Chapter 2

Cultural–Ecological Perspectives on the Understanding and Assessment of Trauma

Lisa Tsoi Hoshmand

This chapter is premised on the assumption that the definition of trauma entails the cultural and ecological systems that mediate human experience and provide resources for coping and meaning making. Furthermore, the detection of traumatic stress disorder implies that the stressful event has overtaxed personal and, in some cases, community capacities. It follows that in considering cultural and ecological factors in the understanding of trauma and trauma recovery, both community resources for resilience and personal resources for coping that are appropriated from culture should be assessed. This emphasis on the cultural and the ecological is in response to the limitations of individually focused western conceptions of trauma and concerns about medicalized approaches to trauma intervention that insufficiently account for contextual factors in trauma recovery (Argenti-Pullen, 2000; Burstow, 2003; Summerfield, 2004).

Cross-cultural trauma work provides the opportunity and challenge of deriving frameworks of understanding and practice that can have both local and global relevance. Although there has been some recognition of sociocultural and systemic factors in trauma, such as experienced by ethnic-minority or low-income populations, the related inquiry has largely focused on domestic concerns. The realities of global trauma work, however, require models of trauma assessment that reflect cultural and ecological diversity, as well as models of intervention that take into account global disparities and complex local histories (Marsella & Christopher, 2004; Wessells, 1999). Professionals in the trauma field have to confront the fact that pretrauma levels of normalcy cannot be presumed for groups that have experienced historical trauma, oppression, and culture loss

(Stam, Stam, Hudnall, & Higson-Smith, 2004; Whitbeck, Adams, Hoyt, & Chen, 2004), or be easily restored for people who live in a fragile state (Bracken & Petty, 1998; Green et al., 2003; Maynard, 1999). For many parts of the world, the relationship between the breakdown of civil society and trauma has to be examined. There is a growing consensus on the need to broaden the discourse on trauma and to develop trauma theory and practice that reflect cultural, ecological considerations in order to complement the prevailing individual, clinical focus.

Part of what has been missing from scientific discourse on trauma is the discussion of values, which is critical in a time of globalizing changes and concomitant cultural tensions and geopolitical conflicts. The nature of practice is such that the normative and the scientific are intertwined. This is beginning to be recognized by recent guidelines from the International Society for Traumatic Studies on international training in mental health and psychosocial interventions for trauma-exposed populations (Weine et al., 2002). The guidelines address humanitarian and cultural values in addition to the scientific values that inform professional work, acknowledging contextual challenges and the importance of an integrative approach across disciplines and different sectors. This author takes the view that multidisciplinary ideas such as found in the human security literature, and collaboration such as between clinical areas of psychology and community psychology or public health, can be helpful.

In this chapter conceptual and assessment issues in a cultural view of trauma are first acknowledged. Contributions from ecological perspectives are described next. An integrative human security framework is used to enable a more comprehensive conception and broadened discourse of trauma. Examples of assessment approaches consistent with cultural–-ecological perspectives, including ones that require further development, are presented under this framework. The chapter concludes with a discussion of the implications for future theory, research, and practice.

CULTURE AND TRAUMA: CONCEPTUAL AND PRACTICE ISSUES

The discourse on trauma reflects conceptual issues stemming from the inseparability of normative and scientific considerations. Certain types of events signal the use of the language of trauma on moral grounds alone, whereas other types of human experience may not be so labeled until there is an outcry for professional and societal attention. As the history of the trauma field has shown, the definition of and attitude toward trauma can affect the detection of trauma and the determination of base rates. As clinicians concern themselves with the impact of traumatic events on the well-being of individuals, social and community scientists weigh in on

the systemic nature of traumatogenic forces and the survivability of community and societal systems. Defining trauma by its impact and biopsychosocial sequelae, however, has not resolved theoretical questions about culture-specific versus universal adaptations to extreme stress.

Cultural dimensions not only add to the complexity of conceptualizing trauma, but also inevitably pose normative and value issues in the theoretical discourse of trauma. What could be regarded as an adaptive as opposed to a failed or incomplete reintegration after severe disruption of functioning has to be evaluated over time (Freedman & Shalev, 2000) and against appropriate cultural horizons (Chun, Moos, & Cronkite, 2006; Manson, 1997). Clinical judgments of adaptive versus ineffective responses to trauma must be informed by the knowledge of ethnocultural factors, including cultural idioms of distress, cultural schemas for meaning making as well as cultural resources and strategies for coping (Marsella, Friedman, Gerrity, & Scurfield, 1996; Rechtman, 2000; Stamm & Friedman, 2000; Wilson, 2006; Yeh, Arora, & Wu, 2006). Value judgments are involved in determining desired outcomes in trauma intervention, and in setting priorities for needs assessment in planning trauma services. In extreme conditions of prolonged trauma exposure, what constitutes an adaptive response may vary from the adaptive response to unexpected loss and adversity under otherwise normal circumstances (Wilson & Drozdek, 2004). There is much that is not known about cultural sources of human resiliency under prolonged adverse conditions. Wong, Wong, and Scott (2006) proposed that a positive psychology of transformation is needed when it comes to human survival and suffering, again attesting to the value-imbued nature of this subject.

The challenges of international trauma work in culturally diverse settings include not only normative but also political and resource issues that are seldom addressed in trauma training. Wessells (1999) commented on the power dynamics present when western professionals are involved in disaster work in less developed countries. Summerfield (1999) critiqued the assumptions brought to international trauma services in areas affected by war. Whether resources are available for proper trauma screening and assessment can be a basic problem, as is the resource need for trauma intervention. To the extent that the evaluation of responses to trauma intervention is one important form of assessment, the interlinked resource issues represent a realistic problem that can be compounded by political issues. These kinds of issues reflect ecological factors that require a different level of analysis than individual psychological factors.

