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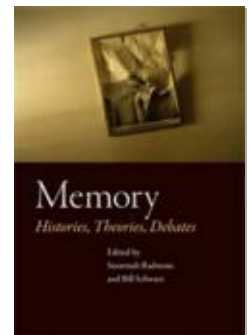
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17. Affect and Embodiment

Felicity Callard and Constantina Papoulias

The best maxim for the 21st century is, “There is no memory save emotional memory.”

Lawrence E. Hedges¹

The Turn to Affect

In his book *Neuropolitics: Thinking, Culture, Speed*, political theorist William Connolly protests against “the insufficiency of . . . intellectualist and deliberationist models of thinking” by suggesting that such models, as manifested in philosophy and the human sciences, give too much priority to the highest and conceptually most sophisticated brain nodules in thinking and judgment [and may] . . . underestimate the importance of body image, unconscious motor memory, and thought-imbued affect.²

Connolly is specifically interested here in expanding what thinking is and does, but to do so, he immediately turns to reconceptualizations of thinking currently taking place within neuroscience. His linking of intellectualist and deliberationist models of thinking to “the highest and . . . most sophisticated brain nodules” is emblematic of the current mode of interdisciplinarity animating humanities scholarship: neuroscience is frequently being called upon to provide what Connolly himself later calls “conversations”—but what we instead suggest tend to be taken as solutions—regarding various problematics within the humanities. The topic of Connolly’s concern, “thinking,” plays a central part in this turn: the superseded view of thinking stands for the Cartesian *cogito* and hence as a shorthand for particular models of subjectivity (those “intellectualist and deliberationist” models); the expanded model comes to give, thanks to neuroscience again, “unconscious motor memory, and thought imbued affect” their dues.

Connolly's proclamation is indicative of an increasingly common position taken by cultural and social theorists. In the last decade or so, the humanities and parts of the social sciences (for example, cultural geography, anthropology, and sociology) have witnessed an affective and emotional turn.³ Such a turn explicitly denounces Descartes' split between mind and body, moves beyond what it regards as a restrictive preoccupation with cognition and representation, and laments what it sees as the deadening effects of linguistic and discursive analyses. As Clare Hemmings has argued, investment in the affective is particularly visible in cultural studies, where affect stands for the thickness of our engagement with the world and for something in the specificity of embodied experience that exceeds constructionist models of subjectivity and that can, therefore, come to transform the very social structures within which this subjectivity is otherwise mired.⁴

Scholars' diverse disciplinary backgrounds and theoretical investments mean that there are numerous definitions of affect; there tends, nonetheless, to be a consistent distinction between the terms *emotion* and *affect* across the humanities' literatures, even though this consistency is not uniformly found in the original literatures drawn upon. Hence, affect refers to an amorphous, diffuse, and bodily "experience" of stimulation impinging upon and altering the body's physiology, whereas emotions are the various structured, qualified, and recognizable experiential states of anger, joy, sadness, and so on, into which such amorphous experience is translated. Thus affect is precognitive, while emotions are understood as distinct categorizations of experience related to a self.⁵ (We feel fear because of a physiological event: fear, the identifiable emotion, is a judgment on a primary bodily mode of engagement with the world.)

Crucially, then, the turn to affect expands the category of *experience*: an affective "event" is not consciously apprehended but is, rather, what happens to the body directly on the level of its endocrinology, skin conduction, and viscera. As we will show in this chapter, this investment in affect is a move away from an understanding of subjectivity and of experience that is based on an internal world, on particular formulations of memory and representation, and that is associated with psychoanalytic models and the category of the psyche as such. Instead, the affective turn is concerned with nonrepresentational and extralinguistic aspects of subjective experience, aspects that its advocates associate with the very fact of embodiment and the particularities of our physiological responses to the world.⁶ This turn to affect and embodiment is not necessarily a turn away from the relationship between memory and subjectivity; rather, it is the relationship between memory and representation that the interest in affect seeks to loosen. As exemplified in Connolly's list above of phenomena that we must not underestimate, the turn to affect can also be seen as a turn to memory—as long as such memory is understood as embodied and nonrepresentational. This is an implicit or procedural memory, subsisting as the embodiment of patterns of excitation that construct our sense of self. The wager is that if we attend to affect and to how it courses through the body, we might edge closer

to illuminating the elusiveness and vitality of the embodied present. Affect is thus seductive to cultural theorists insofar as it is not entirely bound by any social or psychic structuration. It promises an engagement with the living present and a break with the tyranny of representational memory—that is, a break with an apprehension of the present through particular understandings of representation and signification, as a second-order reality.

