinking and feeling and moving for us. (All the “willing,” so to speak.)

Gallagher offers his critique of Libet’s experimental work from the perspective of a phenomenology of embodiment. He draws a distinction in this regard between *intentional actions*, which are usually (but not always) conscious, and *motor movements*, which are usually unconscious, suggesting that Libet’s experiments apply not to intentional actions as such but to motor movements, the control of which we would normally expect to be unaware.<sup>41</sup> But Massumi rejects phenomenology on the grounds that its intentional structures remain stuck in repetition and prevent the emergence of the new. “For phenomenology,” he complains,

the personal is prefigured or “prereflected” in the world, in a closed loop of “intentionality.” The act of perception or cognition is a reflection of what is already “pre”-embedded in the world. It repeats the same structures, expressing where you already were. . . . This is like the *déjà vu* without the portent of the new. . . . Experience, normal or clinical, is never fully intentional. No matter how practiced the act, the result remains at least as involuntary as it is elicited. [PV, p. 191; see also p. 287 n. 4]

The words “fully intentional” in this passage—as in “experience, normal or clinical, is never fully intentional”—mark the moment when Massumi succumbs to a false dichotomy between mind and matter. They mark the moment when he commits himself to the (essentially metaphysical) idea that for something to be “elicited” or intended it must be “fully” conscious and that, since not all experience can be described in those terms (but can *any* “experience” be so described?), the only alternative is to regard it as corporeal or material.<sup>42</sup> Libet’s experiments and interpretations appeal to

41. See Gallagher, “Where’s the Action?” pp. 115–16.

42. In another reference to Libet’s experiment Massumi observes of his own position:

The perspective suggested here displays a tropism toward realist materialism. . . . At virtually every turn in the discussion, dynamics that seemed “subjective” to the extreme made a literal end run back to impersonal matter. The end run of mindedness back to matter always somehow coincided with its emergence from it, the exemplary case being Libet’s feedback loop between the dawning of perceptual awareness and the ever-present previousness of movements of brain matter capable of coloring experience without themselves becoming aware. Accepting this insistence of the material and impersonal (the “involuntary”) *in* bootstrapped personal experience distinguishes the current account most sharply from phenomenological approaches. [PV, p. 206]

Massumi precisely because they are formulated in terms of this false dichotomy and thus seem to provide scientific evidence for the priority of brain matter in the origin of thought.

This last point can be generalized: even as they condemn the subject-object split, there is a constant tendency among the new affect theorists I am considering to adhere to this same false opposition between the mind and the body. Music is often cited by affect theorists as exemplifying the power of the affects. For example, Shouse suggests that music provides perhaps the clearest example of how the “intensity of the impingement of sensations on the body can ‘mean’ more to people than meaning itself.” He observes in this regard that “‘music has *physical effects*, which can be identified, described and discussed but which are not the same thing as it having *meanings*, and any attempt to understand how music works in culture must . . . be able to say something about those effects without trying to collapse them into meanings” (“FEA,” ¶13). Here Shouse puts everything that is not a question of “meaning,” defined in some highly limited sense, over against the body or affect. What seems wrong or confused about this is the sharpness of the dichotomy, which operates at once with a highly intellectualist or rationalist concept of meaning and an unexamined assumption that everything that is not “meaning” in this limited sense belongs to the body. This too is a false dichotomy, one that—in spite of a professed hostility to dualism—threads its way throughout much of the new literature on affect.<sup>43</sup>

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As he also states with reference to the half-second delay: “This is a long incipency of mindedness in brain matter. All kinds of things might be going on in autopilot as perception and reflection are taking off from chemical and electrical movements of matter” (*PV*, 195).

43. Thus we find that the new affect theorists often embrace a highly abstract and disembodied picture of mind or reason in order to repudiate it. But why buy into that picture in the first place? It is worth noting in this regard that the new affect theorists often appear to elide the distinction between two different meanings of the term *representation*. The word *representation* is frequently used to refer to a picture of the relationship between the organism and the world that assumes a sharp separation between the cognizing, representing mind and its objects. This is a picture that the new affect theorists reject in favor of a more embodied account of mind-world interactions. There is nothing inherently noncognitive or nonintentionalist about such an embodied theory, which is also adopted by many philosophers. But the word *representation* is also used by the new affect theorists to refer to signification or meaning or belief, and so on, as if what is at stake in eschewing a representationalist theory of mind-world relations is not just a matter of rejecting a false picture of how mind and body interact but involves rejecting the role of signification, or cognition, or belief altogether. On this second usage, the claim becomes that, since we do not represent the world to ourselves according to the wrong, disembodied model of the mind, our relations to the world are, in large measure, visceral, embodied, and affective and hence not a matter of meaning or belief at all. The new affect theorists’ tendency to reject psychoanalysis or to try to reconceptualize it in

## Out of the Blue

The same half-second delay between the operations of the brain and the emergence of consciousness plays a role in Connolly's efforts to rethink the role of reason, argument, and decision in everyday life. In line with Masumi, to whom he acknowledges a debt,<sup>44</sup> Connolly advocates an "immanent naturalism," according to which the Kantian transcendental "field" can be "translated" into an immanent, material field that decisively alters the direction of our conscious thought. The emphasis falls on the "layered" character of thinking and especially on the priority of fast-acting, subcortical or "subliminal" perceptions, "thought-imbued affects," visceral intensities, and corporeal habits and sensibilities over intentional consciousness, reason, propositional knowledge, and explicit argument in political life. What all this means is not entirely clear, but among several neuroscientific studies that interest Connolly I will single out one in particular—my third and last example—as revelatory of the stakes involved in the new affect theorists' appropriations of the findings of neuroscience.

