Suffering Promotes Flourishing

Robert C. Bishop Nathaniel Thom

January 2018

This paper was produced in the Opus Vocation Scholars Program, now known as CFI Scholars.

This material, written by Robert C. Bishop and Nathaniel Thom, is not to be circulated, shared, or published in any form, hard copy or electronic, without express permission from the authors.



Wheaton Center for Faith & Innovation "...for there is nothing either good or bad, but thinking makes it so." Hamlet: Act 2, Scene 2, Page 11

Introduction

Could pain, stress and suffering be part of a flourishing human life? When thinking about human flourishing, our thoughts normally do not turn to stress and suffering. Yet, biblical authors saw links between suffering and human flourishing in Christ (e.g., Rom 5:1-5; Ja 1:2-4). In this paper, we seek to explore some of the ways that stress and suffering can contribute to the flourishing of individuals and communities, drawing on insights from cultural criticism, theology, and neurobiology.

What is suffering?

In a recent *New Republic* article "Don't Send Your Kid to the Ivy League" (Deresiewicz, 2014a) and his recent book, *Excellent Sheep* (Deresiewicz, 2014b), William Deresiewicz describes how so many students in elite colleges and universities are terrified of not being highly successful. These fears lead to various forms of risk avoidance, a loss of any passion for ideas, and an apparent lack of attention to developing skills in critical thinking or questioning assumptions, or even fostering curiosity. The latter pursuits are risky in various ways, after all, such as setting one apart from the "in crowd" or calling too much attention to oneself. Deresiewicz argues these students are aided in these tendencies by a curriculum that trains them "in the analytic and rhetorical skills that are necessary for success in business and the professions. Everything is technocratic—the development of expertise—and everything is ultimately justified in technocratic terms." While there are exceptions, he concludes that, "beneath the façade of seamless well-adjustment…what you find often are toxic levels of fear, anxiety, and depression, of emptiness and aimlessness and isolation." According to a recent large-scale survey of first-year college students Deresiewicz cites, self-reports of emotional well-being have fallen to their lowest level in the study's 25-year history.

In an essay review of Deresiewicz's book, cultural historian Jackson Lears (2015) endorses the analysis but broadens its application to much of the wider society. Again, there

are exceptions, but in general, "Among the educated and professional classes, no one would be caught dead confusing intellectual inquiry with a quest for ultimate meaning, or with the effort to create an independent selfhood . . . determined to heed its own ethical and aesthetic imperatives, resistant to the claims of fashion, money, and popularity." The preoccupation with "process over purpose, means over ends, has long been a feature of the technocratic mind." He adds, "In the technocratic ethos of neoliberalism, the self is little more than a series of manipulable appearances, fashioned and re-fashioned to meet the marketing needs of the moment."¹ One pursues rewards that by themselves are hollow and transient, namely the credentials, badges of achievement, and prestige dished out by this kind of meritocracy.

Lears (2015) bemoans the fact that there seems to be nowhere to turn for resources to imagine meaningful, credible, alternatives to this kind of large-scale cultural trend. Historian and social critic Tony Judt (2010) makes a similar point. As a society, we seem unable to conceive of alternatives to the "materialistic and selfish quality of contemporary life" which "dates from the 1980's" (p. 2). Not since the "lost generation" of the 1920's, Judt writes, have so many young people "expressed comparable frustration at the emptiness of their lives and the dispiriting purposelessness of their world" (p. 3).

While what these cultural critics are describing has many troubling aspects, the critique speaks to a widespread form of disquiet and suffering. Wheaton College students are not immune to the fears, anxieties, depression, or sense of emptiness that many in the broader society are experiencing. On the one hand, Christians have theological resources for comfort, conviction and confidence, such as the golden chain (Rom 8:28-30), the proclamation that through Christ believers overcome (Rom 8:31-39), and the power and promise of the resurrection (1 Cor 15). On the other hand, Christians still experience fear, anxiety, depression, emptiness, and loneliness, a palpable mismatch between the grandness of the biblical vision of life in Christ and the painfulness, hardship and plain ordinariness of so much of our actual lives in Christ. Our students also live in a context where for decades society has preached the "American dream," but that dream seems to be further and further out of reach for more and

¹ This is reminiscent of Eric Fromm's (1947 [1975]) conception of the "personality market," where people revise or reinvent their personal qualities to meet the preferences of others, whether these others are peers or institutions (pp. 76-80). The tendency is to become a commodity shaped to meet the preferences of others.

more citizens. Add in the student debt crisis, growing income inequality, growing poverty levels in the US, the apparent retreat of democracy in the face of the rising tide of tyrannical "strongman leaders," and pending climate crises (e.g., pollution, global warming). It is perhaps understandable that our students might confuse the "peace that passes all understanding" (Phil. 4:7) with a kind of escapism from the seeming constant anxieties and stress found in the contemporary world, rather than seeing that peace as a present quality amid various forms of suffering.

