Health and the Psychology of Possibility

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Biology is not destiny.
Ellen Langer

In her original work on mindlessness and mindfulness, Ellen Langer describes our reliance upon the Cartesian separation between our "material" body from our "nonmaterial" mind, and that by so doing we seek care from those who focus treatment on only one of the two aspects of our health. We rely upon such a mind/body dualism for our psychological as well as our physical health. Dr. Langer's examples of a mindless adherence to the mind/body dualism may trigger some skepticism inasmuch as their consequences are in a sense unbelievable, foreshadowing an outlook that seems as pessimistic as it is mindless. In one, the "learned helplessness" construct suggests that the context of a situation may supply much promise to maintaining and improving our health:

> The patient lived on what was affectionately called the "hopeless ward." For a time, renovations in the hospital made it necessary for the residents on this ward to be moved temporarily to another ward from which residents usually did get better and return to the community. The patient did well during this time. Once the renovations were completed, however, patients were returned to the hopeless ward. This particular patient died immediately afterward, from no apparent physical cause. The name of the ward had taught him the message written over Dante's Gates of Hell: "Abandon all hope, ye who enter here. (Langer 1989, p. 54)

Mindlessness relies on using previously established labels and categories without regard to the current context, what Ellen Langer refers to as a pre-cognitive commitment (Langer 1989). Distinctions between the categories "body" and "mind" illustrate mindlessly accepted bias in Western society as a direct expression

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of the separation described by 17th century French philosopher René Descartes, in which there is a strict distinction between two fundamental kinds of substances termed *res extensa* (extended things, physical things) and *res cogitans* (thinking things). Much of the Western culture continues to perceive mind and body as distinct in which health care providers advocate diagnostic and treatment plans based on the view that most disorders have either a physical or a mental etiology (Switankowsky 2000).

In a more integrated approach to health that merges our thoughts and emotions, the importance of context is paramount, in particular for its priming effect. For example, the fear involved in a biopsy emerges from our *interpretation* of the doctor's procedure, rather than the procedure itself, that is, in which our thoughts determine our feelings (Langer 1989), context mediating influences on our health. If mind and body share that context then "[t]o achieve a different physiological state, sometimes what we need to do is to place the mind in another context." (Langer 1989, p. 177). In another example, the consequences of personal choice over external motivators, we see that the attitude towards a task (e.g., having a personal commitment to not eating when making the choice oneself) results in a different outcome (less hunger) than if the choice is made for extrinsic reasons (e.g., a fee for participating in hunger research). Still other research (Turk and Gatchel 2013) shows that taking one's mind off pain often results in the pain going away or seeing the pain in a different context (e.g., playing a game) results in the use of fewer pain relievers. These examples of Langer's earliest work introduce the basis for the view that our reactions to illness may change the impact of illness on us. Moreover, with the use of biofeedback equipment to enable control over "involuntary" systems such as heart rate, we can see how "internal cues" could be a substitute for external —including mechanical—prompts.

In her initial framing, Ellen Langer begins with the important distinction between what is—the subject of most psychology researchers—and what might be (Langer Langer 1997). In other words, we come to ask how can the small changes —in language, thinking and the environment—improve our health? This is the psychology of possibility:

> (It) first requires that we begin with the assumption that we do not know what we can do or become. Rather than starting from the status quo, it argues for a starting point of what we would like to be. From that beginning, we can ask how we might reach that goal or make progress toward it. It's a subtle change in thinking, although not difficult to make once we realize how stuck we are in culture, language, and modes of thought that limit our potential…. In the psychology of possibility, we search for the answer to how to improve, not merely to adjust (Langer 2009, p. 15).

