From Mindfulness to Resilience: Two Contexts

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I. Prologue

The resurgence of interest in the cluster of psychological practices that fall within the broad term "mindfulness" has been occasioned, in part, by charting the manifestation of mindfulness in different areas of discourse within 'our' university. In a very real sense, the intellectual and pragmatic exchanges cultivated within "the new American university" (indeed built into its foundation as a design imperative) provided the environment for scholarly research to focus on this transdisciplinary presence, to harness the untapped potential of diverse scholars, and to explore unexpected outcomes in being (to borrow an apt phrase) "awake at work".[1] The case put before our colleagues today is that mindfulness should only be a place to begin and not an end in itself, since the most beneficial aspects of its pursuit continue to register in the body as well as the mind and tend to accumulate across months and years (rather than minutes). The beneficial outcome that such practices offer can help alleviate forms of suffering on both sides of healthcare delivery and promote well-being for those engaged in the delivery of care in all its forms.

II. Introduction to First Context

The U.S. health care system is undergoing significant changes, a situation marked by changing patient demographics and shifting models for healthcare delivery.[2] Seventy percent of adults over the age of 65 have at least two chronic conditions; over 30% of the U.S. population is obese, and the U.S. has the lowest life expectancy compared to all other industrialized nations.[2] Meanwhile, health care costs per capita exceed that of all other industrialized countries.[2] The transition to care delivery models that incorporate principles of population health and patient outcomes may drive positive systemic change, but in combination with patient demographics, may also place additional burden on the individual health care providers.[2,3] In fact, over half of U.S. physicians reported symptoms of burnout.[4] Results are similar in the nursing profession; 36% in trauma and 30% in critical care experience report symptoms of burnout.[5] Consequences of burnout may lead to decreased productivity, depersonalization, medical errors, and substance use or abuse,[6] leading to a focus on clinician wellbeing.[7]

Burnout

Emerging care models, shifting patient demographics and industry outcome measures are challenging front line health care professionals in their ability to connect and care for patients. Over half of U.S. physicians report experiencing symptoms of burnout including fatigue, depersonalization, depression and suicidal ideation.[4] Physicians are two-to-three times more likely to commit suicide than the general US population.[8] Symptoms can begin early in training; medical students and residents are more likely to demonstrate symptoms of depression and burnout compared to the US population.[9] For physicians, symptoms are primarily attributed to increased administrative responsibilities and work hours.[10,11]

The nursing profession experiences similar rates of burnout, with additional concerns over physical and emotional safety.[6] The primary reasons for burnout are linked to unfavorable staffing ratios and work hours.[12,13] Stress and burnout tend to occur more frequently in certain practice settings (trauma/emergency department, critical care/intensive care, oncology) and with specific patient and family encounters such as

abuse, avoidable injury/illness, children, etc.[5,12] The consequences can be costly and may include decreased patient satisfaction, overuse of diagnostic tests, and medical or prescribing errors.[11] Health care providers feel overwhelmed, disconnected from the patient experience, and experience a loss of empathy that led them to a career in health care.[8,11]

In an effort to improve quality and decrease health care costs, there are now over 700 reportable quality measures.[14] Many of these measures lack consistency across stakeholder organizations and lead to time-consuming staff and provider reporting. This has led to a shift in how physicians and staff spend their workday; Physicians report spending more time on non-patient care activities.[11] Licensed practical nurses and other front-line staff also assume the administrative burden.[15] Casalino et. al quantified the annual administrative costs as over $15 billion annually, correlating to approximately $40,000 per physician.[15]

The aging U.S. population provides additional challenges for health care providers across practice specialties, particularly in primary care. High-need patients with multiple chronic illnesses and need for social or community-based services are challenged with access to and coordination of care.[16] Modeling high-performing, evidence-based team practice may provide both patients and health care providers with meaningful health care experiences.[17]

