

Resource caravans and resource caravan passageways: a new paradigm for trauma responding

Stevan Hobfoll

We have long outgrown the capacity of the accepted clinical models of trauma, and a paradigm shift in our thinking is long overdue. The data on traumatic stress were posited from a certain cognitive-behavioural viewpoint, with particular emotional components based almost in their entirety on western, mostly white individuals seeking treatment for post-traumatic stress disorder, and focusing on that time frame. As such, mechanisms such as fear and emotional conditioning theory and the ways traumas are encoded in memory only partially explain trauma response. Conservation of resources theory posits that severe trauma responses occur when personal, social or material resources, which are key to the self, survival and social attachments, are lost severely and rapidly. These resources tend to aggregate or fail to aggregate in what conservation of resources theory terms 'resource caravans'; they do not exist in isolation. Because resource caravans are created and sustained within the environmental and social context of resource caravan passageways, environmental context is fundamental to trauma response. It is argued that resource loss and the maintaining of resource caravans are the best predictors of trauma response, both in terms of posttraumatic stress disorder and in terms of the idioms of trauma distress across cultures.

Keywords: posttraumatic stress disorder, resilience, resource loss, stress, trauma

Introduction

It is my thesis in this paper that we have long outgrown the capacity of the accepted models of trauma. A paradigm shift in our thinking is overdue (Hobfoll & de Jong, 2013). The data on traumatic stress were posited from a certain cognitive-behavioural

viewpoint, with particular emotional components based almost in their entirety on individuals seeking treatment for posttraumatic stress disorder (PTSD), and focusing on that time frame. Further, this viewpoint was accomplished mostly within a western, European and American social context, and mainly by studying middle-class, white patients. It then had a layer added by key work in neuroscience, again almost entirely with the same limitations, which was then force-fitted to the cognitive-behavioural model. One important area of challenge emerged from those who argued that PTSD could be more complex than was originally presented, meaning that it is more multifaceted (Cloitre et al., 2009; van der Kolk, et al., 2005). However, all these viewpoints focus on clinical, western, mostly white populations, which represent a small fraction of those with PTSD or other trauma-related disorders (de Jong, 2004; 2005).

A key limitation to this model building has been the lack of consideration of findings from large scale studies that included nonpatient populations over longer periods of time, studies from nonwestern nations and more anthropological evidence. In particular, research has focused naturally on the time around the trauma event for clinical populations, or the time period when individuals seek treatment. This, in turn, meant that researchers did not incorporate the fuller time sequence including events before and long after trauma, which greatly impact PTSD and cause a different conceptualisation and theory to understand trauma response and recovery. Finally, the consideration of resilience, and

the fact that none of the accepted trauma models account for the extent to which people (even those with PTSD) are resilient, has led to a further challenge that has not been incorporated into the accepted models of trauma and trauma response.

Resource caravans and their tie to world view, body and brain

Conservation of resources (COR) theory posits that individuals strive to obtain, retrain and protect their personal, social and material resources. COR theory envisions this process as a basic evolutionary principle that has many consequences and correlates. Foremost, it sees the seeking and preservation of resources as a primary human motivation, and Hobfoll (1991) theorised that trauma response will occur when there is major loss of fundamental resources and where this loss occurs rapidly. What appears to characterise traumatic resource loss is a rupture of the constellation of five principal resource groups: safety, calmness, attachment, hope, and efficacy (i.e., the ability to affect positive change) (Hobfoll et al., 2007). As resource conservation is of primary concern, the processes inherent in building and maintaining ‘*resource caravans*’ are also the essential building blocks of culture and society. As individuals strive to obtain, retrain and protect personal, social and material resources for the self, they create social structures that necessarily support this primary motivation.

COR theory has held, from its origin, that personal, social and material resources are not possessed piecemeal, but that rather they are developed and associate in aggregate (Hobfoll, 1989, 1998). More recently, Hobfoll (2010) further developed the long-standing underpinning of COR that asserts that resource caravans, the association of linked resources, are created and sustained within a resource caravan passageway. That is, families, organisations and societies create and maintain circumstances that create

and maintain resources when at their best, but that often produces the groundwork for resource loss (Hobfoll, 1988; 1998). COR theory greatly broadens the landscape of how we see PTSD. It emphasises, in particular, that trauma responding is deeply affected by life history—long prior, during and long after events—which this paper will examine in depth (King, et al, 1999; Vogt et al., 2011). Traumatic circumstances not only challenge the individual, but compromise the ability of this social structure to support and protect people.

Current models of trauma: their strengths and limitations

At the outset, I will outline which key findings must be incorporated in any trauma model from current clinical models. First, there is clearly something about exposure to events that threaten life or bodily integrity that produces a powerful cognitive, emotional and physiological response. This is well captured in emotional processing theory (Foa & Kozak, 1986; Rauch & Foa, 2006). Specifically, trauma events create a fear structure that is comprised of associated stimuli, responses and meaning elements that become linked. Further, for some individuals, these fear structures become excessive and resistant to modification. It follows that treatment that could extinguish the interweaving of this fear structure with responding would aid recovery, and there is ample evidence that this is the case (McLean & Foa, 2011).