The study concerns the case of a sixteen-year-old girl suffering from epilepsy who, prior to surgery, was undergoing stimulation by intracranial electrodes in order to locate precisely the brain areas responsible for her seizures. During stimulation the patient was asked to perform a variety of tasks, including the naming of objects, reading paragraphs of text, counting, and various movements of the arms, fingers, and feet. When her physicians began stimulating a region of the left frontal lobe, they discovered that an electrode touching a tiny patch in the "supplementary motor area" made the patient laugh. According to the physicians, not only was the girl's laughter accompanied by a "sensation . . . of mirth" but each time laughter was involuntarily produced by stimulation in this way, when asked to identify the cause of her laughter, the girl offered a different explanation for it, attributing it to "whatever external stimulus was present." As the physicians reported: "Thus, laughter was attributed to the particular object seen during naming ('the horse is funny'), to the particular content of a paragraph during reading, or to persons present in the room while the

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materialist-technological terms plays a role in this development. In the process of revising and amending and materializing Freud, they end up abandoning the notion of the psychological unconscious. On this postpsychoanalytic model, what is not fully conscious must necessarily be corporeal or material.

44. For Connolly's praise of Masumi's "superb exploration of the 'missing half-second'" that, he says, prompted some of his own thinking, see Connolly, "Brain Waves, Transcendental Fields, and Techniques of Thought," *Radical Philosophy*, no. 94 (Mar.–Apr. 1999): 28 n. 6, hereafter abbreviated "BW"; and, again, *N*, p. 209 n. 7.

patient performed a finger apposition task ('you guys are just so funny . . . standing around')."<sup>45</sup>

What appeals to Connolly about this study is precisely the idea that the girl was obliged to offer reasons for her laughter after the fact—in other words, the idea that, as in the case of Libet's subjects, the behavior came first and only afterward could the girl come up with various reasons or, rather, rationalizations, for it: "The young girl, following the time-honored principle of retrospective interpretation, decided that these researchers were extremely funny guys" (N, p. 83).<sup>46</sup> Connolly views the case as offering further evidence that a "lot of thinking and interpretation" goes on during the "'half-second delay' between the reception of sensory material and conscious interpretation of it" (N, p. 83). "We move here . . . into the quick, crude reaction time of the amygdala that precedes feeling and consciousness," he observes, in one of several references in his book to the claim, associated with the experiments of Joseph LeDoux and others, that the amygdala is a crucial component in the generation of rapid emotional responses operating below the reach of conscious cognition and judgment (N, p. 209 n. 6).<sup>47</sup> On the basis of this and related studies, he contests "neo-Kantian" political theorists for overrating the importance of reason and underestimating the role of what he calls "technique" or "external tactics," such as drugs, in influencing our thinking and ethics ("BW," p. 23).<sup>48</sup>

45. Itzhak Fried et al., "Electric Current Stimulates Laughter," *Nature*, 12 Feb. 1998, p. 650.

46. Connolly does not cite the original scientific paper but an article on it in the *New York Times*. There the author prefaces his discussion by observing that, back in the 1930s, Robert Benchley, who liked slyly to poke fun at scientists, had written a mock analysis of laughter. After asserting that "'all laughter is merely a compensatory reflex to take the place of sneezing,'" Benchley had added a footnote: "'Schwanzenleben, in his work 'Humor After Death,' hits on this point indirectly when he says, 'All laughter is a muscular rigidity spasmodically relieved by involuntary twitching. It can be induced by the application of electricity as well as by a so-called joke.'" But the science writer takes the claim seriously. "Little did Mr. Benchley imagine that the imaginary Schwanzenleben would turn out to be very nearly right," he comments, concluding that: "Science may yet prove more potent than Shakespeare or Monty Python" (Malcolm W. Browne, "Who Needs Jokes? Brain Has a Ticklish Spot," *New York Times*, 10 Mar. 1998, p. D1).

47. Connolly refers to LeDoux's ideas about the role of amygdala in affect in N, pp. 76, 91, 206 n. 27, and 211. Connolly uses the language of "intensity" to describe the operations of the amygdala, as when he observes that "the amygdala both influences conduct on its own and bumps *intensities* into conscious thinking and judgment that the complex brain regions then process according to their own capacities of reception, speed, and organization" (N, p. 90). In another reference to the girl who was made to laugh "out of the blue," Connolly sees in the patient's after-the-fact attempts to explain her provoked laughter, by attributing it to objects or situations that were to hand, a sign of the creative potential of the mind to come up with new possibilities of interpretation: "She, as it were, activates other electrical impulses to open up possibilities of interpretation exceeding those followed when she treated her consciousness as a species of apodictic recognition during the first encounter" ("BW," p. 25).