Some scholars go further, however, and see in affectivity an essential irreducibility to memory, whether representational or embodied. Mark Hansen, a philosopher and cultural theorist of new media, tends toward such a polarization between memory and affect. Hansen, who is concerned with mapping the relation between technological change and an attendant reshaping of human subjectivity, regards the body's ability to experience its intensity, to experience itself as "more than itself," as "compris[ing] a power of the body that cannot be assimilated to the habit-driven, associational logic governing perception."⁷ This is not least because digital technologies now tend to operate "beneath the threshold of image memory";⁸ in other words, they are not constrained by "human perceptual ratios" and therefore influence our "embodied lives at a level, as it were, below the 'threshold' of representation itself."⁹ (It is important to note, incidentally, that such insights are, in turn, derived from data gathered by other digital technologies in the form of brain imaging devices, such as functional magnetic resonance imaging, or fMRI). For Hansen:

Affectivity comprises the faculty of the new: it is the modality through which the individuated being remains incomplete, which is to say . . . open to the force of the preindividual.¹⁰

Affectivity, then, is that which names "the capacity for the body to be radically creative,"¹¹ and hence not wholly beholden to—or constrained within—that which came before. Hansen, indeed, frequently distinguishes the problematic of affectivity from what he calls "the politics of memory" or the "problematic of a memorial incompleteness." These phrases refer to the conceptualizations of those such as Derrida, whose emphasis on a particular understanding of tradition and of the dependence of consciousness on the past, on Hansen's account, forecloses consideration of the future-directed force of affectivity.¹²

Hansen's work, like that of other humanities scholars interested in affect, frequently turns to engage scientific and psychological literature.¹³ These transpositions often mean that terms or concepts are plucked from their original contexts and put to work in different arenas and for different purposes. And this is particularly the case as regards those two central concepts, affect and representation, whose contraposition so frequently structures debates over memory. There are numerous models of representation, that most complex of terms, circulating in various disciplines, and it would be foolhardy to assume that what is being referred to in one context is equivalent to that being used in another. Nonetheless, one could argue that "representation" is most frequently conceptualized using a specular

model, in which there is a specular distance between subject and object (that which is represented). It is against this hegemonic interpretation of representation that arguments on behalf of affect frequently find their force.¹⁴ Our chapter will, of necessity, draw on several overlapping disciplines and fields of inquiry: psychoanalysis, cognitive psychology, developmental psychology, and neuroscience; trauma studies (which is, of course, itself interdisciplinary); and literature from the humanities and the social sciences that manifests a turn to affect and the emotions. In so doing, this chapter will attempt to elucidate some of what is at stake in relation to conceptualizations of both memory and affect when such interdisciplinary crossings take place.¹⁵

Memory and Affect in Freud

Freud is indispensable to explorations of memory and affect: his rich and at times contradictory conceptualizations of both terms have had enormous influence on subsequent discussions, and continue to do so.¹⁶ More specifically, as we have mentioned, those scholars cleaving to the promise of affect often explicitly distinguish their formulations from those of Freud. In order to understand why this is the case, it is important to clarify which reading of Freud they wish to depart from. Let us stay, for a moment, with William Connolly and his desire to embed affect at the heart of thinking. Connolly wants to develop “a wide range of tactics by which to *work* on affective memories that help to structure perception and judgment”:

Freud’s theory . . . limits too-stringently positive possibilities of technical intervention into the habitus of the self and the habits of larger collectives. Put another way, Freud encloses memory traces within a deep interpretation in which he knows the source and shape of the most archaic traces, even though those beset by them do not.¹⁷

Let us put to one side Connolly’s over-optimistic reading of Freud’s claims to knowledge and instead concentrate on what motivates Connolly’s argument. This is not an argument *against* memory, but rather against a particular conceptualization of memory. What is under siege is a model in which memory is cut off from contingency and casts its shadow too bleakly over the future. Thus, while Connolly will allow that we have “distinctive memory traces” from our childhood, he claims that their effect “is real without being wholly determinative.”¹⁸ (Moreover, Connolly’s enumeration of possible memory traces makes it clear that he is more interested in those that “filtered into your mode of being” prior to the development of language—gestures, affects, and “visceral habits of perception.”) Freud’s conception of memory is, on such a model, too beholden to language and representation, as we have already discussed. In addition, it is said to set too much store on the prescriptive and constraining influence of the most archaic on that which follows

in the subject's life. What needs to be eschewed, therefore, is a conception of memory that pulls the subject too much into the past—or, rather, perhaps, in which “the archaic,” *qua* fixed memory traces modeled on language, erupts from the unconscious too suddenly and ferociously into the present.

Does such an interpretation of Freudian psychoanalysis stand up to scrutiny? The specific objects of psychoanalysis are, first and foremost, the unconscious and the traumatic nature of human sexuality.¹⁹ That memory lies at the heart of the psychoanalytic endeavor is because of the extraordinarily complex role that the “memory trace” plays in Freud's writings in relation to fantasy, the emergence of sexuality, and repression.²⁰ Memory is most obviously related to sexuality through the structure of *Nachträglichkeit* (afterwardness, or deferred action), which Freud first described in his *Project for a Scientific Psychology*. Here, a young woman's compulsion not to go into shops alone is traced back to a forgotten earlier episode in which she had been molested. The memory “aroused what it was certainly not able to at the time, a *sexual release*, which was transformed into anxiety.”²¹ Freud notes that the case, which is exemplary of hysterical repression, demonstrates

a memory arousing an affect which it did not arouse as an experience, because in the meantime the change in puberty had made possible a different understanding of what was remembered. We invariably find that a memory is repressed which has only become a trauma by *deferred action*.²²

The affect (of fright and anxiety) is labile—in this case it is directed toward shopkeepers whose laughs remind the young woman of the grin of the shopkeeper who molested her—and is intimately associated with libido (via the memory of the molestation).