For example, if instead of accepting aging as a predictor of visual decline, we view it as an opportunity for improvement, we might look for ways to make that happen. And if we do that without evaluating our attempts as good or bad but merely as attempts, as a process being used to suggest potential opportunities for improvement, that we have by its pursuit empowered ourselves. This is another significant departure from the conventional wisdom: Instead of looking for large effect sizes, we look for success in one case. Subsequent work focuses on such

cases, taking as success an instance of possibility that had not previously been known, seen or understood. This is the fundamental building block of Langer's psychology of possibility. The importance of this is to help us understand that the world is a "product of our construction," and not as we have been taught, something to be "discovered" as if it were a stable, unchanging environmental fact (Langer Langer 1997, p. 17). She suggests we should stop believing in stability existing outside of our perception: "We imagine the stability of our mindsets to be the stability of the underlying phenomena, and so we don't think to consider the alternatives. We hold things still in our minds, despite the fact that all the while they are changing. If we open up our minds, a world of possibility presents itself" (Langer 2009, p. 18).

It is this mindless attribution of certainty that blinds us to novelty, to alternative understandings of situations. Being a mindful health learner requires that we be open to everything we can learn, that we appreciate the small things, particularly the variability that small changes can mean for our health, and that while possibility may sometimes feel impossible, in small doses it becomes increasingly more believable and achievable.

In an extension of this principle, Langer suggests that if we can conceive of ourselves as we did before a diagnosis of an illness that the diagnosis need not preclude us from improving our health—even if our trusted health care practitioners are less optimistic than we hope. In this context the use of words themselves can have a real effect on our physical health, such as when a diagnosis of cancer is made and the perception of the diagnosis is more harmful than the disease itself (Langer 2000). Thus the difference between being told that a disease is in "remission" versus being "cured" can have a real impact on our perception of and our ability to control our health: If there are no more countable cancer cells then are we waiting for the disease to "return" (as when we are told we are in remission) or has it been eradicated (i.e., we are "cured"), even if that same disease occurs later? In the same way, when we think about alcohol abuse, is an alcoholic "recovered" or "recovering" after years of not drinking? How many years does it take to make the difference? If we say instead a person is "allergic" to alcohol as one might be to shellfish and therefore to be similarly avoided, do we suggest a greater control over it than if we characterize it as a disease? There are many examples of such labeling bias. Essentially, word choices can make a major difference in how we approach our own health, as a matter of opening up the possibility of greater control and, by extension, greater health.

Ignoring changes in context and a reliance on mind/body connections results in processing information mindlessly, taking what we are told for granted without critical reflection. When diagnosed with an illness we tend to rely on an authority heuristic in which the "expert" pronounces us diseased—or well—by means of the diagnosis. The diagnosis carries with it a sort of fabric perceived as knowledge that accordingly "covers" the recipient. The associations between the diagnosis and what we believe to be "known" about it expand, giving shape to the fabric. The ability to modify how the fabric fits the situation, feelings and thoughts goes beyond the heuristic and relies on one's interpretation of the context. Absent that one remains mindlessly adherent to the implications of the diagnosis as initially

conceived, without questioning its absoluteness. Mindfulness and mindlessness and the psychology of possibility play a major role in this situation, even in case of the most severe disease conditions.

Mindfulness and the Mind/Body Connection

Despite the development of a more complex, biopsychosocial paradigm (Engel 1977) that is aimed at paying attention to the different aspects of the human health, a biomedical approach to physical illnesses continues to dominate, relegating the mind to a minor role. However, there is ample evidence that these two concepts are highly interrelated (Fava et al. 2010); recent research suggests that "negative" emotions such as fear and anger can produce direct and indirect effects on the body in terms of cardiovascular and immune system responses (Ader et al. 1995; Ho et al. 2010), fatigue (Brown and Schutte 2006), intoxication (Peacock et al. 2012), and pain (Tyrer 2006).

Similarly, "positive" emotions can lead to an improvement in physical health (Pressman and Cohen 2005).