48. It has been observed that the new affect theory creates problems for a progressive

Connolly makes an interesting choice when he illustrates the same phenomenon of the half-second delay by citing the reflex movements we make when we recoil from the painful touch of a hot stove. "A half-second delay?" Connolly asks, and replies:

It can be illustrated phenomenologically. When you place your hand over a hot stove, your hand recoils before you experience a feeling of pain, even though you tend to interpret the recoil as if it were caused by the feeling that followed it. The reflex action precedes the feeling commonly thought to cause it; in this case, at least, close attention to the order of action can verify the discrepancy between normal retrospective interpretation of temporal order and the actual order. It seems that "incomprehensible quantities of unconscious calculation" take place during the half-second delay between the reception of sensory material and the consolidation of perceptions, feelings, and judgments. [N, p. 83]<sup>49</sup>

It is hard to know what to make of this. Is Connolly implying that, by analogy with the pain reflex, laughter can also be understood in reflex

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politics in that it is not at all clear how one might go about deliberately influencing what in oneself and others is beyond conscious control; the emphasis on the importance of the subliminal visceral register in people's responses makes it difficult to imagine how a political activist might intervene strategically in a particular situation. David Campbell raises this point in Connolly, "An Interview with William Connolly," interview by David Campbell, in *The New Pluralism: William Connolly and the Contemporary Global Condition*, ed. Campbell and Morton Schoolman (Durham, N.C., 2008), pp. 325–29. When politics becomes a question of distinguishing "good affects" from "bad affects," manipulations operating below the level of ideology and consciousness can only be countered by manipulations of a similar kind. As Connolly himself suggests, an effective counterpolitics must somehow draw on the same resources of image control in order to challenge the sound-media campaigns of the opposition; see Connolly, "The Evangelical-Capitalist Resonance Machine," *Political Theory* 33 (Dec. 2005): 885 n. 15. Likewise, in reference to 9/11 and the Homeland Security Administration's color-coded alert system's manipulations of the country's fears, Massumi comments: "Government gained signal access to the nervous systems and somatic expressions of the populace in a way that allowed it to bypass the discursive mediations on which it traditionally depended and to regularly produce effects with a directness never before seen. Without proof, without persuasion, at the limit even without argument, government image production could trigger (re)action." And again: "The Bush administration's fear-in-action is a tactic as enormously reckless as it is politically powerful. Confusingly, it is likely that it can only be fought on the same affective, ontogenetic ground on which it itself operates" (Massumi, "Fear [The Spectrum Said]," *Positions* 13 [Spring 2005]: 34, 47). The commitment to notions of "emergent causality" makes the outcome of such tactics inherently unpredictable and this unpredictability then becomes the basis for a posthistorical and post-Marxist "hopefulness," or "faith" in the possibilities of change. On this last point, see for example Massumi, "Navigating Movements," in *Hope: New Philosophies for Change*, ed. Mary Zournazi (New York, 2002), pp. 210–44.

49. In this passage, Connolly is citing from Norretranders, *The User Illusion*, p. 164.

terms?<sup>50</sup> If so, he is implicitly arguing that far from being a complex, social-cognitive phenomenon, laughter as an expression of amusement can be conceptualized as an automatic response to stimuli without regard to the meaning those stimuli might have for us, since they are intrinsically capable of triggering a laugh reflex.

In fact, this is just how Damasio interprets laughter. In his discussion of the case just referred to, Damasio emphasizes the fact that the girl's laughter came "out of the blue" and was "entirely unmotivated."<sup>51</sup> What intrigues him about this and similar cases of electrode-induced emotional reactions is the idea that, although such responses seem to manifest the presence of thoughts capable of causing the emotion, the thoughts come only after the emotional behavior has been triggered. "The effect appeared to manifest, for all intents and purposes, the presence of thoughts capable of causing sadness," he writes of a case of sudden sobbing unexpectedly induced by an electrode probe in a woman suffering from Parkinsonian motor symptoms. "Except, of course, that no such thoughts had been present prior to the unexpected incident, nor was the patient even prone to having such thoughts spontaneously. Emotion-related thoughts only came *after* the emotion began." He concludes that the evidence speaks to the "relative autonomy of the neural triggering mechanism of emotion." In the case of the patient who laughed "out of the blue," he proposes that the electrical stimulus mimicked the neural results that the "laughter-competent" stimulus would have normally produced (*LS*, pp. 69–70).<sup>52</sup>

50. Unless he is speaking merely figuratively, this is how Massumi theorizes the way affect exerts its influence in political life today: "Although humanized intentionality, as expressed through negotiation and advocacy, also appears and reappears and disseminates throughout the social fabric, it does not characterize the system as a whole. Like life itself, human intentionality has become an internal variable of capitalist power. . . . Mediation-based strategies, whether of reform or of dialectical struggle, are now bit players on the global scene of power . . . If the human disappears and reappears locally and primarily affectively, globally it is relegated to the status of a reflex machinic relay. For example, instant opinion polling elicits human reflex responses that are relayed via the autonomic apparatus of the mass media to other apparatuses, where they legitimate or enable certain autonomic operations. In such autonomic surroundings, it is vain to mourn the passing of moral reasoning and philosophies of right. Our social existence is affective and reflexive, and it serves little purpose to deny it" (Massumi, "Requiem for Our Prospective Dead [Toward a Participatory Critique of Capitalist Power]," in *Deleuze and Guattari: New Mappings in Politics, Philosophy, and Culture*, ed. Eleanor Kauffman and Kevin John Heller [Minneapolis, 1998], p. 58).

51. Antonio Damasio, *Looking for Spinoza: Joy, Sorrow, and the Feeling Brain* (Orlando, Fla., 2003), p. 75; hereafter abbreviated *LS*.