Second, there are neurological ramifications of trauma that are accompanied by biological perturbations, some of which can become chronic (Brewin, et al., 2010). While these sequences are interesting and important to note, they do not add greatly to emotional processing theory nor to the earlier dual representation theorising of Brewin (Brewin & Holmes, 2003). Tying neurological findings to theory helps support theory, but these neurological findings have not led

to changes in what is predicted by fear processing theory or dual representation theory. Of greater importance for my thesis here, the neurological research has continued the focus on memories and images embedded at the time of the trauma event, and the rather unfounded supposition that persons with PTSD have *'repeated visual intrusions corresponding to a small number of real or imaginary events'* (Brewin et al., 2010, p. 210). This assumption is likely because so much research has been on clinical samples where there was a specific target event. I do not believe that this key assumption, on which so much of current trauma theory rests, has ever been empirically tested.

This point is already cogently covered in the discussion of complex PTSD (van der Kolk et al., 2005). Those who have experienced trauma at times have a principal or worst set of memories, but many report that they have multiple images and memories that are often disorganised and unsequenced, and are an amalgam. As proponents of complex PTSD have argued, traditional PTSD diagnosis offers a rather limited, if partially correct, set of responses to trauma. Such limitations are critical, as they confine understanding, research and intervention, which in turn have to be narrowly constrained in order to fit into more limited models. Giving just one concrete example: if shame or honour are not included in PTSD measures, then the many factor analyses of what is PTSD appear to indicate that shame and honour are not central. However, for many collectivist cultures, honour is central to the trauma experience, not ancillary.

Resource caravans and passageways

Trauma responding, including PTSD, is not only a product of the occurrences around the time of the event, but is strongly affected by the cascade of personal, social and material losses that may occur weeks or months or years before or after the event,

and possibly much later in life. Indeed, resource loss is one of the best predictors of whether someone will develop PTSD or other trauma responses, a fact that is not incorporated in the emotional processing or dual representation theory. These resource losses need not occur at the time of trauma. They may occur in earlier childhood or earlier life or well after the event (Kaniasty, 2012; King et al., 1999; Vogt et al., 2011). Hence, studies find that exposure to childhood trauma and possessing fewer social resources combine to predict an adult trajectory of posttraumatic disorder (Lowe et al., 2014). Referring to a later lifetime sequence, individuals who escaped the Katrina disaster appeared to develop PTSD after they returned home and witnessed their destroyed homes (Adeola, 2009; De Salvo et al., 2007). This moment was not life-threatening, but it had elements that may both be critical and offer us insight as to a broader theory of PTSD. Specifically, when people lose a sense of safety or have a chronic sense of lack of safety, and this is paired with a sequence of events in which they can imagine or actually experience events that are life threatening or threatening to their sense of bodily integrity, they can develop PTSD and other posttrauma sequelae.

This point is especially germane to those who live in chronically unsafe circumstances, such as zones of conflict or many urban inner-city environments that are characterised by pervasive violence. Such environments result in an ongoing loss of safety, fear of loss of loved ones and those relationships, and a sense of future hopelessness and the inability to affect positive change. This hopelessness may be better understood when we appreciate that it is reality based and the darkened sense of future is an accurate representation of likely future events. Once this is understood, each moment of life affords ample opportunity to tie visual, environmental and physiological sequelae in ways that may have more of

the elements that have been tied to complex PTSD (van der Kolk et al., 2005) and fewer of the elements that have been tied classically to PTSD with a particular well-framed memory of a specific event. This also avails intervention to a broad array of alternative foci for intervention and types of intervention. Traditional theories focus on the mind and perception; however, the alternative presented here further encourages social and environmental intervention, so as to shape environments to enable healing.

Several studies of veterans make these points cogently. In the first study, King et al. (1999) found that PTSD was the outgrowth of multiple cumulative effects of stressors, beginning in family and personal life events decades earlier. Most important, this study found that the cascade of resource loss was the key element in the endpoint of PTSD. Indeed, events around the time of deployment were only partially related to PTSD, and the fuller context of postdeployment experience was as fundamental. More recently, Vogt et al. (2011) found that PTSD is best explained by multiple chains of risk, with many of these originating in predeployment experiences. These pathways led to major psychosocial and material resource loss and an inability to access critical resources when needed. Central to the discussion of resource caravans and passageways, not only was the availability of postdeployment social support a larger predictor of posttraumatic response than was exposure to warfare, but that social support was largely influenced by childhood family resources, relationship disruptions, perceived threat of warfare exposure and postdeployment stressors. This was examined more closely by Interian et al. (2014), who found that home-front stressors predicted PTSD whether they occurred before or after deployment. Moreover, these factors were stronger predictors of PTSD than combat exposure or unit cohesion.