While no one would dispute that the problematic of memory and its relation to sexuality lies at the heart of the psychoanalytic endeavor, scholars and clinicians (both psychoanalytic and non- or anti-psychoanalytic) are far from united as regards the place that affect holds—and ought to hold—within psychoanalysis. Freud himself clearly believed that a patient's distress was tied to disturbances of both memory and affect, and his considerations of affect extended from his earliest formulations right up to his death. In his early psychoanalytic essay “On the Physical Mechanism of Hysterical Phenomena: Preliminary Communication,” co-authored with Joseph Breuer, we encounter the famous description of the hysterical patient for whom the *memory* of the psychical trauma “acts like a foreign body which long after its entry must continue to be regarded as an agent that is still at work”; a psychical trauma, Freud and Breuer clarify, is any experience that calls up distressing affects, such as “fright, anxiety, shame or physical pain.”²³ Moreover, the continuation of this passage emphasized that relief from hysterical symptoms demanded the work of both memory and affect:

*each individual hysterical symptom immediately and permanently disappeared when we had succeeded in bringing clearly to light the memory of the event by which it was provoked and in arousing its accompanying affect, and when the patient had described that event in the greatest possible detail and had put the affect into words. Recollection without affect almost invariably produces no result.*²⁴

That affect needed to be aroused alongside memory made clear that this was not an etiolated procedure relying on the patient's neutral narration of a previous experience: the domain of the linguistic was not enough on its own. But while memory and affect are intimately bound together in Freud's early writings on hypnosis, it is simultaneously the case that Freud relied on the important conceptual division he made between the category of the idea (*Vorstellung*—which also connotes presentation and representation properly speaking) and that of affect (*Affekt*).²⁵ Crucially, both *Vorstellung* and *Affekt* were central to Freud's conception of the drive (*Trieb*), which, Freud emphasized, can be known only via its representatives, namely the ideational representative and the quota of affect. Repression, in attempting to banish to the unconscious those representations (thoughts, images, memories, fantasies) bound to a drive, resulted in different outcomes for the two drive components: the *Vorstellung* could be repressed; *Affekt* could only be suppressed. Affect, within this formulation, was intrinsically capable of separation from the idea or memory trace to which it was initially bound and hence could become "falsely connected"—to use a phrase from Freud's early writing—to other representations. What import does this have for the relationship between memory and affect within psychoanalysis? Most notably, the relative independence of representation and affect means that it is representation that comes to represent, as it were, memory (via memory traces), whereas affect is positioned as resistant to representation and hence to memory.²⁶ However, in Freud's formulations, neither affect nor memory is in itself the foundation of psychic reality. Rather, each can only occupy this space insofar as its is tied to the drive, and through the drive to unconscious wishes, to sexuality and to fantasies associated with it.²⁷

Most current forms of psychoanalysis, then, work primarily within the terrain of *Vorstellungen*—memory traces, representations, fantasies. But psychoanalysts of all stripes are ready to acknowledge the crucial role that affect plays in treatment. As the psychoanalyst and philosopher Jean Laplanche emphasizes, "What is essential for the individual, both in life and in the treatment, is the destiny of affect," but "the analytic method begins with the discovery that, ultimately, it is not by seeking to play on affect that one will best intervene in the destiny of the affect."²⁸ (Laplanche is implicitly critiquing hypnotic or cathartic techniques that "play on affect" by directly attempting to handle it, intimating that these will not fundamentally shift intractable patterns of affect.) As Laplanche puts it: The "cause" or "causes" that psychoanalysis searches for "are of the order of representation, they are memories, fantasies or imaginings, and imagos."²⁹

