

actual positive personality change because traumas are particularly severe stressors, but when considering the potential mechanisms underlying PTG, focusing solely on possibilities that are specific to trauma risks ignoring the mechanisms that

are common to coping with and growing from stressors in general. An accurate understanding of these mechanisms will be critical for developing successful interventions that promote lasting growth.

Post-Traumatic Growth: Some Needed Corrections and Reminders

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Abstract: Jayawickreme and Blackie provided an interesting look at post-traumatic growth and personality characteristics. Unfortunately, their paper perpetuated some misunderstandings about work in the area and relied heavily on one methodologically problematic study in their critique. The target article failed to reflect the current evidence concerning self-report measures of growth, such as the Post-Traumatic Growth Inventory, accurately. Self-report measures must be used with caution, but the empirical evidence in support of both the reliability and validity of self-report measures of growth is much stronger than the evidence questioning the measures. Copyright © 2014 European Association of Personality Psychology

We introduced the term *post-traumatic growth* (PTG) as a way to describe the positive changes that sometimes are reported by people as they cope with the aftermath of major life crises (Tedeschi & Calhoun, 1995, 1996). Since then, many researchers have begun to more closely examine the process of PTG. Jayawickreme and Blackie (J&B) have reviewed some of this research, especially in relation to personality change that may occur through PTG, or that may itself represent PTG. Although we agree with much of what they have written, in this brief response, we correct some of the misconceptions that appeared in the paper. We have previously discussed some of these unfortunate misconceptions, especially in relation to the work of Hobfoll that was cited frequently by J&B, and we refer the reader to Tedeschi, Calhoun, and Cann (2007) for a more detailed analysis of those misconceptions.

Perhaps one of the most serious issues raised was that reports of PTG may somehow be suspect. The authors relied on work carried out by Tennen and colleagues (e.g. Frazier et al., 2009) where they attempted to show that self-report measures such as the Post-Traumatic Growth Inventory (PTGI; e.g. Tedeschi & Calhoun, 1996) do not produce accurate assessments of change over time. Frazier et al. is not the 'hallmark' study that J&B claimed; unfortunately, they failed to evaluate the methodology of that study carefully. It contains several significant flaws and serious limitations (see Aspinwall and Tedeschi, 2010, for a critique). There are other studies that lead us to conclude that people are quite able to describe their experiences of PTG accurately, just as we rely on self-report for information about virtually any personality tendency or personal experience. Several other studies provide evidence that people spontaneously report PTG (e.g. Duran, 2013), that they are *not* merely prompted into such reports, and that they report both the positive and negative outcomes of their experiences, indicating that PTG is not merely a self-enhancing bias (Baker, Kelly, Calhoun, Cann, & Tedeschi, 2008; Barrington & Shakespeare-Finch, 2013). Several studies indicated that significant others reliably corroborate reports of PTG (Moore et al., 2011; Shakespeare-

Finch & Barrington, 2012; Taubman-Ben-Ari, Findler, & Sharon, 2011) and reports of PTG are not related to social desirability biases (Tedeschi & Calhoun, 1996; Wild & Paivio, 2003).

The PTGI has served many researchers well for several years. Just maybe this is because the items themselves were originally developed as quotations from trauma survivors who were interviewed after suffering physical disabilities (Tedeschi & Calhoun, 1988) and bereavement (Calhoun & Tedeschi, 1989-1990), not out of any preconceptions we had about PTG. Furthermore, the domains of PTG have been derived by factor analysis and have been confirmed in a number of studies (see Taku, Cann, Calhoun, & Tedeschi, 2008).

The model of PTG that we have proposed and continuously refined (Tedeschi & Calhoun, 1995; Calhoun & Tedeschi, 2006; Calhoun, Cann, & Tedeschi, 2010) has led to the development of measures that allow us to test the process of PTG that we have postulated. We are able now to measure the degree to which core belief systems are challenged, and the degree to which trauma survivors engage in intrusive or deliberate rumination processes, and the predictions of our model hold when tested (e.g. Triplett, Tedeschi, Cann, Calhoun, and Reeve (2012). We have also been able to see how PTG develops over time, and there is evidence that after a few months in initial development, PTG may remain quite stable (Danhauser et al., 2013). This temporal process is also important in considering the relationship between resilience and PTG, something that has often been misunderstood, a misunderstanding also reflected in the target article. When we first described PTG (Tedeschi & Calhoun, 1995), we hypothesized that psychological fitness would likely be related to PTG in a complicated fashion. Early on after the experience of trauma, people with moderate degrees of fitness would show the greatest tendency towards growth, having enough coping resources to move past initial emotional distress and intrusive rumination so that they can begin to reflect on their situation deliberately and to move towards a kind of change that leads to better psychological adjustment, resilience, and even wisdom. The