These studies further clearly illustrate that emotional processing theory (Foa & Kozak, 1986) and dual representation theory

(Brewin, 2001) fail to explain more than a small portion of how PTSD comes about or how it is sustained. These theories are important, but they are partial and represent a small element of the whole in terms of predictive capacity. Rather, as COR theory predicts, PTSD is predicted by the rupture of personal, social and material resource losses that combatants experience, and the web of safety and connections at the home front have as much to do with PTSD as fear conditioning or the laying down of traumatic memories. Further, these results challenge neurological findings, which are important, but clearly are being interpreted without consideration of the full context.

Cultural adaptation models

Crosscultural findings also illustrate the need for a paradigm shift and indicate the partiality, and even inaccuracy, of current trauma models. PTSD is one manifestation of trauma responding. It appears to be universal, but is not necessarily the principal aspect of trauma response in non western cultures (Akello, Richters, & Reis, 2009; de Jong & Reis, 2010; Hagengimana & Hinton, 2009; Hinton & Lewis-Fernández, 2011; Hobfoll & de Jong, 2013; Igreja, 2008; van Duijl et al. 2010; van Ommeren et al., 2001). This should appear obvious, but it is not a well accepted supposition. The reason it should be obvious is that it follows in a straightforward manner from both emotional processing theory (Foa & Kozak, 1986) and dual processing theory (Brewin & Holmes, 2003), if they are not so strictly tied to western cognitive models and if we do not prematurely tie neurological evidence as meaning that mind-brain connections are universal.

What needs to be understood is that, in many cultures, the borders between real and unreal, this world and the dream world, and the very acceptance of the linear nature of events are looser, or even rejected. Further,

there is good evidence that somatic response to psychological distress and illness has quite varied somatic correlations that are culturally evidenced. Recent research on neural plasticity (Chiao, 2009; Domínguez, Turner, Lewis, & Egan, 2010) would even mean that the brain itself would develop to accommodate these views of the world. This would help to explain why the principal reactions to traumatic events in many cultures have been reported to be so culturally specific (Hinton & Kirmayer, 2013) and produce different idioms of distress and different pathways to wellness.

Hinton & Otto (2006), in their careful research on Cambodian refugees of a certain era, are illuminating on this point. Consider their description of many of the Cambodian refugees that they have studied and treated. Profound and rapid loss of personal, social and often material resources are common elements of their reactions, as would fit what is found in western European and American trauma (Hobfoll, 1991). However, the symptom expressions on cognitive, social, emotional and physical levels are quite different in remarkable ways. The refugees experience frequent palpitations, startled responses and poor appetite and sleep, feel physically weak (*khsaoy*) and report a weak heart (*khsaoy beh doung*). They often report *khyal* attacks, which in some ways resemble panic attacks, but which are also accompanied by catastrophic cognitions about imminent bodily dysfunction and loss of use of their arms and legs. Sleep paralysis, which is rather uncommonly reported in the PTSD literature, was found to be evidenced by 67% of Cambodians with PTSD (Hinton et al., 2005).

Hinton et al. (2012) found that both natural healing and effective treatment pathways between cultures likewise differ markedly. This is a key point, as if trauma produced specific emotional and memory sequences, then recovery and treatment pathways would fit well across cultures. Hinton practices a somatic-psychological treatment

regimen for Cambodians that does not relate to the memory and cognition based treatments effective in western populations. Consider also that, whereas in American and western European patients, panic disorder typically leads to further panic disorder, Puerto Ricans who experience *ataque de nervios*, which close resembles panic disorder, widely report relief after the attack (Lewis-Fernández et al., 2002). Such a paradoxical reaction means either that emotional processing theory (Foa & Kozak, 1986) and the dual processing–neural systems model (Brewin et al., 2010) are specious (which I do not think is the case) or that they are partial and have been over-generalised, especially regarding to the argument that neurological evidence supports these models.

Miller & Rasmussen (2010) similarly challenge cognitive-emotional theories of PTSD. Based on their work with adults in Afghanistan, they found that PTSD was not the major pathway of expression of traumatic experience. They found, like Hinton, that indigenous idioms of distress were more common and primary than PTSD, even if PTSD certainly did occur. For example, *jigar khun* was a long-term kind of melancholy, which adults reported as more salient than intrusive images. *Asabi* was described as a synthesis of nervousness and anger that often led to verbal and physical violence and self-beating. What is also key here was that Miller & Rasmussen found these culturally specific symptoms to be more predictive of functional impairment than was PTSD. Bracken, Giller & Summerfield (1995) made a similar argument based on their studies in Uganda. For example, among Ugandans, dissociation in the form of spirit possession is a common pathway of expression for those exposed to trauma (van Duijl et al., 2010). A sense of spirit possession is consistent with cultural norms and social learning. Hence, it is not surprising that, among northern Ugandan former child soldiers, being haunted by spirits called *Cen* is common post trauma (Akello et al., 2009). Add to this that

mass dissociative trance behaviour has been reported among Bhutanese refugees in Nepal (van Ommeren et al., 2001), in post-war Guinea Bissau (de Jong & Reiss, 2010), in Mozambique (Igreja, 2008) and in Rwanda (Hagengimana & Hinton, 2009). Trauma response follows cultural patterns that have some common bases, but there is much elasticity because the environmental conditions that create, sustain or impede resource acquisition and maintenance are culturally embedded. Resource caravans will fit cultural and environmental imperatives through social development and lifelong social processing, and intervention must occur along the paths of these caravans or the structures that support caravan pathways. Hence, we will see responding that resembles PTSD worldwide, but as we become more distanced from western culture, the major expressions of trauma will look increasingly less like PTSD, or PTSD will become a more secondary or tertiary response.

