

Evaluating Resource Gain: Understanding and *Misunderstanding* Posttraumatic Growth

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In a response to an article by Hobfoll and colleagues, theoretical and empirical considerations regarding the concept of posttraumatic growth are reviewed. It is noted that posttraumatic growth should be assessed as such, with measures developed specifically to address this construct; that it follows a challenge to and re-examination of core beliefs, not every bad experience; it can be influenced by many factors; it can coexist with distress during stages of the process without indicating that growth is unimportant or negative; and it can follow various trajectories, including ones where it may at first serve one function, but later involve personally transformative changes.

En réponse à un article de Hobfoll et al., des réflexions théoriques et empiriques concernant le concept de croissance post-traumatique sont menées. On note que la croissance post-traumatique doit être estimée à partir de mesures qui lui sont propres. Il est aussi souligné que la croissance post-traumatique survient après un défi et un réexamen des croyances fondamentales et non après chaque expérience négative. La croissance post-traumatique peut être influencée par de nombreux facteurs, elle peut coexister avec la détresse durant les étapes du processus sans que, pour autant, cela soit un indicateur d'une croissance négative ou peu importante. Enfin, elle peut suivre des trajectoires variées, y compris celles où elle remplit au départ une fonction et ultérieurement est impliquée directement dans des changements.

The view that the struggle with major crises in life can lead to the experience of significant positive change is ancient (Tedeschi & Calhoun, 1995). This general view was also present in the ideas of several influential social and behavioral scientists of the twentieth century (e.g. Caplan, 1964; Dohrenwend, 1978; Frankl, 1963; Maslow, 1954; Yalom, 1980). However, it has only been in the last 25 years or so that this phenomenon, the possibility of something

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good emerging from the struggle with something very difficult, has been the focus of systematic theorising and empirical investigation (e.g. Affleck, Tennen, Croog, & Levine, 1985; Affleck & Tennen, 1996; Cella & Tross, 1986; O'Leary & Ickovics, 1995; Park, Cohen, & Murch, 1996; Schaefer & Moos, 1992; Tedeschi & Calhoun, 1995, 1996). We are pleased that Hobfoll, Hall, Canetti-Nisim, Galea, Johnson, & Palmieri (this issue) have chosen to attend to this area of inquiry.

We agree that posttraumatic growth (PTG) is indeed a "critical area of study" (Hobfoll et al., this issue, p. 347) and it is important to work toward "a better understanding of the complexity of posttraumatic growth" (p. 350). These are goals that have also been suggested by other contemporary investigators (Harvey, Barnett, & Overstreet, 2004; Park & Helgeson, 2006; Zoellner & Maercker, 2006b) and we strongly concur that they are worthy objectives. However, in order to move toward such goals in a constructive manner it is important to fully understand the theoretical conceptualisations (Calhoun & Tedeschi, 1998, 2006; Janoff-Bulman, 2006; Janoff-Bulman & Frantz, 1997; Neimeyer, 2001, 2006) and empirical evidence (Calhoun & Tedeschi, 2006; Joseph & Linley, in press; Linley & Joseph, 2004; Park & Helgeson, 2006; Shaw, Joseph, & Linley, 2005) in this important area of investigation.

Journal readers unfamiliar with the growing literature in the area of posttraumatic growth may be given an incorrect impression by the lead article. In what follows, we will address some of the misconceptions that are apparent in the condensed description Hobfoll and colleagues provide of the three surveys to which they refer in their article. We will address three major areas: Hobfoll and colleagues' representation of Frankl's views, their misrepresentation of the theoretical and empirical literature on growth, and we will suggest some words of caution about the surveys summarised in the lead article.

FRANKL'S VIEW: ONLY ACTION?