Increasingly, more theoreticians and practitioners agree with Langer (2012) that it is difficult to deny the important role that mind plays in one's "physical reactions." This, then, raises the question of how important can we make this connection—how can we purposefully, actively use it? The question, once introduced at a more personal level, creates the opportunity for individual response, which when combined with the role of expectations, can become self-prophesizing. As Henry Ford said, "Whether you think you can, or you think you can't—you are right." If psychology plays a large part in health, the possibility of controlling the body increases exponentially. Without this belief in mental influences, the body one may be lead to mindlessly accept a diagnosis and scientific facts as absolutes. When we do not accept such "facts" as absolutes we can see that wherever we put the mind, we can also put the body. Langer tested this concept with different groups, including the elderly, airline pilots, and chambermaids and found that, indeed, if the mind is in a healthy place, the body will tend to be as well.

Counterclockwise: The Psychology of Possibility and Aging

One of Langer's earliest studies showed us the role of expectations and mindset over the body, a significant link between the power of psychology on the improvement of health (Langer 1983, 1989). In one study demonstrating a link between longevity and engagement (Rodin and Langer 1977), when one group of nursing home residents was encouraged to make choices about various aspects of their lives and another (control) group in the facility was told that the staff would provide for their care, the first group had both a happier, more cheerful disposition

and fewer than half as many of them had died than in the control group. This suggested that making choices results in increased personal control. Subsequent research on the connection between mind and body revealed that a healthy mind would put the body in a healthier place (Langer 1989), forming the basis for the 1979 "counterclockwise study," in which Langer and her students studied what effects of turning back the clock *psychologically* would have on the physiological states of the participants. The results of this study changed the way we view not only aging (the cohort being elderly men) but also of traditional western notions of "limits"—that biology is not destiny, that our mindset about our physical limits limit us more than our physical selves (Langer 1989).

In the original 1979 counterclockwise study (Langer 1989), a small group of elderly men were taken to a remote monastery in New Hampshire where, for a period of one week, they were transformed from the then current year to a time 20 years prior—magazines, books, radio, television and furnishings as well as photographs and discussion topics all were presented *and discussed* as if the men were 20 years younger. The men were asked not just to think about the year 1959, but also *to live as though it were that year*, as if they were 20 years younger. At the end of that week, the notions of typical aging were turned around by the remarkable psychological and physiological changes experienced by the participants who had been part of the "counterclockwise" experiment, compared to a similarly aged demographic control group who, while spending a week at the same retreat, were simply asked to reminisce about life 20 years prior. The expectations associated with a predetermined set of expectations about aging were replaced with a new understanding, what we know as the "psychology of possibility" (Langer 2009).

These studies over the course of 30 years offer us the opportunity to view illness with the lens that our mindset limits us more than our physical selves. It is not whether we label ourselves in remission versus cured, but rather our mindset that rather categorically declares that once we are diagnosed, we are forever ill, that limits us. If one becomes the "guardian" of one's own health (Langer 1989) then the preconceived limitations placed on our health will no longer limit us. We will become more in control of our health by being more mindful.

Mindfulness in Clinical and Health Psychology

The concept of mindfulness is now commonly used in clinical and health psychology. Some of the most promising clinical treatments to reduce distress, improve quality of life and to help people manage life with a chronic or long-lasting disorder are based on the concept of mindfulness. Many of these programs are based on meditation training to help an individual achieve a more deliberate, open-minded awareness, a focus on presence in the moment, and the ability to be non-judgmental (Grossman 2011). Through this practice of mindfulness, a more serene and balanced emotional and affective state can be achieved, an important precondition for stress resistance and resilience (Teasdale et al. 1995).

Mindfulness increases one's ability to cope with the challenges of the environment and helps develop the capability to accept one's own condition. Programs with this underlying framework of mindfulness vary, with some of the more prominent using a more standardized program such as the Mindfulness-Based Stress Reduction (Kabat-Zinn 1990). Results from meta-analytical studies support the use of mindfulness for the improvement of quality of life in clinical populations. This pattern of findings suggests that mindfulness may not be diagnosis-specific but, instead, may address processes that occur in multiple disorders by changing a range of emotional and evaluative dimensions that underlie general aspects of well-being (Hofmann et al. 2010).