How, then, in psychoanalysis do the operations of memory work in and through affect? First and foremost, manifestations of affect cannot, when approached psychoanalytically, be assumed to bear any obvious relationship to either their precipitating or historic cause. To be terrified by something or furious with someone does not mean that the cause for that terror or that fury is *that* something or *that* someone: further investigation is required in order to discern the representation that, enmeshed with the thwarted wish or fantasy, drives the manifestation of affect. But one must also bear in mind Freud's dictum that suppression of the development of affect is "the true aim of repression." The act of repression can result, therefore, in several outcomes: that the affect remains, largely as it is; that it is transformed into a "qualitatively different quota of affect" (most commonly to anxiety); or that it is suppressed.³⁰ This means not only that emotions can transform into their opposite (affection into aggressivity, say), but that an apparent lack of affective intensity, or feelings of intense boredom, might not be all that they appear.³¹ In Freud's account, affects range from tightly structured and qualitatively specific to diffuse and unattached to any obvious object or precipitator (what psychiatrists would now call "generalized anxiety"). This means that while affects, unlike memory, are not tied to language, they nevertheless, like memory, possess different temporalities and are not necessarily tied to their present objects—my anger toward X can just as easily be a displacement from an original target or an original emotion. In other words, the intensity of the affect is in no way a guarantee of its authenticity. Finally, affects and memory alike are constitutive of psychic reality: as representatives of the drive, they are tied to the pleasure principle and therefore to the domain of the subject not determined by self-preservation.

Neuroscience

While those associated with the affective turn have largely spurned psychoanalysis, they have been far from hostile to certain neuroscientists' and developmental psychologists' research on affect. These researchers inherited the terrain of consciousness that had previously been mined by cognitive psychologists, but in so doing, they have restructured their predecessors' understanding of cognition.

Cognitive psychology typically preoccupied itself with the study of memory and excluded the study of affect. For cognitivists, affects could become objects of study only insofar as the mind made them meaningful through cognitive processing and representational "filing": such "emotional experiences" were, then, said to be determined by our subjective interpretation of forms of arousal. The affective was therefore routed through the cognitive and only became conscious—and hence, able to be felt—through a process of cognitive appraisal. In other words, "emotions result from meanings, and meanings, to a large extent, from inferred consequences or causes."³² Types of affective event that

could not be understood as forms of appraisal either were excluded from studies of cognition or featured simply as forms of distortion affecting memory and thought. And so while on the one hand cognitive psychology understood discrete emotions as particular types of cognition, it also studied arousal as a particular kind of interference of memory that could be subject to measurement. Affect, then, from early experiments in task performance under stress, right up to the emergence and consolidation of the new nosology of post-traumatic stress disorder (PTSD) in the 1980s, was understood by the majority of cognitive psychologists as arousal—a literally mindless force that was at best a lubricant to memory and at worst (in cases of traumatic hyperarousal) productive of damage and mnemonic disorder.

Papers in cognitive psychology still cite, for example, the Yerkes–Dodson law of 1908. This law claimed that moderately strong arousal at the time of encoding strengthened memories, while both weak arousal and hyperarousal effectively blocked the ability to remember.³³ Another proposal concerning the memory–emotion correlation, the Easterbrook (or weapon focus) hypothesis, reconfigured the Yerkes–Dodson law for visual memory: here, high arousal was believed to narrow witnesses’ ability to recall visual scenes by producing a kind of tunnel vision in which only the emotionally salient fragments of an event (e.g., the muzzle of a gun) were held in memory while the rest blurred together.³⁴ The hypothesis regarding “flashbulb memories,” a more recent incarnation of this memory–emotion correlation, argued that high arousal can produce a quasi-photographic effect: the scene (here, again, the emphasis was predominantly on the visual) would be indelibly burned into the mind of the spectator participant, with all its trivial details intact.³⁵ Other psychologists have since criticized the assumption of accuracy of both “weapon focus” and “flashbulb” memories, suggesting that while certain traumatic events appeared to produce remarkably vivid memories, these were far from accurate even as they were firmly believed to be so by the participants.³⁶

The separation that cognitive science maintained between memory and affect has, in recent years, been reconfigured, and this has ushered in a more fluid account of the relays between thought, affect, and memory.³⁷ This reconfiguration has extended to conceptualizations of memory itself.³⁸ Psychologists in the 1970s expanded memory from a faculty linked to internalized representations (“mental images”) to a number of systems or modalities, only some of which were, strictly speaking, representational. This expansion was enabled by the study of brain-damaged patients who, while having lost the ability to form new memories (“declarative memories”), surprisingly retained the ability to learn new skills (“procedural memories”). The location of these patients’ lesions suggested that memory, as well as comprising different modalities, was neurally locatable in a number of different areas in the brain. The emergence of the category of procedural, or non-declarative, memory acted as a significant catalyst for a rearticulation between the memorial and the affective. By the mid-1970s, experimental psychologists had begun to suggest that virtually all adult cognitive skills could be more usefully conceptualized as *distinct*

memory operations: there was a kind of memory that manifested itself explicitly through the recalling of specific incidents (e.g., an appendicitis operation during childhood); another that emerged as different kinds of knowledge (e.g., the earth is round); a third that manifested itself in behavior, as perceptual-motor skills (e.g., driving or problem-solving); as well as a fourth that provided the spatial coordinates for those skills to be used.

