



The Existential Challenges of Stress, Trauma, and Psychopathology and Their Integration to the Self: A Self-Determination Theory Perspective

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Abstract

In much current research on stress, trauma, and psychopathology, there is a converging interest in the role of the stress response in engendering trauma, emotional dysregulation, and mental illness. Both the acute stressors known from post-traumatic stress disorder (PTSD) and the early-life, persistent stressors involved in complex PTSD, may create a stress response that is not properly downregulated. This leaves the person in a permanent state of high arousal and hypervigilance, common characteristics of many psychiatric disorders. It is suggested that such stressors are examples of the challenges that confront everyone: trivial, optimal, or overwhelming. Trivial challenges are mundane, optimal challenges invite learning and development, and overwhelming challenges may lead to trauma and mental ill-being. For a promising perspective on life's challenges, we turn to Self-Determination Theory (SDT). In SDT, mental health and human flourishing derive from the satisfaction of three basic psychological needs: for autonomy, competence and relatedness, as well as from the integration of experiences and challenges to the self. It is proposed in this paper that the overwhelming challenges involved in trauma and psychopathology are experiences that frustrate or thwart psychological needs and thus fail to integrate to the self. Such experiences may still be internalized, albeit as “introjects”—“thrown in,” swallowed whole, not digested properly. They remain outside of the self, exerting pressure on it through guilt, shame, ego-involvement, pride, etc., in the process producing much anguish and mental pain. Thus, as challenges are part and parcel of the human experience, trauma and psychopathology appear as outcomes of human development, rather than as essentially incomprehensible aberrations.

Keywords Stress · Trauma · Psychopathology · Self · Integration · Self-Determination Theory

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Introduction

Why do some people thrive and prosper while others succumb to the challenges of life? Historically, the latter question has received the lion's share of scholarly and therapeutic attention, as the fields of clinical psychology and psychiatry have attempted to understand and ameliorate the languishing and deterioration of the human mind. Over the past few decades, the stresses and traumas of human existence and how their effects accumulate in later life have been investigated thoroughly in neurobiology, neuroendocrinology, biological psychiatry, and developmental psychopathology and related fields, involving research that is always empirical, either cross-sectional or longitudinal, often experimental, and usually quantitative (Cicchetti & Toth, 2009; Felitti et al., 1998; McLaughlin et al., 2020; McEwen et al., 2015). This research highlights the character of the challenges involved in human existence and the variety of avenues along which they are addressed—which is the focus of the present paper.

The phenomena of stress, trauma, and psychopathology have been linked by increasingly transdisciplinary research efforts (e.g., Spinazzola et al., 2018). This research shows that the stresses involved in sustained, repeated, or multiple instances of child maltreatment may result in a particularly complex presentation of symptoms that include but go beyond PTSD: complex PTSD (Cloitre et al., 2009, p. 399), or developmental trauma disorder (van der Kolk, 2005).

Ordinary, or acute, stress elicits a stress response that alerts the organism to danger by secreting cortisol and other stress hormones. If, however, the stressors are more or less permanent, as is often the case in modern civilization (McEwen, 2017; Sterling, 2012), a state of chronic stress ensues in which the person cannot discharge stress hormones and, instead, remains alert to danger, or hypervigilant. This condition is increasingly being recognized as being key in emotional dysregulation, psychological problems of various kinds, and psychiatric disease (Weissman et al., 2019).

Major continuous stresses may lead to impaired neurodevelopment. Stresses suffered during early life negatively impact neural structures and neural and endocrine function, as research on child maltreatment and adverse childhood experiences has shown repeatedly (D'Andrea et al., 2012; Teicher & Samson, 2016). For example, sexual abuse in children has long been recognized as traumatizing, as has physical abuse, but emotional and verbal abuse are being added to the list of stressors that may dispose for psychological problems later in life (Gunnar & Quevedo, 2007).

As the occurrence of stressors may be considered part and parcel of human existence, a generalization suggests itself, as will be elaborated in the present paper. A stressor may be seen as a type of *challenge*. We shall propose that (a) when challenges are just dealt with, a person gets by, (b) when they are mastered through effort, a person develops and thrives, and (c) when they exceed a person's capacity and resources, we may call them stressors.

To put that in other, almost tautological terms, optimal challenges are what people *need*. Human needs are oriented towards optimal challenges. To discuss

human needs, we shall turn to a major research program in humanistic psychology, Self-Determination Theory (SDT) (Ryan & Deci, 2017). SDT identifies three universal human needs for relatedness, competence, and autonomy and proposes that in their still better satisfaction lie well-being and human flourishing. In that light, a challenge may be understood as a set of circumstances that confront people in such a way their needs may be frustrated or thwarted. Thus, a challenge calls for people to take such action as meets their needs. If they fail to respond to the challenge, that is, if they fail to stop the imminent frustration or thwarting of their needs, their well-being suffers, and ill-being and, ultimately, death may ensue (Vansteenkiste & Ryan, 2013).

