The Biopsychosocial Model: Exploring Six Impossible Things

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In our view, the biopsychosocial model is a vision and an approach to practice rather than an empirically verifiable theory, a coherent philosophy, or a clinical method. In some cases, when that vision is confused with ideologic dogmatism, it can invite abandonment of the vision entirely or in selected situations. The authors suggest that habits of mind may be the missing link between a biopsychosocial intent and clinical reality. These habits of mind include attentiveness, peripheral vision, curiosity, and informed flexibility. These qualities are teachable and can be reinforced. Rather than aspiring to “being biopsychosocial” — some imagined, static state — commitment to an ongoing process of “becoming biopsychosocial” is more pragmatic and realistic.

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Alice laughed: “There’s no use trying,” she said; “one can’t believe impossible things.”

“I daresay you haven’t had much practice,” said the Queen. “When I was younger, I always did it for half an hour a day. Why, sometimes I’ve believed as many as six impossible things before breakfast.” —Lewis Carroll, Alice in Wonderland

We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.—T. S. Eliot, “Little Gidding,” Four Quartets

Since the early descriptions of the biopsychosocial model, practicing clinicians have had difficulty reconciling the biopsychosocial model with clinical reality (Borrell-Carrio, Suchman, & Epstein, 2004; Frankel, Quill, & McDaniel, 2003). As family physicians, we experience those difficulties first hand. We believe that these difficulties are rooted in confusion about whether the biopsychosocial model is (a) a theory and therefore empirically verifiable, (b) a philosophy and therefore logically consistent, (c) a descriptive model to expand the scope of clinical inquiry, (d) a
belief system and therefore not subject to empirical proof, (e) a guide to practice and therefore with an implicit or explicit methodology, and/or (f) a vision of a way of practice. We find difficulties in all six of these domains. In this article, we explore all six of these domains and the implications of applying a “split” model, as Herman (1989) suggested. We also propose that habits of mind may be the missing link between a biopsychosocial intent and clinical reality. In addition, we will argue that linear approximation—circumscribed reductionism—is often necessary to reaffirm the model itself.

As a theory, the biopsychosocial approach includes a hierarchy of natural systems and emphasis on the fact that subjective experience is amenable to scientific inquiry. But, the hierarchy of natural systems is an incomplete model; in some cases, it might not be a hierarchy, and not all levels are weighted equally in all situations. Rather, the elements may be arranged in different ways depending on the problem encountered. Consider the example of an adolescent with a sore throat. The relevant elements in one particular patient might include the cellular level (the bacterium or virus), the molecular level (the resulting inflammation), and the social level (having to miss school), whereas the organ system level and dyadic levels might not be as relevant for him or her at this time. A diagram of this interaction and the relative importance of each element would look more like a matrix or a web rather than a linear ordering of levels. If the “theory” of a biopsychosocial approach rests on verification of a linear hierarchical model, we will not find convincing evidence that that model applies to all situations. Rather, the model should perhaps consist of matrices defined in part by who the patient is and in which situation he or she encounters himself or herself—“sensitivity to initial conditions” in complexity theory (Plsek, 2001). Complex models may be difficult to justify without some degree of unquestioning belief in their truth.

One of the difficulties with philosophical movements is that adherents have a different set of experiences that led them to their espoused beliefs than the founders did. Engel was first a scientist, initially interested in reductionistic applications of laboratory concepts and methods but increasingly intrigued by direct observation and clinical phenomenology. Through a set of personal realizations, the scope of his scientific inquiry expanded to include application of the insights of psychoanalysis and attentiveness to the subjective dimensions of human experience and interpersonal relationships (Brown, 2003). In his clinical role, he was, however, rarely limited by time. His well-deserved fame as a teacher came from his extraordinary capacity to observe astutely, be curious, and see the world through the patient’s eyes. He created an approach based on those observations, but it was a descriptive approach based on an evolved clinical interview and his skill in narrative storytelling. The logical consistency of a biopsychosocial approach is intimately tied up with who George Engel was as a person and his personal mission to establish scientific rigor in the field of subjective human experience of health.

Engel’s biopsychosocial model was a descriptive model to understand patients’ illness experiences and, in that way, assist and expand the diagnostic process. Even as his career evolved, he was only secondarily interested in treatment. His classic developmental study of Monica is a case in point; it was about experiment, observation, prediction, and description and much less about treatment, even though Engel and his team were deeply committed to Monica and invested in her successful development (Brown, 2003). Engel’s descriptions may not be quite complete enough to guide treatment.

