Comprehensive Guide to Post-Traumatic Stress Disorder
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Vicarious or Secondary Posttraumatic Growth: How Are Positive Changes Transmitted to Significant Others After Experiencing a Traumatic Event?

Conceptual Discussion and Clarification. Predictors of Posttraumatic Growth in Significant Others. Relational Posttraumatic Growth: Therapeutic Value?

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Abstract

Serious and life-threatening illnesses like cancer produce stress symptoms in patients. However, the disease also has an impact on significant others in the patient's life. This is now recognized in the literature, and alongside research on survivors' growth from adversity, increasing attention is being paid to growth among significant others. This chapter adds to this body of work by reviewing the evidence regarding the transmission of growth in the patient to his or her significant others. The review suggests that growth in significant others is reported as being either vicarious or secondary. Couple factors such as gender or dyadic role seem to be relevant predictors of posttraumatic growth among spouses of cancer patients. The chapter concludes by discussing a possible rationale for this phenomenon.

List of Abbreviations

DSM-IV	Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition
PTG	Posttraumatic growth
PTGI	Posttraumatic growth inventory
PTSD	Post-traumatic stress disorder
STS	Secondary traumatic stress
VT	Vicarious trauma

Introduction

Serious illnesses like cancer constitute a potentially traumatic experience that can produce high levels of distress and posttraumatic stress symptoms among sufferers (Kangas et al. 2007). However, not until the publication of DSM-IV (APA 1994) was cancer explicitly recognized as a stressor capable of inducing a post-traumatic stress disorder (PTSD). A further development of DSM-IV was that the effects of a traumatic event were broadened to include those individuals who, while not being directly affected by it, have nonetheless witnessed it in some way. Thus, it is recognized that cancer and other adverse events

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may constitute a traumatic experience not only for patients but also for those significant others who share the illness process with them. Over the last decade or so, a growing number of studies have documented the presence of these pernicious psychological effects among the significant others of cancer patients, especially their partners (Hodges et al. 2005) or in parents of children or teenagers with cancer (Landolt et al. 2003; Ozono et al. 2007; Pelcovitz et al. 1996).

It is also known, however, that in addition to the stress and distress associated with the cancer diagnosis, the illness may also generate positive personal changes in survivors (Cordova et al. 2001; Sawyer et al. 2010; Sumalla et al. 2009). In the literature, these positive changes are referred to as posttraumatic growth (PTG) (Tedeschi and Calhoun 1996) or benefit finding, among other terms. The most widely used tool for assessing posttraumatic growth is the Posttraumatic Growth Inventory (PTGI) (Tedeschi and Calhoun 1996). The PTGI assesses five dimensions of change after a traumatic event: (1) *Relating to Others* assesses the feeling of being more connected and closer to others in the face of difficulties, the increased sense of compassion toward fellow sufferers, and the desire to be helped and to use social support; (2) *New Possibilities* refers to a change in one's interests or activities, as well as new life projects (e.g., volunteering); (3) *Personal Strength* assesses whether the person feels that he or she has survived the worst, thus confirming his or her strength, a feeling of self-security, and the ability to overcome difficulties; (4) *Spiritual Change* covers spiritual meaning and benefit finding, as well as the person's existential plan; and (5) *Appreciation for Life* refers to a more relaxed attitude in life, involving lifestyle changes (e.g., healthy habits) or a change in life priorities (e.g., giving more value to little things).

Positive life changes of this kind are common among cancer survivors, with research suggesting that they are reported by 50–90 % of breast cancer patients, 76 % of testicular cancer patients, and 60–95 % of child or adolescent cancer survivors (Cordova 2008). Although, as noted earlier, the conceptualization of trauma was broadened to include significant others, the PTG literature has mostly focused on survivors, that is, those directly affected by the traumatic event. However, research on patients' significant others and caregivers has shown that they too may experience positive psychological change (Cadell 2007; Kim et al. 2007; Manne et al. 2004; Moore et al. 2011; Ochoa et al. 2013; Weiss 2004b; Zwahlen et al. 2010), thus confirming that the effects of trauma and PTG after a disease are not only limited to survivors but also extend to those who accompany or help them or who simply witness their suffering. Research on other clinical conditions, such as multiple sclerosis, has also documented high levels of PTG among both patients (92.7 %) and their partners (95.8 %), suggesting that the chronic nature of an illness may play a role in this growth (Ackroyd et al. 2011).