While fierce debates continue to surround the hypothesis and the precise delimitation of distinct forms of memory, this expansion of the mnemonic meant that memory was no longer exclusively tied to representation; rather, cognitive science could consider that a vast network of patterns, skills, and habits that underlie conscious acts without themselves becoming conscious are also memory functions. At the same time, the use of digital imaging technologies has enabled the visualization of the brain as a complex and dynamic space of emergent chemical changes and synaptic growth and has shown that particular stimulations result in distributed activity (for instance, the execution of a simple task may be shown to engage multiple areas, some associated with muscular activity, some with reflection, and so forth). What this has meant is that the cognitive/noncognitive distinction could no longer be easily maintained upon the observation of brain activity: here, what had been thought to be a cognitive function appeared now to involve the support of diverse, purportedly unrelated areas. And some of those areas have been increasingly regarded as caught up in affective processing.

It is the work of three researchers in particular, Bessel van der Kolk, Joseph LeDoux, and Antonio Damasio, that has, for a variety of reasons, been most readily taken up by scholars in the humanities interested in affect and embodiment.³⁹ In the subsequent three sections, we summarize the understandings of affect, memory, and embodiment employed by each of these writers and indicate their significance for larger debates concerning the articulation between these three terms.

Bessel van der Kolk

In 1980, the publication of the third edition of the *Diagnostic and Statistical Manual of Mental Disorders* formalized the diagnosis of post-traumatic stress disorder.⁴⁰ As Allan Young's cogent genealogy of this diagnosis makes clear, PTSD consolidated a particular conceptualization of "traumatic memory" and indicated the reinvigorated interest that psychiatrists, psychologists and psychoanalysts, among others, were taking in trauma following the Vietnam War.⁴¹ This interest has, unsurprisingly, resulted in a wide range of new accounts of memory and affect.⁴² The diagnostic criteria for PTSD emphasized that one of the key manifestations of PTSD was the *re-experiencing* of the traumatic event through at least one of the following:

1. recurrent, intrusive, and distressful recollections of the event;
2. recurrent distressful dreams of the event;

3. sudden acting or feeling as if the traumatic event were recurring, because of an association with an environmental or ideational stimulus. (DSM-III criteria).

Placing experiences of distressing affect at the center of the PTSD diagnosis raised two difficult questions: First, to what extent could these reenactments of traumatic events—“acting or feeling as if the traumatic event were recurring”—be termed *memories* and anchored back to a specific event? Second, to what extent was trauma an “experience” that the subject underwent and then “re-experienced”? Both questions posed significant challenges for researchers engaged in issues of memory and affect.

One position in the debates over trauma that became influential within both the sciences and the humanities centered on the claim that trauma resists representation—and hence resists memory understood through representational coordinates. The neuroscientist Bessel van der Kolk has been particularly influential in this regard.⁴³ For van der Kolk, traumatic events (events characterized by extreme levels of affect) are captured within the brain differently from ordinary events (and hence from ordinary memory). Van der Kolk effectively updates the Yerkes-Dodson law through neurobiological findings. He draws on a body of research that maintains that severe or sustained stress can suppress the usual operations of the hippocampus, “creating context-free fearful associations, which are hard to locate in space and time.” Thus, while the traumatic events themselves are subject to amnesia, this is not the case for the “feelings associated with them.”⁴⁴

In van der Kolk’s account, high levels of affect are said to produce an embodied and nonrepresentational memory that is seen somehow as more present and intense than the “normal” memories of our past. As the title of one of van der Kolk’s articles claims: “The body keeps the score”; in other words, something in the body holds on to, stores, the intensity of a particular experience, even when explicit memories are knocked out by that intensity.⁴⁵ However, van der Kolk then goes further, to suggest that traumatic memories are not only present implicitly, as feelings, but also that they activate a very particular type of iconic memory in which the past is preserved literally—and that such memory is what intrudes in PTSD nightmares or during flashbacks. And so, “memories” of the trauma are “predominantly experienced as fragments of the sensory components of the event: as visual images, olfactory, auditory, or kinaesthetic sensations, or intense waves of feelings.”⁴⁶ Here, visual images, like “waves of feelings” and “auditory sensations,” are perceived not as representations but as “fragments of sensory components” cut off from representation and from the integrative work of perception.⁴⁷

Van der Kolk regards himself as confirming and continuing the work of the nineteenth-century neurologist Pierre Janet on dissociation. Janet believed that intensely affective, disturbing experiences were not properly integrated into the memory system and instead produced dissociated “traumatic memories.” Van der Kolk updates Janet to suggest that trauma produces affectively charged “body memory” that exists outside of the frame of cognition and representational memory.⁴⁸ Van der Kolk’s research has been

subject to wide-ranging critique both by other scientists and by historians of science. In particular, his claims that traumatic memories are literal reproductions of a traumatic event are unconfirmed in the literature and seem to rest on a semantic confusion between affective and representational aspects of memory. Van der Kolk's research, though precarious on scientific grounds, fits neatly with certain imperatives circulating in the humanities: trauma is framed to challenge well-worn accounts of cognition, symbolization, narration. On one side, then, appears representation and the memory trace; on the other side, trauma, affect, and the body.