A significant foundation for some of the work reported in the lead article is the existential perspective of Viktor Frankl. However, *the particular way in which Frankl's views are presented may be misleading to some readers, particularly those who are not themselves familiar with Frankl's ideas*. Frankl does indeed suggest that meaning can be achieved through some kinds of "actions"; however, his views go well beyond that. As Frankl indicates, actions are not possible for many persons dealing with traumatic events. It may be useful in this context to allow Frankl to speak for himself.

What was really needed was a fundamental change in our [concentration camp prisoner's] *attitude* [italics added] toward life . . . tasks, and therefore

the meaning of life, differ from man to man, and from moment to moment . . . Sometimes the situation . . . may require him to shape his own fate by action. At other times it is more advantageous for him to make use of an opportunity for contemplation . . . Sometimes man may be required simply to accept his fate, and bear his cross. (Frankl, 1963, pp. 122–123)

Whenever one is confronted with an inescapable, unavoidable situation, whenever one has to face a fate that cannot be changed . . . *What matters most of all is the attitude we take* [italics added] toward suffering, the attitude in which we take our suffering upon ourselves. (Frankl, 1963, p. 178)

One of Frankl's (1946/1965, 1963) central concerns was to answer the question—How can a person discover meaning in a situation that involves unavoidable suffering, where discovering meaning through actions is simply not possible? Frankl did not regard actions as somehow superior to the fulfillment of meaning through “attitudes” or “experiential” values. A full appreciation of Frankl's perspective leads to a much broader recognition of the potential forms of posttraumatic growth.

UNDERSTANDING THE PROCESS OF POSTTRAUMATIC GROWTH

There are a variety of ways in which the lead article fails accurately to represent the current state of theory and research on posttraumatic growth. We will address several ways in which that article may contribute to misunderstanding, but readers are referred to other sources for more comprehensive discussions (e.g. Calhoun & Tedeschi, 2006; volume 74, issue 5 of the Journal of Consulting and Clinical Psychology; Zoellner & Maercker, 2006a, 2006b).

Understanding the Background

Current views of PTG build upon theories of change that focus on the necessity of reformulation of beliefs about the world in the aftermath of very difficult events for which people are psychologically unprepared (Epstein, 1990; Horowitz, 1986; Janoff-Bulman, 1992; Parkes, 1971). Individuals' beliefs about the world and their place in it comprise a generally unquestioned “assumptive world” (Parkes, 1971). Events that are truly traumatic challenge these beliefs and force a re-examination of this assumptive world so that it can be brought into line with what has been experienced. We have used the terms “rumination”, “cognitive processing”, and “cognitive engagement” to refer to this process of re-examining the beliefs that characterise one's assumptive world in light of an unexpected trauma, and these processes are related to posttraumatic growth.

Posttraumatic Growth—Cognitions are Important, But Not Everything

Another misunderstanding that may arise from the lead article is that posttraumatic growth exclusively involves cognitive processes. There are a variety of important elements, beyond the cognitive domain alone, that must be considered to develop the full understanding of posttraumatic growth (cf. Aldwin & Levenson, 2004; Tedeschi & Calhoun, 2004). It is important, for example, to recognise that the highly emotional aspects of trauma are crucial to the shattering of the assumptive world. New information about the world is then both intellectually and emotionally grasped (Aldwin & Levenson, 2004). Full models of posttraumatic growth include many separate elements, for example, the valence of posttrauma cognitions (Calhoun & Tedeschi, 2006), the importance of distress in setting cognitive engagement in motion (Tedeschi & Calhoun, 2004), the pre-existing personality (Tedeschi & Calhoun, 1996), proximate and distal socio-cultural factors (Pals & McAdams, 2004; Park & Lechner, 2006; Calhoun & Tedeschi, 2006), the experience of social constraint about growth-related disclosures, the life narrative (Neimeyer, 2006), wisdom, etc.