Considered as a belief system, the biopsychosocial model provided an important corrective action to naïve psychosomatic
approaches whose proponents proposed that unconscious conflicts or life stress operated through simple mechanisms to cause physical illness. For others, however, “biopsychosocial” has a narrower connotation of finding psychological causes for physical illness, which ignores the more complex interactions that Engel emphasized. Engel’s writings invite clinicians to see illness in a broader context that includes but is not restricted to human subjective experience and to use all of their human capacities and clinical skills to understand the way that subjective experience is important in each clinical situation.

As a guide to practice, Engel and his students and followers have developed clinical methods for communicating with patients and engaging in clinical reasoning. However, the biopsychosocial approach sometimes is misunderstood to imply that specific behaviors, such as using empathic comments, being nice, or offering choices, are biopsychosocial. But, of course, empathy is meaningful only if used appropriately; empathy can be misplaced and thus seem false. Being nice, depending on the context, may not always be appropriate; one can simultaneously be nice, paternalistic, and rigidly biomedical. Offering choices in an attempt to be empowering can also be misapplied; for example, patients with severe pain may require analgesia before a meaningful relationship can be established and choices can be considered. Thus, it is difficult to specify particular behaviors that are intrinsically biopsychosocial. Context and practical wisdom can guide the clinician in discerning which level of the spectrum is relevant for which problems and which responses might be meaningful to the patient. This takes practice, critique, and mentorship.

In our view, the most important contribution that Engel has given us is a vision that in health and illness, there is more than meets the untrained eye. He emphasized over and over that subjective human experience is and should be a focus of scientific study, alongside and in equal importance with reductionistic, mechanistic, and physical explanations of illness and suffering. The timing of his 1977 article (Engel, 1977) coincided with a resurgent medical reductionism that was largely unopposed, and, in particular, was effecting a radical revision of psychiatry (Eisenberg, 1986). A new vision was needed to maintain, or reconstitute, a medical practice that could adequately address suffering. But to apply this vision, clinicians need practical wisdom for guidance; knowledge and techniques are not sufficient (Davis, 1997). There is a danger, however. Even holistic visions can paradoxically degenerate into rigid orthodoxy that limits the ability of adherents to make and validate new observations and to apply new therapeutic strategies.

Linear approximations are often necessary to understand complex recursive systems. One does not consider the theory of relativity when applying the brakes while driving. This is not only because attending to every level in every moment with every patient is bound to be overwhelming but also because linear approximations create frameworks that can inform a holistic view. The solution is not creating a narrower vision. Rather, it is starting, as Engel emphasizes, with the patient’s story. Patients’ experiences and accounts of illness are generally not partitioned into biomedical and psychosocial domains; even the words biomedical and psychosocial are not particularly meaningful from the perspective of a suffering person. Starting from an understanding of this unpartitioned overall experience, the clinician can then develop a method for taking those pieces of the whole that are relevant for each case. Often the patient will tell the clinician which elements those are, sometimes they will form a recognizable pattern based on prior experience (Schmidt, Norman, & Boshuizen, 1990), and sometimes the review of systems and mechanistic explanations may be helpful to survey of the terrain as long as
the clinician does not consider them synonymous with the entire clinical method. Starting with simplified models, the clinician can then expand these to view the whole situation in perspective.

What practical lessons are we to gain from Engel’s wisdom? The first is that, whatever the focus of the patient’s problem, the clinician must adopt two types of vision—first, a direct vision of the problem unencumbered by categories, and second, a peripheral vision that can fix on relevant data at the edges of the principal focus.

Creating categories, if taken too seriously (e.g., “the pancreatitis in room 403,” “the somatizer”), limits the clinician’s vision. But, without categories, we are lost at sea and are diagnostically inept. One approach to this conundrum is to adopt “fragile categories,” as William James suggested (James, 1975), in situations of clinical ambiguity—not taking our formulations as fact but rather as a way of structuring ambiguity and cultivating the ability to maintain more than one perspective at the same time.