52. In keeping with such a view of laughter, which supposes that affects are independent of context and meaning, Damasio accepts Ekman's questionable claim that the difference between genuine and simulated laughter can be detected on the face because only in a person who authentically feels the emotion do the relevant facial muscles involuntarily contract. The distinction goes back to the nineteenth-century scientist Duchenne de Boulogne, who proposed

(Presumably because laughing at such a stimulus has evolutionary value: it would so startle a crocodile that he would not want to eat you.)

The point for Damasio is not to define laughter or sadness in terms of cognitively defined objects or beliefs about the world but as intentionless states such that my ability to give a reason for my feeling something must be based on an illusion, in that what I feel is just a matter of my physiological condition. For Damasio the basic emotions are inherently objectless in the sense that they are bodily responses, like an itch; I laugh when I am tickled, but I am not laughing *at you* (or at your joke). This is a materialist theory that suspends considerations of meaning or intentionality in order to produce an account of the affects as inherently organic (indeed inherently mechanical) in nature.<sup>53</sup> The significance of the case of the girl whose laughter was caused by electrode stimulation for Damasio (and, it would appear, for Connolly, though it is not easy to figure out where he stands on this issue) is that it exemplifies the way all the basic affects are supposed to work.<sup>54</sup>

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that an authentic laugh or smile cannot be feigned because it requires the contraction of muscles not under voluntary control. On this view, a genuine laugh can be produced by someone really feeling the emotion involved; by the same token, an actor cannot convincingly portray the emotion he is trying to represent unless he experiences the emotion himself; if he does not, he can only simulate it, and the simulation will show. The neurological data are said to confirm this. Thus Damasio reports that patients with damage to the same brain areas that were stimulated in the case of the girl who laughed “out of the blue” have difficulty smiling a “natural” smile—a smile spontaneously induced by getting a joke—and are limited instead to a fake sort of “say cheese” smile (*LS*, p. 76). The position has recently been endorsed by François Delaporte, *Anatomy of the Passions*, trans. Susan Emmanuel, ed. Todd Meyers (Stanford, Calif., 2008). For persuasive criticisms of this position and of the neurological claims made on its behalf, see Fridlund, *Human Facial Expression*, pp. 115–18, 152–55; Russell and Fernandez-Dols, *The Psychology of Facial Expression*; and Stéphanie Dupouy, “Le Visage au scalpel: L’Expression faciale dans l’œil des savants (1750–1880)” (PhD thesis, Université Paris I, Panthéon-Sorbonne, 2007).

53. Like many theorists of affect, Damasio has been influenced by James’s well-known theory of emotion according to which we are frightened because we run and sad because we cry; see, for example, *LS*, p. 57. So has Massumi: “As Williams James famously argued, fear strikes the body and compels it to action before it registers consciously,” he remarks. “When it registers, it is as a realization growing from the bodily action already under way; we don’t run because we feel afraid, we feel afraid because we run. . . . Fear at this level of pure activation in the time slip of threat is the *intensity* of the experience and not yet a content of it. Threat strikes the nervous system with a directness forbidding any separation between the responsiveness of the body and its environment. The nervous system is wired directly to the onset of danger. *The reality of the situation is that activation*” (Massumi, “Fear [The Spectrum Said],” pp. 36–37). This is not the place for a detailed discussion of the role of James’s theory of emotion in the recent turn to affect. But for a valuable discussion of the history of that theory, its critical reception, and James’s subsequent revisions, see Thomas Dixon, *From Passions to Emotions: The Creation of a Secular Psychological Category* (Cambridge, 2003), pp. 204–30.

54. In *Neuropolitics*, in line with the scientific findings of Joseph LeDoux, Connolly treats



### Some Conclusions

It is time to take stock. I will bring my discussion to a close by making a few summary points about the ways in which the new affect theorists

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the subcortical amygdala as an important brain “nodule” that interacts with the more sophisticated but slower acting neocortical regions of the brain but also functions independently of cognition and the “linguistic register” to produce quicker acting, emergency responses of fear and anxiety (*N*, p. 206 n. 27). More recently, Connolly has criticized LeDoux’s work as reductive, and he now pays more attention to the work and ideas of Damasio, V. S. Ramachandran, Francesco Varela, and others; see Connolly, “Interview with William Connolly,” p. 327. See for example Connolly’s discussion of the case of a woman who, according to Damasio, can’t experience the emotion of fear or detect dangerousness in others because she has a defective amygdala; see *N*, pp. 5, 8–9 and “Experience and Experiment,” *Daedalus* 135 (Summer 2006): 67–75. Connolly takes this case, among others, to demonstrate the insufficiency of “intellectualist” and “deliberationist” models of thinking and the priority of subconscious processes in perception and judgment. For a critique of Damasio’s interpretation of this case, an interpretation that depends on the same anti-intentionalist assumptions informing Ekman’s approach to the basic emotions, see Leys, “How Did Fear Become a Scientific Object and What Kind of Object Is It?” pp. 85–89.