Tragic vision in a good creation

The variety of forms of suffering we have just sketched seem to pale in the face of tragedy. The recent death of Ethan Rose during the hammer throw competition at Lawson Field that so impacted the Wheaton community, is a reminder that loss and hardships surpassing our ability to make sense of "Why?" are also part of Christian life.

Theologian Reinhold Bernhardt (2016) discusses three dimensions of tragedy that help us distinguish it from other forms of suffering. The first is tragedy as "deeply shattering" events that "are experienced as an avalanche of sheer contingency, making it impossible to ascribe any meaning to them." Such events "are experienced as a painful falling into meaninglessness and hopelessness" (p. 334). A driver losing control of their car, jumping the curb and hitting a tree totaling their car is not a tragic event, though it is a form of suffering. However, if a small child happened to come running out of the house to go play with her friends, crossed the yard at the moment the car jumped the curb, and was struck and killed—that has the bitterness and bewilderingness of the tragic.

The second dimension is tragedy as irresolvable inner moral conflict, where "the tragic is constituted by a grievous antagonism that places before the affected person the choice between two disastrous solutions" in the form of an "irresolvable conflict." This dimension of tragedy has a deep connection with the limitations of human life since it requires "the courage to become guilty and to sacrifice a value . . . because no matter which option is chosen, it will be a culpable decision" (pp. 335-6). Bernhardt gives the example of a father who dies of Ebola. In many areas of Africa, the cultural rules of tribe require burial rituals spanning many days. On

the other hand, health administrators of those districts, following World Health Organization guidelines, require the father's corpse be buried immediately by trained professionals dressed in full protective gear. Tragic loss of some kind simply cannot be avoided, carrying this dimension beyond most forms of suffering we ordinarily experience.

The third dimension is tragedy as unavertable failure. These are cases that "arise out of one's own will and action" leading "to unintended destructive effects for oneself and others" (p. 336). When well-meaning actions produce devastating effects—e.g., when "striving for good brings about disaster" (p. 337)—we are squarely in the realm of the tragic and beyond ordinary forms of suffering. An example would be an attempted rescue of hostages, where a crucial piece of equipment fails at an inopportune moment leading to deaths of rescue squad members and hostages. In all these dimensions, Bernhardt suggests, the tragic is "deeply anchored in the basic structure of human existence in the world," mirroring "deep-rooted tensions of human life—tensions between freedom and compulsion, between contingency and necessity" (p. 340).

A theological version of tragic vision (Farley 1990) may prove useful for thinking about the continuum of suffering from milder forms to the tragic. Everyone suffers pain, loss, stinging disappointment, heartbreak, and death, including witnessing the death of children, perhaps one's own. And at the extreme, there is the horrendous and humanly inexplicable suffering of the biblical story of Job, or the destruction of Jerusalem and the temple by the Babylonians ("Is [Babylon] to keep on emptying his net, destroying nations without mercy?" the prophet Habakkuk cries out; Hab 1:17). Part of the message of the books of Job and Habakkuk is that human understanding and attempts to construct meaning, even concerning justice and right, are limited. Theologian Wendy Farley notes that the human condition of finitude "seems to be tragically structured: the conditions of finite existence include conflict and fragility" (p. 31). Many human relationships are necessarily conflicted, and important "values, too, can be essentially incommensurate and conflicting" (p. 32). Human frailty and the ambiguity and intensity of human desire "compel human beings to act in the midst of contending values and on the basis of ignorance and misunderstanding" (p. 36). In our humanity, we are bound to try

to reach beyond our limits, bound to fail to do so, and bound to distort things and do some degree of harm to ourselves and others in the process.

Christians are not exempt from this all-too-human condition. According to the Creator/creature distinction, the creation is created good (Hebrew *tob*: having the functionality and order God purposed), but it is limited in contrast with God's unlimited being. Moreover, there are many examples in the Bible where suffering occurs that is not due to sin (e.g., Job, John 9), so we are not free to conclude that all suffering is necessarily linked to sin (though, doubtless, much suffering is the result of human sinfulness). As good as the creation is, it is not a complete creation (Bishop et al. 2018, chap. 2); this incompleteness contributes to the contingency, frailty, ambiguity and limitations that so often mark our everyday existence. Yet, Farley (1990) proclaims that tragic vision is "ethical . . . rather than nihilistic . . . cynical, or resigned," (p. 27) even if the human condition and tragedy itself raise the possibility that "life is futile, suffering meaningless" (p. 22).