Given these findings regarding PTG among significant others, it is important to explore whether the growth they experience is related to that of their relative, the survivor, and if this is the case, how the survivor's PTG might be transmitted to his or her significant others. Studies have shown a significant correlation between the PTG of cancer survivors and that of their significant others (Manne et al. 2004; Moore et al. 2011; Thornton and Perez 2006; Zwahlen et al. 2010), although the transmission mechanisms are unknown. Research on stressful and traumatic effects among significant others began to take off in the 1990s, when attempts were made to define the range of stress syndromes related to the caregiving role. Constructs such as compassion fatigue or secondary traumatic stress (Figley 1995) or vicarious trauma (McCann and Pearlman 1990) reflected the deleterious effects of trauma on significant others or professional caregivers, respectively. However, few studies have sought to develop a conceptual framework for understanding the effects of trauma on survivors' significant others (Figley 1995), and almost no work has been conducted on the question of their PTG (Arnold 2005). Indeed, most of the conceptual developments in this area concern the pernicious effects on physicians and other professional caregivers who care for people after a traumatic event (McCann and Pearlman 1990), it being assumed that these concepts can simply be transferred to the issue of growth, as if trauma and growth are equally

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transmissible. Two of the concepts that have been used to describe the effects on significant others have received special attention: secondary traumatic stress (STS) and vicarious traumatization (VT). These two concepts, which emerged practically in parallel to explain similar phenomena, show a considerable overlap, and in what follows we will examine and adapt their definition so as to make clear their relevance to the issue of PTG (see Ochoa et al. 2013 for a discussion). STS (Figley 1995) emerges directly associated with and is focused on people close to the victim of a traumatic event, especially survivors of natural disasters or wars. Figley (1995) explains this syndrome as a response to the knowledge of a traumatic event that is produced in a significant other, stating that it may combine PTSD and symptoms of burnout. He also asserts that the secondary trauma occurs when stress seems to infect the system of significant others after initially affecting just one of its members. Furthermore, he considers that STS symptoms are practically identical to those of PTSD, suggesting that for many significant others, the traumatic event suffered by their relative is, for them, a primary trauma. In terms of growth, this raises the question as to whether PTG in significant others is independent and separate from that experienced by their relative. In other words, is the PTG experienced by significant others similar to or even more profound than that of survivors, and might it have different characteristics (Ochoa et al. 2013)?

The second construct, VT, emerged from research analyzing the negative effect on therapists of their patients' trauma (McCann and Pearlman 1990). These authors suggest that VT involves the possible alteration of the therapist's cognitive schemas (feelings, personal relationships, and life philosophy, among others) as a result of listening to traumatic client material. The positive alteration of these cognitive schemas has been termed vicarious PTG, defined as the psychological growth that results from contact with the trauma of others (Arnold 2005). This concept includes relevant elements for the study of PTG in significant others. Unlike secondary PTG, in which growth is produced in the significant other through "infection" of the traumatic event's effect, vicarious PTG relies on the observational, imitative, and contagious learning that the significant other derives from the patient's growth.

Relational PTG in Different Contexts

Relational PTG in Close Relationships

PTG in Fathers and Mothers of Children and Teenagers with Cancer

A high lifetime incidence of PTSD symptoms (50 %) has been observed among parents of children diagnosed with cancer, with 25 % meeting the diagnostic criteria for PTSD (Pelcovitz et al. 1996). More recent studies have reported rates of around 20 % (Landolt et al. 2003; Ozono et al. 2007). However, research has also shown that the indirect experience of a relative's illness can lead to PTG, both when some sort of conclusion is reached (i.e., recovery or death) and when the illness remains (Davis et al. 2007; Loiselle et al. 2011; Mosher et al. 2006; Wong et al. 2009). Similarly, positive psychological changes have been observed in parents of critically ill children (Colville et al. 2009) and especially in parents of children with cancer (Barakat et al. 2010; Hungerbuehler et al. 2011). What has not been studied in these populations is the possible association between the PTG of the child with cancer and that experienced by his or her parents or the relationship between the respective PTG of the father and mother. There is evidence, however, regarding the traumatic effect (PTSD symptoms) that such experiences have on parents. Indeed, parents (and especially the mother) seem to have a greater risk of reporting high posttraumatic stress scores than does their cancer-surviving child. Moreover, the prevalence of PTSD symptoms among mothers can be higher than that of adult survivors of cancer, suggesting that the experience of having a child with cancer is more traumatic than having directly experienced the illness (Kissane et al. 2003; Smith et al. 1999). Studies that have examined the growth process of children,

