Toward a Jamesian account of trauma and healing

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Abstract: In this essay, I use William James's theory of emotion from his *Principles of Psychology* to develop an account of trauma as fully and non-reductively psychophysiological. After explaining James's account of emotion as bodily change, I develop a Jamesian understanding of trauma and healing in three steps. Drawing from examples of post-traumatic stress disorder (PTSD) experienced by both soldiers and victims of sexual assault, I argue that (1) all traumatic events, even ones that seem to leave no physical wound, are physiological because they are emotional, and (2) a Jamesian understanding of trauma need not be confined to the individual; it can account for the *prememories* and *postmemories* of collective and transgenerational trauma. Finally (3), I argue that because trauma involves bodily movement and change, so too should successful recovery from trauma, a Jamesian insight that supports the use of movement therapies to promote healing.

Keywords: William James; emotion; body; trauma; healing.

1. *Introduction*

In this essay, I use William James' theory of emotion to develop an account of trauma as fully and non-reductively psychophysiological. The concept of trauma, from the Greek term for "wound", originally was understood as bodily. With the advent of psychiatry and especially Sigmund Freud's psychoanalytic theory in the late nineteenth century, the notion of trauma shifted to its contemporary meaning of a wound inflicted on the mind (Caruth 1996: 3). If something like a severe knife cut exemplifies the first understanding of trauma, the second understanding is quintessentially found in the "shell shock" experienced by soldiers in World War I, which was the first large-scale war to use the explosive chemical trinitrotoluene (TNT) in artillery shells. Drawing from James' 1890 *Principles of Psychology* (1950a; 1950b), I will argue that both of these understandings of trauma are inadequate because they are dualist and reductive. On a Jamesian approach, all forms of trauma are irreducibly psychophysiological and thus cannot be understood without rejecting mind-body dualisms that tend to plague most accounts of trauma. James' account

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of emotion as bodily change suggests that both the wound of trauma and the possibility of healing from it should be understood in terms of bodily movement, just as bodily states, changes, and movement should be understood as psychologically rich events. As trauma scholar Gabriele Schwab (2010: 41) has claimed, "trauma kills the pulsing of desire, the embodied self". With James, we could say that the trauma that kills the embodied self happens at the level of the body's physio-emotional pulsing and striving.

Using James' philosophy to understand trauma initially might seem an odd choice given that James scarcely discusses the topic in his published work. In *Principles*'s two long volumes, for example, the term shows up only twice, once as "traumatic inhibition" (James 1950a: 75), another as "traumatic injury" (James 1950b: 687), and both as quick throwaways that reveal little about what James might think about trauma. The closest that James comes to addressing a topic related to trauma is when he discusses his own experience with and recovery from depression. As James famously claimed, the way he cured himself of his depression was by willing himself to believe in free will. "I think that yesterday was a crisis in my life", James reports after reading Renouvier's description of free will, and thus "my first act of free will shall be to believe in free will" (James quoted in McDermott 1977: 7). For this reason, James' concept of will power might seem the most likely resource for developing a Jamesian account of trauma and healing.

While to my knowledge no one has developed such an account, we can find a suggestion in that direction in Susan Brison's (2002) *Aftermath: Violence and the Remaking of the Self*. As Brison discusses her traumatic experience of sexual assault and attempted murder, she briefly invokes James' will to believe when considering the possible advantages of willfully conforming one's symptoms of post-traumatic stress disorder (PTSD) to diagnosable criteria of mental illness in the *Diagnostic and Statistical Manuel* (DSM) produced by the American Psychiatric Association (2002: 80). Brison rightly notes that doing so could help a person's symptoms and suffering be taken seriously by the medical establishment so that she receives the treatment she needs. Thinking of oneself as having some agency with regard to one's health also can support healing, as long as the range and power of one's will is not overestimated (2002: 83).

Despite this possible usefulness, however, Jamesian will power is an inadequate tool for understanding trauma and healing, a point with which I think Brison largely would agree. (I will return later to Brison's account of her assault.) One reason is that will power has little to do with the experience of undergoing a catastrophic event that wounds the self. It is irrelevant to and thus unhelpful for understanding trauma, especially when trauma results from an unpredictable or senseless accident (Malabou 2012: 8-11). A second impor-

tant reason is that even though will power can be relevant to the question of recovery from trauma, the answers it provides tend to blame the victim and/or beg the question. James' personal experience with depression aside, how does telling someone (or oneself) to will their recover – "just do it!" – help them actually do so? And if a person doesn't recover, does that mean that she is at fault because of her weak will? Finally, appealing to will power tends to reinforce mind-body dualisms that neglect both the bodily basis of trauma and healing and the psychological richness of human physiology. For all these reasons, I believe that James' most *biologically* based work is the best resource in his corpus for understanding the *psychological* complexities of trauma and healing.