There are lessons we can learn within tragic vision. For instance, Hans-Georg Gadamer (1989) explains that spectators at a Greek tragedy are "overcome by distress and horror" (p. 116) at an "excess of tragic suffering," at the "disproportionate, terrible immensity of the consequences that flow from a guilty deed" (p. 117). Such reactions, of course, presuppose acceptance of some form of moral order that cannot be revised at will, however much it is perceived only through a glass darkly. If we allow ourselves to go on through the experience of a Greek tragedy, for instance, a "genuine communion" results in which we recognize our own, the tragic hero's, and everyone else's shared "finiteness in the face of the power of fate" (117). It is not that we learn any particular truth; instead, we gain a more basic "knowledge of the limitations of humanity, of the absoluteness that separates [us] from the divine." According to Gadamer, this is "ultimately a religious insight—the kind of insight which gave birth to Greek tragedy" (p. 320). Our experience is "a kind of affirmation, a return to ourselves," and a step towards becoming "free from everything that divides us from what is" (p. 116).

Part of what "divides us from what is" is a kind of illusory avoidance of our finitude and the limited nature of life. Journalist Chris Hedges (2009) captures some of this illusory avoidance in his best-selling book, *The Empire of Illusion*. Whether it is video games, action movies, sports

hero worship, World Wrestling Entertainment, or consumerism, American society seems rife with the pursuit of entertainments that divert our attention away from the limitations and frailty of ordinary life. The fantasy can become more real—or at least is more desirable—than the finitude and contingency of actual life. As just one example, Hedges writes about American fascination with celebrity culture, where "We have learned ways of speaking and thinking that disfigure the way we relate to the world.... Commodities and celebrity culture define what it means to belong, how we recognize our place in society, and how we conduct our lives" (p. 16). It is much easier to imbibe the escapism offered by celebrity culture—or any of our other myriad diversions—than to grasp the genuine ordinariness of life as human beings who cannot transcend our limitations and frailties, or to face up to the way that life often quashes our dreams. It is not as if we do not know from our own experience how many painful illusions we have to dig ourselves out of; how much we have to continue to struggle in our own person with narcissism, false pride, cravings for power or prestige, envy, resentment, cynicism, slavish fear of the disapproval of others, among other flaws and vices; or how much harm we do along the way to important relationships. Although we often want to hide it from ourselves, pursuing illusions is a recipe for lives that are the opposite of flourishing in becoming what Christ calls us to be.

Tragic vision gives us rich terms for illuminating these dark and difficult matters and keeping them in view. Tragic vision can help us do a better job of breaking the grip of the distractions, entertainments, and addictions of a consumer society, or standing up to the inducements and threats of the neoliberal "regime of truth": the types of discourse accepted as true, the processes accepted for distinguishing true from false statements, the means by which such discourses and processes are sanctioned, and so forth. Biblically, hope is conveyed by tragic vision's sense of ethical or spiritual enlargement. The alternative to grappling with the ordinariness of life, with the hardships and disappointments that come, is not one of resignation to despair. Rather, as theologian Kristine A. Culp (2010) writes, the relationship between all these forms of suffering and life in Christ can have a redemptive focus "on vulnerability . . . to transformation" in a life marked by suffering (p. 114). Drawing on Luther and Calvin, she argues, fleshing out tragic vision, that "Vulnerability *is* a basic feature of human

existence, that is, vulnerability to devastation *and* transformation is a basic feature. Human creatures remain open to being damaged and open to being transformed because they remain susceptible to being changed by others—whether the 'others' are neighbors, strangers, or enemies, communities, economies, or the flow of media. These others, in turn, may become means through which God's grace and glory are made manifest" (p. 120).

Vulnerability to devastation is where the effects of significant forms of suffering dehumanize us—make us less human. "Without a doubt, profound suffering destabilizes selves and communities, disrupts expectations, and disturbs assumptions about God and the world. In itself, such suffering cannot be understood as creative, holy, or good, even if, in the broader scheme of things, pain and loss may serve other purposes and tragedy may be accepted as an inevitable part of creaturely and cosmic existence" (p. 125). The cross directs us towards compassion and action on behalf of those who are experiencing such suffering so that "response to human need is the means by which divine presence is made known in sites of suffering. Sites of suffering are therefore also potential sites of restoration and thus of revelation and redemption" (p. 119).

Vulnerability to transformation is where those who experience suffering become more human, learning more about what it means to "glorify God and enjoy him forever," as the *Westminster Catechism* puts it. We acknowledge and experience the vulnerability of dependence on God leading to a transformed life with a reconstructed sense of self and vocation (p. 120). We learn more and more that "grace alone enables persons to bear the weight of their lives" (p. 121), which is to become more human in the likeness of Jesus who fully grasped and lived that grace. We learn through the cross that it is "resistance to idolatry [e.g., illusory avoidance, worshiping the acceptance of others] and indignity—resistance that involves the risk of being harmed—as well as delight and gratitude that ought to orient life before God" (p. 125). From Calvin's "pedagogy of gratitude and enjoyment," even though "human life may indeed be harsh, filled with pain, and disfigured by deception . . . it can reflect the glory of God." A theologically informed tragic vision of the vulnerability to transformation leads us to see that "Human life, work, possessions, and relations can be received rightly as gifts of God and governed rightly through proper stewardship." Everything has its "proper place" (p. 127).