The authors of the lead article imply a simplicity in the current conceptualisations of posttraumatic growth that is simply inaccurate. The question is not action or psychological change. This is a “straw man” dichotomy, and a careful reading of the literature on PTG will indicate that PTG involves internal changes that can set the stage for changed behavior. There is variation in the degree to which personal changes can be noticed by others in terms of actions taken. Sometimes changes in one’s view of self and life may be quite private. Other times, these changes can be public, especially in those persons who have transformed their traumas into efforts to spearhead social change movements (Bloom, 1998; Staub, 2005; Tedeschi, 1999).

Posttraumatic Growth is Not Just an Illusion

Hobfoll et al. do provide a helpful reminder that when individuals attribute highly positive characteristics to themselves, some degree of caution is in order, something we also have suggested (Tedeschi & Calhoun, 1995). Their argument about the illusory nature of PTG goes something like this. Since posttraumatic growth is viewed as positive by those who experience it, then might it not also be a product primarily, as the authors imply, of self-enhancing cognitive biases? This matter has been discussed widely in the literature on posttraumatic growth (Park & Helgeson, 2006; Park & Lechner, 2006; Tedeschi & Calhoun, 1995, 2004; Zoellner & Maercker, 2006b) and the evidence indicates that reports of growth are not correlated with social desirability (Weinrib, Rothrock, Johnsen, & Lutgendorf, 2006; Wild &

Paivio, 2003), respondents may actually underreport growth on quantitative measures (Smith & Cook, 2004), self-reported growth tends to be corroborated by others (Park et al., 1996), people report both growth and negative aspects of experience, but seem to find the growth elements more significant for themselves (Powell, Rosner, Butollo, Tedeschi, & Calhoun, 2003), and the great majority who report positive change from the struggle with major stressful events are *not* engaging in some form of defensive denial (Dohrenwend, Neria, Turner, Turse, Marshall, Lewis-Fernandez, & Koenen, 2004).

Growth and Distress Cannot Coexist?

The authors of the lead article state, incorrectly, that “PTG has been conceptualised as a path for offsetting the negative impact of trauma exposure” (p. 351). *We have not conceptualised PTG as* “a path for offsetting the negative impact of trauma exposure”. The literature on PTG clearly demonstrates the reality that people who experience PTG also recognise the many negative aspects of what has happened. Both positive experiences and negative outcomes remain clear in the experience of people reporting PTG. For example, bereaved parents tend to experience great pain, sometimes for years, even though they can also experience growth from their struggle with great loss. These parents have been struck by how terrible life can be, they have had their illusions about the good life shattered, and yet they can also report PTG (Tedeschi & Calhoun, 2004) without reporting that their pain has ceased. Furthermore, there is evidence that people who have endured such tragedy may actually be *less* prone to illusion (Calhoun & Tedeschi, 2004).

Given that Hobfoll et al. claim that their work partially supports the Zoellner and Maercker (2006a, 2006b) model of PTG, it is unfortunate that they have misread the concept of “Janus-faced” PTG as described by those scholars. In this “Janus-faced” view, the two aspects of PTG, illusory and constructive, appear to be time-related. Nolen-Hoeksema and Davis (2004) have made a similar conjecture. Using the PTGI (Posttraumatic Growth Inventory) (Tedeschi & Calhoun, 1996) as their measure, Zoellner and Maercker (2006a) report the following:

At the beginning of treatment, posttraumatic growth was best predicted by concurrent intrusion level and openness to experience. The prediction of posttraumatic growth by two differing predictors accords to the prediction of the Janus-Face model that assumes two coexisting components in posttraumatic growth, a constructive side (openness) and an illusory, palliative side (distress level). At the end of successful treatment, however, posttraumatic growth was predicted only by a constructive factor of openness to experience and PTSD severity (CAPS score) at the beginning of treatment. The latter finding may point to the fact that those who suffered to a great degree have

simultaneously more potential to grow from the experience. The change of predictor pattern points to the procedural nature of the self-perception of PTG and supports propositions of the Janus-Face model: With growing coping success, the illusory side loses importance over time and the constructive side gains impact over time. (p. 349)

THE THREE SURVEYS CONDUCTED IN ISRAEL— SOME COMMENTS

The numbers of respondents in these studies is indeed impressive and unusual for the social sciences. Regrettably, the absence of methodological detail makes a thorough commentary difficult. But the brief information provided, taken together with the more detailed descriptions of the parts of this work that have been published elsewhere, provides information sufficient for some commentary.