After explaining James' account of emotion as bodily change, I will develop a Jamesian understanding of trauma and healing in three steps. Drawing from examples of PTSD experienced by both soldiers and victims of sexual assault, I will argue that (1) all traumatic events, even ones that seem to leave no physical wound, are physiological because they are emotional, and (2) a Jamesian understanding of trauma need not be confined to the individual; it can account for the prememories (Brison 2002) and postmemories (Brison 2002; Schwab 2010) of collective and transgenerational trauma. Finally (3), I will argue that because trauma involves bodily movement and change, so too should successful recovery from trauma, a Jamesian insight that supports the use of movement therapies to promote healing.

2. *James' theory of emotion*

For James, emotion is the feeling of bodily changes in response to perceiving something in the world. To appreciate the radical nature of this definition, we should focus on the word "is" in it. Emotions just *are* felt bodily changes, which means that emotions do not *cause* bodily reactions, as is often thought. Oversimplifying for the sake of example, it is not the case that a person is anxious about an upcoming meeting and then, as a result of that anxiety, feels cramping or "butterflies" in her stomach. On James' account, the felt contractions in a person's stomach *are* her anxiety, period. This definition also means that emotions do not *represent* bodily states and changes, which is another common misunderstanding of emotion.[1] Taking the example of anxiety once again, it is not the case that a person's stomach begins to cramp at the thought of an upcoming meeting and then she psychologically represents or registers

[1] Jesse Prinz's (2004) perceptual account of emotion interprets James in this way. For a full defense of my reading of James in disagreement with Prinz, see Chapter 1 of Sullivan (2015). See also Reisenzein, et. al. (1995), Taylor (1996: 35), and Wilshire (1968: 212).

her physical state as the emotion of anxiety. James would claim that the problem with both causal and representational accounts of emotion is that they separate emotion from physiology, and they do so by introducing some sort of "mind stuff" to explain the nature of emotion, as James (1950b: 451) colorfully calls it. On these misunderstandings, emotions either cause or represent a physiological event, but in either case emotion is miscast as something mental that intervenes in a physiological event. And in either case, the misassumption is that human physiology cannot be psychologically rich. Such richness is (wrongly) reserved for the mental, understood (again, wrongly) as divorced from the physical.

In contrast, for James, human physiology is thoroughly emotional and psychologically complex in its own right. This is the vital point of James' theory of emotion, as he himself claims (James 1950b: 451; see also James 1994). There is no separate or additional "mind stuff" when it comes to emotion. Human emotional life can be understood completely by means of human physiology, once its richness and complexity are acknowledged, and this claim does not use physiology as a metaphor for something mental or non-physical. When James speaks of "the yearning of our bowels for our dear ones", for example, we should understand him as saying that the emotional tug of yearning is the felt tonality and tension of the intestines (1950b: 308). Claims such as these do not demean human psychological life or reduce it to something "merely" physical. They instead locate and challenge the main problem with many theories of emotion, which is reliance on reductive, biologically flat understandings of human physiology.

Bodily states and changes are indefinitely numerous and complex, which means that our emotional repertoire is indefinitely complex as well. In noting this complexity, James' goal is not to describe or catalogue the full array of human emotions. Indeed James' theory takes the opposite approach, and his exasperation with the tendency to merely catalogue emotions is both forthright and humorous. As James (448) claims after reading the leading scientific psychological works on emotion of his day, he would rather "read verbal descriptions of the shapes of the rocks on a New Hampshire farm [than] toil through them again". For James, the complexity of bodily states and changes means that we probably will never completely comprehend the intricate and vast dimensions of human emotional life. One reason for this is that there is not a one-to-one correspondence between a particular emotion and a particular bodily state or location. James would remind us that the case of anxiety discussed above has been over-simplified for the sake of example. Anxiety is never a matter merely of the stomach muscles alone, and muscular cramping in the stomach is a physiological component of many different emotional patterns. As James

(478) cautions, "each muscle is not affected to some one emotion exclusively, as certain writers have thought". Various patterns of relationships between different bodily parts, circuits, and states give rise to different emotions (Prinz 2006: 72-73; Sullivan 2015: 41-42).