A concept for handling challenges will be derived from SDT. According to SDT, a child, or any person, seeks to take in the social environment in the sense that norms, tasks, and values are internalized, that is, adopted in a more or less integrated fashion. This leads to the formation of a self that is, again, more or less integrated, or consistent in terms of professed values and actual behavior (Ryan & Deci, 2017).

Speaking in terms of integration, it is proposed that challenges may be seen as being amenable to integration. Rather than “master” a challenge, a person may “integrate” it, as will be proposed. A person’s interactions with the world may be refined in such a way that successful responses to particular challenges become part of the repertoire of skills that increase the person’s power to survive, develop, and flourish and thus strengthen the self. Conversely, when challenges remain ill-integrated to the self, stress, trauma, and psychopathology may result (Ryan et al., 2016).

Sections 2, 3, and 4 of this paper provide a brief overview of research in the fields of stress, trauma, and psychopathology, respectively. Section 5 proposes the concept of a challenge to denote what, quite generally, prompts stress and trauma. Section 6 reviews what Self-Determination Theory has to say about psychological needs and integration to the self. Section 7 applies SDT to the matter at hand and proposes the twin ideas that (a) challenges are what threaten needs satisfaction and that (b) challenges are to be integrated to the self. Section 8 concludes that from the perspective of SDT’s integrative psychology of needs and the self, the common thread in the specialized domains of stress, trauma, and psychopathology, namely, the integration of challenges, reveals itself as key process in human development and a core concern of human existence.

Stress and the Stress Response

Since Hans Selye’s original definition of stress as “...the nonspecific response of the body to any demand made upon it” (Selye, 1973, p. 692), the phenomenon has been the subject of vast amounts of research. One current definition of stress is a “psychological condition in which the individual perceives or experiences challenges to physical or emotional well-being as overwhelming their ability and resources for coping” (Gunnar & Quevedo, 2007, p. 147).

The physiology of stress has been well-established and involves the stress response. This orients the organism towards the stressor and the impending danger associated with it, occasioning “... a surge in arousal, alertness, vigilance, focused

attention and cognitive processing” (De Kloet et al., 2005, p. 463). The stress response system executes two phases: a fast response (seconds) in which the sympathetic nervous system triggers multiple peripheral actions, and a slower response (minutes) by the hypothalamus-pituitary-adrenal (HPA) axis during which cortisol and other stress hormones are produced. Cortisol serves both to mobilize resources and to bring the response to an end (Richter-Levin & Sandi, 2021, pp. 1–2).

In the case of acute stress, such as exposure to a predator or sudden verbal abuse, the stress response is singularly adaptive, preparing the organism for fight, flight, or freeze. Once danger has passed, the sympathetic nervous system deactivates; stress hormones are neutralized in the so-called relaxation response. In chronic stress, however, such as that produced in modern civilizations by overcrowding, loneliness, materialism, attachment deprivation, and pervasive online social comparisons (McEwen, 2017; Sterling, 2012), stress hormones remain active and the organism stays alert and hypervigilant, tuned to seemingly life-threatening dangers that rarely materialize.

All serious stresses have neurobiological consequences, especially if they occur during periods of rapid brain development, e.g., in utero, infancy, early puberty, and early adulthood. “A key result of stress is structural remodeling of neural architecture, which may be a sign of successful adaptation, whereas persistence of these changes when stress ends indicates failed resilience” (McEwen et al., 2015, p. 1353). Permanent changes to brain structures resulting from stress and the excess glucocorticoids produced include cortical thinning, volume reductions in hippocampus and amygdala, dendritic atrophy, abnormalities in synaptic pruning, mitochondrial dysfunction, and shortening of telomeres accelerating cellular senescence (De Kloet et al., 2005; Lupien et al., 2018; Gunnar & Quevedo, 2007). If stress was once considered mainly just subjectively unpleasant, it has now become firmly established that stress can produce objective, permanent damage to neural structures.

Psychological Trauma

The Vietnam War helped the mental health profession realize that the mysterious shell shock that befell previous generations of soldiers was very real. Post-traumatic stress disorder (PTSD) finally made it into the *DSM-III*, the *Diagnostic and Statistical Manual of Mental Disorders*, 3rd edition, in 1980. Research on psychological trauma has left behind the Freudian universe of repressed childhood fantasies and entered the empirical domain of neurological impairment, in which trauma is detectable by the same scientific approach that made stress amenable to neurobiological analysis (van der Kolk et al., 1996).

