

Journal of Buddhist Ethics

ISSN 1076-9005

<http://jbe.gold.ac.uk/>

A Review Essay of *Destructive Emotions*

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Destructive Emotions: How Can We Overcome Them? A Scientific Dialogue with the Dalai Lama. Narrated by Daniel Goleman. New York: Random House, 2003, xxiv + 404 pages, ISBN 0-553-80171-6 (hardback), \$28.00.

Destructive Emotions is part of a new wave of works seeking to enlarge the scope of cognitive science by joining together scientific and contemplative approaches to the study of consciousness and cognition. While some still regard this rapprochement with suspicion, a growing number of scholars and researchers in the sciences of the mind are persuaded that contemplative practices such as we find, for instance, in Buddhism resemble a vast and potentially useful introspective laboratory.

The present volume chronicles the eighth episode in a series of scientific encounters between the Dalai Lama and groups of prominent scientists dating back nearly two decades. Ten conferences¹ have taken place so far with the most recent event hosted at Harvard University in September 2003. In 1983 the Dalai Lama met with the late Francisco Varela, then a neurobiologist at Centre National de la Recherche Scientifique in Paris, to discuss the possibility of establishing a forum for active collaboration between scientists and Buddhist contemplatives. It was this early encounter and the support of a benefactor such as Adam Engle that eventually led to the foundation of the Mind and Life Institute, which would henceforth adopt the role of coordinating scientific collaborations between Buddhists and scientists and bringing their results to a wider audience.

Written in a lucid and captivating style, in what is perhaps one of Goleman's best narrative accomplishments to date², the present volume covers the five-day event, which took place in Dharamsala in March 2000. It opens with a foreword by the Dalai Lama, who suggested the theme of the conference as a reflection on the human costs of destructive emotions and a search for effective methods to counter them. In conception the volume follows

the structure of the conference, with detailed accounts of each presentation and ample summaries of the question and answer sessions. An introductory chapter entitled “The Lama in the Lab” brings the story forward to May 2001 with a report on a breakthrough achievement in studying the effects of specific types of meditation on brain activity using state of the art imaging technologies.

A remarkable cast of characters makes this novel round of ongoing meetings between Buddhists and scientists a major and in many ways unique event. Apart from the Dalai Lama and Daniel Goleman, who acted as moderator, the list includes several other prominent researchers coming from fields as diverse as neuroscience, cognitive psychology, developmental psychology, philosophy and neurobiology. As it has been customary with similar encounters in the past, in order to minimize the chance of talking at cross-purpose the organizers have enlisted again the support and collaboration of qualified translators and Buddhist scholars with an interest in promoting the dialogue between Buddhism and Science. Notable in this case was the presence of Matthieu Ricard, Buddhist monk and French interpreter to the Dalai Lama, who also holds a doctoral degree in cellular genetics and is one of the most informed participants in the dialogue between scientists and Buddhist contemplatives. The other translators included were the Tibetan scholar Thupten Jinpa, principal English interpreter to the Dalai Lama, and Alan Wallace, one of the few Buddhist scholars writing today on the interface between science and religion with a specific focus on Buddhist meditative practices.

Building on the results of previous collaborations the present volume takes the scientific dialogue between Science and Buddhism into a new direction. This is marked in particular by the transition from philosophical disputations, which have been the hallmark of previous encounters, to experimental research that directly focuses on the unusual cognitive abilities of long-term meditators and the lessons science may derive from studying these unusual abilities. Perhaps the most significant aspect of this new orientation is a paradigm shift in methodology. As the narrator is keen to point out, attempts to study the brain activity in monks and yogis are not new. But the right measure of technological sophistication coupled with the willing participation of advanced meditators only recently has become possible. The new methodology has allowed volunteer meditators to be both subjects of analysis and actively participate in modelling the scientific protocols that monitor the activity of their brains during meditation. This is a new sort of science geared toward “charting the specific links between highly disciplined mental strategies and their impact on brain function” (p.3). In contrast to

previous such attempts “the lama in the lab” has now the “mission control” for inner space exploration and is directly guiding the neuroscientific community in its effort to understand the direct correlations between brain activity and voluntary mental actions. To be sure, the search for the neural correlates of consciousness and cognition, which in the last decade has become the main focus of research in the neuroscientific community, is not without its problems. Despite significant breakthroughs, the idea of correlating phenomenal states of consciousness to brain events has also sparked major controversies. There are now many philosophers and some scientists, who cite recent research in brain plasticity as proof that correlations between subjective experience and brain events are not as rigid as previously thought.