relationship between resilience and PTG is stronger later on in the process than it is earlier, as PTG leads to resilience. Depending on how fixed or malleable one considers personality to be, this may be seen as personality change.

It is beyond the scope of this brief rejoinder to cover all the issues raised by J&B, but our reminders and clarifications are clearly needed so that those who are interested

in PTG as a process of significant and enduring change can understand better what we already know about this process. The evidence for use of the PTGI and for PTG in general is much stronger than was implied by J&B. For a recent description of the fine details of the PTG process and how to facilitate it, we refer the reader to Calhoun and Tedeschi (2013).

AUTHORS' RESPONSE

Promoting Change in Post-Traumatic Growth Research: Response to Commentaries

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Abstract: We are confident that researchers who take note of the suggestions raised by the commentaries will greatly advance the study of post-traumatic growth. Our response focuses on four broad issues—the exact nature of post-traumatic growth, the role of 'traumatic' experiences, methodological improvements for future research, and why it really does matter whether retrospective perceptions of post-traumatic growth reflects genuine change. We hope that our target article and the discussion it has generated will inspire rigorous research into the positive outcomes that may follow from experiencing trauma and adversity. Copyright © 2014 European Association of Personality Psychology

We begin by thanking all the authors who contributed commentaries to our target article on post-traumatic growth. Each author offered a unique perspective on the construct and a novel solution to the conceptual and methodological challenges currently faced by researchers in this field. We are confident that researchers who take note of these suggestions will greatly advance the study of post-traumatic growth. In reading through and absorbing all the rich and informative commentaries, we identified some recurring themes. We therefore organize our response around four broad issues—clarification of the definition of post-traumatic growth, the role of traumatic experiences in post-traumatic growth, methodological improvements for future research, and why it really does matter whether retrospective perceptions of post-traumatic growth reflect genuine change. Readers interested in a summary of the commentators' views and our response may refer to Table 1. It is our hope that our target article and the discussion it has generated will inspire continued and rigorous research into the positive outcomes that may follow from experiencing trauma and adversity.

JUST WHAT IS POST-TRAUMATIC GROWTH? TOWARDS GREATER THEORETICAL CLARIFICATION

Several authors focused (either directly or indirectly) on issues surrounding the definition of post-traumatic growth. In our article (Jayawickreme & Blackie, this issue), we

discussed the many conceptualizations that have been put forward, which include the manifestation of five specific changes (Tedeschi & Calhoun, 2004), an increase in eudaimonic well-being (Joseph & Linley, 2005), and the "restructuring of an individual's life narrative" (McAdams, 2006). However, as pointed out by Miller, there are a number of unresolved issues that are likely to affect all of these definitions. Miller raised several concerns about how post-traumatic growth is defined and evaluated, and he encouraged us (and other researchers) to refine our own definition of post-traumatic growth as positive personality change further. In this section, we try to shed some light on these complicated issues.

Miller's first concern was whether the evaluative criteria of what counts as positive change should be defined by the survivor or the researcher. We argue for 'all of the above'—both parties should define it. Tedeschi and Calhoun (1996) did therefore make a significant contribution by articulating their five outcomes on the basis of interviews with survivors who had experienced severe physical disability and bereavement. It is, however, for researchers to decide whether the outcomes identified by the survivors are distinct constructs or are instead captured by existing constructs. As Joseph argued, there may be value to conceptualizing post-traumatic growth in terms of other well-recognized and researched constructs. Such a process may grant researchers more insight into the functional value of post-traumatic growth. For example, if we all agree that a core aspect of post-traumatic growth is self-efficacy, then we can draw upon past research on self-efficacy to gain valuable information on how post-traumatic growth is related to