

*Posttraumatic Stress Disorder; Biological, Clinical, and Cultural  
Approaches to Trauma's Effects*

*Closing Remarks*

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I have been privileged to spend most of my professional life living at intersections, but, even so, never have I been at such a conference. First, I congratulate the speakers—it is hard to imagine a set of talks that would be livelier, more informative, or more inspiring than the ones we heard this weekend. Or more wide-ranging: until this weekend, I thought that the range of discourse for neuroscience extended only from “molecules to mind” [the name of a full-year course we teach UCLA neuroscience majors]. But this weekend we have gone beneath molecules, to Mike Meaney’s methyl groups, and beyond mind to metaphysics and culture, to public and personal history.

I come away from these lectures and discussions with information, fascination, and, most of all, humility—humility in the face of such diverse and deep scholarship, of such dedicated and insightful caregiving, and of such terrible and terrifying human experience. In listening to questions from the audience and to conversations over coffee, I was moved to hear how many of you spend your lives helping people deal with trauma, and I hope that the conference has been provided useful insights. Yet I was also struck by how much the course of PTSD depends on human connection, not only with aware health professionals, like David Kinzie, James Boehnlein, Edna Foa, and Arieh Shalev, but also with thoughtful and empathic people like Richie Sheirer, Rosemarie O’Keefe, and networks of families and friends.

Impressed as I am with all that is already going on, I have been asking, what is the role of gatherings such as this one? First, are we right to be asking so many different kinds of questions? Should our discussion best focus on the societal sources of trauma and its public significance (as done so deeply by Robert Jay Lifton and Bob Pynoos)? Can placement of trauma in a cultural or historical context—as done so powerfully by Mel Konner, Mark Micale, Alex Hinton, Byron Good, Degung Santikarma, and Leslie Dwyer, and by this morning’s powerful presentations by Ms. Mina Nooristani, Ms. Theresa Lugano, Dr. Bounsung Khamkeo, and Dr. Luh Ketut Suryani)—provide unexpected insights into new therapies or even just help educate the unimaginative bureaucrats and judges, such as those recounted by Laurence Kirmayer? Can the experience of truth and reconciliation commissions, as we heard from Nancy Scheper-Hughes, give new ways of healing with personal and societal wounds?

As a neuroscientist, far from the front line, my questions focus on how **biologists** should think about PTSD. Is the classification of PTSD intellectually meaningful (as Allan

Young asked) and medically useful (as discussed by Bessel van der Kolk)? Is reductionist brain science a dangerous distraction from the complexity of human complexity, as hinted, perhaps, by Byron Good and Nancy Scheper-Hughes? Could one improve the classification of PTSD by incorporating into its nosology the results of imaging studies (such as those described by Doug Bremner) or molecular markers (such as glucocorticoids, CRH, or NPY discussed by Rachel Yehuda, Dennis Charney, and others)? Will the neurobiology of fear—as we heard about from Mike Davis, Mark Barad, Michael Fanselow, Mark Bouton, and Gregory Quirk—give insights that will be useful to clinicians? Will the nonneural biology of stress—discussed by Emeran Mayer and Christopher Coe—give new understanding of the medical problems of people with PTSD? Can animal studies and their ethological and endocrinological settings really give insight both into single and to multiple traumas? Can we really hope that stimulating the division of new nerve cells in the hippocampus will be useful in treating trauma? Or is the problem of PTSD itself (as opposed to the problem of the existence of trauma and evil in the world) really another reflection of preexisting conditions—prior traumatic experiences (as discussed by Charles Marmar), autonomic dysregulation (as suggested by Larry Cahill), of awful childhood experiences (as suggested so movingly by Rachel Yehuda and Bessel van der Kolk), or even of failure of initial bonding between mother and infant (as implied by Steve Suomi and Mike Meaney)?

These questions remind us of some of the reason for trying to cross disciplinary boundaries in the first place. To challenge the assumptions of our own fields, to look for applications of our own approaches in other worlds of discourse and application, and even just to grab new metaphors. The weekend was a great opportunity for all these activities.... I only wish that we had had more time together. I think that the next step is to engage in a dialogue—electronic and face-to-face—about where to go from here. I know that Rob and the FPR will welcome your comments on the conference and your suggestions of what to do next. I certainly would love to hear more about what you all think the role for neuroscientists in the future of understanding trauma's effects.