Indeed, during the past couple of decades, the research topics of stress and psychological trauma have converged and now draw on essentially the same understanding of insult and injury to the brain, the mind, and the body (Sroufe, 1997; McLaughlin et al., 2020; Richter-Levin & Sandi, 2021). In this view, psychological trauma results when a person is exposed to serious danger, threatening the loss of attachment, personal security or life, as in domestic violence, traffic accidents, natural disasters, or war (van der Kolk et al., 1996). Traumatic events send the stress

response into overdrive as people struggle to cope with the enormity of the challenges confronting them. When the traumatic events are so overwhelming as to seriously hamper coping and comprehension, the residuals left in the body and brain are referred to as trauma. These effects represent the traces of incomplete downregulation, resulting from the lingering stress hormones insufficiently neutralized subsequent to the event.

A major part of the trauma residual is the hypervigilance triggered by the traumatic event and the failure of the brain to integrate the traumatizing events into a coherent and meaningful narrative accepted by the mind. Fragments continue to haunt the person in the form of traumatic triggers, like the proverbial backfiring of a car engine that sends the war veteran diving for cover, propelled by a nervous system that registers life-threatening gunfire in the present.

Flashbacks and nightmares represent a similar reliving of events that have not been securely located in the past because the normal autobiographical narrative that was supposed to make sense of the dangerous events has not been constructed (Wilson & Keane, 2004). As we shall phrase it below, in Sect. 7, the events of the traumatic episode have not been *integrated to the self* and thus continue to torment the individual as shards and fragments of an unintegrated past personal history.

While PTSD involves only one or a few severely threatening episodes, like a nail being bent by a single, powerful blow, it is now recognized that psychological trauma may result from the persistent impact of many, many small blows to a person's integrity, just as 100,000 tiny taps of a hammer will bend the nail eventually. As these insults, small and large, typically occur through the lifespan and often produce the most harm early in life, they may result in what is often referred to as developmental trauma disorder (van der Kolk, 2005). This disorder involves elements of traumatic stress and has a marked effect on children:

At the core of traumatic stress is a breakdown in the capacity to regulate internal states. If the distress does not ease, the relevant sensations, affects, and cognitions cannot be associated—they are dissociated into sensory fragments—and, as a result, these children cannot comprehend what is happening or devise and execute appropriate plans of action (van der Kolk, 2005, p. 403).

Traumatized children are perpetually scanning the environment for threats to personal safety, as they interpret their internal highly aroused state as signaling objective danger. Anxiety may lead to disasterizing, as every choice facing the person cascades into new uncertainties and perceived threats.

The fact that psychological trauma is endemic was brought home by the Adverse Childhood Experiences (ACEs) Study. Originally published in 1998 (Felitti et al., 1998), the study went on to include 17,000 volunteers, identifying the incidence of ten categories of ACEs, including physical, sexual, or emotional abuse; physical or emotional neglect; violence, substance abuse, or mental illness in the home, parental divorce, or a family member in prison. Not only were these categories of ACEs surprisingly common, but they also correlated in a dose-response relationship with physical, mental, and social problems later in life (the more ACEs, regardless of which kind, the more severe the medical and mental health outcomes). Negative events in early life seem to dispose people to ill-health as adults.

Psychopathology

The field of developmental psychopathology (Cicchetti & Toth, 2009) is based on the premise that child maltreatment may impair mental health in later life. Researchers dispense with any simple determinism and instead study mental suffering as the outcome of normal development gone awry (Sroufe, 1997; Cicchetti & Rogosch, 1996). Nevertheless, "...exposure to trauma in childhood likely influences the development of psychological and neurobiological processes that confer broad vulnerability to multiple types of psychopathology" (McLaughlin et al., 2020, p. 2), "... including mood, anxiety, disruptive behavior, substance abuse and psychotic disorders" (Weissman et al., 2019, p. 899). "Specifically, environments characterized by violence and high potential for harm can influence patterns of social, emotional, and neurobiological development in ways that facilitate the rapid detection of potential threats" (McLaughlin et al., 2020, p. 3).

One pathway linking early-life stresses and traumas to adult psychopathology that has attracted much attention recently is emotion dysregulation. Adaptive emotion regulation (Gross, 1998) involves directing attention to any emotion generated, cognitively appraising it and selecting an appropriate response to it (e.g., reacting in the moment, withholding it for later, or seeking support). Children exposed to maltreatment have been found to employ emotion regulation strategies that seemed adequate in the moment, but lead to long-term dysfunctional patterns of thought, emotion, and behavior.