System and Individual Practice Solutions

The traditional culture of medicine leans toward restraint, autonomy and "machismo".[8] New models of education, training and care promote a culture of transparency, communication, engagement, and teamwork.[3] Interestingly, physician assistants (PAs) and nurse practitioners (NPs) remain extremely satisfied with their career choice and are trained in the team-based model of care. PAs and NPs work with physicians and health care teams in a variety of specialties to deliver patient-centered care. Seventy-four percent of PAs and NPs are satisfied or very satisfied with their career, despite increases in both patient volume and overall job responsibilities.[18] Both the nursing and PA professions place a high value on teamwork, collaboration and collegiality in the workplace, suggesting a new paradigm for health care professionals in education and practice.[8,12,18] According to a recent report, only 58% of physicians would again select medicine as a career.[19] This is a clear indication that workplace health should be a priority. Large-scale systemic, leadership and organizational changes are critical for long-term success. On an individual level, interventions such as mindfulness, resiliency training and similar techniques may offer health care professionals opportunities to recapture their joy in work.

III. Introduction to Second Context: Experiments in Mindfulness

The emergence of mindfulness and resiliency practices and their function as vehicles for the manifestation of resiliency flow from an increasingly strong evidentiary basis confirming their efficacy. The recent research offers a foundation upon which to construct practical tools capable of transforming stressful situations into forms of stability capable of sustaining the self while providing constant movement towards resiliency (both as immediate experience and projective aspiration). Like mindfulness, resilience resides in every single second of every single day, and the strengths of the former lead directly to the stability of the latter. However, the greatest strength that these contemplative methods offer is their potential to ease anxieties on both sides of the exchanges that define "delivery" in the diverse spaces in the healthcare environment.

As our brief survey of research suggests, the range of demands driving burnout in the workplace for those in healthcare (our immediate focus) are shared by colleagues in other professions, including our own intense university environment. However, given that the university is what Freud would term the 'scene of instruction' for those preparing for healthcare and related professions, the university has a pre-existing infrastructure suited to accommodate systems to promote these practices on a collective basis. Given the

range of problematic symptoms experienced by all healthcare participants previously discussed (i.e. patients and providers—in another words almost all of us), we argue that the opportunity to hone these inner resources must also be accompanied by a recognition of a shared responsibility for all disciplines within that scene of instruction. Mindfulness and resiliency practices have an extremely long epistemological and historical presence in the human science (i.e. the humanities), which tend to be better vehicles for working at all levels of neurological capacity (i.e. consider the range of states involved in the 'reception' for literary or religious expression).

Aesthetic Experiments and Analytic Experiences

This historical continuity of concern can often recover surprisingly detailed maps (pedagogies) leading to the sought end (mindfulness and resilience), as in William Blake's "sublime allegory [addressed to the intellectual properties]" and his exploration of alienation, dream states, and psychic fragmentation through those aspects of mind one hundred years before Freud published *The Interpretation of Dreams*.[20] However, the most extensive cartography of states of consciousness and the conditions that give rise to them remains the obscure Tibetan texts works collectively known as the *Abhidharma* (which has, to date, empirically charted over 84,000 discrete states of consciousness).

As one contemporary expositor of this highly complicated work argues, in terms that intersect our own analysis and proposals: "if scientific observation is going to explain the mind, not just the brain, then producing a systematic approach to measuring and describing mental processes cannot be avoided".[21] The foundation of the system, one both easily measured and taught, is the "breath . . . as an [observed] intake and outflow" infused with the varied forms of bodily rhythmic presence present in all cultural forms of expression—whether artistic or scientific.[22] Of course, as is well known in a medical context, short-term attention to the breath (e.g. hyper-ventilation) reduces immediate anxiety and generates calmness; what is equally well-known in the mind-science of meditation, long-term 'watching the breath' brings stability and equipoise, the primary features of most states of abiding resilience. The most important 'takeaway' from an encounter with the detailed analysis of mind in the *Abhidharma* is its empirical impulses to map mental states through the vehicle termed, by the Buddha in the *Anapanasati* Sutra, the "science of breath".[23] In the view of one of the best know modern practitioners of this science, Chögyam Trugpa, the vehicle of "meditation [provides] a way of scientifically looking at our situation [yet] should not be regarded as a learning process [but] as an experiencing process".[24]