How current models remove us from factors of social context and social intervention

If we do not study social context, and the caravan of resources and resource passageways that are contextually evidenced, we miss both a deeper understanding of PTSD as well as many avenues for potential social intervention. Following the 1992 Hurricane Andrew in Florida, Ironson et al. (1997) found that cognitive-emotional or information-processing variables were hardly related to trauma responding. Rather, they found that the extent of material resource loss and length of time before receipt of insurance settlements were the major predictors. Further, the extent of material loss and waiting for insurance settlements that would allow rebuilding were only modestly related to the initial trauma experience. Likewise, the prolonged time period waiting for asylum and posttraumatic living conditions

were key predictors of PTSD and depression among Iraqi asylum seekers. These factors outweighed the impact of direct war-related exposure, which is inconsistent with dominant models of PTSD (Laban et al., 2008), but highly consistent with COR theory.

This was also noted in the responding of those affected by the World Trade Center (WTC) attack on 11 September 2001. On one hand, peritraumatic reaction was a major predictor of PTSD outcomes (Galea et al., 2002). However, loss of job and loss of possessions were as predictive of PTSD as was any aspect of the experience that occurred closer in time to the trauma. Again, these factors are not part of the trauma memory and are not even present when fear processing associated with the event occurs.

By focusing on the trauma memory and initial fear responding, we remove ourselves from context, which appears to be a paramount factor found for those who more carefully include context, resource caravans and resource passageways in their designs. So, studying survivors of Hurricane Katrina, Adeola (2009) found that the most significant predictors of distress were: residency in the poorest parishes of New Orleans, having dependent children, unemployment, degree of property damage, and financial impacts sustained due to the disaster. Likewise, others noted that, among Katrina evacuees, not being insured, the degree of home destruction and human loss were the strongest predictors of posttrauma exposure distress (De Salvo et al., 2007; Lee, Shen, & Tran, 2009). However, even this human loss was seldom witnessed. Add to this, De Salvo et al. (2007) found that lack of property insurance, longer evacuation and commuting distance to work during the rebuilding period and obstacles to obtaining quality new residences were important predictors of PTSD symptoms. Again, for most people, they were evacuated before home destruction, and this was witnessed only when they were allowed to return weeks or months later.

Incorporating resilience in trauma models

Nowhere are the limitations of current clinical models of trauma more evident than in their irrelevance to people's resilience in the face of trauma. Accepted trauma models, being pathology-based and concentrating on the time of the trauma event, fail to account for aspects of resilience that are present, even when individuals develop PTSD. The paucity of attention, and therefore the future need for emphasis on resilience in the face of traumatic stress, is cogently presented in a recent key paper by Southwick & Charney (2012) on resilience and depression. I am referring not only to resilience in terms of not experiencing a powerful initial response, quick or early recovery from severe response, or only experiencing a moderate response. Rather, the accepted models fail to make or even to attempt to make any predictions about who continues to engage and even enjoy life tasks. Even those with severe PTSD have a wide range of levels of engagement in life tasks and in resilience processes.

In contrast to leading clinical theories of PTSD, COR theory makes specific predictions about both levels of psychological distress as well as resilience. These predictions are well supported, although the literature regarding adult resilience is still nascent and requires much more exploration. In contrast to a more developed child literature on resilience (see Masten & Narayan, 2012), the adult literature has focused only more recently on resilience and bolstering and protecting personal, social and material resources (Bonanno, Westphal, & Mancini, 2011). Basically, COR theory predicts that, to the extent that the caravan of resources that people possess remains intact, the more likely they will be resilient, resistant or quickly recover. That is, their lifetime resource trajectory and resource reservoir will be more central to their response than will be the type or extent of trauma exposure.

In one of the few studies of PTSD and resilience in a zone of conflict, Hobfoll et al. (2012) interviewed 1196 Palestinian adults of the West Bank

and Gaza during a period of intense conflict. This is one of the few multiwave studies in a zone of conflict, and the only to examine both PTSD symptoms and positive adaptation as measured by degree of engagement in life tasks. Engagement is a concept adopted from organisational psychology. It is comprised of dedication, absorption and vigour (Schaufeli et al., 2002). In many ways, these elements of engagement can be seen as the polar opposite of PTSD, which results in avoidance, inability to concentrate and be positive and drained energy and depressive effect.

The results of path analysis indicated clearly that trauma exposure is only weakly related to engagement (Hobfoll et al., 2012). As predicted by COR theory, and consistent with the model of resource caravans, the impact of resource loss on both trauma symptoms and engagement far outweighs the impact of trauma exposure. Likewise, positive aspects of social support were related to greater engagement, but again, as COR theory predicts, resource gains in the form of sustained social support are overshadowed by the larger influence of resource loss.