Suffering can be seen as a pedagogy that breaks our chronic self-centeredness and gives us a Spirit-bred love for others. Moreover, Culp notes that "destabilization and reorientation are necessary for the Christian life. . . . Indignation, sorrow, and anger experienced in the face of suffering may attune persons to injustice, falsehood, and evil" (p. 128).

From suffering to stress

Colloquially, we tend to describe painful events, disappointments and various forms of loss as "stressful."² It turns out that there is a connection between suffering and stress, and neurobiology is revealing that this connection reflects some of the contours of Culp's two kinds of vulnerability.

Neuroscientists and psychologists operationalize stress for experimental investigation using the following categories: good stress, tolerable stress, and toxic stress³. From a neurobiological perspective, perhaps suffering can also be categorized as good, tolerable, and toxic for research purposes. At its core, all stress (good, tolerable, and toxic) represents a departure from homeostasis. Recall that homeostasis is the relatively stable environment that exists among all of the interdependent bodily systems. Put another way, homeostasis is the body's tendency toward equilibrium. The neurobiological mechanisms that underlie a departure from homeostasis are well understood and helpful for understanding how suffering can promote flourishing. Nevertheless, we recognize with Cofer and Apley that stress has been broadly applied in research: "It is as though, when the word stress came into vogue, each investigator, who had been working with a concept he felt was closely related, substituted the word stress ... and continued in his same line of investigation" (Wolfe, 1964). However, it's also the case that broadening of the definition of stress and inclusion of other terms (e.g., frustration, anxiety, and trauma to name a few) under the umbrella of stress promoted an explosion of research in the area and ultimately significantly enhanced our understanding of the concept of stress. Although suffering as stress is not a perfect model, in our view it is useful for expanding

² To be more precise, scientists call stressful events the "stressor" and the way we respond is the "stress response,"", but for clarity, we simply use the term stress to refer to the stimulus and the response.

³ For example, good stress = aerobic exercise; tolerable stress = taking an exam or public speaking; toxic stress = consistent verbal or physical abuse.

our understanding of the variety of forms of suffering, and how these ultimately contribute to human flourishing.

When a stressor is perceived (or recalled, or imagined), the brain orchestrates a bodywide response that is meant to mobilize the body's resources for a response (fight or flight, tend and befriend, freeze, etc.). In short, there are two main neurobiological pathways that can be activated in response to stress: the fast-acting and slow-acting responses.⁴ If the stressor is perceived (more on perception later) as something that can be mitigated quickly, only the fastacting system is activated, resulting in a quick response and recovery. By contrast, if a longerlasting response is warranted, the slow-acting system will also respond, leading to a longerlasting response that takes more time to recover from. Among many other things, both pathways eventually activate the adrenal glands, leading to an outpouring of adrenaline and noradrenaline (from the fast-acting system) and cortisol (from the slow-acting system). These hormones travel throughout the entire body and prepare the internal organs and muscles for action.

A key aspect of how the brain orchestrates the response to stress is the concept of allostasis, which differs slightly from homeostasis. Allostasis means "constancy through change" and refers to the ability of the brain to regulate the stress response based on the circumstances and goals of the organism. For example, suppose you are sitting at your desk. Your brain regulates the ups and downs of your blood pressure based on the fact that you have relatively low metabolic demands. But if you get up from your desk and go to the gym and work out, your brain can also regulate your blood pressure given these new metabolic demands. So, the brain does not have a critical set-point for your body's homeostatic parameters; instead, it can adjust the set-point for each organ based on the circumstances and goals of the organism. This gives the brain incredible flexibility to direct the response to a stressor.

Another key process underlying the stress response is the way in which an individual perceives a stressor. Psychologists call this process perception appraisal, and a mountain of evidence suggest that the way you appraise a stressor can determine whether or not you

⁴ The fast-acting response is called the sympathoadrenal (SA) response, and the slow-acting is called the hypothalamic-pituatary-adrenal (HPA) axis

flourish as a result of the stress. Broadly, the concept of appraisal stems from a model that conceptualizes emotional responses to the environment as an ongoing process. Throughout our daily lives, we perceive stimuli, appraise them, and respond as we see fit. This results from a constant interaction between the environment and the self, and this interaction can be broken down into stages: anticipation, provocation, unfolding of the emotion, and finally, the outcome. During all of the stages, the nature of the environment-self relationship may be changing, and the appraisal of that change shapes the emotional response.

For instance, if you perceive an impending yearly physical exam as an opportunity for growth, you will likely have congruent emotional reactions (e.g., happiness, joy, excitement) leading up to the exam. And this is key: the way you respond to the results of the exam helps determine whether or not you flourish from the experience. You went into the physical exam looking to grow, but now you have received bad news that you have high cholesterol. How will you respond? Do you still appraise it as an opportunity for growth? Or has the environment-self relationship changed, so that you now perceive this news as negative with the associated parallel emotions (e.g., dejection and fear). The critical nature of "self" should be apparent in this process model of emotion, and this means there is a critical role for the brain's ability to sense that body to generate a sense of self. Recent research is highlighting the importance of our ability to sense the internal state of our bodies, thereby providing a critical signal to the brain to help determine how to appraise a situation by supplying relevant information about the status of the self.