For example, "[c]hildren who have experienced abuse are more perceptually sensitive to detecting anger in faces... than those without a history of violence" (Weissman et al., 2019, p. 901), a reasonable strategy in the moment. However, *persistent* abuse and threats of violence engender a host of negative emotions, which, because of their sheer volume, are difficult to negotiate. Thus, "...[c]hildren and adolescents exposed to maltreatment may attempt to suppress intrusive and intense negative emotions" (ibid.), which is generally considered a maladaptive emotion regulation strategy. When the suppressive strategy proves unsuccessful, the child may "dwell on those feelings, thereby increasing their duration" (ibid.), which amounts to rumination, another example of maladaptive emotion regulation.

In other words, extreme sensitivity to threat, emotion suppression, and rumination are all meaningful coping strategies employed by children exposed to constant threat of abuse and violence. Vigilance is served by the stress response and the production of stress hormones by the HPA axis, but this adaptive reaction to acute and short-lived dangers turns maladaptive when prolonged or rendered permanent.

Since it seems to be generally agreed that "...exposure to adverse events is causal to many chronic debilitating neuro-psychiatric diseases" (Valentino et al., 2015, p. 1), the emotion dysregulation that arises from such exposure is now taking center stage in much psychopathology research. Indeed, "[d]ifficulties with emotion regulation [are being viewed] as a transdiagnostic mechanism linking child maltreatment with the emergence of psychopathology" (Weissman et al., 2019, p. 899).

Such, then, is the link that appears from current interdisciplinary research in the previously somewhat unrelated fields of stress, trauma, and psychopathology.

Ordinary or seemingly minor stressors, such as verbal abuse and emotional neglect, produce the stress response, involving heightened levels of stress hormones that arouse the organism to deal with danger. If repeated or constant, such stressors sediment as traumas to the mind and body characterized by lasting neurobiological effects on brain structures as well as on cognitive and emotional processing. In later life, these effects may emerge as the symptoms of alertness to threat and hypervigilance that indicate anxiety, depression, PTSD, and other psychiatric disorders.

Challenges: Trivial, Optimal, or Overwhelming

From an existential viewpoint, the ascent from stressor and trauma to emotion dysregulation and psychopathology may be seen as so many steps up a ladder of still more serious *challenges* confronting the human organism. Generalizing further on this notion of challenges, we propose that every interaction between a person and their environment may be understood as containing the seeds of challenge. This is similar to what Cox (1993, p. 29) says about stress in the specific context of work: “Stress can be defined as a psychological stage which is part of and reflects a wider process of interaction between individuals and their work environment.”

Seeing organism-environment interactions as challenges suggests a rough typology of challenges, according to levels of severity. (Of course, all challenges are *perceived* as such; they are subjectively interpreted, not objective, and their meanings vary across situations and contexts. How people perceive challenges co-determine how they handle them.) The three levels are:

1. **Trivial challenges.** These are the everyday human-environment interactions; they are hardly perceived as challenges. Examples are a small child being left alone as the parent says “I’m going to take out the trash, honey,” which the child barely registers, and an office worker being given a minor assignment by her manager.
2. **Optimal challenges.** These are moderate-sized challenges that are mostly mastered successfully, whether they are experienced as pleasant or not. The young child may be told by the parent “I’m going to the corner store,” which is nice—and a challenge: “I can play my computer game without interruption now, great! But how long will I be left alone?” The office worker is given an important assignment, which is exciting and a little daunting. While the activities involved in situations such as these may be moderately stressful, success brings relief. The stress response produced helps the person mobilize the requisite metabolic energy and cognitive resources. When the (time-limited) task is completed, the stress response is downregulated in an orderly fashion. Learning and development may ensue when the person feels confident that he or she can do this as well or even better next time. Eustress, “good stress,” is a term sometimes used for optimal challenges, as they are the *sine qua non* of learning and psychosocial development.
3. **Overwhelming challenges.** Challenges that go beyond a person’s resources, repertoire, or value system may be stressful and potentially traumatizing. The young

child may be abandoned for the whole night by a parent who returns drunk and violent. The office worker may yet again be given an ill-structured task with an impossible deadline and an implied threat of demotion in case of non-completion. The nervous system tries to cope with the perceived dangers, sending the HPA axis stress response into overdrive. These are the lasting effects of either one-shot, major trauma, or the history of ongoing insults that we addressed above. Let them both be included in this category of overwhelming challenges that threaten personal safety.

Now, the existential task facing the individual as well as the community of humans is to prevent or contain *overwhelming* challenges and/or transform them into *optimal* challenges. Optimal challenges often produce learning and development and, further, they become routinized and habitualized such that they become the ordinary interactions of a life lived in safety and personal coping. Such a learning context of manageable challenges is probably what most people would want for themselves and their children, and sociopolitical development of this type seems a reasonable goal to set for our civilization. For example, schools would pose moderate and interesting learning and social challenges to students; work would involve tackling manageable challenges and performing tasks that produce goods and services of value to customers and citizens; and political and economic institutions would serve to organize material resources and the diversity of cultural values in such a way that no overwhelming challenges (poverty, racism, social exclusion, etc.) are presented to any demographic group.