Measuring Resource Gain is Not the Same as Assessing Growth

Resource gain is not the same as posttraumatic growth. Gains in resources such as increases in “time for adequate sleep . . . [and in] free time” (Hobfoll, Tracy, & Galea, 2006b, p. 870) are clearly different from changes such as greater compassion for others and a more meaningful spiritual life (Tedeschi & Calhoun, 1995, 1996). In addition, we do not adopt an exclusive focus on what has been called the *hedonic* view (Ryan & Deci, 2001), that good adjustment involves only greater quality of life, satisfaction, and well-being. PTG is colored by tragedy, and the *eudaemonic* view (Ryan & Deci, 2001) of human flourishing, which emphasises (but is not limited to) meaning and self-realisation, seems more appropriate. This broader and deeper view of “well-being” is clearly compatible with PTG (Calhoun & Tedeschi, 2004; Neimeyer, 2006). The gains involved in PTG go well beyond comforting oneself and simply feeling better or having more free time.

To accurately explore PTG processes and outcomes it is necessary to employ careful measurement and to fully understand the basic concepts. Although *Hobfoll et al. may have designed studies that provide interesting tests of the conservation of resources model of stress*, these surveys do not enable us to draw conclusions about PTG. In the original report of some of the results used in the current interpretation (Hobfoll, Canetti-Nisim, & Johnson, 2006a), the term growth is not even used to describe the measure that was utilised. *Re-labeling resource gain as growth does not make them equivalent*. We should continue to keep separate the notions of resource gain and PTG until some clear evidence exists to link them in some meaningful way.

What Can these Samples Tell Us?

The presence or absence of PTG may depend, for some traumatised people, on their socio-cultural environment post trauma (Calhoun & Tedeschi, 2006). For example, Powell et al. (2003) reported that PTG reported by civilians who had experienced the war in Sarajevo was related to whether they had fled the city or stayed there for the entire conflict. Those who had gotten to more stable environments reported more PTG. The participants in the surveys of Hobfoll and his colleagues appear to be similar to those civilians who stayed in Sarajevo, in that they may have found no relief from the trauma experience. They may therefore not be in a good position to reflect on the aftermath of trauma—for them, there is not yet an aftermath.

Furthermore, if we accept that PTG is the result, in significant measure but not exclusively (Calhoun & Tedeschi, 2006; Tedeschi & Calhoun, 1995, 2004), of a re-examination of core beliefs about the assumptive world, then these samples from Israel may not be ideal. Not only are the respondents still in a dangerous setting, but they may not have experienced a challenge to their assumptive world beliefs. Clearly the events of the Al Aqsa Intifada are very stressful. However, the previous Intifada had ended less than 10 years earlier, and terrorist activities are more common in the area than in many locations. Because many of the adults sampled probably had been exposed to the first Intifada, and perhaps to other terrorist events, their beliefs about the world may include the real possibility of ongoing, intermittent terrorist attacks, and they have daily reminders (e.g. bags routinely searched on entry to businesses) of the possibility of terrorist acts. When such events do indeed occur, no core beliefs about the world are challenged. A clearer test might use, for example, a sample from the 9/11 terrorist attacks in the United States. And, in a sample exposed to that terrorist act, Hobfoll et al. (2006b) did not find any relationship between resource gain and other outcome variables.