Joseph LeDoux

Joseph LeDoux's work has centered on the endocrinological changes and brain activations associated with the production of fear. On his account, "emotional memory," as he terms it, is a separate registration from explicit memories about that same event. This emotional memory is conceived along the lines of a conditioned stimulus response: it involves the forging of a link between the thalamus (an area of the brain responsible for gathering sensory information) and the amygdala (a small area near the center of the brain that seems to be responsible for the activation of endocrinological changes, such as the secretion of adrenaline). The systems responsible for this endocrinological change can operate autonomously from cognition, and so the individual is not aware of the stimulus occasioning the fear response; or, to put it differently, fear can be generated in the absence of a representation. In this sense, what LeDoux calls "emotional memory" is not memory at all, properly speaking, since the reconstruction or representation of an emotional event in its lived intensity is not possible. Rather, emotional memory refers to the body's ability to generate an emotional response anew when confronted with a particular stimulus. This response can be considered an aspect of memory insofar as it is "learned"; however such learning takes place without the engagement of cognition, the processes of thinking and judgment associated with the neocortex.

LeDoux, then, sees emotional memory as a precognitive mode of interacting with the world. In other words, emotional memory is understood as a foundation of cognition rather than as its other: precognitive processes are those that "guide reflexive, instinctive, biologically prepared or genetically disposed behaviour"; these are defined against types of cognitive processing that are "dependent on some form of learning or experience-based memory."⁴⁹ In this context, emotions are conceptualized as the outcome of a precognitive system of bodily response to environmental stimuli, a system that forms the biological substratum of consciousness. For LeDoux, the purpose of this emotional processing system is adaptive; that is, possession of this "thoughtless," fast-track route from stimulus to action facilitates survival in situations of environmental threat (we automatically jump back in fear when we see snake-like objects). Through affective experiences,

the organism adapts to environmental change by altering the chemical milieu of the body, its viscera and autonomic nervous system.

Indeed, LeDoux claims that some basic emotional responses to particular stimuli (such as that initiated by the snake) are genetically fitted: that is, they exist as a species memory.⁵⁰ This view is shared by a number of neuroscientists. Damasio too claims that “the brain is prepared by evolution to respond to certain Emotion Competent Stimuli with specific repertoires of action.”⁵¹ Crucially, this visceral automaticity can also become maladaptive: once a specific emotional memory is laid down, it can never be extinguished. While for LeDoux thoughts and memories can be enlisted to regulate such emotional conditioning (by inserting them into particular representational spaces, or stories about the self), emotional conditioning remains essentially outside cognitive control as though in a frozen state. To use LeDoux’s own words, one can establish “cortical control over the amygdala’s output” but cannot “wip[e] clean . . . the amygdala’s memory slate.”⁵² What this means, then, is that affective responses both engage the present immediately and precognitively and at the same time generate “out of time” experiences in which the organism responds inappropriately to stimulation because of a previous connection that does not know extinction. Here, despite LeDoux’s emphasis on the adaptational value of emotional memory, he also seems to underline that intrusive affect possesses a traumatic “timelessness” that is an inherent risk of emotional memory as such.

Antonio Damasio

If LeDoux and van der Kolk are wedded to a distinction between the affective and the cognitive, a distinction maintained through the argument for separate emotional and declarative memory systems, Antonio Damasio attempts to challenge this distinction on a more fundamental level. As the title of *Descartes’ Error* (1995), his first best-selling book suggests, Damasio wishes to undo the Cartesian distinction between mind and matter (*res cogitans* and *res extensa*). On Damasio’s account, thoughts and representations are not separable from affective experiences because representations are always imagistic and thinking is distributed through the body. His neurobiological perspective allows him to translate emotions and thoughts alike into releases of chemicals within the bloodstream (hormones) or between the synapses in brain cells (neurotransmitters). Sensations impinge upon our bodies as chemical and neural responses that temporarily change our internal milieu (that is, our visceral environment, the autonomic nervous system, and the flow of hormones in our blood). The reinforcing of these transitory body states then becomes a neural pattern, and mental images (the currency of our minds and what Damasio regards as cross-modal representations of body states) somehow arise from these neural patterns. While Damasio does not provide an account of the change from neural pattern to mental image, he positions mental images as *dispositions*, which form the basis of both emotions and memory. This is because, for Damasio, mental images are not

images of an event or object but images of our interactions with that object. Memory is therefore inherently relational and affective. Damasio claims, for example, that autobiographical memories should not be conceptualized simply as images or schematizations of events but rather as the disposition of the body during that event, as the chemical and neural changes and adjustments that formed part of a perception and that persist to some extent as part of the memory.⁵³ It is as if memory of X is also the memory of proprioception of the X-encounter (i.e., it is also the memory of skin conduction, pupil dilation, and sweating when perceiving X). In other words, memory of X is here a map of relational engagements between our body and X. Rather than following the split between representational and embodied memory, Damasio then effectively recasts representation as an embodied process.