Self-Determination Theory: Needs and the Integrative Self

In general terms, trivial and optimal challenges are what humans need in order to grow, learn, and develop into mature and fully thriving individuals. Almost by definition, no one needs overwhelming challenges. In terms of *needs* specifically, we may see the challenges confronting people as being capable of satisfying or frustrating their needs. Psychological needs have received extensive scientific attention in Self-Determination Theory (SDT) (Deci & Ryan, 1985; Ryan & Deci, 2017; Vansteenkiste et al., 2010). SDT is a comprehensive research program on human motivation, development, and well-being that identifies both people's potentials for flourishing and their vulnerabilities to ill-being and disease (Vansteenkiste & Ryan, 2013).

Defining needs as constructs that point to nutriment that are essential for human flourishing (Vansteenkiste et al., 2020), SDT identifies three universal psychological needs:

1. The need for *autonomy*, which involves authenticity and ownership to one's actions as they proceed free from external controls and internal pressures.
2. The need for *competence*, the experience that one can plan and take action that produces effects as intended.

3. The need for *relatedness*, the experience of warmth and emotional support from the people that one spends time with, including fellowship, caring, and love.

Hundreds of empirical studies have documented that self-reports of satisfaction of these psychological needs correlate with multiple measures of thriving and quality of life, such as subjective well-being, meaning in life, positive emotions, life satisfaction, and vitality (reviews in Ryan & Deci, 2017). Likewise, people's experience of need frustration or need thwarting covaries with, and often produces, ill-being as assessed by indices of psychological problems, maladjustment, depression, etc. (Vansteenkiste & Ryan, 2013).

Patterns of need satisfaction and frustration and hence, a given individual's degree of flourishing and languishing, emerge during early-life development. SDT has given particular attention to one of the key processes in human development: children's internalization of the norms, rules, and values of their family and social environment. SDT posits that internalization may produce types of regulation that are more or less autonomous or controlling. Autonomous regulation results from internalizing processes that involve the provision of supportive structure, limit-setting, role modelling, value enactment and gentle guidance (Joussemet et al., 2008)—in other words, through ordinary play and work, such that children come to *integrate* the values and norms of their family, community and culture. In general terms, “[w]ithin Self-Determination Theory, integration denotes the process through which people accept past and present experiences and harmonize these experiences within their sense of self” (van der Kaap-Deeder et al., 2016, p. 580).

In contrast to autonomous, integrative regulation, the controlling end of the spectrum features a kind of internalization in which norms, rules, and values are forced upon the child through intimidation, threats, punishment, shaming, guilt induction, and other pressures. This results in “introjected” regulation, as the norms and values seem to be “thrown into” the child, not digested, but swallowed wholesale, not integrated with previously internalized norms and values.

Such introjects are amassed in a person's psychological make-up, where they seem to push the person around, as when people try to force or coax themselves into complying with norms and values that they do not really own or fully identify with. A child who is told by a stern parent that nothing less than a B in school is acceptable will likely internalize this demand or norm by introjection. Such an expectation may haunt the child as she tries to pressure herself into performing to her parent's standards, and she may find it difficult to integrate that extrinsic goal with any burgeoning, autonomous motivation for academic work or intrinsic interest in self-chosen topics or hobbies.

A child exposed to neglect or harsh and inconsistent discipline, which may include emotional, verbal, and physical abuse, is unlikely to be able to form a coherent, well-integrated sense of self. In terms of SDT's psychology of needs, an integrated self is generated in a person only when all three psychological needs are met: when his autonomy is respected (his sense of choicefulness, authenticity, and ownership), his sense of competence is gradually expanded as he encounters appropriately-sized challenges, and his relatedness needs are met by warmth and caring emanating from family and peers.

When psychological needs are frustrated or thwarted during internalization, a collection of introjects are produced that fill up the person's inner world but fail to synthesize into a stable and comprehensive self. Introjects like stereotypes, prejudice, dogma, black-and-white thinking and dichotomies remain unintegrated, outside of the self, pulling and pressuring the self by means of guilt, shame, pride, ego involvement, and a yearning for self-esteem.