In the following I shall attempt to review what I consider to be the main features of this volume and evaluate its significance in the wider context of the Buddhism and Science dialogue, seeking to do justice to all but the most common aspects of this project. Because this is not a book of independently authored essays it is not possible to evaluate individual opinions other than as participating voices in a common narrative. I shall therefore concentrate on the conceptual and methodological aspects of this project and emphasize what appear to be its main characteristics.

The first chapter, which covers day one of the meeting, opens with a presentation by Allan Wallace and Owen Flanagan aimed at clarifying what exactly do Buddhist and Western cognitive scientists mean by destructive emotions. As Wallace points out, the important issue is not what emotions are, but what triggers their manifestation and whether they are constitutional of human nature. It is here that a difference begins to emerge between the Western and Buddhist perspectives. While Buddhists have primarily been concerned with overcoming the harmful effects of destructive emotions through some form of disciplined practice, the scientist’s main preoccupation is to identify the factors that act as catalysts for their manifestation. For the scientists, who in general adhere to a form of biological determinism (i.e., brain states cause subjective experience) emotional responses appear mainly as adaptive forms of behaviour that are the result of human evolution. Expanding on this difference, Owen Flanagan sets out to elucidate the common distinction between facts and values, which is at the foundation of the scientific enterprise. Speaking primarily as a philosopher, Flanagan concedes that although we think of humans primarily in cultural terms, since Darwin it has become increasingly difficult to study human nature without dissociating between cultural and evolutionary traits. From a Western scientific perspective, whether human beings are inherently good, and whether or not

they all desire happiness, a view that Flanagan sees as cogently Buddhist, is an open question. Modern researchers, as he sees it, are primarily preoccupied with studying humans as social beings. Drawing upon the ideas and examples of classical and modern philosophers, Flanagan contends that in their pursuit of virtue and happiness as the highest good, Western thinkers were not unlike their Buddhist counterparts. Flanagan concludes his brief presentation with a mention of the utilitarian and enlightenment perspectives on ethics, which have had a defining impact in shaping the way people in the Western world relate to emotions.

Although Flanagan's brief excursus is sufficiently comprehensive, one wishes that more had been said on the difference between the systematic philosophers and the moralists, especially since the two traditions have evolved along quite different lines. While most modern attempts to treat ethics as a systematic metaphysics of moral imperatives draw upon a tradition that goes back to Kant, and indirectly to Aristotle, moralist philosophers from Marcus Aurelius to Kierkegaard and Nietzsche have pursued moral questions as deeply personal reflections of one's own existential condition.

The next two sections of the volume, which cover the remainder of the first days' presentations, attempt a succinct overview of emotions from an Abhidharma perspective. The first section comprises a lucid exposition from Matthieu Richard, who begins by defining a destructive emotion as an obscuring' or afflicting' mental factor, which "prevents the mind from ascertaining reality as it is" (75). In his treatment, Richard traces the source of destructive emotions, which Buddhists refer to as afflictions, not to any constitutional or genetic trait but to the grasping tendency of the ordinary mind and to the habitual tendencies resulting from the accumulation of past experiences. Richard also notes that Abhidharma links emotion to thought patterns, indicating that whereas destructive emotions are seen as leading to bias in thinking, positive emotions are mainly seen as affecting the way we perceive and relate to things. Richard appears to suggest that the links between emotion and thought, which modern cognitive psychology has until recently neglected, have been, by contrast, a major preoccupation for the Buddhist Abhidharma scholars. He also draws attention to the fact that for the Buddhists the Abhidharma analysis of feelings is primarily twofold: first, it indicates the manner in which feelings are to be interpreted, and second, it provides a method for learning to dissociate between different types of feelings (e.g., pleasant, unpleasant, neutral) and the reaction to those feelings (e.g., grasping, aversion, indifference). Noting that the Buddhist tradition operates on the premise of original goodness rather than original

sin, Richard concluded his presentation with a saying attributed to the famous Tibetan hermit Milarepa, that reflects the Buddhist conviction in the human capacity to overcome destructive emotions and achieve genuine happiness, “In the beginning nothing comes, in the middle nothing stays, in the end nothing goes.”