In another of the rare prospective studies of resilience in the face of the kind that is often linked with PTSD, Pietrzak et al. (2014) examined more than 10,000 (World Trade Center) WTC responders 3, 6, and 8 years after the WTC attacks. They also examined the differential responding of police versus nontraditional responders who were generally less well trained, such as construction workers security guards and transportation workers. Here, resilience was defined as the degree to which PTSD symptoms were not appreciably experienced at any time point. The majority of police and nontraditional responders were resilient, but the police were significantly more likely to be resilient than nontraditional responders. Correspondingly, nontraditional responders were more likely to have chronic PTSD.

In this situation, the predictors of trauma sensitivity (i.e., lower likelihood of being resilient) were Hispanic ethnicity, prior

psychiatric history, WTC exposure severity, number of life stressors in the year prior to the attack, number of WTC-related medical conditions that developed after the attack and having less family support. Consistent with COR's resource caravan model, prior life stressors, having a medical condition following the events and the level of social support combined to have a much greater influence than WTC exposure severity.

That two aspects of status and role, being a police officer and Hispanic ethnicity, were so critical is a reflection of the different resource caravans and resource caravan passageways that these groups' status reflects. Hispanic ethnicity is likely to be explained as a factor by language and cultural gaps that are obstacles to translation of resources to action, as in difficulty of getting accurate news from mainstream media, difficulty in accessing treatment and possibly having more precarious employment stability. Importantly, police selection and training made a major difference in resilience outcomes, even though the police had much greater trauma exposure in witnessing dead bodies, threats to their own lives and witnessing the death of peers. Clearly, their selection for traits of strength and resilience and training on dealing with trauma were critical determinants of PTSD versus resilience.

Examination of the trauma literature, incorporating clinical, epidemiological and more anthropological study, illustrates the importance of resource caravan passageways, when we compare them to a similar study of resilience trajectories examined in a resilience trajectory study with the abovementioned cohort of Palestinians. In this regard, the critical difference in findings compared to the WTC study was that the majority of respondents were not resilient. Indeed, more than four times the proportion of participants were in the severe, chronic distress group in this study than in the WTC study, and even those in the best trajectories were nevertheless, experiencing considerable distress. This difference was attributed to the

chronic nature of the trauma and the low hope for future positive political relief (Hobfoll, Mancini, Hall, Canetti, & Bonanno, 2011). The context of ongoing trauma, which is characterised as a resource caravan passageway with intense trauma exposure and daily threat, and little hope for future change resulted in a virtual reverse of the proportion of individuals who were resilient versus experienced chronic symptoms of trauma. Indeed, the level of chronic distress versus resilience was so great as to result in a reconsideration of resilience theory by Bonanno, one of the co-authors. As previously Bonanno had theorised that resilience was evidenced by most of those facing trauma, this key aspect of his pioneering theorising on resilience had to be modified for those living within chronic traumatic circumstances (Bonanno et al., 2011).

Conclusions

Responding is first and foremost an expression of the extent and chronicity of trauma in the environment and people's ability to seek safety, retain close attachments and realistically hope for an end to the risk of trauma. When circumstances limit people's ability to retain or recreate resources and where personal, social and material resource loss is prominent, then high levels of PTSD and depression occurs, and recovery pathways become blocked. The resource caravan and resource caravan pathways concept are key predictors of both pathological and resilience outcomes. This is especially true for vulnerable populations and low resource settings, as in such cases there are often multiple traumas occurring over a lifetime, with a continued spiralling of resource loss. Only a partial element to predictive models is added by clinically based theories of emotions or recorded memories. Nor would neurological findings add much at this stage of research.

We must incorporate social context as central to responding. By focusing on the

caravan of resources and resource passageways that are contextually evidenced, we create a deeper, more ecologically valid understanding of PTSD and the array of idioms of distress that are represented in different cultures. This, in turn, opens multiple new avenues for potential clinical and social intervention. By way of example, the centrality of honour to many collectivist cultures would require intervention to focus on steps to 'repair tears in the fabric' of honour and shame through community reintegration, acceptance and recognition. This means that intervention would not be only, or perhaps not at all, on the individual level, but instead would be a community process, incorporating such concepts as collective efficacy (Benight, 2004).

As Norris, Sherrieb & Pfefferbaum (2011) prescribe, intervention must work to build communities' economic resources, increase access to services and mitigate risks associated with social injustice in order to build resilience systems. Social support should be translated to building stronger social networks and enhance natural social supports, ensuring robust linkages that can resist the destructive impact of a disaster or trauma. An important point here is that trauma is compounded by social injustice and the unfair access to resources that in some contexts occurs by class, gender, sexual orientation, ethnicity or race.