Within SDT, the self is not a fixed entity, as frequently and popularly conceived, but an organismic process. During early development it emerges as the organizing center of human experience and agency (Ryan & Deci, 2017, pp. 35–37). The self is those processes, structures, and energies of the mind that enable a person to coordinate intention and action and maintain some consistency between espoused and enacted values. Elements and experiences may be internalized and enter a person's psychological make-up, yet remain non-integrated to the self, outside of the self, so to speak. "The SDT concept of an integrative process is similar to Rogers' (1964) organismic valuing concept, which describes the process by which experiences are evaluated: some are taken in to form a sense of self, while others remain compartmentalized and unintegrated" (Benita, 2020, p. 2). The relative strengths of the self and the jumble of introjects impinging on it bear directly on the personal flourishing and community contributions that can be expected from that person.

Now, internalization may proceed in such a way that psychological needs are ignored and the integrative tendencies of the self are obstructed. This is SDT's way of addressing the general human vulnerability to maladjustment and ill-being, especially psychological problems and the disorders of the mind. SDT researchers have done extensive work interpreting (1) stress, (2) emotion dysregulation, and (3) psychopathology in terms of frustrated or thwarted psychological needs and the ill effects thereof on the integrative self. Let us briefly consider each in turn.

1. *Stress*. Equating an autonomy orientation with human flourishing, as SDT researchers do, Weinstein and Ryan (2011, p. 6) review work on stress "suggesting that an autonomy orientation leads individuals to respond non-defensively to stressors, anticipating and interpreting stressors as challenges [rather than] threats, and engaging in less avoidant coping after a stressor, all mechanisms that lead to positive outcomes." In other words, individuals who are disposed to autonomy, or whose need for autonomy has been properly supported, handle stress well.
2. *Emotion dysregulation*. Emotion regulation comes in three flavors, according to SDT. It is (i) integrative if it expresses autonomy and authenticity, as the person involved accepts their emotions, treats them as conveying information about current goal-seeking efforts, and seeks to act on them in ways consistent with personal values and beliefs. In contrast, (ii) suppressive emotion regulation is characterized by controlled and pressured attention, akin to introjected regulation. Another maladaptive strategy is (iii) emotion dysregulation, in which emotions overwhelm people and render them victims of their emotions (Roth et al., 2019; Benita et al., 2020).
3. *Psychopathology*. A major effort in SDT is to understand psychopathology in terms of need thwarting conditions in early life (Ryan et al., 2016) and social contexts that dispose people towards (a) control/suppression, (b) dysregulation,

or (c) disturbances of the self. As to (a) control/suppression, the internalizing disorders, which include maladaptive perfectionism, eating disorders, and obsessive-compulsive disorder, often express conflicts about personal control. This indicates that the person has experienced frustrations in her need for autonomy in early life. As to (b) dysregulation, externalizing problems, such as antisocial personality disorder, also stem from a failure of integration: “When interpreted with concepts from SDT, the development of conduct disorders and an asocial and selfish extrinsic goal orientation result from inadequate attachment and failed internalization resulting from social environments that are inconsistent, chaotic, externally controlling and relationally impoverished” (Ryan & Deci, 2017, p. 416). As to (c), a third type of psychological problem involves serious disturbances of the self, such as the disorders of dissociative identity and borderline personality, both of which are associated with “severe need thwarting or abuse during development,” such as “harsh control, rejection, maltreatment and neglect” (ibid.).

In a word, according to SDT, psychological problems of many kinds may be analyzed in terms of unmet psychological needs and processes of internalization that failed to produce sufficient integration to the self.

Challenges to Psychological Needs Must be Integrated

Now, combining the concepts of challenges and needs, we argue that the overwhelming challenges involved in stress, trauma, emotional dysregulation, and psychopathology are characterized by their propensity to threaten need satisfaction. For example, an ordinary stressor, like an encounter with a schoolyard bully or an aggressive colleague, may pose a considerable challenge or threat to a person’s autonomy (“I’m cornered and can’t move as I want to”) and competence (“I don’t know what to do to protect myself”) as well as relatedness (“Why is no one helping me?”). Since, in SDT, needs are defined as pointing to the necessary nutrients for human well-being and flourishing, a stressor exposes a person to ill-being by its major or overwhelming challenge to need satisfaction.

For another example, a parent may have presented overwhelming challenges to her daughter if she later recalls: “When I was a child, my mother constantly told me that my thoughts and feelings were all wrong.” Even common admonitions, like “Stop being so angry!” are a challenge to a small child, because how to you stop yourself from being angry? By suppressing the feeling or trying to escape it? This is a demanding challenge, even for an adult. To be sure, it is a far cry from physical and sexual abuse, but it still may contribute to an emerging developmental trauma disorder, in that the girl’s needs for affirmation and validation (both of which involve autonomy, competence, and relatedness) are so intensely frustrated or thwarted that negative outcomes are likely to ensue.