In the next section, which gives a presentation of the anatomy of mental afflictions, Allan Wallace and Thupten Jinpa begin with the necessary recognition that “there is no such thing as the Western tradition’ in the sense of one monolithic entity that has cruised through time for the last twenty-five hundred years, anymore than there is one monolithic entity that is Buddhism” (88). Acknowledging the diversities and discontinuities that are present within each tradition, the authors proceed to identify certain distinguishing features that make it possible to dissociate between Buddhist and Western attitudes towards emotions. One example is the fact that the Buddhist tradition is more specific in its usage of terms such as feeling’, which does not have the broad currency found in its Western use, but refers instead to pleasant, unpleasant and indifferent mental states. These distinctly mental’ feelings are treated as separate from mere sensory feelings, which do not carry any affective value until they become the object of conscious grasping. In short, sensations are considered as merely non-conceptual states, unmediated by language and non-discriminatory. Once discriminated, feelings acquire a distinctly cognitive flavour and can be experienced as autonomous mental states. The notion of feeling as a mental state is one of the main characteristics of the Buddhist approach to emotions. The authors then continue their analysis by addressing issues such as how to counter afflictions and whether it is more appropriate to regard them as connate rather than innate. In addition they offer a detailed list of destructive emotions from a Buddhist point of view and consider issues such as whether there can be any value in moral outrage in the face of human injustice. Emphasizing once again the difference between voluntary and involuntary actions, the chapter ends with the presenters and the Dalai Lama puzzling over the intricate relationships between killing, developmental issues, and destructive emotions.

In the following two chapters, which cover day two and three of the meeting, the reader is first taken on a journey of identifying emotions in everyday life, and subsequently given an opportunity to peer into the emotional brain. Bridging these two scientific presentations is a more general discussion concerning mental health in which yet another difference between the Buddhist and Western account of emotion surfaces: the presence/absence of a definition of mental health. As the Dalai Lama points out, there seems to be

a difference between Buddhism and Science in the manner these two traditions attach the label “destructive” to an emotion. For the most part the modern sciences of psychiatry, psychology and psychoanalysis have focuses primarily on mental disorders, providing no overarching definition of mental health. Indeed, the Freudian notion of “normal neurosis” seems to best approximate the Western scientific view of mental health. By contrast, the Buddhists view mental health primarily in terms of achieving a state of mental balance and divide emotions in destructive or constructive (or more adequately into wholesome and unwholesome) depending on whether they are deemed to enhance or disrupt this mental balance.

The second chapter, entitled “Feelings in Everyday Life,” has as protagonist Paul Ekman, the leading authority on the facial interpretation of emotions. From Ekman one learns about recent changes in the field of cognitive psychology, which have led to a greater acceptance of the cognitive function of emotions, as well as to the recognition that emotions are not culturally specific and learned, but are to a great extent inherited and universal for all humans. Ekman’s research on emotions among indigenous people in Papua New Guinea in the 1960s, at a time when psychology was still in the grip of behaviorism, led him to conclude not only that emotions are in fact universal, but that the causes that trigger emotional response in various situations are largely involuntary. The human ability to simulate (fake) emotions appears thus to represent an important adaptive trait. The chapter includes also several illustrations of individuals displaying false and genuine smiles to convince the reader of Ekman’s thesis that learning to distinguish various types of emotions as well as identify their true value is a complex task that some perform better than others. An important point in his presentation is the emphasis on the public function of emotions, namely that feelings, although internal and private for the most part, play also a social role in signalling to other members of the community (or indeed to an entire species) the emotional state of a person and thus elicit a specific response.