Ellen Langer's construct of mindfulness, while in harmony with fundamental tenets of Eastern-based mindfulness interventions, is different in its framing and achievement of mindfulness. It is focused on the process of actively noticing new things as a way to be in the present. While in the present, people are aware of context and sensitive to perspective, aware that things are always changing and look different depending on perspective. The process of actively noticing is enlivening, both literally and figuratively. It is the essence of engagement. It is not a matter of practicing, but is more appropriately viewed as a way of being. When we are engaged in the present, actively noticing new things about or in the current situation, we stop thinking about consequences as positive or negative and instead see evaluation as in our minds, not in the environment. This often leads to a sense of being more in control and more at peace. This approach may be more appealing to people who are less able to or less inclined to participate in other more time-intensive and otherwise challenging training programs (Grossman 2011). Since some people do not feel comfortable with meditation, from a personal or religious perspective, this "meditationless" form of mindfulness provides an alternative for these patients and/or caregivers. From an epidemiological perspective, is would be inappropriate to believe that everybody can practice meditation to increase their mindfulness, which continues to be a practice less than 10 % of the US population (Barnes et al. 2008).

In summary, the application of Langer's mindfulness framework in chronic illness directly targets the concept of an illusion of stability in diagnosis—that is, that people take for granted what they are told by health care practitioners as unconditional, losing an opportunity to challenge traditional views and reflect further on one's own views. In this conceptual framework, medical diagnoses are valuable but are not a substitute for a mindful understanding about what is going on with one's body; in other words, paying attention to the variability of symptoms of illness (Langer 1983). Attention to variability has the potential to bring our physiological as well as emotional and behavioral responses under control (Langer 2009). In the situation of chronic illness, the unintended consequence of ignoring variability—the grouping together of symptoms as part of the disease when in fact the symptom might be attributed to something else entirely—inhibits our ability to exert control: "We are not our disorders, and we shouldn't be defined or constrained by them" (ibid, p. 47).

Examples of the Interplay Between Mindlessness and Chronic Illnesses

We can see a major role for the mind to play in the health of people with a chronic, or longer term, condition. There are several ways in which this interaction may take place. Some effects depend on barely known biological mechanisms, studied by psychophysiology and psychosomatics. These mechanisms may exert a direct effect on the body, as the result of a brain–body connection that needs to be explored by science. One classical example is the placebo effect, in which the deceived mind leads the body to develop an expected reaction, with no physical stimulus that justifies it. As in the counterclockwise and other earlier studies, placebos play an important role in this framework. Langer again differs from the conventional view that an inert medicine (placebo) that is not outperforming a drug marks the drug as ineffective. Instead, she argues, they can be very powerful (Langer 1989). Like other forms of indirect intervention (e.g., hypnosis, positive thinking, biofeedback), placebos "can be seen as a device for changing mindsets, enabling us to move from an unhealthy to a healthy context." (Langer 1989, p. 190) She further suggests this as an "active" process, so that people change the context of their own illness physically, all with the objective to take control over one's illness and not leave it the physician in a mindless way. The placebo effect is an example of mindlessness that can be positively used in the clinical setting: the bodily reaction depends on a category that creates a self-fulfilling prophecy via some physiological changes that have only partially been discovered.

The mind can also interact with the body as an influence on the course of the disease using indirect mechanisms. For example, having an expectation of worsening symptomatology may lead to a change of lifestyle that will physiologically impact metabolism. We can provide an intuitive example that helps to understand our point: John is a person who likes going to run every day. One day, he starts feeling tired after exercising. This sensation does not change over the next several days; prompting a doctor's visit. Shortly thereafter John is diagnosed with ALS. Starting from that moment, John looked at himself as an ALS patient.