By focusing on the trauma memory and initial fear responding, we remove ourselves from context because we focus on internal cognitive and emotional processes. This, of course, artificially leaves these aspects out of our clinical models. We lose predictive value, become circular in explaining new findings that are shoe horned into existing models and leave most of those with PTSD and other trauma responses untreated. Finally, as we begin to think more about resilience, we are poorly informed by clinical models. COR theory, with its emphasis on loss and gain of resources, the concept of resource caravans and the social and

cultural understanding of resource caravan passageways, helps to predict and explain trauma responding and expands insights for intervention across cultures and settings. Future research needs to examine trauma in the social and cultural context. It will be important to examine whether and to which extent more traditional western concepts of PTSD fit within these other contexts, but at the same time to be creative in conceptualising distinctions that are more culturally specific. By expanding our view of time, by comparing groups in context and by comparing groups in different contexts, we will engender a richer view of trauma responding and how treatment can likewise evolve.

References

- Adeola, F. O. (2009). Mental health and psychosocial distress sequelae of Katrina: An empirical study of survivors. *Research in Human Ecology, 16*(2), 195-210.
- Akello, G., Richters, A. & Reis, R. (2009). Coming to terms with accountability: Why the reintegration of former child soldiers in Northern Uganda fails. In: P. Gobodo-Madikizela & C. van der Merwe (Eds.), *Memory, Narrative, and Forgiveness: Perspectives on the unfinished journeys of the past* (188–212). Cambridge: Cambridge Scholars Publishing.
- Benight, C. C. (2004). Collective efficacy following a series of natural disasters. *Anxiety, Stress, and Coping, 17*(4), 401-420.
- Bonanno, G. A., Westphal, M. & Mancini, A. D. (2011). Resilience to loss and potential trauma. *Annual Review of Clinical Psychology, 7*, 511-535 doi: 10.1146/annurev-clinpsy-032210-104526.
- Bracken, P. J., Giller, J. E. & Summerfield, D. (1995). Psychological responses to war and atrocity: The limitations of current concepts. *Social Science and Medicine, 40*(8), 1073-1082.
- Brewin, C. R. (2001). A cognitive neuroscience account of posttraumatic stress disorder and its treatment. *Behavior Research and Therapy, 39*(4), 373-393 doi:10.1016/S0005-7967(00)00087-5.

- Brewin, C. R., Gregory, J. D., Lipton, M. & Burgess, N. (2010). Intrusive images in psychological disorders: Characteristics, neural mechanisms, and treatment implications. *Psychological Review*, 117(1), 210-232 doi:10.1037/a0018113.
- Brewin, C. R. & Holmes, E. A. (2003). Psychological theories of posttraumatic stress disorder. *Clinical Psychology Review*, 23(3), 339-376 doi:10.1016/S0272-7358(03)00033-3.
- Chiao, J. Y. (2009). Cultural neuroscience: A once and future discipline. *Progress in Brain Research*, 178, 287-304 doi:10.1016/S0079-6123(09)17821-4.
- Cloitre, M., Stolbach, B. C., Herman, J. L., van der Kolk, B., Pynoos, R., Wang, J., . . . Petkova, E. (2009). A developmental approach to complex PTSD: Childhood and adult cumulative trauma as predictors of symptom complexity. *Journal of Traumatic Stress*, 22(5), 399-408, doi: 10.1002/jts.20444.
- De Jong, J.T.V.M. (2004). Public mental health and culture: Disasters as a challenge to Western mental health care models, the self, and PTSD. In: J. P. Wilson & B. Drozdek (Eds.), *Broken Spirits: The treatment of asylum seekers and refugees with PTSD*. (159–179). New York, NY: Brunner/Routledge Press
- De Jong, J.T.V.M. (2005). Commentary: Deconstructing critiques on the internationalization of PTSD. *Culture, Medicine, and Psychiatry*, 29(3), 361-370 discussion 371-366. doi:10.1007/s11013-005-9172-7.
- DeJong, J. T. V. M. & Reis, R. (2010). Kiyang-yang, a West-African postwar idiom of distress. *Culture, Medicine, and Psychiatry*, 34(2), 301-321 doi: 10.1007/s11013-010-9178-7.
- De Salvo, K. B., Hyre, A. D., Ompad, D. C., Menke, A., Tynes, L. L. & Munter, P. (2007). Symptoms of posttraumatic stress disorder in a New Orleans workforce following Hurricane Katrina. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, 84, 142-152 doi:10.1007/s11524-006-9147-1.
- Domínguez, D. J. F., Turner, R., Lewis, E. D. & Egan, G. (2010). Neuroanthropology: A humanistic science for the study of the culture-brain nexus. *Social Cognitive and Affective Neuroscience Advance*, 5(2–3), 138-147 doi:10.1093/scan/nsp024.
- Foa, E. B. & Kozak, M. J. (1986). Emotional processing of fear: Exposure to corrective information. *Psychological Bulletin*, 99(1), 20-35 doi: 10.1037/0033-2909.99.1.20.
- Galea, S., Ahern, J., Resnick, H., Kilpatrick, D., Bucuvalas, M., Gold, J., . . . Vlahov, D. (2002). Psychological sequelae of the September 11 terrorist attacks in New York City. *The New England Journal of Medicine*, 346(13), 982-987. doi:10.1056/NEJMsa013404.
- Hagengimana, A. & Hinton, D. E. (2009). Ihahamuka, a Rwandan syndrome of response to the genocide: Blocked flow, spirit assault, and shortness of breath. In: D. E. Hinton & B. J. Good (Eds.), *Culture and Panic Disorder* (205–229). Redwood City, CA: Stanford University Press.
- Hinton, D. E. & Kirmayer, L. J. (2013). Local responses to trauma: Symptom, affect, and healing. *Transcultural Psychiatry*, 50(5), 607-621 doi: 10.1177/1363461513506529.
- Hinton, D. E. & Lewis-Fernández, R. (2011). The cross-cultural validity of posttraumatic stress disorder: Implications for DSM-5. *Depress Anxiety*, 28(9), 783-801 doi: 10.1002/da.20753.
- Hinton, D. E. & Otto, M. W. (2006). Symptom presentation and symptom meaning among traumatized Cambodian refugees: Relevance to a somatically focused cognitive-behavior therapy. *Cognitive and Behavioral Practice*, 13(4), 249-260 doi: 10.1016/j.cbpra.2006.04.006.
- Hinton, D. E., Pich, V., Chhean, D. & Pollack, M. H. (2005). ‘The ghost pushes you down’: Sleep paralysis-type panic attacks in a Khmer refugee population. *Transcultural Psychiatry*, 42(1), 46-77 doi: 10.1177/1363461505050710.
- Hinton, D. E., Rivera, E. I., Hofmann, S. G., Barlow, D. H. & Otto, M. W. (2012). Adapting CBT for traumatized refugees and ethnic minority patients: Examples from culturally adapted CBT (CA-CBT). *Transcultural Psychiatry*, 49(2), 340-365 doi: 10.1177/1363461512441595.