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mothers, and fathers separately have yielded a number of interesting findings. Mothers experience more psychological distress than do fathers 1 month after their child's cancer diagnosis, and 3 years later this distress is associated with higher levels of PTG in mothers but not in fathers (Hungerbuehler et al. 2011). Since it is unclear whether this PTG in mothers is linked to that of the child or father, any hypothesis regarding its vicarious or secondary nature remains speculative, although some studies suggest that mothers of a child with cancer play an essential role in relation to the development of posttraumatic symptoms in the child (Pelcovitz et al. 1996). Given that emotional distress in mothers, but not in fathers, appears to predict their subsequent PTG, which is greater than that of fathers (Barakat et al. 2006; Hungerbuehler et al. 2011), and also that mothers appear to play a mediator role in relation to their child's PTSD symptoms, one can speculate that the child's illness has a greater potential to produce PTSD – and presumably PTG – in mothers than in fathers.

This phenomenon has also been studied in fathers and mothers who experienced the premature death of their child. Ruf et al. (2009) found that the degree of grief-related concordance between spouses had an influence on their suffering and PTG. As in mothers of children with cancer, bereaved mothers generally reported more growth than did fathers 2–6 years after the loss of the baby. However, in more concordant couples, both members were more capable of deriving PTG from the trauma than was the case among discordant couples, who were more likely to report low satisfaction with the relationship or even to separate.

Studies that have examined relational variables show that flexibility and perceived family cohesion are negatively correlated with PTSD symptoms in teenagers with cancer (Pelcovitz et al. 1996) and also that the quality of family relationships predicts the joint parental PTG (Hungerbuehler et al. 2011). Thus, relational and family variables contribute to processes of vicarious learning and support, which play an essential role in relation to the PTSD and PTG experienced by family members. However, the mechanisms underlying these processes have yet to be clarified.

In sum, although further research is required on the mechanisms of growth among parents of children with cancer, the available data suggest a possible effect of role (mother vs. father) and/or gender. Mothers may, to a greater extent than fathers, derive secondary PTG from their child's cancer, as has been observed among the partners of men with cancer. The question of whether the PTG experienced by fathers is a vicarious phenomenon linked to the PTG of their child, their spouse, or both remains to be elucidated.

PTG in Couples

Implicit to the changes defined by the five dimensions of the PTGI (Tedeschi and Calhoun 1996) is a growth in the quality of interpersonal relationships. Specifically, these changes involve the strengthening of bonds with other people and an increased need to share and express feelings with family members or friends. In the field of cancer, many studies have found that patients commonly report positive changes in personal relationships (Petrie et al. 1999; Sears et al. 2003), although the potential for mutual growth and the mechanism behind relational PTG have yet to be fully examined (Zwahlen et al. 2010).

PTG in Survivors and Their Partners: A Comparison

Research shows that both cancer survivors and their partners report PTG and also that their PTG scores are significantly correlated (Manne et al. 2004; Moore et al. 2011; Thornton and Perez 2006; Zwahlen et al. 2010). One recent study found that the largest proportion of variability in relational PTG in cancer is explained by the couple dyad, followed by the role of each member of the couple (survivor vs. partner) and gender (Zwahlen et al. 2010). In terms of role, the majority of studies show that survivors score higher than their partners on measures of PTG (Manne et al. 2004; Moore et al. 2011; Thornton and Perez 2006; Zwahlen et al. 2010), although the scores of men with prostate cancer were similar to those of their partners (Thornton and Perez 2006), and the female partners of men with head and neck cancer reported