It is understandable that political and cultural theorists such as Connolly are drawn to Damasio’s work. The latter’s insistence on the link between rational action and emotion and feeling is attractive to them. Especially appealing is his “somatic marker hypothesis,” according to which decision making is the result of a combination of “high reason,” which is capable of cost-benefit analyses of a given action, and somatic signals or body-state profiles from the emotional body, signals that are transmitted to the higher brain centers where they help screen out certain choices, thereby establishing constraints on decision and action. Damasio thus explains the emotional and everyday decision-making deficits displayed by patients suffering from damage to the ventromedial sector of the frontal lobes by suggesting that these patients lack the relevant nonconscious emotional “hunches” or “somatic markers” that normally influence abstract thinking. In effect, Damasio stresses the limits of “pure reason” and instead foregrounds the constitutive role in our thoughts of affects said to operate quickly, below the threshold of reflection and argument. Since somatic markers signal the mixing of innate and learned components of our affective responses, the somatic marker hypothesis suggests a mechanism for conceptualizing how culture and the body interact. Somatic markers are thus said to be culturally influenced “gut reactions” that provide guidelines for decision making. These ideas are appealing to those who contest theories of “deliberative democracy” and the role of rational choice in ordinary life.

But it would not be difficult to show that Damasio’s account of the influence of emotion and feelings in deliberative reason is theoretically confused and empirically problematic. From my perspective, his fundamental error is to claim that all emotions, including the “secondary” ones such as shame and guilt, are built up out of the basic or “primary” emotions, which are then defined, according to the Ekman paradigm, as hard-wired physiological states triggered by emotionally competent stimuli to discharge involuntarily in stereotypical ways. Damasio thus conceptualizes the basic emotions in nonintentionalist terms as inherently independent of cognition, knowledge, and belief. His ideas are therefore vulnerable to many of the same criticisms that can be launched against Ekman’s paradigm of the emotions. For useful critical assessments of Damasio’s somatic marker hypothesis, see Barnaby D. Dunn, Tim Dalgleish, and Andrew D. Lawrence, “The Somatic Marker Hypothesis: A Critical Evaluation,” *Neuroscience and Behavioral Reviews* 30, no. 6 (2006): 239–71; John Cromby, “Integrating Social Science with Neuroscience: Potentials and Problems,” *BioSocieties* 2 (June 2007): 149–69; and Bennett and Hacker, *Philosophical Foundations of Neuroscience*, pp. 210–16.



considered in this essay are making use of the sciences to forward their views:

1. In the case of certain scholars in the humanities and social sciences, such as Sedgwick and Smail, the situation is relatively straightforward. In their turn to affect these scholars have drawn on neuroscientific research that treats the emotions as inherently independent of intentions. The affects are thus held to be a set of innate, automatically triggered brain-body behaviors and expressions operating outside the domain of consciousness and intentional action.

Sedgwick explicitly endorses the Basic Emotions paradigm associated with the work of Tomkins and Ekman. That paradigm serves her theoretical and political interests in several ways, not least in its emphasis on the role of contingency and error in emotional life. For Sedgwick, following Tomkins, it is because the affects can be triggered by virtually any object without our cognitive system's knowledge of the object or "stimulus" that elicits it that we are so liable to be wrong about ourselves. The alleged disjunction between emotion and cognition is attractive to Sedgwick precisely because of what she describes as "the unexpected fault lines between regions of the calculable and the incalculable."<sup>55</sup> In other words, for Sedgwick the shift away from questions of meaning and intention in Tomkins's approach to the emotions produces as one of its important consequences an emphasis on the attributes of a subject that can incidentally attach itself to objects but that has no essential relation to them. The effect is to replace the idea of one's intentions with regard to objects or of the meanings those objects might have for one with the idea of the singularity of one's affective experiences, which is to say with the idea of one's difference from all other subjects.<sup>56</sup>

55. Sedgwick and Adam Frank, "Shame in the Cybernetic Fold," in *Touching Feeling*, p. 106.

56. In Sedgwick's analysis shame emerges as an affect that ensures each person's absolute difference from the other. According to Sedgwick, following Tomkins's approach to the affects, what matters in the experience of shame is not your conscious or unconscious wishes or intentions toward some object but your subjective feelings in all their singularity and difference from those of others. Shame thus transforms and produces identity, without any moralism and indeed without giving identity any specific content; it is a means for creating (queer) identity as the experience of pure difference. The result is a characteristic posthistorical valorization of questions about who we are, or how we feel, over questions about what we believe or intend or mean. In a recent article Adam Frank, Sedgwick's coauthor in her work on Tomkins, advocates the superiority of Tomkins's biologically based theory of the affective elements to Freud's psychoanalytic theory of guilt for understanding the relations between ideology and affect. Since Tomkins defines ideology as "any organized set of ideas about which human beings are at once most articulate and most passionate, and for which there is no evidence and about which they are least certain," it appears he thinks our ideas and beliefs can't be defended by good arguments because they are entirely imaginary (quoted in Frank, "Some Affective Bases for Guilt: Tomkins, Freud, Object Relations," *English Studies in Canada* 32 [Mar. 2006]: 17). On the

Smail adopts a similar approach to the emotions because he believes that intentionality is an inadequate basis for the study of history. Treating the search for meaning in texts based on the interpretation of authorial intentions as inherently untrustworthy because authors may lie, Smail advocates the study of the traces of the past that are unintentionally sedimented in documents—traces that are passed on by an evolutionary process of random variation and selection and that not only can be considered more trustworthy records of what happened but that, as a matter of “information” rather than intended meaning, can be interpreted in much the same way a population geneticist reads a strand of DNA. Smail’s critique of authorial intention is aimed at dissolving the prejudice against studying prehistory, which lacks written records. The result is a neurohistorical approach to the past that brings history and neurobiology together in the study of all those allegedly nonintentional processes, such as the emotions, that influence human behavior.<sup>57</sup> It is hardly surprising, then, that Smail endorses an account of the basic emotions as automated body states or that, in an apparent echo of Libet’s ideas, he claims that “the brain often likes to do its communicating all by itself, and it only grudgingly allows the mind a say in the process.”<sup>58</sup>