Like all pedagogies of compassion (rather than compulsion) the vehicles of enlightenment (creative visualization, mindfulness, single-point focus, watching the breath), as Larry Rosenberg argues, "can be used as a systematic course of contemplation, as a training program [or] as the description of a process," but such assertions tend to be followed by the corrective "but however you use it, you can't force these steps".[23] This seems to remain the chief problematic for any institutionalized approach to promulgating mindfulness within what Lacan termed the "discourse of the university",[25] although the pedagogical shift from compulsion to compassion proffers the best opportunity to embed such training into professional preparation. What can be implanted in the immediate can only become manifest in contexts beyond the site of instruction and can only be assessed outside normal models of measurement. Certainly, as the best-known and most intense experimental attempt to measure the outcomes of mindfulness practices when extended and tracked across longer time frames—that conducted for over two decades at Harvard Medical School—the results of extensive meditation across time create actual physical, as well as mental/psychological, changes in practitioners.

The Neurophysiology of Mindfulness

One of the earliest direct examinations of the physical dimensions of meditative practices (of which mindfulness is a part) was the prescient study conducted at Harvard University Medical School in 1972,

when two researchers (Robert Wallace and Herbert Benson) sought practical and skillful means of ameliorating "the deleterious effect on the mental and physical health of modern man" and providing thereby factual that those practices "produce[d] a variety of physiological effects" that reflect the genesis of "the human body's resources for copying with the most challenging aspects of our daily environment".[26] In these earlier studies, effects include increases in "alpha brain waves," decreases "in oxygen consumption," and enhances in the "integration of [neurophysiological] responses mediated by the central nervous system".[26] After almost two generations of intermittent experimentation, the neuroscientists, psychologists, and psychiatrists involved in the mind-science conferences with H. H. The Dalai Lama, beginning with that held at Harvard Medical School, have sought to test the scientific claims of the specific sutra cited above (i.e. 'the science of breath") and the broader *abhidharma* doctrine (meditation as "an experiencing process"), finding in the preliminary outcomes that "the brain is constantly," in the view of Francisco Varela, "remodeling its own physical structure to reflect how it is being used".[27]

Taking a twenty-year quantum leap to a recent summative report on continuous experiments across that same term, which again appeared in the pages of *Scientific American*, the most recent research provides support for this view. Scientists studied "the brain activity of expert Buddhist meditators" and found that "meditation brings about changes not just in well-defined cognitive and emotional processes but also in the volume of certain brain areas" (Matthieu et al. 45). For example, meditators had "greater volume of brain tissue in the prefrontal cortex . . . and the insula," and these areas of the brain serve "to disengage attention from a distraction to refocus on the rhythm of the inhalations and exhalations".[28]

IV. Preliminary Conclusions and Pragmatic Recommendations

These outcomes clearly confirm the overlapping goals found in contemplative practices and "the objectives of clinical psychology, psychiatry, preventive medicine and education".[28] For meditating monks, the breath functions as vehicle that forges interactions with other bodily manifestations of rhythm (e.g. the beating heart, the vacillating patterns of brain waves). For the contemplative poet, poetry receives, encodes and redeploys embodied rhythms within its metrics in an attempt to reconcile "meaning and being" and thereby "escape [both] the uncertainty and inadequacy involved in communication through language".[29] For the medical practitioner, the cadences of communication provide the narrative screen upon which their patients project the range of concerns in states of uncertainty, and the practices of mindfulness (i.e. single-pointed focus or self-annihilative listening) can convert those occasions into opportunities for personal growth, self-realization and stability most associated with those practices.

All studies in the context of the workplace have arrived a similar solutions and only vary by means and methods, although the arrival of distress grounded in workplace stress generated by ever-escalating complexity functions as the primary challenge to any attempt to deploy mindfulness as the mechanism for greater individual and collective stability. In this sense the physiological manifestation of "robustness" is intimately related to the long-term experience of resilience, since rigidity itself as a response to fluctuating external and internal conditions creates the very deleterious effects mindfulness practices address. As our brief evocation of some of the best known and wide range experimental studies confirm, any living system (especially the individual human being embedded in complex social structures) best responds to the relentless mutability of everyday life through "flexibility, its ability to adapt and to function in a range of [physical and psychological] environments".[30] Thus, the practice of mindfulness training simply cultivates to raise into higher effectiveness the inner capacities already accessed by the self on a daily basis through autonomous systems that can be harnessed to improve the experience of the workplace and enhance health in the process.

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