Despite his ability and his passion, Joh stops running every day, thinking "why should I run? I am an ALS patient, I will soon be in a wheelchair." By doing that, John accelerates the process of physical function loss and decreases his quality of life by depriving himself of something enjoyable. This is an example of how a mindless acceptance of a category (in this case, the diagnosis) can lead to real and observable changes.

As described earlier, there is a convergence of study results describing how mindsets can affect the body. Clinical applications can be highly relevant here and in this way, health professionals themselves can be the most powerful medicine of all. Even the way in which doctors and nurses communicate with people they are trying to help is essential. A dysfunctional doctor–patient interpersonal communication promotes a mindless reception of any diagnosis, risking a more severe embodiment of the disease in question. Chronic diseases seem particularly susceptible to this in

communications that transmit the message "from now on, *you are a patient* with X," which is devastating for both psychological well-being and for the course of the disease. The simple use of the conditional form might reduce this risk as if instead of saying, "on the basis of clinical experience/scientific data, you *will* experience X," we say, "Clinical experience/scientific data suggest that you *may* experience X, *although this is actually unpredictable*." Furthermore, despite the mindless trust that we tend to have in science, it is often wise to keep in mind that no matter how relevant the statistics are, we are never really able to make predictions with absolute certainty. The observation that 90 % of people diagnosed with a certain condition experienced a specific course of progression does not allow one to predict anything unconditional about a single case. A communication that does not entrap the person into a label, with its own rules and expectancies, may lead to a more mindful comprehension of the situation and may reduce the overwhelming effect of the diagnosis. Furthermore, some knowledge about the psychology of possibility can help the health professionals develop a mindful disposition that will positively impact the communication.

A Brief Word on Potential Applications of Langer Mindfulness in Clinical Psychology

Ellen Langer began investigating mindlessness and mindfulness in the 1970s, directly and indirectly influencing the cognitive-behavioral approach that is now known in the practice of cognitive-behavioral therapy (CBT). Several exercises and training found in CBT and similar psychotherapeutic approaches often refer to the "cognitive revolution" promoting an increase in flexibility, novelty seeking and openness to multiple perspectives. In these approaches, many clinical conditions can be thought about in terms of mindlessness. For example, irrational beliefs, which are considered by the CBT model as the base of most disorders, are a deep form of mindlessness that consider only a specific point of view, a previous category that is acknowledged or felt to be "true." Most CBT and CT techniques, such as the use of alternative beliefs from the ABC model, directly address this, promoting mindfulness. The cognitive approach is deeply rooted in Ellen Langer's framework, though this is not always recognized. We believe that by recognizing the important role of the mindfulness/mindlessness thought processes during therapeutic settings that interventions can help generate improvements in psychological distress. Possible applications of this concept may involve strategies and techniques to be used with the patient, explanations and metaphors. The Langer Mindfulness Lab is currently working on mindfulness training interventions that can be easily implemented within psychotherapy. Separately, the concept of mindfulness can contribute to the research on psychotherapists' dispositions (Heinonen et al. 2012), as it may be an important pretreatment variable in psychotherapy outcomes (Ryan et al. 2012). Studies suggest that mindfulness meditation represents a powerful training tool to increase the therapist's awareness of

self and of his/her experience, as well as awareness of the moment-by-moment interactions in the therapist–patient dyad. It has been theorized that mindfulness has an improving effect on tolerance (Fulton 2005), concentration and mental clarity, emotional intelligence (Walsh and Shapiro 2006), coping with negative counter-transference reactions (Rodriguez Vega et al. 2013) to mention some.

Most of these studies, whether empirical or theoretical reflections, explicitly refer to Kabat-Zinn's construct of mindfulness using with meditation as the intervention or method of achievement. Our view is that Langer's conceptualization may be easier to achieve for those motivated towards a more learning-based approach, leading to positive outcomes in clinical practice.

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