2. When we examine the work of affect theorists such as Massumi, Shouse, Thrift, and Connolly who claim to be influenced by the ideas of Spinoza, James, Bergson, Deleuze, Guattari, and others, their relationship to the sciences at first appears to be more complicated than that of Sedg-

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basis of Tomkins’s contestable claims, Frank explains the ways in which according to Tomkins people’s affects influence their ideologies. But of course no one has ever doubted that our feelings can influence our beliefs. The problem is that by adopting Tomkins’s separation of the affects from our ideas or beliefs and by treating the affects as nonintentionalist states, Frank, like other affect theorists who share this approach, implicitly deflates or eliminates ideological disagreement over what we believe in favor of a pluralistic-ontological emphasis on what we feel or who we are, a position that allows concern with identity to trump disagreements over our beliefs. For an elaboration and critique of this position, see Michaels, *The Shape of the Signifier*; see also Leys, *From Guilt to Shame*, pp. 150–54.

57. For Smail’s discussion of Damasio’s approach to the emotions, see Smail, *On Deep History and the Brain*, pp. 150–51. Without mentioning his name, Smail comes close to adopting Ekman’s “neurocultural” theory according to which socialization or learning may determine the range of stimuli that can trigger our basic emotions and can moderate facial expressions based on social norms or “display rules,” but the underlying emotions may nevertheless leak out. Smail is especially interested in “Psychotropy,” or the unintended effects of the consumption of chemicals or of other behaviors on human moods and feelings, suggesting that human hierarchies are embedded in neurophysiology. For an important critical assessment of Smail’s book, see Reddy, “Neuroscience and the Fallacies of Functionalism,” *History and Theory* 49 (2010): 412–25.

58. Smail, *On Deep History and the Brain*, p. 165.

wick and Smail. It might even seem that the neurosciences would have little to offer these theorists because they define affect in terms that appear to be inimical to scientific analysis. As Sianne Ngai has recently observed in this connection, Massumi's characterization of affect as an "asignifying intensity" that is prior to or apart from any qualification or quantification "creates difficulties for more positivistic kinds of materialist analysis."<sup>59</sup> In fact, Massumi has some rather harsh things to say about the sciences, characterizing them as seeking to tame, instrumentalize, and render profitable the singularity, unpredictability, immanence, and liveliness of a world in flux. "Scientific method is the institutionalized maintenance of sangfroid in the face of surprise," he writes. "Properly scientific activity starts from a preconversion of surprise into cognitive confidence" (PV, p. 233). But this is not the whole story, since he and like-minded affect theorists are also keen to enter into some sort of relationship with the sciences. Indeed, it is an interesting feature of the present situation that according to Massumi "the humanities need the sciences . . . for their own conceptual health—a lot more than the sciences need the humanities" (PV, p. 21; quoted in "BG," p. 39). What he hopes is that the humanities can borrow or pilfer from the sciences in such a way as to stir things up and, ideally, change the terms of the encounter between the two fields.

In a generous mood one might be willing to concede that this is what Massumi is doing when he makes use of the snowman experiments of Sturm and her team. He could be said to be catching those scientists in the very process of trying to tame the complexities and apparent paradoxes inhering in their findings about the way children respond emotionally to the media—once those findings are reinterpreted along the lines he proposes. In a less generous mood, however, one could argue that not only is Massumi unfair to Sturm and her group, who acknowledge the complexity of their results and the difficulty of interpreting them, but that he willfully or otherwise misreads the data in order to create paradoxes where there were none.

In any case, creative misreading can hardly be said to characterize Massumi's and Connolly's appropriations of Libet's experiments or the uses Connolly makes of experiments and pathological case histories described by Damasio and others, appropriations and uses that amount to straightforward endorsements.<sup>60</sup> In Massumi's case, in spite of his claim to em-

59. Sianne Ngai, *Ugly Feelings* (2005; Cambridge, Mass., 2007), p. 26.

60. Papoulias and Callard observe in this regard that the language in which the new affect theorists invoke the neurosciences is often the language of evidence and verification; they cite Massumi ("Fear [The Spectrum Said]"): "the 'time-loop of experience has been experimentally verified'" ("BG," p. 37); and Connolly ("Experience and Experiment"), who states that one of

brace a form of “radical empiricism” inspired in part by James, he comes across as a materialist who invariably privileges the “body” and its affects over the “mind” in straightforwardly dualist terms, forgetting that for James the “body” is not a pure state of being but rather a pragmatic classification of the operations of “pure experience,” just as the “mind” is.<sup>61</sup> That is why Massumi finds the work of scientists such as Libet so congenial; as we have seen, Libet privileges the body in such a way as to claim that the mind always functions “too late” for intention and reason to play a decisive role in action and behavior. In this regard, Massumi’s attitude toward the sciences is scarcely to be differentiated from that of non-Deleuzian affect scholars, such as Sedgwick and Smail.<sup>62</sup>

3. My last point concerns whether alternative accounts of the affects are

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Damasio’s experiments in the case of the patient with defective amygdalae “reveals how much of perception and judgment is prior to consciousness” (“BG,” p. 37).