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greater PTG than did the men themselves (Ruf et al. 2009). Thus, the results differ slightly depending on the survivor's gender. If it is the woman who is suffering from cancer, then she is likely to score higher on PTG, whereas this is not necessarily the case for male patients. Additionally, it seems that the PTG of female patients is not only greater than that of males but is also a stronger determinant of their partner's PTG. One study of women with breast cancer found that their PTG predicted the PTG of their partner (Weiss 2004a), a relationship that has also been observed in other clinical samples, such as multiple sclerosis patients and their partners (Ackroyd et al. 2011; Pakenham 2005). However, studies of men with prostate cancer (Thornton and Perez 2006), with head and neck cancer (Ruf et al. 2009), and with other types of cancer (Zwahlen et al. 2010) have found their PTG scores to be similar to or lower than those of their female partners; furthermore, although the two partners' PTG appeared to be closely related, the dimensions of growth involved were not identical, suggesting a growth profile that differed by gender. This was illustrated, for instance, in a qualitative study by Ruf et al. (2009), who found that while women placed greater emphasis on improving the marital relationship, reporting increased intimacy and communication, male patients described positive change in the context of family relationships and friendships, without referring to changes in the marital area. Bellizzi et al. (2010) suggested that women's relationships tend to be of central importance in their lives and this may explain the critical role that relationships with others play in terms of predicting women's PTG. Overall, these results suggest that there may be a differential mechanism of PTG "transmission" to the patient's partner that may differ depending on gender. Men's growth when their partner has cancer is less, but it is predicted by and depends more on their female partner's growth, which suggests vicarious learning or transmission. By contrast, women's growth when their partner has cancer is similar to or greater than that of the man, and it may emerge in different areas to that of their spouse. This suggests that while there is a relationship between the PTG of men and women, women's PTG is not restricted to that of their male partner and may, in fact, be an example of secondary growth in response to the man's illness. Research on couples in other contexts, such as the wives of Vietnam veterans (McCormack et al. 2010), has similarly shown that gender has an influence on PTG. Specifically, these women were found to be capable of PTG and recognized that they had managed to reinterpret a difficult period of their lives, resulting in better relationships, greater self-appreciation, and a feeling of being stronger than before. However, the "time" factor also seemed to be crucial in the development of these women's PTG.

Predictors of PTG in Cancer Survivors and Their Partners

Another good way of examining the extent to which the PTG of cancer survivors' partners is vicarious or secondary is to assess potential predictors of PTG in both parties. If survivors and their partners share similar predictors of PTG, then the process of positive change in the couple relationship could be regarded as vicarious, whereas a difference in PTG predictors would suggest a secondary process of growth.

In one study in which practically the same PTG predictors were assessed in survivors of breast cancer and their partners, only age was found to be common factor for both (Manne et al. 2004). In the partners of breast cancer survivors, growth was associated with intrusive thinking, positive reframing, and emotional processing, none of which was associated with growth among survivors (Manne et al. 2004). Other studies with breast cancer survivors have identified different predictors (Weiss 2004a, b), although the same predictors were not examined in both parties. In these studies, the PTG of husbands was predicted by the intensity of the marital commitment, greater PTG in their wife, and reporting a traumatic stressor (Weiss 2004a). However, in breast cancer survivors, PTG was predicted by educational level and by having contact with a role model of PTG during their illness (Weiss 2004b). Similar results have been reported in studies with prostate cancer survivors, where practically no PTG predictors were shared by men and women, the exception being positive reframing, which predicted growth in both (Thornton and Perez 2006). In other clinical samples, such as the spouses of myocardial infarct patients, environmental

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variables such as the social support received from family and friends have been found to promote greater PTG in spouses (Senol-Durak and Ayvasik 2010). This relationship needs to be examined in cancer patients, given the chronic nature of both diseases. In sum, although there is a correlation between the PTG of survivors and their partners, the only predictors common to both appear to be positive reframing and age. This lack of common predictors suggests that growth in couples may be secondary, because they seem to share very few ways of coping or support. The impact of cancer as a stressor would therefore appear to depend on the person's role in the couple (survivor vs. partner), which in turn implies differential processes (e.g., coping styles) that result in similar or different positive life changes (growth). Age, that is, being a young cancer patient or having a young partner with cancer, may favor a common or shared PTG, probably because, for both parties, cancer would go beyond their personal or social expectations regarding illness at this stage in life and also because younger people are likely to have a greater capacity and willingness to change. In this regard, other shared mediator variables such as positive reframing, or the fact that the PTG of breast cancer survivors predicts their husbands' PTG, would suggest that there must be vicarious processes of modeling that influence the PTG of both parties. It is especially interesting to note that a good predictor of PTG in breast cancer patients is having a positive role model who has experienced a similar trauma and who perceives benefits from it, whereas for husbands, their positive role model is their wife with breast cancer (Weiss 2004a, b). These results seem to indicate a gender effect that, at least in women with breast cancer, would mean that women would derive vicarious PTG from other survivors (not from their husbands) and, in addition, that they would more easily transmit their own PTG to their husbands, resulting in vicarious PTG for them.