If appraisal helps determine how we respond to the stressor, and our appraisal is partly guided by our sense of the emotional reaction to the stressor (and partly guided by the environment), then interoception, our body's sense of itself, would likely play an important part of a response to a stressful situation that leads to flourishing. So understanding interoception will be helpful for our discussion. Interoception, what we might call our "sixth sense," integrates information about the homeostatic state of our bodies into a coherent picture of the body in our insula. The insula is a clam-shaped region of the brain, just underneath the superficial layers of the temporal cortex, which is located in the brain region just above the ear (Figure 1).



Figure 1: Sagittal view of the human brain, with forceps peeling back the temporal lobe to reveal the insula (shaded in green) (KenHub, 2017).

It works in your life like this: your insula combines the internal homeostatic information with other types of relevant information (e.g., the environmental context, memories of similar experiences, and the other primary senses) to produce a holistic picture of your body. It feeds that picture forward to regions of your brain that process information about empathy and social learning (medial prefrontal cortex), complex decision-making processes such as your ability to plan your day and achieve your long-term goals (dorsal-lateral prefrontal cortex), and the evaluation of personal value, such as whether or not you are going to buy that Cascara Latte from Starbucks (orbitofrontal cortex (Figure 2)).

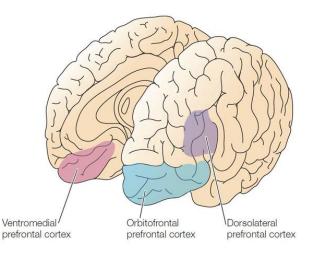


Figure 2. Fronto-sagittal view of the human brain, separated into hemispheres to reveal the medial surface (Jacobs, 2014).

Neurobiologically, we have come to realize that your brain not only regulates your response to stress, it is also a *target* of the stress response. Stressful experiences increase the levels of specific hormones in your blood, and these hormones act on your brain in ways that change its structure, and therefore its function. Three regions of the brain in particular are affected by distress: the prefrontal cortex, the hippocampus, and the amygdala.

Several regions of the prefrontal cortex (see Figure 2) just mentioned are also affected by distressing situations. For instance, neurons in the middle part of the prefrontal cortex (medial prefrontal cortex) lose their dense connections with other neurons, and this leads to poor cognitive flexibility and rigid thought patterns. We also observe an expansion of neuronal cell connections in the part of the cortex that is just behind the eyes (orbitofrontal cortex), which is thought to indicate an overabundance of cortical tissue dedicated to how much things matter (i.e., salience). So instead of being able to appropriately contextualize a stressor, you tend to be far too enmeshed in it and dedicate too much time thinking about it. And last, the part of the cortex that is responsible for the ability to make complex decisions (i.e., dorsolateral prefrontal cortex), integrating information from the past with predictions about the future, is also hindered when you are exposed to toxic levels of stress.

The hippocampus is a structure located deep within the middle of the temporal lobe of the brain and is most well-known for its role in memory (see Figure 3). One of the biggest issues with damage to this region of the brain is that it markedly impairs the ability to plan and coordinate complex behaviors. After all, it is difficult to plan your future if you cannot recall the outcomes of previous decisions. Through a variety of genomic and non-genomic mechanisms, stress reduces the size of the hippocampus, leading to such negative effects.

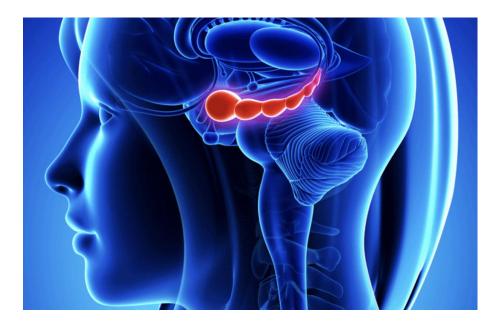


Figure 3. Sagittal view of the human brain, with the hippocampus highlighted in red (Brookshire, 2017).

Another key brain region that is altered by stress is the amygdala (See Figure 4). But whereas stress reduces the size of the hippocampus, it actually increases the density of the amygdala by increasing the number of connections in particular stress-sensitive regions. This makes sense because the amygdala is part of the brain circuit that processes fear. In this way, the circulating glucocorticoids that are released to help the body prepare to respond to a stressor are helping the amygdala form emotionally-laden memories. This is really important if you are getting chased by a bear, but not really a helpful response if it is triggered by purely "psychological" stress (thinking about future stressors) for prolonged periods of time. The effect of an overly dense amygdala is a hyperactive amygdala. Often that leads to behavioral health issues such as depression and anxiety.



Figure 4. Sagitttal view of the brain, highlighting the amygdala in red (Learning Mind, 2017).