Part of the difficulty with understanding trauma in varied cultural contexts is that our knowledge base is still evolving. How humans react to extreme stress is an area of ongoing research with some conclusive but incomplete information. While empirical evidence of physiological responses to stress seems to suggest a more or less universal psychobiology of

hyperarousal in response to trauma, the psychosocial and cultural mediation of stress is more complex and less predictable. The diathesis-stress model suggests that vulnerability to stress is a function of the maturity of the self-structure, the type of stressor, and how much exposure to stress is involved. Building on this model, Kira (2001) provides an improved taxonomy of stress response in trauma that includes values processing. According to Kira, five factors in human functioning that have been replicated cross-culturally are attachment, individuation, interdependence, performance, flexibility, and survival. A trauma assessment matrix that includes these factors as part of the value structure of the self that can mediate and at the same time be shaped by traumatic experience is presented. The interaction between this set of universal factors and the nature of the traumatic stressor, as moderated by sociocultural resources, further determines the degree of personal vulnerability in each case. A similar model should be developed at the community or group level in understanding collective vulnerability. Furthermore, threats that increase vulnerability at the two respective levels need to be assessed.

Although Kira's (2001) model offers a framework of assessment that includes both universal and culture-specific factors, the latter have not been operationalized. Eisenhruch (1991) suggests that the concept of cultural bereavement be included in the nosology for psychological trauma. Wilson (2006) proposes culturally based trauma archetypes as another conceptual tool in the cultural assessment of trauma. Cultural pathways in the processing of traumatic events could be operationalized for research and clinical purposes. The cross-cultural understanding and assessment of trauma requires further research and development, building on improved taxonomies. In this connection, Chun et al. (2006) argued against dichotomous typologies of coping such as active–passive or approach–avoidant when applied across cultures. They cited research that shows the effectiveness of cultural strategies in nonwestern settings that may be perceived as avoidant or passive in a western context. Survey instruments and interview protocols have to be developed to empirically validate heuristic classifications across cultures. It is likely that both universal and culture-specific or community-specific approaches are needed (Cooper & Denner, 1998) as complementary approaches in the cross-cultural assessment of trauma.

As stated at the outset, we cannot assess trauma impact and trauma response without examining cultural sources of resilience at both the personal and the community level. Bonnano (2004) challenged the assumptions associated with a deficit view of trauma, showing evidence of human resilience as a common response. With the notable exception of the multicultural work on stress and coping presented in Wong and Wong (2006), cultural sources of resilience and culture-specific forms of coping in the face of trauma have not been widely documented or understood.

Research on resilience has tended to focus on the personal level, with less emphasis on the community and group level. This is where an ecological approach can be helpful.

CONTRIBUTIONS FROM ECOLOGICAL PERSPECTIVES

Ecological perspectives in psychology were proposed by early theorists such as A. F. Brunswick and James Gibson. Barker (1968, 1978) promoted the concepts of psychological ecology and behavioral setting, which have been used by researchers and practitioners in behavioral psychology and environmental studies. Bronfenbrenner (1986) focused on the ecology of the family as a developmental context. Moos (1991) advanced environmental psychology with a socioecological model of human adaptation. He theorized that every life area comes with particular environmental stresses and resources for coping. In differentiating between the environmental system and the personal system in crisis and coping, he conceived of the two as having a bidirectional influence on each other. His research has encompassed school, work, and family settings and their interconnection, paving the way for ecological studies of human adaptation in context.

Ecological perspectives become especially relevant when cultural factors are considered. The cultural–historical has been addressed in Vygotsky's (1978) view of activity settings as the ecological context of learning and cognitive development, and applied by many educational researchers. Sasao and Sue (1993) defined cultural complexity by the extent to which an ethnic-cultural group is defined in an ecological, community context at both the individual and the collective level. Trickett (1996) argued that the ecological perspective is the conceptual vehicle for incorporating culture and context. Furthermore, ecological perspectives imply a contextualist philosophy of science, methodological pluralism, and paradigms of human diversity that include contextualist approaches to acculturation. An ecological framework is necessary for understanding culture and context in linking individual and collective levels of assessment and analysis.

Ecological perspectives have contributed to the trauma field in a number of ways. Wong (1993) and Hobfoll (1998) highlight the importance of cultural resources, theorizing that congruence between the demands and coping resources determines the outcome of stressful events. Wilson (2006) points to the importance of understanding cultural cosmologies in the treatment of posttraumatic syndromes globally. Cultural cosmologies and cultural systems are major aspects of human ecology that must be considered. Ecological perspectives also have brought attention to the systemic causes and collective transmission of trauma. The role of family system, community,

and structural and cultural factors in the larger society is emphasized, such as in Harvey's (1996) ecological model of trauma and trauma recovery, and Heise's (1998) integrated ecological framework of gender-based violence. Grauerholz (2000) discussed ecological approaches for linking personal, interpersonal, and sociocultural factors in child sexual abuse, and Zielinski and Bradshaw (2006) expounded on ecological influences in child maltreatment. These contributions call for the assessment of family, other social institutions, and community and cultural settings as ecological systems that are implicated in trauma and its developmental sequelae.

The transmission of trauma, intergenerationally and within groups, has been conceptualized in ecological terms. The collective transmission of trauma involves the historical and social–structural that should be included in the assessment of cumulative ecological risks that can perpetuate trauma. Prelow, Danoff-Burg, Swenson, and Pulgiano (2004) created an ecological risk composite score from the Multicultural Events Schedule for Adolescents and the Ambient Hazards Scale, and used it in assessing ecological stress and neighborhood disadvantage in African-American youth and Euro-American youth. They found cumulative ecological risk to be associated with poor psychological adjustment in youth, with perceived discrimination playing a significant role in the poor adjustment of African-American youth. In the assessment of groups for which cultural trauma is related to collective identity (Alexander, Eyerman, Giesen, Smelser, & Sztompka, 2004; Whitbeck, Chen, Hoyt, & Adams, 2004), the complex interaction between historical oppression, culture loss, and cultural adaptation is difficult to capture. One should take into account both the risk factors and cultural sources of resilience.

An ecological framework can be useful in the prevention of and response to trauma. Ecological perspectives have helped to extend current approaches to resilience and coping by considering ecological assets in the developmental trajectories of youth (Taylor et al., 2002; Theokas & Lerner, 2006). In preventing and responding to trauma, ecological assets should be assessed in relation to community capacity building. Concepts of community resilience such as psychological sense of community, neighborhood resilience, and community competence (Breton, 2001; Chavis, Hogge, McMillan, & Wandersman, 1986), or political and ecological resilience (Peterson, 2000), also are consistent with ecological approaches to trauma prevention and response. These ecological dimensions are especially important when considering low-income communities and ethnic minority populations.