PTG Dimensions Shared by Couple Members

Another important aspect to consider when examining PTG in couples is the possibility that the same dimensions may be involved. In cancer patients in general, strong correlations have been observed between patients and partners on the dimensions of PTG (Moore et al. 2011; Zwahlen et al. 2010), although among caregivers of advanced cancer survivors these significant correlations have only been found on the Spirituality and Personal Strength subscales of the PTGI (Moore et al. 2011). Thus, it appears that in the case of advanced cancer, spiritual and existential aspects emerge in both parties and that both patient and partner maintain a fighting spirit. Overall, these results suggest that the severity of cancer is another factor linked to differential growth (in terms of PTGI dimensions) between survivors and their significant others. The significant correlations found among heterogeneous samples of cancer survivors and their significant others reinforce the idea of vicarious PTG in cancer survivors' relationships, since the changes they report reflect a shared pattern of growth. Thus, one would not expect to observe a differential or secondary PTG when analyzing these heterogeneous samples. By contrast, the caregivers of advanced cancer survivors do show a differential pattern of growth to that of the patient, and this would be more indicative of secondary PTG. Studies show that advanced cancer patients score lower on measures of PTG than do other cancer patients (Mystakidou et al. 2007). Lechner and Zakowski (2003) also found that patients with a diagnosis of stage II or stage III cancer reported higher levels of PTG than did those who were diagnosed with stage I or IV disease. The authors suggested that an associated feature of intermediate-stage cancer is ambiguity and uncertainty about the future and that this may drive patients to search for meaning and growth. In advanced cancer, by contrast, the impossibility of denying the negative consequences of their illness and the sense that death is perhaps near may limit patients' scope for growth and also affect its possible transmission to significant others. There are two possible explanations for these results: (1) the processes through which the significant other learns from, identifies with, and derives vicarious growth through contact with the patient may be heightened when the prognosis is more positive and it is possible to imagine a future together, and (2) as the end of life approaches in the context of advanced cancer, PTG may have existential connotations and limits that are difficult to transmit to a

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healthy person in a purely vicarious way, whereas these aspects may more readily constitute a secondary traumatic event (e.g., anticipatory grief) that is capable of generating secondary PTG in close relatives or friends.

Mention should also be made of the study by Zwahlen et al. (2010), who explored the way in which PTG may be influenced by gender, role, and the couple dyad. All three factors were found to make a significant contribution to the variability in scores on most PTGI subscales (the exception being gender, which did not influence the New Possibilities and Spiritual Change scales). The most influential of the three factors was the couple dyad, which explained the variability in the total PTGI score and in scores on all its subscales, indicating that the couple bond is a more important factor than gender or role (i.e., patient or partner). The second most influential factor was the person's role in the couple. Thus, whereas gender seems to have more influence than does role on negative psychological experiences (Hagedoorn et al. 2008), the couple dyad and role have a stronger and more consistent influence when it comes to positive psychological experiences (Zwahlen et al. 2010). The fact that role and the dyad appear to explain the variability between couples on most of the PTGI scales suggests that PTG is more related to having directly experienced cancer (survivor) and to the particular relationship that each couple has (dyad), which, in turn, would support the idea that the partner's PTG may be dependent on that of the survivor and on the special bond they maintain, in a process of PTG that is vicarious rather than secondary.