What does all of this have to do with how you handle stress? Based on research that Thom helped undertake, we know that individuals that are really adept at performing well (flourishing, if you will) under extreme stress (think Navy SEALs) have a very well-contextualized interoceptive system. They are excellent at combining that internal interoceptive information about their homeostatic state, external information (relative safety of their current location, proximity of threats, etc.), and previous experience to make good decisions under duress⁵. These adaptations to the interoceptive system likely protect the rest of the brain (e.g., prefrontal cortex, hippocampus, amygdala) from the deleterious effects of stress that were just discussed.

Perhaps the most interesting thing about the interoceptive system is that you can train it to behave as you want it to through means such as meditation and prayer. Numerous studies

⁵ To date, our group has shown that those that are able to successfully adapt to stress demonstrate: 1) alterations in brain regions that control emotional processing; especially self-referential structures such as the mPFC and insula (Paulus, 2010; Thom, 2012), 2) attenuated insula activity during and after an aversive interoceptive stimulus (Paulus 2012), and 3) enhanced emotional flexibility as evidenced by a functional preparatory mode when anticipating negative stimuli (Simmons, 2013), especially under unpredictable circumstances.

have demonstrated a relationship between meditation and positive brain-health outcomes. For example, Thom helped complete a large study in the Marine Corps evaluating a mindfulnessbased meditation program, and showed that Marines who trained their interoceptive systems were able to handle the stress of highly realistic immersive training during their predeployment training work-up. Their ability to make good decisions during these immersive training scenarios was accompanied by changes in brain activity in the insula. Thom is now embarking on research that would evaluate the effects of spiritual exercises (such as the Ignatian exercises) that integrate self-reflective meditation with prayer. Stay tuned to see if we can train our interoceptive system to listen to God more richly.

Growing through and after suffering

Theologically, although we sometimes joke about "the school of hard knocks," thinking of suffering as potentially fostering a vulnerability or openness to becoming more human, as Culp describes, may provide a fresh understanding and approach to personal growth toward flourishing. A key question is, "How can we grow in the midst of suffering?" As a start, realizing that everything we receive in life, including life itself, is gift—whether our activity or passivity is involved—fosters a sense of gratefulness to and humility towards God. The full or abundant life that Jesus spoke of in John 10 is not about the accumulation of possessions or accomplishments; rather, it is participation in Christ's life through the Spirit. Offering up the good and the bad that we receive as sacrifices of praise to God (as we see, for example, both Job and the Apostle Paul doing) takes the spotlight off ourselves and focuses it where it rightly belongs. Included in these gifts are human limitations and frailty (e.g., Paul's "thorn in his flesh," 2 Cor. 12:7-10), the very things so intertwined with suffering. Theologically, we are called to steward all we have received—limitations and frailty included—to the glory of God and to the service of others.

Within this perspective, suffering and stress offer us opportunities to expand our understanding of God's work in and through our lives, as well as to foster empathy for the suffering and distress of others we are called to serve as ministers of Christ. When we see beyond our troubles and difficulties as problems to be solved or avoided, finding within them

opportunities to participate in divine life through the enablement of the Spirit, our humanity is enlarged. As Culp notes, "profound suffering destabilizes selves and communities, disrupts expectations and disturbs assumptions about God and the world." Yet, "destabilization and reorientation are necessary for the Christian life." For instance, the "indignation, sorrow, and anger experienced in the face of suffering may attune persons to injustice, falsehood and evil" (2010, p. 128). And such reorientation can open enlarged understanding of the human condition as well as new paths of ministry and action for us as persons who see more fully with Jesus' eyes. As Christ followers, we experience new forms of self-transformation as well as ways of participating in transforming the world around us (e.g., through deepened friendship, or a new responsiveness to the plight of the "least of these" in our midst).

Neurobiologically, one of the most striking and well-known studies evaluating the devastating effects of early-life stressors is the ongoing study of children raised in Romanian orphanages during Nicolae Ceausescu's reign. After he was overthrown in the late 80's, some 170,000 orphans were discovered in incredibly impoverished conditions. In short, unless the babies were being fed, bathed, or undergoing diaper changes, they were ignored. They were not talked to, read to, sung to, or touched for the rest of their days. The children showed "delays in cognitive function, motor development and language. They showed deficits in socio-emotional behaviors and experienced more psychiatric disorders. They also showed changes in the patterns of electrical activity in their brains, as measured by EEG" (Weir, 2014). Perhaps the most interesting finding to emerge from the study of these children is that kids who were rescued and placed into loving homes before the age of two tended to develop normally, with some developmental issues, while the children rescued after age 2 never recovered.

This is an example of the kind of suffering that qualifies as tragic. Clearly, extreme levels of stress during development do not promote flourishing and appear to damage children's humanity. By contrast, recent research on resilience shows that an optimal level of stress during development leads to a more resilient response to stress later in life. If we accept that suffering is a form of stress, and that resilience is an aspect of flourishing, then these studies are informative for our understanding of how suffering can promote flourishing.