In contrast, challenges that do not overwhelm, but are merely trivial or engagingly optimal, *facilitate* need satisfaction. *Trivial* challenges, that is, the uncomplicated actions performed during daily living, persistently consolidate a person’s experience of acting autonomously, free of excessive control and pressure, of

being competent, because ordinary things get done, and of feeling related, as everyday interactions with others proceed relatively smoothly. *Optimal* challenges are those that provide suitable need satisfaction, as when a person successfully makes difficult personal and professional decisions (autonomy, the experience of choicefulness), masters difficult tasks and acquires new skills (competence), or solves workplace conflicts through empathy and reconciliation (relatedness). In other words, handling a challenge well, or mastering it, means negotiating the situation so that the needs of the people involved are met and their well-being is enhanced.

Along these lines, eustress may be understood as challenges to the human need structure that end up being mastered and thus provide satisfaction of a higher order (because of the learning and development involved) than would have been possible without the eustress. This addresses a common confusion: “*Some* stress is good, no?” Well, yes, if you can handle it. Challenges need to be as close to optimal as possible, just suitable for that particular person in that particular situation.

Assessing the nature of challenges—do they promote or hamper human development and flourishing?—allows us to see stress, trauma, and psychopathology as expressions of the natural vulnerabilities to which human beings are subject. Thus, they are comprehensible phenomena in the common range of existential challenges and demands confronting everyone. Human beings *need* optimal challenges, but they certainly do not always *get* them.

Consider challenges across the lifespan. Given reasonable circumstances with suitable demands on personal resources, people mature and grow old integrating most of life’s challenges along the way (van Rhyn et al., 2022). For example, research on 80-year-olds (Ardelt et al., 2018) has shown that emotional stability and openness to experiences in early adulthood are associated with subjective well-being and wisdom in old age, which can “be traced back to psychosocial growth throughout life, facilitated by a supportive childhood, adolescent competence, emotional stability in early adulthood, and generativity at midlife” (p. 1514)—all indicators of the successful negotiation or avoidance of serious stressors and traumatizing experiences.

Next, combining the concepts of challenges and integrative internalization to the self, we may say that mastering challenges can be understood in terms of integrative internalization. By definition, a challenge confronting a person presents a task that lies outside that person’s repertoire, in that situation. With the application of effort, however, this task could become included in the person’s repertoire or, in more general terms, become integrated to that person’s self.

To illustrate, consider this sequence, which a 10-year-old would recognize: “Omg, that looks difficult! I can’t do that! Can I? Let me try, then. Oops, let me try again. Okay, I managed to do it. Now I did it again. And again. I must have learnt it. It’s super easy, really. What, did I just do it again? You call that a challenge?” Colloquially, this is the process of integrating a challenge to the self. What was a sizeable challenge (not an overwhelming one), is transformed, through trial and error or learning and skill development, into a trivial one that can now take its place in the child’s self, among all the other routines, habits, and norm-following practices that the child has already conquered.

Moderate or optimal challenges are those in which the process of coping is well served by the stress response produced in the person. The levels of stress hormones released are just adequate to mobilize the extra energy needed to experiment with and eventually learn the cognitive and motor actions required to do the new task. Further, an optimal challenge persists no longer than stress hormones are properly deactivated afterwards. As an example, a good parent or teacher knows how to serve up suitably sized challenges differentially to Ann and Ben in situations X and Y. Failing this, the parent or teacher will either bore or overwhelm Ann or Ben. Optimal challenges may become integrated to the self if they are presented to children in a sufficiently supportive context (e.g., at school) or if children manage to carve out appropriate chunks for themselves (e.g., during play).

Overwhelming challenges, in contrast, do not integrate to the self. They remain outside of the self, unmastered, and do not become part of the repertoire of experiences and skills that the person is comfortable with and knows how to handle. An overwhelming challenge is a stressor in high gear, which may release a maximum amount of cortisol, adrenaline, and the other stress hormones, but the person does not know how to deliberate, plan, or take action so as to protect themselves against the threat posed to their physical or mental integrity. If the challenge is not rejected successfully and warded off completely by the mind, traces may be left subsequently in the form of the introjects discussed by SDT. They are brain-based or embodied relics of the intruding and unmet challenge, emotional residues of the failure to take appropriate action. These traces range from a lingering irritation that the boss got away with his sexist remark to the trauma inflicted on the soldier who did not know how to disarm the improvised explosive device before it blew up in his buddy's face.