This explains why emotions are difficult to fake convincingly: "the immense number of [body] parts modified in each emotion is what makes it so difficult for us to reproduce in cold blood the total and integral expression of any one of them" (James 1950b: 450). The complex variety of physiological patterns also is related to the fact that some cultures identify particular shades of emotion that go unnoticed in other cultures (485). For example, American English-speaking culture does not finely discriminate the emotions of *schadenfreude* (happiness felt at another person's misfortune) or *pena ajena* (embarrassment felt at witnessing someone else's humiliation) as German and Spanish cultures respectively do. This could be merely a linguistic difference – American English lacks precise words for these particular patterns of emotion – or more significantly, it could be also that different cultural environments give rise to different physiological patterns and thus different emotional experiences.

Just as felt bodily changes should be recognized as emotions, all emotions should be understood as physiological states and movements. As James (450) argues, "no shade of emotion, however slight, should be without a bodily reverberation as unique, when taken in its totality, as is the mental mood itself". When an emotion is felt, it is because one's body has moved, attuned itself to, or otherwise responded to something in the world (including imagined or erroneously perceived events). If I feel afraid while standing on a bridge without a guardrail, my heart rate, respiration, muscle tone, and probably many other aspects of my physiology have changed. The fact that people sometimes seem to feel an emotion before its physical aspects are manifest does not change James' claim. He argues that in that situation, a person has not felt a non-bodily emotion, but has anticipated bodily symptoms that are to come (458). Put another way, emotion-anticipation is not the same thing as a felt emotion even though intensely anticipating a particular emotion can work a person into a physiological fervor of feeling the emotion itself. If I am walking toward the bridge and seem to feel afraid before I am on it and my heart rate quickens, it is because I recall my past emotional-physiological state while on the bridge and that recollection is an anticipation of the fear I soon will feel again. It is not the fear yet itself. It might be, however, a different, antsy sort of emotion, with its own, subtle physiological state that is difficult to identify or name – perhaps something like the "morbid terror" discussed by James in which what is feared is fear itself (458).

A final point to note about James' theory of emotion is its insistence – mis-

taken in this case, as I will argue – that all emotions are felt. As James puts it with his characteristic emphasis, "*every one of the bodily changes, whatsoever it be, is FELT, acutely or obscurely, the moment it occurs* (1950b: 450-51, emphasis in original). Most of the time, James thinks, we do not pause in the midst of a passionate emotion to note how our body feels. We tend to be fairly obtuse in this respect, and on a gross bodily level, James is correct. When tense from stress at work, for example, a person does not often notice how her shoulders have hunched up and her back muscles have tightened. Drawing attention to one's bodily tension can help one relax it and thus alleviate the emotional tension. James is wrong, however, that all bodily changes are or can be consciously felt. It is not just that we tend to ignore our bodily states, as James' examples of the worried brow and the embarrassed cough highlight. It is also that some physiological states and changes are not available to conscious awareness no matter how hard we try to feel them. For example, the psoas muscle, connecting legs to hips and torso in the lower abdomen, is a key muscle involved in fear but not all of its states or contractions can be felt (Koch 1997). If "feeling" means conscious awareness of how one feels – and this clearly is what James intends by the term – then not all emotions are feelings. Many physiological states and changes – especially the finer grained ones – are non-conscious and/or unconscious, which means that so too are many of our emotions.

3. *Trauma and Post-Traumatic Stress Disorder (PTSD)*

Trauma is a grave injury that results from a shocking or devastating experience. Trauma can and does take many forms. It can be either episodic or ongoing, for example, in cases of sexual assault. It can be caused by global events, such as war, or local and personal events, such as rape. What is true in all cases is that trauma wounds people's lives in intimate ways. While trauma also can be collective, shared, and even transmitted across generations (a topic to which I will return), it is never impersonal. At its crux, traumatic events produce intense and often unbearable suffering that does not easily go away.