61. “Subjectivity and objectivity are affairs not of what an experience is aboriginally made of, but of its classification.” Massumi cites this passage from James’s essay, “The Place of Affectional Facts in a World of Pure Experience,” first published in the latter’s *Essays in Radical Empiricism* in 1912 (PV, p. 296). James goes on to write: “In the case of our affectional experiences we have no permanent and steadfast purpose that obliges us to be consistent, so we find it easy to let them float ambiguously, sometimes classing them with our feelings, sometimes with more physical realities, according to caprice or to the convenience of the moment.” He remarks in this regard that it is a mistake to say that the emotions are purely mental phenomena, asserting with reference to his theory of emotion that “to a great extent at any rate, they are simultaneously affections of the body.” On this basis he observes, “in practical life no urgent need has yet arisen for deciding whether to treat them [affectional experiences] as rigorously mental or as rigorously physical facts. So they remain equivocal; and, as the world goes, their equivocality is one of their great conveniences.” In short, James suggests that the categorization we choose is a pragmatic question and not a constitutive one, whereas Massumi invariably privileges the body over the mind (William James, *Essays in Radical Empiricism*, ed. Frederick Burkhardt et al. [Cambridge, Mass., 1976], pp. 71, 73).

62. Apropos of the title of Massumi’s book, *Parables for the Virtual*, the notion of the virtual deserves a further comment. If according to Massumi affect is “virtual” because it is something that “happens too quickly for it to have happened” (PV, p. 30); if affect as the virtual is the “incorporeality of the body” (PV, p. 21); if affect is “incipience, incipient action and expression” (PV, p. 30); if affect is the realm of “potential” (PV, p. 30); if affect is the “unclassifiable” or the “never-yet-felt” (PV, p. 33); if affect is “undecidability fed forward into thought” (PV, p. 37); if affect or the virtual “as such” is “inaccessible to the senses” (PV, p. 133); if affect can only be grasped topologically, which is to say, unempirically (see PV, p. 134); if affect is “prior to or apart from the qualitative” and is not a matter of quantitative investment (PV, p. 260); then it is not at all clear that it makes sense for Massumi to cite Libet’s experiment in support of his views because by doing so he makes it seem as if the “virtual” has been definitively located in the body-brain. But it does make sense for him to cite Libet’s experiment if he is a certain kind of materialist bent on privileging the role of body-brain over that of mind and intentionality in human life, culture, and behavior. For the claim that Deleuze has been misunderstood by certain affect theorists because he in fact liberated affectivity and the virtual from the body, see Richard Rushton, “Response to Mark B. N. Hansen’s ‘Affect as Medium, or the “Digital-Facial-Image,”” *Journal of Visual Culture* 3 (Dec. 2004): 353–57.

possible, accounts that do not make the error of separating the affects from cognition or meaning in the way the recent theorists I have been discussing do. Here a historical perspective is useful. The anti-intentionalism so pervasive today in affect theory has a genealogy that for our purposes can be traced back to developments in the psychological sciences beginning in the early 1960s. At that time two very different scientific approaches to the emotions were simultaneously proposed. One approach, associated with a famous (if problematic) experiment by Stanley Schachter and J. Singer, published in 1962, claimed to demonstrate that affect and cognition are indissociable. A rival approach, also first published in 1962, was associated with the work of Tomkins, who argued that the affects and cognition constituted two entirely separate systems and that accordingly the emotions should be theorized in anti-intentionalist terms. At first Schachter-Singer's "cognitive" model prevailed. But, for various reasons that have yet to be adequately evaluated, over time Tomkins's approach displaced the cognitive model with the result that by the 1990s his had become the mainstream position.<sup>63</sup> What we are witnessing today is the embrace by the new affect theorists in the humanities and social sciences of the same anti-intentionalism that for more than twenty years now has been entrenched in the sciences of affect.

The success of the anti-intentionalist paradigm is thus a relatively recent phenomenon, one that has depended on a number of complex institutional, intellectual, and social factors. It is also the case that over the years critics have raised various objections to the anti-intentionalist position. Psychoanalysts of course have always posited a close link between emotions and cognition or belief and therefore have stood opposed to any attempt to strip the affects of meaning. But we are living today in a largely postpsychoanalytic age, and the new affect theorists tend either to ignore Freudian views or to reinterpret them along materialist lines, frequently in order to align Freud's thought with the latest neuroscientific findings. Philosophers, too, tend to favor the cognitive position, but, since with a few exceptions they are not interested in bringing their arguments to bear on the latest findings in the empirical sciences, their views can all too easily be ignored by affect theorists who believe it is important to integrate the latest neuroscientific results into their analyses. It is worth noting in this con-

63. Obviously, a history of theoretical and experimental approaches to the emotions will eventually have to go further back than the 1960s, to the work of Darwin, James, Walter B. Cannon, and many others. For an important attempt to identify the emergence of an "adrenaline structure of feeling" in the early twentieth century, see Otniel E. Dror, "Afterword: A Reflection on Feelings and the History of Science," *Isis* 100 (Dec. 2009): 848–51 and *Blush, Adrenaline, Excitement: Modernity and the Study of Emotions, 1860–1940* (forthcoming).

nection that another reason cognitive approaches are felt by many to be less gripping than noncognitive ones is that the former are often held to be captive to a version of cognition according to which it is associated with making propositions. In other words, cognitivism is held to be tied to the human capacity for producing linguistic propositions, a position that appears to create a sharp divide between humans and nonhuman animals. Since the new affect theorists are committed to overturning the human-nonhuman animal divide, they sometimes reject the cognitive position on this basis. Thus Griffiths defines the cognitive position in terms of the human capacity for “propositional attitudes” in order to reject it. But I think this is a mistake. There is nothing about the cognitive or intentionalist position that limits the capacity for cognition and intentionality to human animals.<sup>64</sup> Nor is there anything about the cognitive position that is opposed to the idea that humans and nonhuman animals are emotionally embodied creatures and that this fact is of the highest importance.