Given that a person's resources do not match the overwhelming challenge confronting the person, the mind deals with the challenge as best it can. Suppression and evasion are two common strategies, either of which may encapsulate the threat in more or less life-like gestalts within the person's mind, unintegrated to the self. These may be the voices, personae, or "demons" of dissociative disorders or merely the ordinary internal pressures arising from the incessant "you-really-ought-to" reminders tormenting so many people. Such pressures are the fragmented byproducts of failed integration. As they attract psychic energy, they may come to dominate a person's psychological life, whether as stereotypes, dichotomies, obsessions, compulsions, addictions, invasive thoughts, psychotic intrusions, etc. To mention just one common mental disorder, PTSD, its symptoms present as fragments of past experience too intense to have undergone integration in the mind—the disjointed flashbacks, nightmares, triggers, hypervigilance, etc.

The three emotion regulation strategies of SDT—integrative, suppressive, and dysregulated—generalize to the notion of challenges in the sense that aroused (negative) emotions challenge a person's status quo, her well-being. Strategies such as being attentive to emotions, approaching them as challenges to be learned from, and acting in a socially appropriate manner so as to discharge the emotional energy safely are all examples of an integrative approach that uses emotions as a means to psychological development and maturity, so that a stronger and more consistent self may result. Compare the two maladaptive strategies: *suppressive* (controlling) emotion regulation, whereby the challenges posed by emotions are so disagreeable or

threatening that they are denied, hidden, or rejected, and emotional *dysregulation*, in which the challenges posed by emotions are ignored or evaded to such an extent that they reemerge to engulf and overpower the person.

In summary, the integration of challenges (or experiences) to the self is key:

... [I]ntegration is not a function of the self, integration is what the self is. Therefore, the failure to integrate salient experience represents profound distortion in the self system. When salient experience must be unnoticed, disallowed, unacknowledged, or forgotten, the result is incoherence in the self structure. Interconnections among experiences cannot be made, and the resulting gaps in personal history compromise both the complexity and the integrity of the self (Ogawa, Sroufe, Weinfeld et al., 1997, pp. 871–872).

Conclusions

Generalized to “challenges,” the slings and arrows of outrageous fortune that contribute to stress, trauma, and psychopathology appear as but extreme instances of those interactions with the physical and social environments that are the bedrock of human existence. Most organism-environment interactions are uneventful, hardly worth the label “challenges”; some stimulate the learning, growth, and development of the individual; and some are excessive, demanding more resources for their resolution than the person can muster.

In previous centuries, the anguish and mental suffering engendered by stressors along this continuum were widely belittled as something to be endured, but in recent decades, practitioners and researchers in clinical psychology and psychiatry have become alert to the familial, social and economic conditions that typically produce this pain: Exposure to verbal abuse, emotional neglect, domestic violence, economic inequality, racism, etc. They are no longer seen as unavoidable.

Challenges per se are indeed the warp and woof of human existence, but their severity is not given. Seeing challenges as located on a spectrum from trivial to optimal to overwhelming may help remind us that efforts towards social and economic reform, as well as towards the growth and development of individual lives, should go together. As Freud’s contemporary, the psychiatrist Pierre Janet, emphasized, the mind is a unity, and every experience or thought that the mind cannot synthesize (integrate) is liable to be banished from consciousness (Ellenberger, 1970, p. 361) and take on an existence in the mind as an *idée fixe*, a dissociated fragment which, in the manner of the introjects highlighted by SDT, will impair the person’s psychological wholeness and health. Ideally, the challenges that the contingencies of life present to each individual are amenable to learning and mastery, allowing integration to the self, making for new generations of citizens untrammelled by the traumas of the past.

Seeing challenges, more specifically, as challenges to psychological need satisfaction, as we have argued that Self-Determination Theory suggests, implies attention to the personal and socio-economic conditions that support need satisfaction. Every structure or practice in schools and the workplace, in the family, the community, and the wider society, presents challenges to the children and adults involved. Some

of these structures and practices are more supportive of people's needs than others, and some of the challenges produced are more easily addressed and integrated to the self than others. In this light, the human quest for a meaningful existence and the betterment of society may take the form of moderating the challenges and tasks that infants, children, adolescents, and adults are expected to tackle, such that these experiences are better integrated to the selves of everyone involved, making for a more powerful citizenry in command of its psychological as well as socioeconomic and political resources.

Thus, mental problems and disorders may be seen as arising from the complete set of social conditions and personal challenges that confront everyone. Every non-trivial challenge is accompanied by a stress response that is initially adaptive but, if perpetuated by social and economic structures, such as family violence, poverty, or political disenfranchisement, may turn against the person and lodge as introjects that disrupt integrative functioning and prepare for a new cycle of stress and traumatization. In this light, stress, trauma, and psychopathology are not inexplicable aberrations from a "normal" mental equilibrium, but the statistically predictable product of human and social development gone awry (Sroufe, 1997). Striving to rectify developmental conditions so as to facilitate the integration of challenges to the self is both a personal-existential task and a sociopolitical responsibility.

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