Whereas we can only evaluate associations between stress during development and subsequent flourishing in humans (because you cannot ethically cause children suffering for the sake of experimentation), it is possible to leverage animal models to learn about the causal relationship between stress during early life and resilience to stress later in life. One such model is called the "enhanced maternal care" model of rearing. In this model, mother rats are separated from their rat pups for prescribed periods of time (usually ~15 minutes) each day before being re-united. While the separation is stressful for the mother and pup, it promotes increased maternal behavior upon reunion that leads to resilience to depressive-like behavior and improved learning and memory. Compare this to a model of chronic early-life stress, where the mother and pup are constantly in contact, but they live in an impoverished cage environment, where bedding and nesting material are scarce. In this environment, maternal care becomes unpredictable, can even turn rough, and led to anxiety and depression-like behavior, as well as early cognitive decline, in developing pups.

More recent studies have begun to uncover the genetic and epigenetic mechanisms that underlie these responses to early-life stress. ⁶ One such study began by rapidly screening mice for signs of anxiety, which led to the development of two groups of mice: those with low initial susceptibility, and those with high susceptibility. When the mice were subsequently exposed to both acute and chronic stressors, they showed different behavioral responses that were associated with pre-existing epigenetic differences in brain cells in regions that are important for regulating parts of the stress response (McEwen, 2016; McEwen et al., 2015).

Taken together, the neurobiological studies suggest that early life stressors can promote resilience to stress by altering the way our genes are expressed, which suggests that we need to be alert to the positive role that stress can play in our growth as humans.

Perspectives and practical advice

If we can learn to see how suffering and stressful circumstances bring vulnerability and an accompanying openness to becoming more human as Christ followers, this perspective can change the ways we respond to trials and tribulations. Jesus is our model here. Just as his path

⁶ Epigenetics are the factors that control how genes get expressed.

to the completion of his humanity, and the consummation of new creation, lay through suffering (Matt 16:21-23; Luke 9:28-35; Luke 24:25-27), so our paths lie through suffering as well (e.g., 2 Cor 3:18; 2 Cor 4:16-18; Rom 8). Although we should not go out of our way to seek suffering or create unnecessary stress for ourselves, we should not go out of our way to avoid suffering or stress. Neither "playing it safe" nor illusion are biblical approaches to life in Christ. The more we begin to grasp the tragic nature of the human condition in a good yet incomplete creation, the more we realize that we can never fulfill our relationships with ourselves, with other humans, with nonhuman creatures and with God on our own. We "are unable to completely do justice to these relationships" (Bernhardt 2016, p. 346). But by pursuing the power and presence of the Holy Spirit, we can progressively close the gap between our current limitations and the fullness of these various relationships—even if that gap cannot be fully closed on this side of new creation.

One form of Spirit enablement is practicing faithful presence, the "presence of the living, transforming God in the midst of persecution and oppression" (Culp 2010, p. 119). First, this means learning to be present with ourselves in the midst of struggle and stress, listening and looking for God's transforming work in our lives. Such listening involves not just accepting, but genuinely embracing the limitations of being human, of hearing God's affirmation of the limited nature of human being. Since God's good purposes are for all created beings to be finite (Bishop et al., 2018, chap. 2), practicing faithful presence towards ourselves involves learning to follow the Spirit's enablement to offer our finitude as a sacrifice of praise to our loving Creator. This provides a transformed perspective on the disappointments, pains and troubles of life that avoids both illusion and despair. Instead, we can see the call to love and service in the Christian life as anchored squarely in the painful realities of a finite, incomplete creation that our Creator Redeemer is bringing to completion. As Paul says, "Therefore we do not lose heart. Though outwardly we are wasting away, yet inwardly we are being renewed day by day. For our light and momentary troubles are achieving for us an eternal glory that far outweighs them all" (2 Cor 4:16-17), and "We know that the whole creation has been groaning as in the pains of childbirth right up to the present time. Not only so, but we ourselves, who have the firstfruits of

the Spirit, groan inwardly as we wait eagerly for our adoption to sonship, the redemption of our bodies" (Rom 8:22-23).

Second, practicing faithful presence means being present to others, ministering Christ's love to those who, like ourselves, are "marked by suffering, mourning, and grief," and also to those in "situations where love, compassion, and caring predominate" (Bernhardt 2016, p. 348). Through his Spirit, God is at work wherever we are present. Sometimes this happens as we simply sit with others in their times of struggle and stress. Faithful presence is participating in divine life amid the good and the bad. We have no guarantee that practicing faithful, Spirit-enabled presence will make the tragic and meaningless meaningful to us. What it does is create "new seeds of life and new patterns of meaning, seeds of resurrection in dead-end situations." We can discover that "God's operative presence has transforming effects on the awareness of people and communities, on their attitudes, and on their behavior. As the experience of the tragic is an omnipresent possibility, the power of God's spirit is an omnipresent healing power" (p. 349). God's presence encompasses all forms of suffering, providing meaning and new pathways forward towards becoming fully human. Through the Spirit, faithful presence is a form of participation in life in Christ.