Peripheral vision can take in various types of data for which the one’s mind is prepared—social data, psychological data, biomedical data, and laboratory data. But, some things are invisible to the unprepared mind. Preparation should include knowledge and experience and also adopting the curiosity that Engel exemplified in his interactions with patients; this curiosity should pervade the clinician’s broad understanding of the situation. Other fundamental qualities are attentive observation and informed flexibility. These qualities are teachable and can be reinforced.

Second, there is a pressing need to refine teaching in medical school and residency to emphasize not only “clinical skills” but also attitudes of mind, such as awareness of context and being-in-relation with the patient (Zoppi & Epstein, 2002). Trainees should learn how, for example, a facilitating comment in one context might be an interruption in another (Makoul, Rintamaki, Epstein, Marvel, & Frankel, 1999; Marvel, Epstein, Flowers, & Beckman, 1999). Biopsychosocial training requires face-to-face human contact involving direct observation and critique by master clinicians in the context of an apprenticeship or mentor-mentee relationship—rarities in current medical training (Ludmerer, 1999). Teachers need methods that are transparent and pragmatic enough to reach students whose interpersonal skills are not necessarily well-developed on entry to medical school and adaptable to a variety of clinical settings. Student assessment programs set standards for clinician behavior; these should effectively identify and reward informed flexibility, not just the completion of checklists (Epstein, in press).

Fortunately, there has been progress since Herman’s article 16 years ago. Courses in communication with patients are nearly universal in medical schools. In Rochester, we have developed exercises for students and residents in communicating evidence for informed decision making (Epstein, Alper, & Quill, 2004), building relationships with families in busy primary care settings (McDaniel, Campbell, Hepworth, & Lorenz, 2005), engaging in clinical reasoning that incorporates the patient’s elicited values, and using reflective questions to foster self-awareness and limit the likelihood of misunderstandings and errors (Borrell-Carrio & Epstein, 2004; Epstein, 2003). Collaborative work with mental health professionals is more common. Forward-looking student assessment programs are designed to make it difficult to resolve clinical situations without synthesizing a wide array of relevant data—biomedical, psychological, intersubjective, and ethological (Epstein et al., 2004).

Practically speaking, what was lacking in the clinical encounter described by Dr. Herman was not that he delayed arriving at the diagnosis, but rather that he had not put himself in a position where he could listen and pursue relevant data, probably because of having made assumptions about
what he would find. These limiting assumptions were unexamined until after the diagnosis was made. Often, the reasons for not examining assumptions can be traced to psychological factors in the clinician—fatigue, not wanting to face a possibility of more work, avoidance of difficult topics, and/or the desire for the patient to have a condition that the physician feels comfortable treating (Borrell-Carro & Epstein, 2004). In this case, perhaps the clinician’s inner dialogue included thoughts such as, “She’s complaining of fatigue like so many other patients, and it’s probably a psychological condition like so many other patients . . . .” Cultivating self-awareness to examine those assumptions in an open, attentive, and curious way can help the clinician deconstruct categories that have become rigidified and less germane to the patient’s situation (Borrell-Carro & Epstein, 2004; Epstein, 2003). This capacity for mindful in-the-moment self-monitoring may have been what was lacking in the case Dr. Herman describes but clearly was awakened once the diagnosis was reached. There are several methods for achieving self-awareness that can be incorporated into medical training (Borrell-Carro & Epstein, 2004; Epstein, 2003). This capacity for mindful in-the-moment self-monitoring takes no time for the prepared practitioner—it is the marrow of daily practice. Preparation, though, requires attention, training, and calibration to develop habits of mind in approaching both novel and familiar situations (Novack, Suchman, Clark, Epstein, Najberg, & Kaplan, 1997). This self-awareness is best viewed as an asymptote that we never quite reach. It is an invitation for clinicians to know themselves better, including prejudices, points of view, and blind spots. Ti- zon (1998) describes a biopsychosocial approach to care as an “impossible humanis-
tic vision” rather than an expectation that clinicians explore each level of the biopsychosocial hierarchy in each moment of each encounter. Rather than aspiring to “being biopsychosocial”—some imagined, static state—the ongoing process of “becoming biopsychosocial” develops mental suppleness, diagnostic agility, thoughtful approaches to therapeutics, and a holistic vision; it provides a focus for finding meaning in clinical practice and pathways to strong relationships with patients.

The dynamic tension exhibited in Herman’s article should not be dismissed glibly nor invite despair. Rather, it is an invitation to learn from unexpected (and not necessarily pleasant) moments of awareness.

References