Green (1996) pointed to the need to focus on ethnocultural and cross-national issues in disaster research. Marsella and Christopher (2004) concluded from their review of two decades of international, cultural, and ethnic minority studies of mental health response to disasters that disasters

pose special burdens in mental health for ethnic minority and developing country populations. How communities such as those affected by hurricane Katrina and the tsunami of 2004 fare could be assessed with ecological measures. Many research questions remain as to how different communities and cultural groups perceive risk, how risks translate into vulnerability, and how community resilience in response to disasters is manifested (Buckle, Marsh, & Smale, 2003). This is an area in which community psychology can make a significant contribution.

Although there has been progress toward the measurement of community concepts of resilience (Eng & Parker, 1994), the research however has not always focused on trauma per se. Meanwhile, the construct of resilience has been critiqued in terms of its operational clarity, the instability of the phenomenon of resilient adaptation to adversity, and heterogeneity in risks experienced and competence achieved by individuals viewed as resilient (Luthar, Cicchetti, & Becker, 2000). Further research is needed on protective as opposed to vulnerability factors, at both individual and group levels, and to explicate the multidimensionality and cultural variability of resilient adaptation. As stated previously, cultural resources for resilience should be considered an important part of the ecological assets in coping with stress and traumatic events. Generic assessment methods and cultural inventories can be designed to ascertain the cultural resources available in particular cultural and ecological settings. Again, the application of these ecological concepts to the trauma field is pending further development of instruments and assessment protocols that associate ecological assets and community resilience with trauma response.

The assessment applications of ecological perspectives may have been hampered by the individual focus in western psychology. Outside of environmental and community psychology, there have been few systematically validated ecological assessment instruments. In the area of public health Lochner, Kawachi, and Kennedy (1999) attempted to integrate the ecological concepts of collective efficacy, psychological sense of community, neighborhood cohesion, and community competence under the construct of social capital that can be measured with these various indicators. Using regression analysis, they were able to gauge the contribution of each indicator, illustrating a viable methodology for assessing the differential role of multiple ecological factors. These researchers concluded that much remains to be done in the development of ecological assessment methods. It is fair to state, with respect to the trauma field in particular, that the development of ecological assessment approaches has not kept up with ecological theorizing. Meanwhile, the ecological complexities of cross-cultural trauma work require a more comprehensive framework of understanding for guiding assessment and intervention.

LINKING THE CULTURAL WITH THE ECOLOGICAL IN HUMAN SECURITY

In the cultural–ecological view it is not sufficient to approach trauma assessment only clinically at the individual level, or possible to exclude normative judgment and social values. Given the difficulty of gauging pretrauma and posttrauma levels of normalcy under current global disparities, a framework is needed that takes into account what is valued in the human condition, what can be considered an acceptable level of normalcy, and what constitute threats locally and globally that may result in human trauma and suffering.

Bajpai (2000) presented a comprehensive framework for international humanitarian assistance from the perspective of human security. He provided a history of the evolution of the human security framework by the United Nations Development Program (UNDP) and the Canadian Consortium of Human Security (cchs.hq@ubc.ca) from a narrow focus on the political security of states to encompassing a broad spectrum of ecological and human factors in defining global human security. This framework identifies the following human security values: (a) economic security, (b) food security, (c) health security, (d) environmental security, (e) personal security, (f) community security, and (g) political security. These human security values refer to factors that often interact in producing major effects on the human condition. They also represent areas that can be threatened by local and/or global forces.

Local sources of threat to these areas of human security include poverty, precarious employment, health risks, lack of health facilities, natural disasters, crime, violence and abuse, cultural collapse, human rights violation and discrimination, repression, civil conflicts, and genocide. These threats are familiar contributors to trauma that have implications for development, institutional change, civil society, and policies on compensation for damages in case of injuries. Very importantly, the human security framework also acknowledges global or transnational threats that include population pressures, disparities in global income that result in environmental degradation, drug trafficking, international terrorism, and militarization and war. Bajpai (2000) pointed out that such an enormous array of threats that could result in trauma demands cooperation among different actors, related national and international policies, and the international endorsement of the concept of human security itself. For the trauma field, simultaneous work on these fronts through collaboration with other instrumentalities is crucial for the prevention and containment of traumatogenic forces.

The human security framework offers a comprehensive framework for clarifying the values fundamental to human well-being and civil society, as well as what constitute ecological threats that involve cultural collapse

and the violation of human rights. As these threats impact on personal safety and well-being as well as community assets, addressing them is central to efforts toward maintaining human security and reducing trauma. An ecological assessment of traumatogenic factors should include an inventory of both local and global threats to human security.

A human security framework enables a broadened discourse on trauma and its relationship with civil society as an ecological guarantor of optimal human conditions. Stamm, Stamm, Hudnall, and Higson-Smith (2004) proposed that revitalization and reorganization following cultural trauma and dissolution necessarily involve economic, sociopolitical, and spiritual systems and resources. The assessment of threats to the cultural and structural integrity of a society should be accompanied by the assessment of ecological assets for sustaining human security. This entails a focus that goes beyond physical infrastructure to human infrastructure. Peterson (2000), for example, proposes to integrate human and environmental dynamics in understanding ecological resilience. Adger (2000) also views social and ecological resilience as linked. A multidisciplinary approach is needed in understanding and assessing ecological resilience in relation to trauma caused by threats to human security.

ASSESSMENT APPROACHES CONSISTENT WITH A CULTURAL–ECOLOGICAL PERSPECTIVE

The cultural–ecological perspective implies methodological pluralism and the use of multi-method approaches for research and assessment. Psychometric approaches are to be complemented by clinical interviews, field-based community interviews, and other ethnographic and action research methods used in the ecological setting. These approaches can be further supplemented by large-scale epidemiological and quantitative studies.