What exactly is the nature of a traumatic injury? Consider the example of a soldier who is suffering from PTSD. Typical symptoms include nightmares and flashbacks that relive the traumatic event; being tense and easily startled; having difficulty sleeping; severe, even suicidal depression; feelings of guilt, shame, and/or explosive anger; memory loss; and avoiding thoughts or places that remind one of the traumatic event (The National Institute of Mental Health 2016). Until very recently, PTSD has been considered an emotional or psychological condition, not a physical injury (Worth 2016). In part, this

is because soldiers who have no visible physical injuries can be and often are afflicted with PTSD. An explosive might go off near a soldier, but her body armor and/or tank protect her from the flying shrapnel and so she survives the blast with no physical harm. Or so we thought, until neuropathologists began in the 2010s to examine systematically the brain tissue of deceased soldiers who suffered from PTSD and discovered dust-like scarring in the brain very different from other brain diseases such as Alzheimer's and chronic traumatic encephalopathy caused by concussions in sports or automobile accidents (Worth 2016). It turns out that the visible injuries of an explosive blast are only part of the story. The other part is the "invisible" damage done to the brain, when the blast wave ripples through the body, changing speed and causing more or less destruction when it hits more or less dense matter. While the physics of blast wave damage on the human body are not yet fully understood, the emerging scientific conclusion is that blast waves injure the brain, causing the symptoms of PTSD. (And in fact the brain damage from explosive blasts is *worse* for those inside armored tanks than for those outside them because the blast wave multiplies as it bounces off hard surfaces.) As a result, "much of what has passed for emotional trauma may be reinterpreted" now that we understand that "PTSD is more physical than psychological" (Worth 2016).

From a Jamesian perspective, the recent increase in knowledge about the physical effects of blast injury is most welcome. It furthers the understanding of blast trauma and is likely to help medical practitioners better treat soldiers who suffer from PTSD. It would be a grave mistake, however, to think that our better understanding of blast waves should displace psychology with physiology. James would insist that it is wrong to claim that PTSD is more physical than psychological, just as it has been wrong to think over the past century that "shell shock" and PTSD are psychological and emotional rather than physical. PTSD is emotional, psychological trauma *because* it is physical trauma. The bodily changes that occur when an explosive detonates nearby a person *are* the emotional wounds that will become manifest sometime after the traumatic event.

Understanding bodily changes as emotions allows one to understand the following description of a blast wave as a description of "the bodily soundingboard" (James 1950b: 471) as the wave reverberates through it. The violent speed of bodily change stands out: the blast wave that hits the body is "a wall of static pressure traveling outward in all directions faster than the speed of sound" (Worth 2016). People who experience it at fairly close range "describe it as an overpowering, full-body experience…, a simultaneous punching and squeezing effect, a feeling at once generalized and intensely violent, as if someone had put a board against your body and then struck it with dozens of hammers" (Worth 2016). As the wave violently slams into, across, and through the

entire body, the magnitude and complexity of bodily changes that take place are difficult to fathom and perhaps will never be well understood. Current hypotheses about how the brain is damaged include "surges of blood upward from the chest [into the brain]; shearing loads on brain tissues; and the brain bouncing back and forth inside the skull" (Worth 2016).

Whatever the case turns out to be – and it is likely that multiple factors are at play simultaneously – James would underscore two important points about blast injuries. First, every physical description of blast injury is a description of emotional injury. The magnitude and complexity of bodily changes at play *are* the magnitude and complexity of emotions involved, both of which perhaps are so complex due to the extremity of the event that we will never be able to untangle them all. Second, the bodily changes involved in blast injuries are not psychologically and emotionally important only because they impact the brain. Emotions are not "located" in the brain, even if an area of the brain (the amygdala) tends to be associated with emotional experience. (James thus would disagree with Catherine Malabou's [2012: 3] claim that the brain is "the privileged site of the constitution of affects".) Emotion is "located" in every nook and cranny of our bodies. Not just the brain, but also every organ, muscle, and tissue in the body is psychologically vibrant, even if in different ways and to different degrees. This is why every organ, muscle, and tissue in the body is susceptible to psychological injury when it undergoes physical violence.

What James can teach us about trauma and PTSD in the case of wartime blast injuries is helpful for other cases of trauma and PTSD as well. Returning to Susan Brison's account of her near fatal sexual assault, Brison (2002, 15) provides a list of psychophysiological symptoms very similar to those of "shell shocked" soldiers: "dissociation, flashbacks, hypervigilance, exaggerated startle response, sleep disorders, inability to concentrate, diminished interest in significant activities, and a sense of a fore-shortened future". In fact, the majority of PTSD cases are caused by events outside of the military, and women are twice as likely as men to develop PTSD because they more often are victims of interpersonal violence (Gradus 2017; Brown, Burnette, and Cerulli 2015). The similarities across cases of PTSD extend beyond symptoms to explanations for the disorder and strategies for its treatment. For example, like many soldiers who "said it makes a big difference to be told they have a physical wound rather than a mental one" (Worth 2016), Brison "felt enormous relief…when she learned that there was evidence that [PTSD] was a neurological condition, treatable by drugs… It was liberating to think of [her]self as having a physical injury" (Brison 2002: 77).