Symptoms and Resource Gain

It is important not to judge the relationship of PTSD symptoms to resource gain as indicating that “PTG” has an “impact” on PTSD, especially in a cross-sectional study, and in particular when the result has not been replicated (Hobfoll et al., 2006b). Hobfoll et al., in the lead article (p. 354), fall into this kind of interpretation when they state, “This study added support to our previous findings indicating a negative association of PTG with PTSD diagnosis in models that control for other key factors. To illustrate the level of this negative *impact* [italics added] of PTG it is notable . . .”. We recommend a more comprehensive approach to PTG that recognises various possible trajectories over time and that measures all domains of the PTG, rather than measuring and evaluating the utility of *resource gain*.

Zoellner and Maercker (2006a), for example, reported that the new possibilities and personal strength domains of the PTGI were most consistently associated with reductions in PTSD severity. And, as we have previously said,

We might expect different pathways to growth based on the various factors in the PTGI, and different pathways based on person variables. During the process of the development of PTG, we may see different relationships between PTG reports and adjustment at different times in the aftermath of trauma. For example, perhaps reports of PTG immediately post trauma may correlate with poorer adjustment later. Similarly, an initial “illusory growth” may later relate to “constructive growth”. (Calhoun & Tedeschi, 2004, p. 101)

IN SUMMARY

To briefly summarise our main points about the Hobfoll et al. contentions regarding resource gain portrayed as “posttraumatic growth”:

- growth should be assessed as such, with measures developed specifically to assess this construct;
- growth follows a challenge to and re-examination of core beliefs, not every bad experience;
- there are many factors that influence growth and that influence the role growth may play following trauma;
- growth and distress can, and do, coexist during stages of the process without indicating that growth is unimportant or negative;
- growth can follow various trajectories, including those where it may at first serve one function (e.g. comfort), but later involve personally transformative changes;
- measurement of resource gain and evaluations of its utility should be unambiguously treated as such.

We hope these comments provide a better understanding of the complex processes involved in posttraumatic growth.

REFERENCES

- Affleck, G., & Tennen, H. (1996). Construing benefits from adversity: Adaptational significance and dispositional underpinnings. *Journal of Personality, 64*, 899–922.
- Affleck, G., Tennen, H., Croog, S., & Levine, S. (1987). Causal attribution, perceived benefits, and morbidity following a heart attack: An eight year study. *Journal of Consulting and Clinical Psychology, 55*, 29–35.
- Aldwin, C.M., & Levenson, M.R. (2004). Posttraumatic growth: A developmental perspective. *Psychological Inquiry, 15*, 19–21.
- Bloom, S.L. (1998). By the crowd they have been broken, by the crowd they shall be healed: The social transformation of trauma. In R.G. Tedeschi, C.L. Park, &