- Hobfoll, S. E. (1988). *The Ecology of Stress*. Washington, DC: Hemisphere.
- Hobfoll, S. E. (1989). Conservation of resources. A new attempt at conceptualizing stress. *American Psychologist*, 44(3), 513-524 doi: 10.1037/0003-066X.44.3.513.
- Hobfoll, S. E. (1991). Traumatic stress: A theory based on rapid loss of resources. *Anxiety Research: An International Journal*, 4, 187-197.
- Hobfoll, S. E. (1998). *Stress, Culture, and Community: The psychology and philosophy of stress*. New York, NY: Plenum Press.
- Hobfoll, S. E. (2010). Conservation of resources theory: Its implication for stress. In: S. Folkma (Ed.), *The Oxford Handbook of Stress, Health, and Coping* (127–147). New York, NY: Oxford University Press.
- Hobfoll, S. E. & deJong, J. T. V. M. (2013). Sociocultural and ecological views of trauma: Replacing cognitive-emotional models. In: N. C. Feeny & L. Zoellner (Eds.), *Facilitating Resilience and Recovery Following Traumatic Events* (69–90). New York, NY: Guilford.
- Hobfoll, S. E., Johnson, R. J., Canetti, D., Palmieri, P. A., Hall, B. J., Lavi, I., . . . Galea, S. (2012). Can people remain engaged and vigorous in the face of trauma? Palestinians in the West Bank and Gaza. *Psychiatry*, 75(1), 60-75. doi: 10.1521/psyc.2012.75.1.60; 10.1521/psyc.2012.75.1.60.
- Hobfoll, S. E., Mancini, A. D., Hall, B. J., Canetti, D. & Bonanno, G. A. (2011). The limits of resilience: Distress following chronic political violence among Palestinians. *Social Science and Medicine*, 72(8), 1400-1408 doi: 10.1016/j.socscimed.2011.02.022.
- Hobfoll, S. E., Watson, P., Bell, C. C., Bryant, R. A., Brymer, M. J., Friedman, M. J. & Ursano, R. J. (2007). Five essential elements of immediate and mid-term mass trauma intervention: Empirical evidence. *Psychiatry: Biological and Interpersonal Issues*, 70(4), 283-315 discussion 316-369. doi: 10.1521/psyc.2007.70.4.283.
- Igreja, V. (2008). Gamba spirits, gender relations, and healing in post-civil war Gorongosa, Mozambique. *Journal of the Royal Anthropological Institute (N.S.)*, 14, 350-367.
- Interian, A., Kline, A., Janal, M., Glynn, S. & Losonczy, M. (2014). Multiple deployments and combat trauma: Do homefront stressors increase the risk for posttraumatic stress symptoms? *Journal of Traumatic Stress*, 27(1), 90-97 doi: 10.1002/jts.21885.
- Ironson, G., Wynings, C., Schneiderman, N., Baum, A., Rodriguez, M., Greenwood, D. & Fletcher, M. A. (1997). Posttraumatic stress symptoms, intrusive thoughts, loss, and immune function after Hurricane Andrew. *Psychosomatic Medicine*, 59(2), 128-141.
- Kaniasty, K. (2012). Predicting social psychological well-being following trauma: The role of post-disaster social support. *Psychological Trauma: Theory, Research, and Practice*, 4(1), 22-33.
- King, D. W., King, L. A., Foy, D. W., Keane, T. M. & Fairbank, J. A. (1999). Posttraumatic stress disorder in a national sample of female and male Vietnam veterans: Risk factors, war-zone stressors, and resilience-recovery variables. *Journal of Abnormal Psychology*, 108(1), 164-170.
- Laban, C. J., Komproe, I. H., Gernaat, H. B. & de Jong, J. T. (2008). The impact of a long asylum procedure on quality of life, disability and physical health in Iraqi asylum seekers in the Netherlands. *Social Psychiatry and Psychiatric Epidemiology*, 43(7), 507-515 doi: 10.1007/s00127-008-0333-1.
- Lee, E. K. O., Shen, C. & Tran, T. V. (2009). Coping with Hurricane Katrina: Psychological distress and resilience among African-American evacuees. *Journal of Black Psychology*, 35(1), 5-23 doi: 10.1177/0095798408323354.
- Lewis-Fernández, R., Garrido-Castillo, P., Bannasar, M. C., Parrilla, E. M., Laria, A. J., Ma, G., . . . Petkova, E. (2002). Dissociation, childhood trauma, and ataque de nervios among Puerto Rican psychiatric outpatients. *The American Journal of Psychiatry*, 159(9), 1603-1605.
- Lowe, S. R., Galea, S., Uddin, M. & Koenen, K. C. (2014). Trajectories of posttraumatic stress among urban residents. *American Journal of*