Significantly, scientists themselves have raised some of the most powerful objections to the anti-intentionalist position. Already in the 1980s, at a time when Tomkins’s views were beginning to capture the field, Richard S. Lazarus in a well-known debate opposed those who, like Robert Zajonc, claimed that affect and cognition are separate systems. Even earlier, Lazarus had demonstrated in a series of artfully designed experiments—not unlike those undertaken at almost the same time by Sturm and her team—that viewing stressful films could induce powerful emotional and physiological responses that depended crucially on the viewer’s appraisals, beliefs, and coping styles. Based on these findings, Lazarus took a prominent role in defending the cognitive position.<sup>65</sup> In 1994, Fridlund put forward a devastating critique of the theoretical and empirical claims underpinning the Tomkins-Ekman paradigm. The same year, in a superb analysis of the cross-cultural facial judgment studies reported by Ekman and his colleagues, Russell showed that the results were artifactual, depending on forced-choice response formats and other problematic methods that begged the questions to be proved in ways that fundamentally undermined Ekman’s claims for the universal nature of the basic emotions. Fridlund went on to propose that facial movements should not be viewed as expressions of hard-wired, discrete internal emotions leaking out into the external world, as Tomkins and Ekman claim, but as mean-

64. The term *cognitive* can suggest a concern with cognitive psychology and information-processing systems, which is very far from the meaning attached to the term by the appraisal theorists who interest me.

65. For a discussion of Lazarus’s experiments and their import see Leys, *From Guilt to Shame*, pp. 145–56.

ingful behaviors that have evolved in order to communicate motives in an ongoing interpersonal or interindividual context or transaction. From this perspective, a perspective that links up with a “new ethology” that likewise emphasizes the communicative value of nonhuman animal displays, facial displays are relational signals that take other (real or imagined) organisms into account. According to Fridlund, humans and nonhuman animals produce facial behaviors or displays when it is strategically advantageous for them to do so and not at other times, because displays are dynamic and often highly plastic social and communicative signals. In short, Fridlund has made the question of intentionality—including nonhuman animal intentionality—central to his account of the emotions. Russell and other scientists, too, are proposing alternative approaches to the affects, proposals that challenge the disjunction between emotion and meaning on which the Tomkins-Ekman paradigm is based.

The present situation therefore offers to the historian and critic the engrossing phenomenon of an ongoing clash between competing ways of thinking about the emotions. What is especially striking is that scientific researchers who have been formed by and trained in Ekman’s presuppositions and research methods are expressing doubts about the anti-intentionalist paradigm. But as powerful and even intellectually decisive as these scientists’ objections may be, it will not be simple or easy for them to overthrow the anti-intentionalist paradigm.<sup>66</sup> The latter’s solidarity with evolutionary theories of the mind; the agreement between its assumptions about the independence of the affect system and cognition and contemporary presuppositions about the modularity and encapsulation of brain functions; the congruence between its image-based approach to the emotions and neuroimaging techniques; the convenience of Ekman’s methods, based on the use of standardized posed photographs of expression as test stimuli, in facilitating research—all these and other factors help explain why the Tomkins-Ekman approach remains firmly entrenched in contemporary neuroscientific work on the emotions. How long this strange state of affairs will prevail is an open question.

It may be, too, that critics face another difficulty, which is that the moment one abandons the Tomkins-Ekman paradigm in favor of some kind of intentionalist interpretation of the affects one finds oneself forced to provide thick descriptions of life experiences of the kind that are familiar to anthropologists and novelists but are widely held to be inimical to science. At the same time, one is obliged to engage with an array of very

66. Some sentences in the following two paragraphs are also found in my, “How Did Fear Become a Scientific Object and What Kind of Object Is It?”

difficult questions about the nature of intentionality, including the intentionality of nonhuman animals, which have traditionally belonged to the domain of philosophy.<sup>67</sup> For these and other reasons the anti-intentionalist position may well maintain its dominance within psychology and the affective neurosciences for some time to come. A related question is why anti-intentionalism exerts such a fascination over the cultural critics and theorists whose work I have been criticizing in this essay—especially since one price their views exact is to imply such a radical separation between affect and reason as to make disagreement about meaning, or ideological dispute, irrelevant to cultural analysis. But that is a topic for another occasion.<sup>68</sup>

67. For an interesting recent discussion of the minimal rationality enjoyed by many animals, see Fred Dretske, "Minimal Rationality," in *Rational Animals?* ed. Susan Hurley and Matthew Nudds (Oxford, 2006), pp. 107–16.

68. The basic reference for such a discussion is of course Michaels, *The Shape of the Signifier*.