The use of psychometric approaches in a cross-cultural context poses a number of problems including linguistic equivalence, response bias, and cultural validity issues (Keane, Kaloupek, & Weathers, 1996). These problems also apply to the clinical assessment of trauma (Wilson & Keane, 2004). Self-report instruments used in the trauma field tend to be concerned with traumatic experience and symptoms (e.g., Briere & Spinnazzola, 2005; Courtois, 2004). There are few psychometric measures of trauma and PTSD that are culturally validated. Stamm (1996) provided a most thorough summary and evaluation of instruments for assessing stress, trauma, and adaptation. Using the electronic PILOTS database on published international literature in traumatic stress, and distinguishing between clinical measures and research measures, he found only 13 measures available in languages other than English. Antonopoulou (2006) studied PTSD in victims of sex-related trafficking from Greece,

Maldavia, and Georgia, using the Trauma Syndrome Inventory (TSI) and the Brief Betrayal Trauma Survey (BBTS) in addition to the Battered Women Syndrome Questionnaire (BWSQ). She found significant differences in comparison with the general population of women in Greece, providing some cross-cultural data on these instruments. Though there has been some progress toward developing culturally valid measures, few of the currently existing trauma measures have been validated with cross-cultural populations.

The literature on resilience and coping reports various psychological instruments for individual measurement. Examples are the Adolescent Resilient Scale (Oshio, Kaneko, Nagamine, & Nakaya, 2003) and the Connor and Davidson Resilience Scale (Connor & Davidson, 2003). Cross-cultural data have not been reported on the majority of self-report measures of resilience. Furthermore, the measurement of resilience with a single self-report instrument is in many ways not consistent with ecological conceptions of resilience (Fergus & Zimmerman, 2005). Maddi and Harvey (2006) reviewed the research on hardiness across cultures and found only a few studies that show significant correlation of hardiness with cultural variables. The insufficient development of hardiness measures has left the relationship between culture and hardiness inconclusive.

Heppner et al. (2006) reported the development and validation of a Collectivist Coping Styles Inventory. This instrument was developed with an acceptable level of reliability on a sample of over 3,000 Taiwanese college students. Based on Asian values and western conceptual models for adaptation and problem resolution, it aims to represent an Asian perspective on coping in the event of trauma. Factor analyses suggested five areas, including family support, religion-spirituality, and private emotional outlets as well as meaning-oriented approaches and avoidance-detachment as control efforts. Although more research is needed in other Asian societies and with groups that have collectivist traditions, there is some evidence of concurrent validity of the inventory in terms of problem solving and resolution, psychological distress, and the impact of trauma on the lives of the participants.

Yeh et al. (2006) questioned the western bias against Asian cultural modes of affective control and fatalism in treating them as dysfunctional coping. They developed a Collectivistic Coping Scale, also based on East Asian collectivist values. Their research identified seven factors, including forbearance, fatalism, respect for authority, and intracultural coping, which are more characteristic of nonwestern cultures. Similar to the Heppner et al. (2006) research, family support was found to be a key coping strategy. As Wong (1993) pointed out, however, cultural assessment should distinguish between collectivist coping strategies that are associated with collectivist values, and collective coping strategies that draw on

the group as a communal resource. The former reflects the use of cultural resources; the latter, ecological resources.

Given the need for continuing cultural research on trauma, coping and resilience, it would be helpful to have a clearinghouse of cross-cultural data on the various related measures, in conjunction with which other ecological assessment approaches can be examined. As stated previously, the advance of assessment approaches depends on improved taxonomies and conceptual development. Schwarzer and Knoll (2003) reviewed the dimensions and distinctions in the conceptualization of coping, proposing mastery of demands and search for meaning as key concepts. They documented the use of qualitative assessment in studying the role of meaning, and emphasized the importance of assessing coping as a longitudinal process. After critically evaluating current measures of coping from a cultural perspective, Wong, Reker, and Peacock (2006) proposed a comprehensive approach based on the resource–congruence model. It includes the assessment of coping orientations and prototypes, further empirically refined and represented by the Coping Schemas Inventory. These cultural–ecological instruments can be used to shed light on the adequacy of ecological resources and culture-specific forms of coping in the face of trauma. Future research should further correlate the responses from such self-report instruments with interview data on community resources for coping and resilience.

In reviewing the psychometric assessment of trauma, Briere and Spinazzola (2005) recommended the combined use of preferably two psychometric measures or one instrument with clinical interviews. It would appear that if more than one measure is used, at least one should have a cultural–ecological focus. Examples of psychometric instruments that reflect an ecological emphasis are the measures of community cohesion (Buckner, 1988) and collective efficacy (Sampson, Raudenbush, & Earls, 1997) used in the assessment of ecological assets. Rasmussen et al. (2003) reviewed scales for environmental assessment in home, school, and work settings, citing some support for reliability and internal consistency. Validation of ecological measures of positive psychological assets in relation to coping with trauma, or convergently with other measures of ecological assets in responding to trauma, will be helpful.

Although structured clinical interviews can provide more nuanced phenomenological and behavioral information that is not obtained by psychometric instruments, there are also issues with recollection, effects on the informants, and ensuring qualified users (Weiss, 1997). Strand, Sarmiento, and Pasquale (2005) reported in their review of 35 measures of trauma in children and adolescents that many do involve the interview format. While most clinical interviews are conducted on an individual basis, there have been protocols that involve triangulating information from multiple informants. Goldin, Levin, Persson, and Hagglof (2003) described the use of a semistructured interview on child exposure to war

trauma in which Bosnian refugee children and teenage youths and their parents were interviewed. Such approaches could yield more valid information, but are not necessarily ecological in scope. As with psychometric measures, there is a continuing need to field-test interview protocols with more diverse trauma populations.

An example of an interview protocol that has been applied to diverse samples of adolescents in low-income neighborhoods is the Social Competence Interview (Ewart, Jorgensen, Suchday, Chen, & Matthews, 2002). It measures social–emotional regulatory mechanisms in response to chronic, health-damaging stress, and has been demonstrated to have a reliable rating system for African-American and White adolescents in high-risk communities. More culturally validated interview methods are needed in research that correlates ecological measures with individual stress regulation and coping among high-risk groups. Connor, Davidson, and Lee (2003) conducted a large-scale online survey of trauma survivors. They explored the contributions of spirituality, forgiveness, and anger to physical and mental health outcomes, using regression analysis. The need at this time is for clinicians and researchers to find culturally sensitive and ecologically valid instruments designed for the assessment of both trauma and resilience.