From a picture of how emotions operate in everyday life for most people the reader is given a window into the emotional brain and the complex neural patterns that are assumed to give rise to emotions. This movement from the outward realm of phenomenal experience to the hidden recesses of neural activity is lead by Richard Davidson, one of the leading authorities on affective neuroscience. This new round of discussions covering the third day of the conference marked, according to its narrator, a “decisive turning point.” This was in turn marked, as Goleman gleefully puts it, by a sudden change of weather: “the skies were overcast, and thunderstorms would

come by afternoon” (180). Goleman’s affectionate and anecdotal account of Davison’s hurdled career into the neuroscience of emotions is not only in keeping with the theme of his presentation, but also provides a road map for the encounter between Western and Buddhist psychologies. The reader is told that after several failed attempts to secure funding for investigating the links between brain and emotions, Davidson was to become in the last decade of the twentieth century the person largely responsible for launching the field of affective neuroscience with substantial support from the US National Institute of Health.

Davidson’s presentation revolves around three main points: first, the brain mechanisms underlying emotion; second, the neuroscience of afflictive emotions; and last, a theoretical model for afflictive emotions. The first and second points are largely a summation of current knowledge about neural correlates of emotions and what we have learned about their modularity (i.e., complex emotions activate more than one area of the brain) and plasticity (i.e., the same brain regions can support different types of processes at different times). Although the presentation veers at times toward the technical, several brain charts to aid the non-specialist reader accompany the text. One learns, among other things, that the amygdala is the primary centre for fear and that feelings of comfort and security, usually associated with nurturing environments, have a base in the hippocampus. By contrast, depression and post-traumatic stress disorder indicate a malfunctioning hippocampus. One is also told that research in the neuroanatomy of emotions has confirmed that different areas of the brain are responsible for activating and for regulating emotion. Notable in this case is the fact that the pre-frontal lobes, which are responsible for reasoning and abstract thought, are also engaged in regulating emotions. The overall lesson that one is invited to take home from nearly two decades of research in affective neuroscience is that emotions are not completely hardwired in the brain but that a certain degree of plasticity always prevails. As in the previous sections, Goleman punctuates the narration with questions, comments and quips from the Dalai Lama and the other participants.

In the fourth chapter, we are introduced to the practical aspects of mastering emotional intelligence. Here the protagonists are Jeanne Tsai, a psychologist whose work has focused mainly on the interplay between culture and emotion, and Mark Greenberg, an expert on neuroplasticity in the emotional development of children. As Goleman reminds the reader, Jeanne Tsai speaks mainly as a researcher in cultural psychology, a field that has witnessed a considerable revival since the 1980s. Tsai’s account of the manner in which culture shapes the way we experience and react to emotions was

intended to provide a balance to the quest for emotion “universals” in the general dialogue between Buddhism and Science. Drawing a distinction between an “independent” and a “social” self, Tsai begins her presentation by introducing some cultural differences. Based on her research data, Tsai noted that whereas Americans of European descent are more likely to define themselves in terms of their individual self, most Asian Americans think of themselves primarily as social selves. Another observed difference is that between the high self-esteem of European Americans versus the high self-effacement of Asian Americans, the implication in all these cases being that culture plays a significant role in regulating response toward such emotions. Jeanne Tsai’s presentation appears to have signalled the main point of discord between the Dalai Lama and the scientists. As Goleman is keen to observe, the Dalai Lama found himself in disagreement with the notion that cultural differences, particularly between Europeans and Asians, are as apparent as Tsai maintained. More to the point, he provided a counterexample for each of the examples that Tsai cited in support of her hypothesis. One can only speculate that had Jeanne Tsai used more evocative examples or argued her case more forcefully she would have been able to win over Dalai Lama’s scepticism about the importance of cultural differences relative to the general human understanding and response to emotions.