Community Psychology, 53(1–2), 159-172 doi: 10.1007/s10464-014-9634-6.

Masten, A. S. & Narayan, A. J. (2012). Child development in the context of disaster, war, and terrorism: Pathways of risk and resilience. *Annual Review of Psychology*, 63, 227-257.

McLean, C. P. & Foa, E. B. (2011). Prolonged exposure therapy for post-traumatic stress disorder: A review of evidence and dissemination. *Expert Review of Neurotherapeutics*, 11(8), 1151-1163 doi: 10.1586/ern.11.94.

Miller, K. E. & Rasmussen, A. (2010). War exposure, daily stressors, and mental health in conflict and post-conflict settings: Bridging the divide between trauma-focused and psychosocial frameworks. *Social Science and Medicine*, 70(1), 7-16 doi: 10.1016/j.socscimed.2009.09.029.

Norris, F. H., Sherrieb, K. & Pfefferbaum, B. (2011). Community resilience: Concepts, assessment, and implications for intervention. In: S. M. Southwick, B. T. Litz, D. Charney & M. J. Friedman (Eds.), *Resilience and Mental Health: Challenges across the lifespan* (162–175). Cambridge: Cambridge University Press.

Pietrzak, R. H., Feder, A., Singh, R., Schechter, C. B., Bromet, E. J., Katz, C. L. & Southwick, S. M. (2014). Trajectories of PTSD risk and resilience in World Trade Center responders: An 8-year prospective cohort study. *Psychological Medicine*, 44(1), 205-219 doi: 10.1017/S0033291713000597.

Rauch, S. & Foa, E. (2006). Emotional Processing Theory (EPT) and exposure therapy for PTSD. *Journal of Contemporary Psychotherapy*, 36, 61-65.

Schaufeli, W. B., Salanova, M., Gonzalez-Roma, V. & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample

confirmatory factor analytic approach. *Journal of Happiness Studies*, 3(1), 71-92.

Southwick, S. M. & Charney, D. S. (2012). The science of resilience: Implications for the prevention and treatment of depression. *Science*, 338(6103), 79-82.

Van der Kolk, B. A., Roth, S., Pelcovitz, D., Sunday, S. & Spinazzola, J. (2005). Disorders of extreme stress: The empirical foundation of a complex adaptation to trauma. *Journal of Traumatic Stress*, 18(5), 389-399 doi: 10.1002/jts.20047.

Van Duijl, M., Nijenhuis, E., Komproe, I. H., Gernaat, H. B. & de Jong, J. T. (2010). Dissociative symptoms and reported trauma among patients with spirit possession and matched healthy controls in Uganda. *Culture, Medicine, and Psychiatry*, 34(2), 380-400 doi: 10.1007/s11013-010-9171-1.

Van Ommeren, M., de Jong, J. T., Sharma, B., Komproe, I., Thapa, S. B. & Cardena, E. (2001). Psychiatric disorders among tortured Bhutanese refugees in Nepal. *Archives of General Psychiatry*, 58(5), 475-482 doi: 10.1001/archpsyc.58.5.475.

Vogt, D., Smith, B., Elwy, R., Martin, J., Schultz, M., Drainoni, M. L., . . . Eisen, S. (2011). Predeployment, deployment, and postdeployment risk factors for posttraumatic stress symptomatology in female and male OEF/OIF veterans. *Journal of Abnormal Psychology*, 120(4), 819-831. doi: 10.1037/a0024457.

Stevan E. Hobfoll, PhD, is the Judd and Marjorie Weinberg Presidential Professor and Chair of the Department of Behavioural Sciences at Rush University Medical Center, Chicago, Illinois, USA.
email: stevan.hobfoll@rush.edu