As Brison goes on to chronicle, however, treating her "despair as a 'purely mechanical problem'" misunderstood her illness, even as treating her depres-

sion with medication was one component of her eventual recovery (78). Her neurophysical wound was not reductively or "mechanically" physiological. James helps us understand that it was a fully emotional and psychological wound because it was bodily. As Brison (2002: x) explains, the worst part of her violent assault was its psychophysiological aftermath, when she experienced "how trauma not only haunts the conscious and unconscious mind, but also remains in the body, in each of the senses, ready to resurface whenever something triggers a reliving of the traumatic event". We could say that Brison's entire bodily sounding-board – not just her brain – continued to reverberate with the event of her rape and attempted murder long after the assault was over. James helps us see that the idea of replacing psychology with physiology is nonsensical in her case, just as it is for soldiers and others suffering from PTSD, because human physiology is fully psychological.

4. *The fringe of collective and transgenerational trauma*

Trauma is not always an individual affair. It also can be collective. This is fairly obvious in the case of national or global events that impact a larger number of people at one time. The 9/11 terrorist attacks in the United States in September 2001 and the November 2015 terrorist attacks in Paris are two examples of collective traumatic events during which many individual people underwent a similar devastating experience. Trauma also can be collective in a different sense, however, when the effects of trauma are transmitted to and experienced by individuals who did not directly undergo the original traumatic event. Often this involves the transmission of trauma across generations, from grandparents, parents, and other ancestors to children, who then in turn can transmit the trauma to their offspring if the traumatic experience has not been resolved. It is this sense of collective trauma on which I will focus here, examining how James' theory of emotion can help us understand it.

Although James typically is considered an individualistic philosopher (Pawelski 2008), his work also could be described as focused on the person (Taylor 1996), where "the person" need not be understood as an atomistic individual. However we assess the role of the individual in James' work, his philosophy offers resources for understanding trauma as collective and shared across persons. The concept of the fringe is one of the most important of those resources. All objects of consciousness have fringes, James claims, where the distinctness of the object's meaning fades into other related meanings/objects of consciousness. The fringe "makes [us] aware of relations and objects but dimly perceived", as James (1950a: 258) explains. It is where precision is mis-

placed and where vagueness must be allowed, even appreciated. James also describes the fringe as a gap: whatever things we perceive, he says, "we feel their relation to this aching gap" (1950a: 259), this something more of which they are a part but which necessarily eludes conscious attention (because once one focuses on the relations in the fringe, they no longer are the fringe but are objects of conscious thought with their own elusive fringes). The concept of the fringe highlights the importance of continuities in James' thinking, anticipating his later doctrine of radical empiricism, which holds that not just particular things, but also the relations between them are part of felt experience (James 1996). The term "fringe" shows up only briefly in James' essays on radical empiricism, however (see James 1996: 28). It is in *Principles*, where felt experience is identified with bodily states and changes, that the concept of the fringe is introduced and developed.

James scholar Bruce Wilshire (1968: 94) has claimed, "the real point James wishes to make [concerning the concept of the fringe] is that the fringe of thought involves a reference to the future". According to Wilshire, the future satisfaction of a thought is what its fringe primarily concerns. For example, if I am thinking about rain, the fringe of that thought might include whether there will be large puddles of water on the road as I drive, whether I have an umbrella with me, whether I closed the upstairs window at home, and so on. While I agree with Wilshire that the fringe can involve the future, I disagree that reference to the future is the only or the main part of the Jamesian fringe. The relation to the past provided by the fringe can be just as, or even more significant as its relation to the future.

James himself provides an example of the fringe in which relationship to the past is central. As he describes a flint arrowhead that he holds in his hand, he claims, "all remote objects in space or time are believed [to be real]" by means of the fringe. He then continues:

> When I believe that some prehistoric savage [sic] chipped this flint, for example, the reality of the savage and of his act makes no direct appeal either to my sensation, emotion, or volition. What I mean by my belief in it is simply my dim sense of a *continuity* between the long dead savage and his doings and the present world of which the flint forms a part. It is pre-eminently a case for applying our doctrine of the 'fringe' (1950a: 320, emphasis in original).

For James, the fringe is an important way – perhaps even the primary way – by which we know the past. The halo of the fringe, as James often calls it, extends back in time to past events that a person did not directly or personally experience, but that are part of the relationships that constitute the present.