In the context of disaster management, field-based approaches probably are more appropriate than the use of psychometric measurement. The interaction between the field-based interviewer and the informant can have relational and stabilizing effects if handled with clinical and cultural sensitivity. This becomes a matter of training. Field-based interviews of community members can be conducted in the mode of ethnographic (Denzin & Lincoln, 2000) or action research (Hoshmand & O'Byrne, 1996; Reason & Bradbury, 2001). Because participatory action research involves the relevant constituencies in process-oriented problem finding and problem solving, it can be empowering and appropriately informed by local knowledge. Macy et al. (2004) describe a process of implementing community-based trauma assessment, intervention, and training that involved gathering information from different community constituencies in the manner of action research. Community leaders, politicians, citizens, and emergency workers were included in a series of information gathering for the purpose of planning psychosocial interventions in the aftermath of a community trauma. There was also evaluation of training outcomes in this case. Collaboration between clinical and community areas of psychology can help to develop best practice models for community-based trauma assessment and intervention in the future.

The field of public health addresses the social epidemiology of trauma nationally, such as in the National Comorbidity Survey (NCS) that provides base rates in the U.S. The data can be used for comparison with the findings on particular high-risk groups and communities, including war veterans and civilian populations with high trauma exposure.

For example, Prigerson, Maciejewski, and Rosenheck (2001) compared men who had combat trauma with men who had other traumas, as assessed by the NCS Revised Diagnostic Interview Schedule. They concluded that those exposed to combat trauma as their worst trauma were more likely to have lifetime PTSD and many related adjustment difficulties. This type of data is not always available, however, in countries that do not have a reliable epidemiological database.

Manson, Beals, Klein, Croy, and AI-SUPERPFP Team (2005) used interviews to study the nature and frequency of five types of trauma in American-Indian communities, examining the demographic correlates and demonstrating higher levels of trauma in these communities than what is found in the general population by the NCS survey. Such epidemiological measures of the prevalence of PTSD have to be linked with community ecological conditions and trauma response, beyond demographic correlates. Efforts in screening and early detection must take into account the problems of recruitment and retention due to cultural and realistic constraints (Niles, Newman, & Fisher, 2000). Secondary analysis of multiple ecological indicators, such as in the measurement of social capital described earlier (Lochner et al., 1999), should be conducted to understand the specific contributions of cultural resources and ecological assets to trauma prevention, response, and recovery.

Finally, the human security framework suggests that we should embark on the measurement of human security needs and their fulfillment, including assessing all threats to human security in particular cultural communities and ecological settings. Such research and assessment can be informed by existing approaches to evaluating trauma, resilience, prevention, and recovery. It likely involves large-scale epidemiological studies. Schlenger, Fairbank, Jordan, and Caddell (1997) discussed the relative merits and limitations of surveys, interviews, self-report psychometric instruments, and psychobiological measures as epidemiological methods for assessing trauma exposure and for case identification. They pointed to ethical and training issues as well as the need for multidisciplinary teams to implement such large-scale epidemiological research. The international community has to support such collaboration and the funding of such efforts.

IMPLICATIONS FOR THEORY, RESEARCH, AND PRACTICE

The conceptual contributions from a cultural–ecological perspective can complement the individual focus in theorizing about trauma. Cultural–ecological approaches bring much needed attention to the cultural context and ecological setting that are not always considered in individual clinical

assessment and intervention. Due to the fact that moral values and normative judgments are intertwined with the scientific description of stress, adaptation and suffering, a human security framework can further provide a broader base for trauma discourse and intervention globally. By encompassing a wide range of interrelated factors that affect the human condition and articulating universal human security values, it provides a more comprehensive understanding of traumatogenic forces, human vulnerability, and ecological risks. The human security framework requires practitioners and researchers to draw on multidisciplinary knowledge in addressing issues at both micro and macro levels. In ecological terms, when culture and context are linked with the individual level of analysis, both personal and group resources for coping will be considered in relation to individual and community resilience.

The cultural–ecological perspective implies the use of culturally sensitive research models and pluralistic research methods that can capture the ecological and the contextual. Culturally sensitive research and culturally validated assessment, such as presented in this volume and by Wong and Wong (2006) on stress and coping, would need to become widely practiced. Luke (2005) recommended statistical tools that are more suited to capturing and assessing contextual data. They include multilevel modeling, geographic information systems (GIS), social network analysis, and cluster analysis. Methodological pluralism is another requirement for research and evaluation from a cultural–ecological perspective. Barker and Pistrang (2005) discussed the practical implications of methodological pluralism for community research, and how to integrate multiple methods within a single study. They proposed four sets of criteria for appraising research under a pluralistic ethos, including criteria for qualitative and action research.

Assessment approaches need to be developed, not only for the evaluation of cultural–ecological resources, but also to evaluate system effectiveness and identify reasons for system breakdown during disasters or trauma and in its aftermath. In the medical trauma field surveys of state emergency medical services have been conducted, for example, with a trauma system inventory and reports of injury-related mortality rates (Nathens, Jurkovich, Rivara, & Maier, 2000). Similar evaluation should be conducted on the effectiveness of trauma systems in terms of psychological adaptation and the sustaining of cultural and community supports. Such evaluation research is critical to the ultimate goal of developing best practice models that reflect cultural–ecological considerations in the assessment of trauma and trauma intervention. The community-based work of Macy et al. (2004) included the evaluation of training outcome for psychosocial workers in the context of implementing trauma assessment and intervention. More system-wide evaluation of preparedness in trauma response would be necessary for all communities.

Such system evaluation also requires the development of protocols and evaluation measures that include cultural factors. Many lessons can be learned from the evaluation of disaster management about the emergency preparedness and efficacy of trauma intervention and other services in a given community. These lessons have to be reviewed in a critical dialogue that involves all parties concerned, with an openness to improving cultural competency in the delivery of emergency assistance and in the design of trauma response systems. Participatory action research can serve as a model for involving all relevant constituencies. Case study research methodology can be used to illuminate contrasting scenarios of community and group responses to trauma and to evaluate cultural and ecological resources for resiliency and coping. Multiple case studies that identify different prototypes of community response can contribute to the development of best practice models that include cultural–ecological considerations.