Another place we may find the Spirit enabling is as we seek to practice a life of forgiveness. This is more than simply saying, "There but for the grace of God go I." We may come to Spirit-bred empathy and Spirit-led forgiveness of others because we each have experienced how our actions have hurt others—have caused them disappointments, have dented their dreams, have broken relationships, and so forth. From our experience of causing suffering and stress in others, we can grow personally into people who are quicker to have empathy for and give forgiveness to those who wrong or hurt us. We can set aside the response of anger for the response of Spirit-enabled grace because we have seen how we ourselves have harmed others. This also reflects our understanding of human limitations and frailty—that every person who causes us wrong wears an "under construction" sign around their necks just as we do. The more we participate in the Spirit's enablement in forgiveness, the more we will be able to see others through the expansive view of Christ's eyes, as persons deeply loved by God.

Conclusion

What at first sounds counterintuitive—suffering and stress can contribute to human flourishing—on reflection, turns out to be a source of hope in an incomplete creation. The benefits of cultivating openness to our vulnerability to transformation, and new results in neurobiology exploring stress and interoception, both cast light on possibilities for spiritual formation and service through suffering. The *shalom* of God—peace, wholeness and completeness—breaks into our lives in surprising ways. Becoming more aware of the possibilities of God's *shalom* in the struggles and stresses of life promotes our flourishing in Christ.

References

- Bernhardt, R. (2016). Abraham's dice in the flow of life: The experience of the tragic and its theological interpretation. in K. Giberson (Ed.), Abraham's Dice: Chance and Providence in the Monotheistic Traditions (pp. 333-352). Oxford, Oxford University Press.
- Bishop, R. C., Funck, L. L., Lewis, R. J., Moshier, S. O. and Walton, J. H. (2018). *Understanding Scientific Theories of Origins: with Biblical and Theological Perspectives*. Downers Gove, InterVarsity Press.
- Brookshire, B. (2017). Scientists Say: Hippocampus. Retrieved December 19, 2017, from https://www.sciencenewsforstudents.org/blog/scientists-say/scientists-sayhippocampus
- Culp, Kristine A. (2010). Vulnerability and Glory: A Theological Account. Louisville, Kentucky: Westminster/John Knox Press.

Deresiewicz, W. (2014a). Don't send your kid to the Ivy League. *New Republic*. https://newrepublic.com/article/118747/ivy-league-schools-are-overrated-send-your-kids-elsewhere

Farley, W. (1990). Tragic Vision and Divine Compassion. Louisville, Kentucky: Westminster/John Knox Press.

Fromm, E. (1947 [1975]). *Man for Himself*. New York: Fawcett Premier.

- Gadamer, H-G. (1989). Truth and Method, second revised edition, trans. J. Weinsheimer and D. Marshall. New York: Crossroad.
- Hedges, C. (2009). Empire of Illusion: The End of Literacy and the Triumph of Spectacle. New York, Nation Books.

Jacobs, D. (2014, May 14). HumanAntiGravitySuit: MORE ABOUT DORSOLATERAL PREFRONTAL CORTEX. Retrieved from http://humanantigravitysuit.blogspot.com/2014/05/moreabout-dorsolateral-prefrontal.html

Judt, T. (2010). Ill fares the land. New York, Penguin.

KenHub. (2017). Insular lobe (Lobus insularis). Retrieved December 19, 2017, from https://www.kenhub.com/en/atlas/insula

- Learning Mind. (2017). How to Control the Amygdala of Your Brain to Turn off Your Anxiety. Retrieved December 19, 2017, from https://www.learning-mind.com/the-amygdalaanxiety/
- Lears, J. (2015). The liberal arts vs. neoliberalism: William Deresiewicz's 'Excellent Sheep.' *Commonweal*. https://www.commonwealmagazine.org/liberal-arts-vs-neoliberalism
- McEwen, B. S. (2016). In pursuit of resilience: stress, epigenetics, and brain plasticity. Annals of the New York Academy of Sciences. https://doi.org/10.1111/nyas.13020
- McEwen, B. S., Bowles, N. P., Gray, J. D., Hill, M. N., Hunter, R. G., Karatsoreos, I. N., & Nasca, C. (2015). Mechanisms of stress in the brain. Nature Neuroscience, 18(10), 1353–1363. https://doi.org/10.1038/nn.4086
- Weir, K. (2014). The lasting impact of neglect. Retrieved September 7, 2017, from http://www.apa.org/monitor/2014/06/neglect.aspx

Wolfe, J. B. (1964). Motivation: Theory and Research. C. N. Cofer and M. H. Appley, Wiley, New York, 1964, xii + 958 pp. Illus. \$12.50. Science, 145(3633), 696–697. https://doi.org/10.1126/science.145.3633.696-a