Even though the concept of the fringe is associated with objects of con-

sciousness, it is not simply cognitive. It is affective. Put another way, as James' later radical empiricism will insist, human cognition is always already affective. We know the fringe through our vague feelings of it. Given that the fringe is one way by which we know the past, this means that emotion and affect are vital to knowledge of the past (Gordon 1997). And given that emotions are bodily states and changes, on a Jamesian account we can say that we know history through our emotional, bodily state. When muscles are tense or one's blood pressure is high, for example, it might not just be an object or situation in the present to which one is responding. It might be the fringe of an object or situation that stretches into the past. Taken in its totality, James' theory of emotion suggests that, via the fringe, we know and undergo in a vague, aching way events that did not directly happen to us.

Susan Brison calls this kind of emotional knowledge a *prememory*, and she suggests that many women in the United States (and likely in other nations and societies as well) have prememories of sexual assault and rape formed out of *postmemories* of other women's violent experiences. As Brison (2002: 86) says of her own sexual assault, "I remembered the rape before it happened". This is because girls in the United States are raised hearing so many stories of rape that they "enter womanhood freighted with postmemories of sexual violence" (87).[2] In addition to possibly being inherited from one's own parents, postmemories of sexual assault can come from the culture at large: new stories, television programs, movies, episodes recounted by friends, neighbors and acquaintances, and so on. Postmemories of rape experienced by other people (typically girls and women) feed into a woman's prememory of her own rape to come. The paradoxical twisting of time that takes place through prememories of rape operates primarily through the emotion of fear. As Brison (88) explains, "the backward-looking postmemory of rape, thus, at every moment, turns into the forward-looking prememory of a feared future that someday *will have been* – a temporal correlate to the spatial paradox of the Mobius strip, in which what are apparently two surfaces fuse, at every point, into one". This is why the details of Brison's rape as it began to happen, including her strategies to survive, seemed familiar to her, as if she had done them before and knew what she was supposed to do to endure (even though most of those strategies did not work to protect her).

Postmemories and prememories of rape are part of the fringe of rape. The violence of sexual assault is not contained merely in the occurrence of the event itself. It stretches into a somewhat dimly perceived past of the rapes of

[2] Both Brison (2004) and Schwab (2010), to be discussed shortly, take the concept of postmemory from Hirsch (1997).

other people that precede and infuse one's own. Simultaneously, a woman's own future rape that has not yet happened, strictly speaking, conditions her present emotionally and bodily. In that vague way, her future rape already exists before it happens. As emotions, bodily states – especially those composing fear – have the ability to warp time. The vagueness of these claims does not discredit them, as James would insist. Their vagueness is vital to them. We inadequately understand the traumatic event of rape if we cut it off from its relationships to other moments and events in the past, as well as in the future.

We also inadequately understand traumatic global events such as the WWII German Holocaust if we think of them as experienced only by the generation of people who lived through them. The trauma of the German Holocaust is inevitably transgenerational, with postmemories of it that children of the Holocaust generation – both the victims and the perpetrators, albeit in different ways – carry with them and suffer from. "How do children of parents who lived through violent histories 'remember' events they did not experience themselves?" as Gabriele Schwab (2010: 13) asks. She answers that children inherit their parents' experiences secondhand, fragmented and distorted in different ways than the parents' memories of the original events are. Children pick up traces of the traumatic events, sometimes through stories they overhear, but even more often through "the embodied language of affects" unconsciously conveyed to children: "silences and memory traces hidden in a face that is frozen in grief, a forced smile that does not feel quite right, an apparently unmotivated flare-up of rage, or chronic depression" (14). Children's traumatic postmemories are somatic (14). They are part of the fringe of children's lived experience, stretching into a historical past that they affectively and bodily live in the present. We might say that the fringe of postmemories is similar to a phantom limb (24). The limb both does and does not exist, just as the child both does and did not experience the original trauma through her postmemories of it. In both cases, the physical and emotional pain is real. With postmemories, the imprint of the original event is affective, resulting in children who display physical symptoms that emerge from other people's experiences (53, 49).

5. *Healing from trauma*

James' physiological account of emotion rightly has been described as anticipating 20th century forms of homeostatic regulation known as biofeedback (Kaag 2009: 438-39). In biofeedback, a person uses biological information about her heart rate and respiration patterns, for example, to change her biological state. Observing a monitor that displays one's heartbeat can allow a

person to use her breathing to slow the rate of her heartbeat. This is something that almost anyone can do with some practice, and skilled practitioners of yoga can even significantly slow their heart rates to the point of briefly stopping the heart. Skilled yogis notably describe this physiological process as "a two-fold calming of the *emotions*" (2009: 438, emphasis added). The slowing heart emotionally calms the yogi, who in turn slows the heart in an ongoing spiral of psychophysiological tranquility.