In the second part of this chapter, Mark Greenberg provides a summary of his own research in the psychology of primary prevention, a discipline designed to endow young children with emotional skills. The program that Greenberg helped engineer, called PATHS (Promoting Alternative Thinking Strategies), is primarily a method for teaching children emotional literacy. Greenberg contended that while children’s emotional life develops more or less in an autonomous fashion, their response and valuation of different emotions is the result of acculturation. In one of his examples, he pointed out that when “parents recognize their infants’ negative emotions—their anger and sadness—and help them to cope with those emotions, children over time develop better physiological regulation of their emotions and show more positive behavior” (259). Conversely, if parents respond with anger and frustration to their infant’s emotional distress, over time children learn that certain emotional responses do not elicit empathy and adapt to shut down or ignore those emotions with detrimental consequences for their psychological well-being. Similarly, the emotional states of nursing mothers and mothers of small infants are decisive in determining the emotional life of their children later in life. Greenberg’s presentation of his own work in emotional literacy is compelling in many ways and stands as a confirmation that important progress in educating children about their inner emotional life has been

made in the West. In the second part of the chapter, the discussion shifts seamlessly from the need to cultivate genuine compassion and altruism in order to counter negative emotions to the more complex issue of teaching ethics.

The final chapter of the book, which covers day five of the event, returns to consider some of the more general issues that were addressed by Owen Flanagan and Matthieu Richard at the start of the event: bridging Buddhist and Western scientific views of the mind, breaking the taboo of subjectivity in science, and more specifically, in the case of the Dalai Lama, learning the neurobiological basis of mental states as a means to providing a naturalist reading of Buddhist epistemology and psychology. The chapter opens with a deeply moving account of Francisco Varela's professional and personal journey into neurobiology and Buddhist meditation. Goleman duly acknowledges Varela's prolific career as a neurobiologist and his pioneering role in engineering the dialogue between Buddhism and Cognitive Science. Varela's 1991 book *The Embodied Mind*, co-authored with Evan Thompson and Eleanor Rosch, offered the first comprehensive approach to cognitive science to draw extensively from Buddhist psychology. More recently in *The View From Within* (1999), he was the first to propose a working methodology for incorporating first person perspectives into cognitive science, giving preference to key forms of Buddhist meditation such as mindfulness awareness (launching a research program now known as "neurophenomenology").

Goleman also gives a short sketch of previous Mind and Life conferences and their achievements to date. As he poignantly reminisces, a first attempt to study the brain patterns of yogis and meditators in the huts of the high Himalayas above Dharamsala a decade earlier brought little or no results, as the team, despite letters of introduction and assurance from the Dalai Lama, met with resistance and scepticism. For Varela and his colleagues, that initial failure was to provide some very important lessons. First, it made clear that "it was naive to ask a yogi who has been meditating for twenty years and who has no interest whatever in science, to participate in a scientific experiment" (314). Such research, in order to be effective, had to enlist the support and participation of highly trained Western meditators or Westernized indigenous Buddhist with an active interest in science. In addition, it had to rely on the latest state of the art technology that was only available in few select laboratories in the West. Second, it became obvious that it was "better to bring the yogi to the lab than the lab to the yogi" (315), if any progress was to be achieved in this direction. Varela's presentation and the discussion that follows focus mainly on recent attempts at charting the anatomy of mind moments' with the aid of advanced meditators and on

drafting proposals for future research in this direction.

The final chapter ends with a review of Richard Davidson's research in neuroplasticity, and its implications for various areas of psychology and neuroscience. The discovery of neuroplasticity in the late 1990s that the brain and the nervous system are capable of generating new neurons has had significant implications for neuroscience and psychology, in particular for understanding the impact of adaptive behavior on the brain's neuroanatomy. If an individual's brain can be shaped by learning and experience, disturbing emotions and other psychological disorders are no longer perceived as unavoidable or irreversible and one can begin to think of antidotes. For Davidson, whose research has focused primarily on the long-term effects of meditation on mood alteration, "one way to think about antidotes to destructive emotions is by facilitating the activation of regions of the frontal lobe that suppress or modulate the activity of the amygdala" with the aid of specific meditative techniques. (335) Davidson and his research associates have found that the area of the brain most strongly associated with positive emotions such as zeal, vigor, enthusiasm, and buoyancy is the left frontal cortex. At the same time it is the activation of this area of the left frontal cortex that is responsible for decrease in amygdala activation. As Davidson concedes in the end, the strongest confirmation for his findings has come from studying the brain patterns of advanced meditators. In its broader sense, Davidson's research appears to provide a modern scientific confirmation that disciplined mental training can not only lead to positive mood alterations but can effectively rewire the brain in ways that were hitherto thought impossible. At the same time, his research seems to offer a distant confirmation that the complex edifice of Abhidharma psychology, although largely resulting from the introspective reports of early generations of Buddhist meditators and scholars, displays a peculiar empirical anchorage. Along with this confirmation comes also a refutation of the modern scientific dogma that our biological programming for emotions is a given.