Confirming Growth in Couples: Relational PTG as an Indicator of Real PTG

One of the most intense debates in relation to PTG, and especially as regards cancer patients, concerns the question of whether these positive changes after illness are real or an illusion resulting from a self-enhancing bias (Sumalla et al. 2009). Several criteria have been proposed in an attempt to lend consistency to self-reports of PTG, with one of the most widely used being the interpersonal criterion. Here, the fact that partners of cancer survivors also report PTG, and that this PTG is associated with that reported by survivors, would constitute evidence of the "real" nature of PTG. Some studies have gone further and have explored the extent to which significant others confirm or agree with the level of PTG reported by survivors. The findings suggest that significant others corroborate survivors' PTG (Moore et al. 2011; Shakespeare-Finch and Enders 2008). For instance, a study of advanced cancer patients and their caregivers by Moore et al. (2011) found high agreement between survivors' self-reported PTG and caregiver ratings of survivors' PTG. This agreement was observed on practically all the PTGI subscales, including Personal Relationships, Spiritual Change, Personal Strengths, and New Possibilities, as well as for the total PTGI score. Only on the subscales Appreciation for Life and New Possibilities were the levels of agreement not significant. More interestingly, caregivers' own PTG was significantly correlated with their ratings of patients' PTG on all PTGI subscales and for the total PTGI score (Moore et al. 2011). The authors suggest that caregivers may judge patients' PTG through their own experience. However, given the correlational nature of the study, the opposite interpretation could equally be made, that is, caregivers may take the patient's PTG as a model for their own, given that their own PTG and the PTG they perceive in the survivor are highly related. From this perspective, caregiver's PTG is more related to their evaluation of the patient's PTG than to the patient's own self-assessment. Hence, the PTG of significant others would be produced through a vicarious mechanism in which the survivor's PTG would guide that of the significant other, although primarily as a result of the significant other's rating of the survivor's PTG rather than the latter's own self-report. Another important prospective study that assessed perceived closeness in couples 1 year after a diagnosis of nonmetastatic breast cancer also found high overall agreement on this aspect (Dorval et al. 2005). In this study, in which couple members were interviewed individually, the authors identified four modifiable spouse-patient interactions shortly after diagnosis that predicted greater closeness in the couple 1 year later: (1) husbands describing their wife as their confidant, (2) obtaining advice from her within 2 weeks of the diagnosis about coping with breast cancer,

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(3) accompanying her to surgery, and (4) the patient reporting more affection from her husband 3 months after diagnosis (Dorval et al. 2005). This study shows that growth follows a vicarious process, since the four interactions that predict mutual growth influence the husband's capacity to become involved and to learn how to cope with his wife's illness.

Although the corroboration and agreement observed among PTG ratings in close relationships are interpreted as evidence that these positive changes are real, some studies show that memories of change at an interpersonal level are far from being precise (Tennen and Affleck 2009), in the same way that studies of personal change in cancer have suggested that memories of this may be subject to bias (Sumalla et al. 2009). Furthermore, other authors have shown that agreement in couples regarding positive changes does not necessarily mean that real change has occurred (Kirkpatrick and Hazan 1994). Rather, it seems that couples may rewrite their shared history, highlighting in their memories positive aspects of their emotional life that were not previously recounted.

However, Tennen and Affleck (2009) cite an study (Wirtz et al. 2003) in which remembered experience was a better predictor of the desire to repeat that experience than was current experience. Although further research is required, it seems that when it comes to predicting well-being or behaviors associated with it, the positive nature of memories is more important than is their veracity or accuracy. In line with this hypothesis, interventions focused on retrieving positive autobiographical episodes have been used in order to facilitate positive life changes in cancer (Ochoa et al. 2010).

Relational PTG Across Cultures

The notions of stress, trauma, and PTG are all derived from studies carried out in Western cultures, and the models developed to explain them have focused on discrete traumatic events experienced by the victim (Sumalla et al. 2009; Vázquez et al. 2014) rather than by significant others. Culture shapes our understanding of trauma and growth, and this is also the case in the relational context. An example of the nonuniversality of traumatic stressors can be found in the research by Scheper-Hughes (1992), who explored the apparently cold reaction of Brazilian mothers living in shanty towns (*favelas*) in relation to the death of their children. Each newborn is treated with caution and an apparent lack of "empathy," which improves over subsequent months if the child survives. The author of this study concluded that husbands, partners, and children are considered to be temporary and replaceable commitments. In addition, a child's death is not seen as a traumatic event because he or she is assured of happiness in the next world. Childhood mortality is common in the Brazilian *favelas*, and, therefore, the culture of the people who live there includes social models for understanding the death of a loved one from a nontraumatic and adaptive perspective. In a context such as this, it makes little sense to explore the victim's growth or the vicarious growth of her partner (Vazquez et al. 2014).