Similar biofeedback techniques have been used successfully for chronic pain management (Sherman and Hermann, n.d.), and increasingly they are being used to treat war veterans with PTSD (Othmer 2012) and victims of sexual assault (Longo 2010). Biofeedback thus could be considered one component of a Jamesian approach to healing from trauma, in which emotional states are treated via physiological practices and one's physiological state is treated via one's emotions. James' work helps highlight the emotional aspect of biofeedback treatment as inseparable from the physiological aspect of it, which skilled yogis understand but Western medical practitioners tend to neglect.

James' theory of emotion can offer more to the treatment of trauma than support for biofeedback, however (which is not to belittle the importance of biofeedback). His identification of emotion with bodily change brings out the importance of movement and action to human emotional life. As James argues in a chapter in *Principles* devoted to movement, "*every possible feeling produces a movement, and…the movement is a movement of the entire organism, and of each and all its part*" (1950b: 372, emphasis in original). James admits that the science of his day has not yet been able to trace all the complex movements that one simple reaction or perception of the world can trigger. He does, however, argue for broad categories of movement that are produced, proving the general truth of the "law of diffusion" of impressions reverberating throughout the bodily organism (1950b: 372). Already in the 1880s, psychologists had documented empirically how the body continually attunes itself to its environments, sometimes in large noticeable ways and often in ways that are experientially imperceptible. Circulation, pulse-rate, and blood pressure vary in ways that are not dependent on the heart. Quoting the Italian scientist Mosso (who invented the plethysmograph for recording volume in the body), James documents "the extreme unrest of the blood-vessels in the hand, which at every smallest emotion, whether during waking or during sleep, changed their volume in surprising fashion" (1950b: 374). So too are respiration, the production of the sweat-glands, the contractions of the abdominal viscera, and the tone and strength of voluntary muscles constantly adjusting and regulating themselves in response to the surrounding world. Comparing the body to a taut electric wire, James concludes: "tension cannot be changed anywhere [in

the body] without changing it everywhere … A process set up anywhere in the [bodily] centres reverberates everywhere, and in some way or another affects the organism throughout, making its activities either greater or lesser" (381).

On a Jamesian understanding, the emotional wound of trauma injures bodily action and movement, which means that recovery from trauma also should address bodily action and movement. In fact, the two main forms of contemporary trauma treatment, pharmaceuticals and talk therapy, do this although this fact is not always realized. When anti-depressant drugs such as selective serotonin retake inhibitors (SSRIs) alter a person's bodily chemistry, her body has been made to move in different ways. Through chemical intervention, a person's neurotransmitters act differently by not reabsorbing serotonin, thus increasing the amount of serotonin in her body. James would underscore that the altered movement of neurotransmitters caused by SSRIs is not isolated in the brain, nor is it confined to the gut (where, contrary to common wisdom, over 95% of the body's serotonin is found; see Gershon 1999: xii). The new patterns of neurotransmitter activity reverberate throughout the body. Likewise, James would underscore that talk therapy works because language has the ability to move the body. Hearing, listening, and speaking can alter neurons, and this is true not only for infants as they learn their native tongue. For adults also, in social contexts of communicating with other people, sound has a corporeal materiality with potential psychophysiological effects (Pommier 2007: 25-27).

While pharmaceuticals and talk therapy can be important aides in healing from trauma – and for many people, recovery often involves multiple forms of treatment – they are not the only or necessarily the most important forms of trauma therapy. A Jamesian approach to trauma recovery would emphasize treatment that works more explicitly with bodily movement to generate physiological, and thus emotional experiences that counter the bodily experience of trauma. This can be particularly important for trauma survivors who experience debilitating flashbacks when talking about their traumatic experience, as well as for survivors who literally cannot put their experience into words because of damage done to the speech center of their brain, which is a common effect of trauma (Van der Kolk 2014: 43-47).

How might moving one's body be used to heal from trauma?

Sometimes the answer to this question is for a person to physically move in ways that she was not able or allowed to move when she underwent the traumatic experience. Based on clinical experience, physician Bessel Van der Kolk recently has argued that survivors of trauma often "need to have *physical* experiences to restore a visceral sense of control, … to physically move to escape a potentially threatening situation that was similar to the trauma in which they had been trapped or immobilized" (2014: 31, emphasis in original).