The book ends with an afterword, in which Goleman follows up on the lessons that each participant drew from the conference. Noteworthy is the case of Owen Flanagan, who, we are told, was the sceptical voice throughout the conference. It appears, however, that in the end Flanagan experienced a change of heart and responded by publishing an article on destructive emotions in the journal *Consciousness and Emotion*, in which he acknowledged the potential for positive emotional change to be gained through sustained meditative effort.

As a general observation, it may be noted that this is not an easy book to classify. Although conceived primarily as a conference report the book reads

at times as a collective memoir complete with personal testimonies and individual biographies. It is a measure of Goleman's commitment to reclaiming the subject for science that he draws so frequently from the personal experience and life journey of each participant to reveal the true motives behind the research.

A prominent feature of this book is the complex yet informal treatment of the Buddhist and scientific accounts of emotions, making obvious the fact that it is intended both as a contribution to understanding of the role of emotions in a cross-cultural perspective, and as an important step in reclaiming affective cognition for neuroscience and psychology. The conspicuous absence of references to emotions in the early decades of cognitive science was largely the result of a theoretical bias, as emotions were regarded as nothing more than unconscious and uncontrollable impulses related to the primitive parts of the mammalian brain. The present volume is a modest effort toward correcting that bias by pointing to research that conclusively demonstrates the capacity for affective self-mastery in humans and the implicit intelligence of emotional modes of knowing.

At the same time, this volume brings further support for the view that cognitive science is poised to shift the dialogue between Buddhism and Science in a promising, if somewhat challenging, direction. Unlike earlier attempts to draw parallels between Buddhism and quantum physics, two traditions whose domains of investigation diverge considerably, the sciences of the mind share with Buddhism a common interest in exploring the potential of human cognitive capacities. To this exploration Buddhism brings a first person phenomenological perspective that the science of cognition are only now beginning to articulate. To be sure, mapping mental states onto brain functions, even with the aid of skilled meditators, is still a complex and controversial undertaking. At the same time, the recent discovery of the brain's neuroplasticity lends credibility to the view that cultivating positive mental and emotional states can have lasting effects on any individual, regardless of his or her biological makeup.

Amidst highlights of these new research findings, insights from Buddhist psychology, and spirited dialogue, the contributions in this volume are a testimony to the possibility of genuine cross-cultural research on the effects and benefits of meditation on human well being and a valuable contribution to the general dialogue between Buddhism and Science.

Notes

¹The results of previous collaborations have appeared in print as: *Gentle Bridges: Conversations with the Dalai Lama on Brain Science and Buddhism* (1992), edited by Jeremy Hayward and Francisco J. Varela; *Consciousness at the Crossroads: Conversations with the Dalai Lama on Brain Science and Buddhism* (1994), edited by Zara Houshmand, Robert B. Livingston, and B. Allan Wallace; *Healing Emotions: Conversations with the Dalai Lama on Mindfulness, Emotions, and Health* (1996), edited by Daniel Goleman; *Sleeping, Dreaming and Dying: An Exploration of Consciousness with the Dalai Lama* (1998), edited by Francisco J. Varela; *Visions of Compassion: Western Scientists and Tibetan Buddhists Examine Human Nature* (2000), edited by Richard J. Davidson and Anne Harrington; and *The New Physics and Cosmology* (2003), edited by Arthur Zajonc.

²Author of the now classic *Emotional Intelligence* (Bantam, 1995), Goleman has also moderated and authored the 6th Mind and Life Conference, which has appeared in print as *Healing Emotions* (1996)