An example of how culture shapes what is understood as growth can be found when comparing Hispanic and American culture. Hispanic culture places greater importance on social and family responsibilities than does American culture, which is more individualistic (Weiss and Berger 2010). Taku (2011) offers an interesting perspective on how these cultural differences may affect growth and also takes into account the personal dimension. She distinguishes between "commonly defined PTG" and "individually defined PTG." Thus, for people who naturally express their emotions or for whom emotional expression has no inherent value, all those changes associated with the idea of emotional communication indicative of PTG are barely regarded as significant. Conversely, for those individuals who find it hard to be assertive. a small shift toward greater expressivity may be experienced as an important change that would produce a sense of growth following an adverse event. Thus, the sensation of positive change, including its relational aspects, would be determined by the meaning that each individual gives to that change, in addition to the influence exerted by that individual's cultural context. In a qualitative study of aspects of identity carried out in three focus groups involving women diagnosed with breast cancer

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(Ochoa 2012), it was found that these women did not identify themselves as "survivors," with the following reasons being put forward: (1) this word lends too much severity to the illness; (2) it made them appear exceptional, whereas their own view was that they would not have pulled through without the support of their significant others; and (3) the threat to their physical and psychological well-being was experienced as ongoing, not as a discrete event. These results suggest that the notion of "overcoming" illness which underpins the concepts of survivor and PTG is better suited to individualistic cultures such as that of North America (Splevins et al. 2010) rather than to more collectivist cultures in which growth is understood more in relational and social terms. Interestingly, Bellizzi and colleagues (2010) found that African Americans reported more growth than did White Americans. In a similar vein, a study carried out with a Spanish sample of spouses of women with breast cancer (Ochoa et al. 2010) found that mean PTG scores (50.2) were higher than those obtained in comparable American samples (39.7) (Manne et al. 2004). These results suggest that collectivist cultures are more likely to engage in processes of vicarious rather than secondary growth, whereas the opposite would be true for individualist cultures.

Final Comments

In general, growth processes in the significant others of cancer patients are better explained by a vicarious mechanism. This is due to the fact that it is the survivor who directly experiences the illness threat and who, therefore, reports more growth and has more influence on the significant other. This idea is supported by the fact that factors such as the dyad, marital engagement, and perceived closeness have an influence on PTG in couples, while the quality of family relationships predicts PTG in parents of children and teenagers with cancer.

However, the research findings regarding the influence of gender, role, and illness severity on the PTG of significant others suggest that they may, at times, experience secondary rather than vicarious growth. In terms of gender, although partners of women with cancer (especially breast cancer) have been observed to experience vicarious growth, partners of men with cancer and mothers of children or teenagers with cancer appear to experience secondary growth. A number of hypotheses have been proposed to explain these results (Hungerbuehler et al. 2011; Weiss 2004a). Women, who are more sensitive to stress (Stanton et al. 2005), are more likely to experience thoughts, images, and feelings that cause them distress, but this in turn would trigger PTG (Kashdan and Kane 2011). The results could also be explained by the fact that in terms of personal relationships and intimacy, women guide men, with men being more likely to have an intimate relationship with their wife, whereas she will also have intimate relationships with other women (Weiss 2004a). The severity of illness, especially in the case of advanced cancer, also favors secondary growth processes. This may indicate that there are specific characteristics of the event that could be especially difficult to understand and to transmit vicariously to the significant other. In cancer, this may be the case of existential worries and questions (Heidegger and Rivera 2003).

Key Facts

The study of PTG has begun to settle down in cancer and has begun to be studied in cancer patients' significant others.

Growth in significant others is reported as being either vicarious or secondary.

Vicarious growth is more usual in significant others, but gender (women) and illness severity (advance cancer) may, at times, promote experience a secondary growth.

Couple factors such as gender or dyadic role seem to be relevant predictors of posttraumatic growth among spouses of cancer patients.

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Culture shapes trauma and growth processes in the relational context, being collectivist cultures more prone to facilitate vicarious growth than individualistic.

Summary Points

Life-threatening illnesses such as cancer produce not only PTSD symptoms but also PTG in both patients and significant others.

Significant others experience PTG through contact with their partner's suffering, although the way in which PTG is transmitted may differ.

In general, growth processes in the significant others of cancer patients are better explained by a vicarious mechanism (relational growth).

Gender (women), role (survivor), and illness severity all contribute to the fact that significant others may also experience secondary rather than vicarious growth.

Culture can influence relational growth, for example, by defining what is traumatic and whether a desired positive social change is more individualistic or collectivist.

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