Think here of someone being physically pinned down, trying to escape, from her rapist and attempted murderer, as Susan Brison was. Van der Kolk's research demonstrates that "when people are held down, trapped, or otherwise prevented from taking effective action, be it in a war zone, a car accident, domestic violence, or a rape, the brain keeps secreting stress chemicals … and emotional states … are imprinted in the body's chemical profile, in the viscera, in the contraction of the striated muscles of the face, throat, trunk, and limbs" (2014: 54, 273). Feelings of helplessness, for example, can be literally embodied in muscle tension or feelings of disintegration in the bodily areas that were directly impacted by the trauma, including vagina and rectum for victims of rape (2014: 265). In those situations, therapy that utilizes running, kicking, lunging, and otherwise moving one's body can change emotional states for the better (see, for instance, Weintraub 2004: 204-17). While nothing guarantees that one can avoid being traumatized by sexual assault, for example, "being able to move and *do* something to protect oneself is a critical factor in determining whether or not a horrible experience will leave long-lasting scars" (Van der Kolk 2014: 55, emphasis in original).

Therapeutic movement need not duplicate the movement that was prohibited during the traumatic event. If James is right that physical processes in one area of the body can reverberate across the entire body, then movement strategies could involve bodily movement that is not directly associated with the body areas that were impacted by the trauma. Van der Kolk offers an example of this kind of movement with his use of eye movement desensitization and reprocessing (EMDR). While the medical profession does not yet understand exactly how EMDR alleviates trauma – and it is worth noting that the same is true for popular anti-depressants such as Prozac (Van der Kolk 2014: 262) – EMDR works by triggering in an awake patient something like rapid eye movement (REM) by having a patient focus her eyes on the doctor's moving finger while thinking about the traumatic event (2014: 249). REM activity, which typically occurs when a person is asleep and dreaming, is associated with learning, balancing mood, and processing memories (2014: 260; National Institute of Health, n.d.) The doctor's role in the process is somewhat reminiscent of that in hypnosis, and like hypnosis, EMDR enables states "that normally lay outside the field of normal waking awareness" (Taylor 1996: 39). But the patient is not hypnotized. Instead, while awake, the patient's eyes move rapidly in a jerky manner, and a flood of emotions tends to overcome the patient (Van der Kolk 2014: 249). The patient and doctor do not talk about the memories while EMDR is in process, as with the case of traditional talk therapy. EMDR seems to work instead by rapidly triggering loosely associated memories, including ones that might have been forgotten, allowing the patient to confront

and process their experiences in a different way than when the original events occurred (2014: 253). The similarity of this description of EMDR and that of dreaming is striking. While the purpose and effects of dreaming still are not well understood (Lewis 2014), learning more about dreaming, including the neuronal and other bodily movements involved in it, could help us learn more about the effectiveness of EMDR as trauma treatment, and vice versa.

Finally, using movement to recover from a traumatic event need not be restricted to the individual person. Therapeutic movement can be collective and communal as it is, for example, in "Dancing Well: The Soldier Project", which uses barn (square) dancing to treat soldiers and their families who are struggling with PTSD (Dancing Well, n.d.). Trauma injures interpersonal relationships, and this injury is experienced as much physically as it is psychologically. As Van der Kolk (2014: 213) argues, "trauma results in a breakdown of attuned physical synchrony" with other people. This is why something as simple as rhythmically tossing a ball back and forth with someone can create a therapeutic opening for trauma victims who have closed down into themselves. Like the military drill that once was crucial to veteran soldiers' lives, dancing, singing, engaging in religious rituals, and also playing some sports can create "muscular bonding" between people via collective physical movement (333). Collective, coordinated movement can rebuild trust, feelings of connection, and joy in being with others that traumatic experiences tend to kill.

6. *Conclusion*

James' theory of emotion provides a helpful lens for understanding the full nature of trauma. His theory supports Van der Kolk's (2014: 100) claim that "physical self-awareness is the first step in releasing the tyranny of the past". This is because, following James, the physical – that is, bodily states and changes – is identical to the emotional, and so it is through the physical that trauma in the past continues to haunt its survivors. Awareness of the physiological basis of emotion is an important first step in grappling with how bodies are shaped by trauma. It also can help trauma scholars, survivors, and treatment providers understand how recovery from trauma happens through bodily movement that reshapes a person's emotional repertoire. For James, the bodily sounding board that is wounded by trauma also is the key to healing from trauma.

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