Trauma training must focus not only on cultural competency, such as reflected in the treatment guidelines of the American Psychiatric Association (American Psychiatric Association Steering Committee on Practice Guidelines, 2004) and the International Society for Traumatic Stress Studies (Weine et al., 2002), but also on ecological awareness and knowledge. This is also true for academic programs. Collaboration between clinical and counseling psychologists with community scientists and public health professionals should be emphasized in multidisciplinary curriculum and inquiry related to trauma that is found in academic programs. The realities of international humanitarian aid and trauma assistance are such that western trained professionals tend to be present at the scene for short periods of time. Not only does it not allow sufficient time for cultural immersion and culture learning, but it also prevents the development of ecological understanding necessary for effective work with the local communities.

A cultural–ecological approach must be process oriented and involve sensitive collaboration between outsiders and insiders who have knowledge of the ecological system. It needs to draw on multidisciplinary knowledge from the joint work of culturally competent clinicians, public health workers, and community scientists as well as other local constituencies. The scope of the trauma field has expanded to encompass wider communities of discourse and diverse groups of researchers and practitioners who need to work in unison toward maintaining human security values in a world that has allowed these values to be seriously compromised.

REFERENCES

Adger, W. N. (2000). Social and ecological resilience. Are they related? *Progress in Human Geography, 24*(3), 347–364.

Alexander, J., Eyerman, R., Giesen, B., Smelser, N., & Sztompka, P. (2004). *Cultural trauma and collective identity*. Berkeley, CA: University of California Press.

American Psychiatric Association Steering Committee on Practice Guidelines. (2004). *Practice guidelines for the treatment of patients with acute stress disorder and posttraumatic stress disorder*. Retrieved September 10, 2006 from http://www.psych.org/psych_prac/treatg/pg/prac_guide.cfm.

Antonopoulou, C. (2006). Symptoms of post-traumatic stress disorder in victims of sex-related trafficking. *International Psychology Bulletin*, *10*(4), 32–37.

Argenti-Pillen, A. (2000). The discourse on trauma in non-western cultural contexts: Contributions of an ethnographic method. In A. Y. Shalev, R. Yehuda, & A. C. McFarlane (Eds.), *International handbook of human response to trauma* (pp. 87–102). New York: Kluwer Academic/Plenum.

Bajpai, K. (2000). Human security: Concept and measurement. Kroc Institute Occasional Paper no. 19: OP: 1.

Barker, R. G. (1968). *Ecological psychology: Concepts and methods for studying the environment of human behavior*. Stanford, CA: Stanford University Press.

Barker, R. G. (1978). *Habitats, environments, and human behavior*. San Francisco: Jossey-Bass.

Barker, C., & Pistrang, N. (2005). Quality criteria under methodological pluralism: Implications for conducting and evaluating research. *American Journal of Community Psychology*, *35*(3/4), 201–212.

Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist, 59*(1), 20–28.

Bracken, P. J., & Petty, C. (Eds.). (1998). *Rethinking the trauma of war*. New York: Free Association Books.

Breton, M. (2001). Neighborhood resiliency. *Journal of Community Practice, 19*(1), 21–36.

Briere, J., & Spinazzola, J. (2005). Phenomenology and psychological assessment of complex posttraumatic states. *Journal of Traumatic Stress*, *18*(5), 401–412.

Bronfenbrenner, U. (1986). Ecology of the family as a context for human development. *Developmental Psychology*, *22*, 723–742.

Buckle, P., Marsh, G., & Smale, S. (2003). Reframing risk, hazards, disasters, and daily life: A report of research into local appreciation of risks and threats. *Australian Journal of Emergency Management*, *18*(2), 81–87.

Buckner, J. C. (1988). The development of an instrument to measure neighborhood cohesion. *American Journal of Community Psychology*, *16*, 771–791.

Burstow, B. (2003). Toward a radical understanding of trauma and trauma work. *Violence Against Women, 9*(11), 1293–1317.

Chavis, D. M., Hogge, J. H., McMillan, D. W., & Wandersman, A. (1986). Sense of community through Brunswick's lens: A first look. *Journal of Community Psychology*, *14*(1), 24–40.

Chun, C. A., Moos, R. H., & Cronkite, R. C. (2006). Culture: A fundamental context for the stress and coping paradigm. In P. T. P. Wong & L. C. J. Wong (Eds.), *Handbook of multicultural perspectives on stress and coping* (pp. 29–53). New York: Springer.

Connor, K. M., & Davidson, J. R. T. (2003). Development of a new resilience scale: The Connor–Davidson Resilience Scale. *Depression and Anxiety*, *18*, 76–82.

Connor, K. M., Davidson, J. R. T., & Lee, L. C. (2003). Spirituality, resilience, and anger in survivors of violent trauma: A community survey. *Journal of Traumatic Stress*, *16*(5), 487–494.

Cooper, C. R., & Denner, J. (1998). Theories linking culture and psychology: Universal and community-specific processes. *Annual Review of Psychology*, *49*, 559–584.

Courtois, C. A. (2004). Complex trauma, complex reactions: Assessment and treatment. *Psychotherapy: Theory, Research, Practice, Training*, *41*(4), 412–425.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2000). *Handbook of qualitative research*. Thousand Oaks, CA: Sage.

Eisenhruch, M. (1991). From post-traumatic stress disorder to cultural bereavement: Diagnosis of Southeast Asian refugees. *Social Science and Medicine*, *33*(6), 673–680.

Eng, E., & Parker, E. (1994). Measuring community competence in the Mississippi delta: The interface between program evaluation and empowerment. *Health Education Quarterly*, *21*, 199–220.

Ewart, C. K., Jorgensen, R. S., Suchday, S., Chen, E., & Matthews, K. A. (2002). Measuring stress resilience and coping in vulnerable youth: The Social Competence Interview. *Psychological Assessment*, *14*(3), 339–352.

Fergus, S., & Zimmerman, M. A. (2005). Adolescent resilience: A framework for understanding healthy development in the face of risk. *Annual Review of Public Health, 26*, 399–419.

Freedman, S., & Shalev, A. Y. (2000). Prospective studies of the recently traumatized. In Y. Shalev, R. Yehuda, & A. C. McFarlane (Eds.), *International handbook of human response to trauma* (pp. 249–261). New York: Kluwer Academic/Plenum.