- L.G. Calhoun (Eds.), *Posttraumatic growth: Positive changes in the aftermath of crisis* (pp. 179–213). Mahwah, NJ: Lawrence Erlbaum.
- Calhoun, L.G., & Tedeschi, R.G. (1998). Posttraumatic growth: Future directions. In R.G. Tedeschi, C.L. Park, & L.G. Calhoun (Eds.), *Posttraumatic growth: Positive change in the aftermath of crisis* (pp. 215–238). Mahwah, NJ: Lawrence Erlbaum Associates.
- Calhoun, L.G., & Tedeschi, R.G. (2004). The foundations of posttraumatic growth: New considerations. *Psychological Inquiry*, *15*, 93–102.
- Calhoun, L.G., & Tedeschi, R.G. (2006). The foundations of posttraumatic growth: An expanded framework. In L.G. Calhoun & R.G. Tedeschi (Eds.), *Handbook of posttraumatic growth* (pp. 1–23). Mahwah, NJ: Lawrence Erlbaum Associates.
- Caplan, G. (1964). *Principles of preventive psychiatry*. New York: Basic Books.
- Cella, D.F., & Tross, S. (1986). Psychological adjustment to survival from Hodgkin's disease. *Journal of Consulting and Clinical Psychology*, *54*, 616–622.
- Dohrenwend, B.S. (1978). Social stress and community psychology. *American Journal of Community Psychology*, *6*, 1–15.
- Dohrenwend, B.P., Neria, Y., Turner, J.B., Turse, N., Marshall, R., Lewis-Fernandez, R., & Koenen, K.C. (2004). Positive tertiary appraisals and posttraumatic stress disorder in US male veterans of the war in Vietnam: The roles of positive affirmation, positive reformulation, and defensive denial. *Journal of Consulting and Clinical Psychology*, *72*, 417–433.
- Epstein, S. (1990). The self-concept, the traumatic neurosis, and the structure of personality. In D.J. Ozer, J.M. Healy, & A.J. Stewart (Eds.), *Perspectives in personality*, Vol. 3 (pp. 63–98). London: Jessica Kingsley.
- Frankl, V.E. (1963). *Man's search for meaning—An introduction to logotherapy*. New York: Washington Square Press.
- Frankl, V.E. (1965). *The doctor and the soul—From psychotherapy to logotherapy*. New York: Bantam Books. (Original work published 1946.)
- Harvey, J.H., Barnett, K., & Overstreet, A. (2004). Trauma growth and other outcomes attendant to loss. *Psychological Inquiry*, *15*, 26–29.
- Hobfoll, S.E., Canetti-Nisim, D., & Johnson, R.J. (2006a). Exposure to terrorism, stress-related mental health symptoms, and defensive coping among Jews and Arabs in Israel. *Journal of Consulting and Clinical Psychology*, *74*, 207–218.
- Hobfoll, S.E., Tracy, M., & Galea, S. (2006b). The impact of resource loss and traumatic growth on probable PTSD and depression following terrorist attacks. *Journal of Traumatic Stress*, *19*, 867–878.
- Horowitz, M.J. (1986). *Stress response syndromes* (2nd edn.). Northvale, NJ: Jason Aronson.
- Janoff-Bulman, R. (1992). *Shattered assumptions*. New York: The Free Press.
- Janoff-Bulman, R. (2006). Schema-change perspectives on posttraumatic growth. In L.G. Calhoun & R.G. Tedeschi (Eds.), *Handbook of posttraumatic growth* (pp. 81–99). Mahwah, NJ: Lawrence Erlbaum Associates.
- Janoff-Bulman, R., & Frantz, C.M. (1997). The impact of trauma on meaning: From meaningless world to meaningful life. In M. Power & C. Brewin (Eds.), *The transformation of meaning in psychological therapies* (pp. 91–106). London: Wiley.
- Joseph, S., & Linley, P.A. (Eds.) (in press). *Trauma, recovery, and growth: Positive psychological perspectives on posttraumatic stress*. Hoboken, NJ: Wiley.