Developmental Psychology

“It is turning out that the “missing link” in psychoanalysis is the nonverbal affect transacting relationship between the developing human infant and the primary caregiver, since this serves as the matrix of the individual’s emerging unconscious.”⁵⁴ The neuroscientist and psychoanalyst Allan Schore argues, as the foregoing quotation indicates, that the individual is founded through the intersubjective transmission of nonverbal affect. Developmental psychology has, since the 1980s, increasingly staged the affective as the basis of self-building in infancy. In so doing, the discipline has provided fertile resources for those wishing to challenge accounts that stage the subject upon the operations of memory and unconscious fantasy. Here, by contrast, caretaker–infant interactions are said to organize a precognitive, prelinguistic, and embodied basis for self-experience and identity, and affect becomes the lining of self and internal world alike. Perhaps the central axiom of this body of work is that of affective resonance. (Indeed, it is the work on affective resonance by developmental psychologist Daniel Stern that has been most readily engaged by scholars within the humanities.)⁵⁵ Affective experiences are regarded as inherently contagious and transmissible from body to body. For example, if a gunshot (stimulus) produces a series of endocrinological changes felt as a sudden distressing heightening of arousal, then the look, sound, and feel of this distress will automatically transmit a sudden heightening of arousal to others. This transmissibility of affect is at its most heightened in infancy because infants lack both a sense of personal history and its mnemonic supports, as well as the neurological development that would allow them to regulate their affective experiences. (The immediacy of this transmission between adults is in doubt because in adults such transmissions are always modulated by their own histories of affect regulation.)

The observation of infant–carer interaction has provided psychologists with the privileged view of what we might call zero-degree subjectivity: infants are said to possess aptitudes for engagement but no representational world. (This is because, in neurobiological

terms, their neocortex, where representation is understood to take place, has not yet matured.) Consequently, infantile bodies are convulsed with affect in such a way that affective resonance with the parent is heightened; such heightened resonances in turn shape the infant's brain and emergent capacities for self-organization. Daniel Stern described this process of mother-infant affective resonance using the term attunement: attunement is the ability of the carer to enter the feeling states of the infant and to translate them into another modality. For example, an infant may emit rhythmic cries rising in intensity while the mother matches the rhythm and cadence of the cries by tapping the infant's body, thus transmitting her sharing of the child's pleasurable feeling back to him. In its most basic form, at the point where the other simply shares and returns intensity and rhythm, attunement communicates nothing. Its function is not to transmit a message but to create a shared space in which a communion between mother and child can take place. It is "a recasting, a restatement of a subjective state"⁵⁶ by non-verbal means. Importantly, such echoing is not said to be imitative: the mother does not simply mimic the behavior of the child; rather she is said to recast his feeling *state* into a different modality. This recasting, Stern contends, is essential for the foundation of self: it "tells" the infant that her or his feeling is recognized and therefore that it is real and shareable. Here again, attunement refers to the body's authentic expressivity: it does not represent, or mimic, but rather enters the felt present, or lived experience, of the body.

Attunement is not the end of the story, of course: this sharing of experience between mother and child evolves into a parental modulation of the affect experienced by the child, whereby direction and tonality of affect is subtly manipulated (hyperarousal may be interrupted, hypoarousal may be intensified, etc.). Initially, in the neurobiological version of the story, this parental modulation consists in the mother acting as the infant's external neocortex, thus prompting the development of the infant's own forebrain.⁵⁷ What the child internalizes, then, are regulatory interactions—episodes of communication and modulation of affects that, eventually, constitute the individual's mode of engaging the world. Indeed, for Allan Schore "the core of the self lies in patterns of affect regulation that integrate a sense of self across state transitions, thereby allowing for a continuity of inner experience."⁵⁸ Dispositional memory is, therefore, positioned at the core of the self. In this way, human biology adapts to the particular social space in which the infantile body finds itself: in a sense, it is the infolding of such a space that produces the biosocial self.

Here in the wake of neurobiology and its developmental applications, bodily memory and affective experience are brought together as the precognitive foundation of the self: "[a]ffect regulation fundamentally underlies and maintains self-function, and this process is essentially nonverbal and unconscious."⁵⁹ Though affect transactions are located as the matrix of an unconscious, this is a very different unconscious from that envisaged by classical psychoanalysis, and it is important to consider this difference. This unconscious functions primarily as nonrepresentational bodily memory, in the sense that it is made

up of habits of acting and feeling, as well as the felt tonality of our present (our habitual state of arousal, which Stern calls “vitality affect”). The story of the affective foundations of the self then presents us with a corrective of sorts to classical psychoanalytic theories of subjectivity: in the place of a model of subjectivity based on conflict, sexuality, and fantasy, this model is based on the homeostatic regulation of affects through an embodied, affective space.⁶⁰ This consists of a certain rhythmicity of pattern that provides us with the capacity to modulate our experience of the world and adapt to socio-environmental exigencies. Crucially, this affect patterning (what Robert Clyman has called “the procedural organization of emotions”⁶¹) possesses a materiality that exceeds and preexists the sway of fantasy. Indeed, Stern claims that infants are primarily engaged with reality (albeit a reality of rhythm) in the sense of interactions with others, before they come under the sway of sexuality and the pleasure principle. What this biosocial supplementation to the psychoanalytic understanding of subjectivity suggests, then, is that what motivates the subject is adaptation and that drive and sexuality have a secondary, much reduced role.