Goldin, S., Levin, L., Persson, L. A., & Hagglof, B. (2003). Child war trauma: A comparison of clinician, parent and child assessments. *Nordic Journal of Psychiatry*, *57*(3), 173–183.

Grauerholz, L. (2000). An ecological approach to understanding sexual revictimization: Linking personal, interpersonal, and sociocultural factors and processes. *Child Maltreatment*, *5*(1), 5–17.

Green, B. L. (1996). Cross-national and ethnocultural issues in disaster research. In A. J. Marsella, M. J. Friedman, E. Gerrity, & R. M. Scurfield (Eds.), *Ethnocultural aspects of posttraumatic stress disorder: Issues, research and applications* (pp. 341–361). Washington, DC: American Psychological Association Press.

Green, B. L., Friedman, M. J., de Jong, J., Solomon, S. D., Keane, T. M., Fairbank, J. A., et al. (Eds.). (2003). *Trauma interventions in war and peace*: *Prevention, practice and policy*. New York: Springer.

Harvey, M. R. (1996). An ecological view of psychological trauma and trauma recovery. *Journal of Traumatic Stress*, *9*(1), 3–23.

Heise, L. L. (1998). Violence against women: An integrated, ecological framework. *Violence Against Women, 4*(3), 262–290.

Heppner, P. P., Heppner, M. J., Lee, D. G., Wang, Y. W., Park, H. J., & Wang, L. F. (2006). Development and validation of a Collectivist Coping Styles Inventory. *Journal of Counseling Psychology, 53*(1), 107–125.

Hobfoll, S. E. (1998). *Stress, culture, and community: The psychology and philosophy of stress*. New York: Plenum.

Hoshmand, L. T., & O'Byrne, K. (1996). Reconsidering action research as a guiding metaphor for professional psychology. *Journal of Community Psychology*, *24*, 1–16.

Keane, T. M., Kaloupek, D. G., & Weathers, F. W. (1996). Ethnocultural considerations in the assessment of PTSD. In A. J. Marsella, M. J. Friedman, E. Gerrity, & R. M. Scurfield (Eds.), *Ethnocultural aspects of posttraumatic stress disorder: Issues, research and applications* (pp. 183–205). Washington, DC: American Psychological Association Press.

Kira, I. A. (2001). Taxonomy of trauma and trauma assessment. *Traumatology*, *7*(2), 73–86.

Lochner, K., Kawachi, I., & Kennedy, B. P. (1999). Social capital: A guide to its measurement. *Health and Place*, *5*, 259–270.

Luke, D. A. (2005). Getting the big picture in community science: Methods that capture context. *American Journal of Community Psychology*, *35*(3/4), 185–200.

Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*, *71*(3), 543–562.

Macy, R. D., Behar, L., Paulson, R., Delman, J., Schmid, L., & Smith, S. F. (2004). Community-based, acute posttraumatic stress management: A description and evaluation of a psychosocial-intervention continuum. *Harvard Review of Psychiatry, 12*(4), 217–228.

Maddi, S. R., & Harvey, R. H. (2006). Hardiness considered across cultures. In P. T. P. Wong & L. C. J. Wong (Eds.), *Handbook of multicultural perspectives on stress and coping* (pp. 409–426). New York: Springer.

Manson, S. M. (1997). Cross-cultural and multiethnic assessment of trauma. In J. P. Wilson & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD* (pp. 239–266). New York: Guilford Press.

Manson, S. M., Beals, J., Klein, S. A., Croy, C. D., & AI-SUPERPFP Team. (2005). Social epidemiology of trauma among two American Indian reservation populations. *American Journal of Public Health, 95*(5), 851–859.

Marsella, A. J., & Christopher, M. A. (2004). Ethnocultural considerations in disasters: An overview of research issues and directions. *Psychiatric Clinics of North America, 27*, 521–539.

Marsella, A. J., Friedman, M. J., Gerrity, E., & Scurfield, R. M. (Eds.). (1996). *Ethnocultural aspects of posttraumatic stress disorder: Issues, research and applications*. Washington, DC: American Psychological Association Press.

Maynard, K. (1999). *Healing communities in conflict: International assistance in complex emergencies*. New York: Columbia University Press.

Moos, R. (1991). Connection between school, work, and family settings. In B. J. Fraser & H. J. Walberg (Eds.), *Educational environments: Evaluation, antecedents, and consequences* (pp. 29–53). New York: Pergamon Press.

Nathens, A. B., Jurkovich, G. J., Rivara, F. P., & Maier, R. V. (2000). Effectiveness of state trauma systems in reducing injury-related mortality: A national evaluation. *Journal of Trauma-Injury Infection and Critical Care, 48*(1), 25–31.

Niles, B., Newman, E., & Fisher, K. (2000). Obstacles to assessment of PTSD in longitudinal research. In B. Niles, E. Newman, & K. Fisher (Eds.), *International handbook of human responses to trauma* (pp. 213–222). New York: Plenum.

Oshio, A., Kaneko, H., Nagamine, S., & Nakaya, M. (2003). Construct validity of the Adolescent Resilience Scale. *Psychological Reports, 93*, 1217–1222.

Peterson, G. (2000). Political ecology and ecological resilience: An integration of human and ecological dynamics. *Ecological Economics, 35*, 323–336.

Prelow, H. M., Danoff-Burg, S., Swenson, R. R., & Pulgiano, D. (2004). The impact of ecological risk and perceived discrimination on the psychological adjustment of African American and European American youth. *Journal of Community Psychology, 32*(4), 375–389.

Prigerson, H. G., Maciejewski, P. K., & Rosenheck, R. A. (2001). Combat trauma: Trauma with highest risk of delayed onset and unresolved posttraumatic stress disorder symptoms, unemployment, and abuse among men. *Journal of Nervous and Mental Disease, 189*(2), 99–108.

Rasmussen, H. N., Neufeld, J. E., Bouwkamp, J. C., Edwards, L. M., Ito, A., Magyar-Moe, J. L., et al. (2003). Environmental assessment: Examining influences on optimal human functioning. In S. J. Lopez & C. R. Snyder (Eds.), *Positive psychological assessment: A handbook of models and measures* (pp. 443–458). Washington, DC: American Psychological Association.