- Linley, P.A., & Joseph, S. (2004). Positive change following trauma and adversity: A review. *Journal of Traumatic Stress, 17*, 11–21.
- Maslow, A.H. (1954). *Motivation and personality*. New York: Harper.
- Neimeyer, R. (2001). *Meaning reconstruction and the experience of loss*. Washington, DC: American Psychological Association.
- Neimeyer, R. (2006). Re-storying loss: Fostering growth in the posttraumatic narrative. In L.G. Calhoun & R.G. Tedeschi (Eds.), *Handbook of posttraumatic growth* (pp. 68–80). Mahwah, NJ: Lawrence Erlbaum Associates.
- Nolen-Hoeksema, S., & Davis, C.G. (2004). Theoretical and methodological issues in the assessment and interpretation of posttraumatic growth. *Psychological Inquiry, 15*, 60–64.
- O'Leary, V.E., & Ickovics, J.R. (1995). Resilience and thriving in response to challenge: An opportunity for a paradigm shift in women's health. *Women's Health: Research on Gender, Behavior, and Policy, 1*, 121–142.
- Pals, J.L., & McAdams, D.P. (2004). The transformed self: A narrative understanding of posttraumatic growth. *Psychological Inquiry, 15*, 65–69.
- Park, C.L., Cohen, L., & Murch, R. (1996). Assessment and prediction of stress-related growth. *Journal of Personality, 64*, 645–658.
- Park, C.L., & Helgeson, V.S. (2006). Introduction to the special section: Growth following highly stressful life events—current status and future directions. *Journal of Consulting and Clinical Psychology, 74*, 791–796.
- Park, C.L., & Lechner, S. (2006). Measurement issues in assessing growth following stressful life experiences. In L.G. Calhoun & R.G. Tedeschi (Eds.), *Handbook of posttraumatic growth* (pp. 47–67). Mahwah, NJ: Lawrence Erlbaum Associates.
- Parkes, C.M. (1971). Psycho-social transitions: A field for study. *Social Science and Medicine, 5*, 101–115.
- Powell, S., Rosner, R., Butollo, W., Tedeschi, R.G., & Calhoun, L.G. (2003). Posttraumatic growth after war: A study with former refugees and displaced people in Sarajevo. *Journal of Clinical Psychology, 59*, 71–83.
- Ryan, R.M., & Deci, E.L. (2001). On happiness and human potentials: A review of research on hedonic and eudaemonic well-being. *Annual Review of Psychology, 52*, 141–166.
- Schaefer, J.A., & Moos, R.H. (1992). Life crisis and personal growth. In B.N. Carpenter (Ed.), *Personal coping: Theory, research, and application* (pp. 149–170). Westport, CT: Praeger.
- Shaw, A., Joseph, S., & Linley, P.A. (2005). Religion, spirituality, and posttraumatic growth: A systematic review. *Mental Health, Religion, and Culture, 8*, 1–11.
- Smith, S.G., & Cook, S.L. (2004). Are reports of posttraumatic growth positively biased? *Journal of Traumatic Stress, 17*, 353–358.
- Staub, E. (2005). The roots of goodness: The fulfillment of basic human needs and the development of caring, helping and nonaggression, inclusive caring, moral courage, active bystandership, and altruism born of suffering. In G. Carlo & C. Edwards (Eds.), *Nebraska Symposium on Motivation: Vol. 51. Moral motivation through the life span: Theory, research application*. Lincoln, NE: University of Nebraska Press.
- Tedeschi, R.G. (1999). Violence transformed: Posttraumatic growth in survivors and their societies. *Aggression and Violent Behavior: A Review Journal, 4*, 319–341.

- Tedeschi, R.G., & Calhoun, L.G. (1995). *Trauma and transformation: Growing in the aftermath of suffering*. Thousand Oaks, CA: Sage.
- Tedeschi, R.G., & Calhoun, L.G. (1996). The Posttraumatic Growth Inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress, 9*(3), 455–471.
- Tedeschi, R.G., & Calhoun, L.G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry, 15*, 1–18.
- Weinrib, A.A., Rothrock, N.E., Johnsen, E.L., & Lutgendorf, S.K. (2006). The assessment and validity of stress-related growth in a community sample. *Journal of Consulting and Clinical Psychology, 74*, 851–858.
- Wild, N., & Paivio, S. (2003). Psychological adjustment, coping, and emotion regulation as predictors of posttraumatic growth. *Journal of Aggression, Maltreatment and Trauma, 8*(4), 97–122.
- Yalom, I. (1980). *Existential therapy*. New York: Basic Books.
- Zoellner, T., & Maercker, A. (2006a). Posttraumatic growth and psychotherapy. In L.G. Calhoun & R.G. Tedeschi (Eds.), *Handbook of posttraumatic growth* (pp. 334–354). Mahwah, NJ: Lawrence Erlbaum Associates.
- Zoellner, T., & Maercker, A. (2006b). Posttraumatic growth in clinical psychology—A critical review and introduction of a two component model. *Clinical Psychology Review, 26*, 626–653.

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