. . .

The desire to understand and conceptualize “experience” has been one of the animating forces underlying work in the humanities, and, we have suggested, motivates much of the literature on memory. The preoccupation with experience is just as strong, if not stronger, for those turning to affect. In this current interest in the affective aspects of experience, memory has been expanded to include nonrepresentational, embodied faculties such as corporeal memory, motor memory, and implicit or procedural memory.⁶² The maxim from the psychologist and psychoanalyst Lawrence Hedges with which we began—that the state of play in the twenty-first century vis-à-vis our understanding of subjectivity is that “there is no memory save emotional memory”—seems to align all these embodied modes of memorialization. However, the phrase *emotional memory* itself masks considerable conceptual divergence in the putting together of its two terms.

The stakes of this divergence become more visible if we turn back to a particular commentary on memory and the emotions by the Swiss psychologist Edouard Claparède in the early twentieth century that subjects the concept of emotional memory to stringent critique.⁶³ Claparède, in attempting to describe the mental processes involved in different kinds of recollection, claims that the

tendency to experience in the present a previously experienced scene is especially likely to occur when I seek to represent to myself a past emotion: the emotion can only be experienced as a state of myself. It can only be known from within, and not from outside. . . . One cannot be a spectator of one’s own feelings; one feels them, or one does not feel them; one cannot imagine them [image them, represent them] without stripping them of their affective essence.⁶⁴

Claparède distinguishes between two kinds of experience: in one, an emotional event is recalled and this process of recollection serves to strip the memory of its affect; in the other, memory takes the form of a reliving of the emotion in the present. Since the distinctiveness of an emotional experience is its intensity—that is, its felt tonality in the present—emotional memory in the sense of a projection of an emotional state as past, is then, strictly speaking, for Claparède an impossibility.

The current use of the term *emotional memory* could then be seen as offering ways of negotiating, sublating, or refusing the distinction between affect and representation that Claparède compellingly set out. For example, both Joseph LeDoux and, to some extent, Bessel van der Kolk virtually restate Claparède's distinction: here, emotional memory, understood on the model of a conditioned stimulus response, is an intrusive eruption of affect that disturbs our habits of perception and is created in response to a non-cognized stimulus. LeDoux, indeed, even mentions Claparède's writings when distinguishing between what LeDoux terms "emotional memory" (i.e., implicit, fear-conditioned memory), which he distinguishes from "memory of an emotion" (i.e., explicit declarative memory).⁶⁵ For developmentalists like Daniel Stern and Allan Schore, by contrast, emotional memory refers to embodied patterns of relatedness that underlie our sense of self; here the tonality of these patterns carried from the social interactions of our infantile past is said to contribute to the felt aspects of our experience in the present. In this way, developmentalists appear to overcome Claparède's distinction and to suggest that memory carries, as it were, an affective lining. Damasio complicates the picture further: for him, all memory is embodied, by which he means that what we would tend to associate with representational memories in fact also include all the traces of our felt experiences with objects in our environment. While Damasio appears to refuse Claparède's distinction between representation and affect, his model does not explain how embodied memories (what he calls mental images) emerge out of the activation of synaptic pathways (Damasio's neural patterns).

Perhaps, then, we need to focus on this difficult distinction between representation and affect or recollection and embodiment, even as some of the humanities' investment in affect testifies to a wish to be done with linguistically conceived memory and, with it, representation altogether. As we have suggested, Freud too emplots the psychoanalytic method around the problematic of this same distinction, when he claims that sexuality and the drives manifest themselves either as recollections or as affect. In exploring this distinction, we should not forget that the move from representation to affect is only one aspect of the current interest in embodiment. Subtending this interest is the humanities' engagement with vitality, with the elusive rhythm of life as it quickens the body. And it is here that the distance from a psychoanalytic reading of subjectivity is at its most marked. For Freud, the movement of affect in the body is tied to what constitutes the psychic domain. While Freud remained undecided about how to represent this domain (oscillating between various formulations of the pleasure principle, libido, and the death drive),

he nevertheless insisted that this bodily intensity is fundamentally irreducible to vitality, and indeed that it interrupts the principle of self-preservation. Freud's drive is that which scrambles the body's bio-logic. From such a vantage point, the current investment in affect can be understood not simply as the fleshing out of memory but, more fundamentally, as a bracketing of the eruptive force of the drive and hence a curious chastening of the flesh. In this sense, it is crucial that we interrogate the implications of placing affect in the service of vitality rather than as its interruption.