Reason, P., & Bradbury, H. (Eds.). (2001). *Handbook of action research*. London: Sage.

Rechtman, R. (2000). Stories of trauma and idioms of distress: From cultural narratives to clinical assessment. *Transcultural Psychiatry, 37*(3), 403–415.

Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violence crime: A multi-level study of collective efficacy. *Science, 277*, 918–923.

Sasao, T., & Sue, S. (1993). Toward a culturally anchored ecological framework of research in ethnic-cultural communities. *American Journal of Community Psychology, 21*(6), 705–727.

Schlenger, W. E., Fairbank, J. A., Jordan, B. K., & Caddell, J. M. (1997). Epidemiological methods for assessing trauma and posttraumatic stress disorders. In J. P. Wilson & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD* (pp. 139–159). New York: Guilford Press.

Schwarzer, R., & Knoll, N. (2003). Positive coping: Mastering demands and searching for meaning. In S. J. Lopez & C. R. Snyder (Eds.), *Positive psychological assessment: A handbook*

of models and measures (pp. 393–409). Washington, DC: American Psychological Association.

Stamm, B. H. (Ed.). (1996). *Measurement of stress, trauma, and adaptation*. Lutherville, MD: The Sidran Press.

Stamm, B. H., & Friedman, M. J. 2000. Cultural diversity in the appraisal and expression of trauma. In A. Y. Shalev, R. Yehuda, & A. C. McFarlane (Eds.), *International handbook of human response to trauma* (pp. 69–85). New York: Kluwer Academic/Plenum.

Stamm, B. H., Stamm, H. E., Hudnall, A. C., & Higson-Smith, C. (2004). Considering a theory of cultural trauma and loss. *Journal of Loss and Trauma*, *9*, 89–111.

Strand, V. C., Sarmiento, T. L., & Pasquale, L. E. (2005). Assessment and screening tools for trauma in children and adolescents. *Trauma, Violence and Abuse*, *6*(1), 55–78.

Summerfield, D. (1999). A critique of seven assumptions behind psychological trauma programs in war-affected areas. *Social Science and Medicine*, *48,* 1449–1462.

Summerfield, D. (2004). Cross-cultural perspectives on the medicalization of human suffering. In G. M. Rosen (Ed.), *Posttraumatic stress disorder: Issues and controversies* (pp. 233–245). New York: Wiley.

Taylor, C. S., Lerner, R. M., von Eye, A., Balsano, A. B., Dowling, E. M., Anderson, P. M., et al. (2002). Individual and ecological assets and positive developmental trajectories among gang and community-based organization youth. *New Directions for Youth Development*, *95*, 57–72.

Theokas, C., & Lerner, R. M. (2006). Observed ecological assets in families, schools, and neighborhoods: Conceptualization, measurement, and relations with positive and negative developmental outcomes. *Applied Developmental Science, 10*(2), 61–74.

Trickett, E. J. (1996). A future for community psychology: The contexts of diversity and the diversity of contexts. *American Journal of Community Psychology*, *24*(2), 209–285.

Vygotsky, L. (1978). In M. Cole (Ed.), *Mind in society*. Cambridge, MA: Harvard University Press.

Weine, S., Danieli, Y., Silove, D., Van Ommeren, M., Fairbank, J. A., & Saul, J. (2002). Guidelines for international training in mental health and psychosocial interventions for trauma exposed populations in clinical and community settings. *Psychiatry*, *65*(2), 156–164.

Weiss, D. S. (1997). Structured clinical interview techniques. In J. P. Wilson & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD* (pp. 493–511). New York: Guilford Press.

Wessells, M. (1999). Culture, power, and community: Intercultural approaches to psychosocial assistance and healing. In K. Nader & B. Stamm (Eds.), *Honoring differences: Cultural issues in the treatment of trauma and loss*. New York: Brunner-Mazel.

Whitbeck, L. B., Adams, G. W., Hoyt, D. R., & Chen, X. (2004). Conceptualizing and measuring historical trauma among American Indian people. *American Journal of Community Psychology*, *33*(3–4), 119–130.

Whitbeck, L. B., Chen, X., Hoyt, D. R., & Adams, G. W. (2004). Discrimination, historical loss and enculturation: Culturally specific risk and resiliency factors for alcohol abuse among American Indians. *Journal of Studies on Alcohol*, *65*, 409–418.

Wilson, J. P. (2006). Culture, trauma, and the treatment of posttraumatic syndromes in a global context. *Asian Journal of Counselling*, *13*(1), 109–147.

Wilson, J. P., & Drozdek, B. (2004). *Broken spirits: The treatment of traumatized asylum seekers, refugees, war and torture victims*. New York: Brunner-Routledge.

Wilson, J. P., & Keane, T. M. (2004). *Assessing psychological trauma and PTSD*. (2nd ed.). New York: Guilford Press.

Wong, P. T. P. (1993). Effective management of life stress: The resource-congruence model. *Stress Medicine*, *9*, 51–60.

Wong, P. T. P., Reker, G. T., & Peacock, E. J. (2006). A resource-congruence model of coping and the development of the Coping Schemas Inventory. In P. T. P. Wong & L. C. J. Wong (Eds.), *Handbook of multicultural perspectives on stress and coping* (pp. 223–283). New York: Springer.

Wong, P. T. P., & Wong, L. C. J. (Eds.). (2006). *Handbook of multicultural perspectives on stress and coping*. New York: Springer.

Wong, P. T. P., Wong, L. C. J., & Scott, C. (2006). Beyond stress and coping: The positive psychology of transformation. In P. T. P. Wong & L. C. J. Wong (Eds.), *Handbook of multicultural perspectives on stress and coping* (pp. 1–72). New York: Springer.

Yeh, C. J., Arora, A. K., & Wu, K. A. (2006). A new theoretical model of collectivistic coping. In P. T. P. Wong & L. C. J. Wong (Eds.), *Handbook of multicultural perspectives on stress and coping* (pp. 55–72). New York: Springer.

Zielinski, D. S., & Bradshaw, C. P. (2006). Ecological influences on the sequelae of child maltreatment: A review of the literature. *Child Maltreatment*, *11*(1), 49–62.