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AQAL: Beyond the Biopsychosocial Model

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The biopsychosocial model promised a more integrated psychiatric approach to patients. It assumed biological and psychosocial factors were paramount to effectively treat human disease and suffering. It has not, however, influenced conventional psychiatry as George Engel had envisioned. This article describes many of the strengths and weaknesses of the biopsychosocial model, as well as how AQAL and Integral Methodological Pluralism include the model's partial truths and transcend its shortcomings.

Introduction

This article was sparked by a conversation with a psychiatric colleague of mine, wherein we briefly discussed the AQAL model. Near the end of our discussion (mostly about the four quadrants), she said that AQAL was interesting but not much different from the biopsychosocial model. My understanding is that there are some similarities, as both call for a more comprehensive approach; however, there are clear differences and significant advancements in the AQAL model.

In this article, I will first review the biopsychosocial model and its more recent critiques. I will then offer a more advanced formulation using the AQAL model, which addresses several theoretical shortcomings of the biopsychosocial model. Subsequent articles will further explore the theoretical and practical implications of an AQAL psychiatry.

The Biopsychosocial Model

In 1977, the biopsychosocial model was first introduced through an article published in *Science*, entitled "The Need for a New Medical Model: A Challenge for Biomedicine," by George L.

Engel. He ignited the medico-cultural mores with his contention that psychiatry and medicine were in a crisis. He asserted that medicine was reducing disease to mere biologic/somatic pathology, while ignoring the psychosocial factors that cause and contribute to disease. At the time, psychiatry's "meta-model" of disease was in flux, shifting, it seemed, to an exclusive biomedical model as effective medications for psychiatric illness were discovered. Engel wrote that psychiatry could either differentiate from medicine or strictly adhere to a medical model. He thought the issue was whether psychiatrists would maintain the importance of psychological factors in their practice, or give in to the reductionism so present in the biomedical model. Arguing that the biomedical model itself required revision, Engel warned psychiatrists to avoid premature abandonment of their own models.

In the same article, Engel reviewed the historical origins, assumptions, and cultural relativity of the biomedical model and the subsequent practice of biomedicine. He traced the West's reductionism and mind-body dualism to the orthodox Christian church, which authorized the study of the body but not the mind, since the latter was viewed as the territory of the church. He reasoned that this Newtonian/Cartesian paradigm fostered a reductive approach and that very little could be comprehended by exclusively examining physically observable parts. The biomedical model, in his opinion, accepted this split and reductionism without question. The biomedical model is supposedly a scientific model; as such, it involves a shared set of assumptions directed by the scientific method and generates research paradigms for further study. In science, a model is revised or abandoned when it does not adequately account for the phenomena. Engel concluded that biomedicine was not actually a scientific model but a folk model, precisely because it asserted that all disease, including mental disorders, is caused exclusively by biological pathology. With this premise, the biomedical model did not adequately account for all phenomena involved with disease. Given that it resisted revision, Engel considered biomedicine to be the dominant folk model of disease in the Western world.

Although Engel stated such vexatious claims about conventional medicine, he did not deny its invaluable contributions to human welfare. Rather, he proposed six characteristics of a new medical model that included psychosocial elements without sacrificing the advances of the biomedical. First, he proposed that biochemical pathology was a necessary but only *partial* cause for disease. Second, the scientific, rational approach should be used to collect and analyze the patient's biological, psychological, cultural, and social circumstances. Third, the model must acknowledge that psychosocial variables influence the onset and unfolding of disease. Fourth, psychosocial factors influence the way patients are viewed by others and how they view themselves. Fifth, a rational treatment must address more than biochemical abnormality. Lastly, the patient-physician relationship directly influences the overall outcome, for better or worse, and the physician must sometimes be both educator and psychotherapist. The above requirements were not an exhaustive list but preliminary axioms of a new medical model.

Remarking that reductionism was useful for scientific research but not humane medical treatment, Engel described how a more holistic model could be organized with these axioms. The work of von Bertalanffy on general systems theory would further elaborate this model.

Ludwig von Bertalanffy, one of the most important theoretical biologists of the 20th century, developed general systems theory (GST) and applied it to the social sciences and psychology in response to reductionism.[1] Engel readily accepted GST as a new model for medicine. Instead of exclusively studying and treating a human's biological organs, a practitioner could acknowledge the systemic interactions between different levels of organization, including "molecules, cells, organs, the organism, the person, the family, the society, and the biosphere." Engel believed that systems theory offered "a conceptual approach suitable not only for the proposal of biopsychosocial concept of disease but also for studying disease and medical care as interrelated processes."[2]

In another article, "The Clinical Application of the Biopsychosocial Model," Engel explored biopsychosocial applications via systems theory. He recapitulated his prior rationale and embraced systems theory's conception of hierarchy. He quoted Weiss, another systems theorist: "nature is ordered as a hierarchically arranged continuum, with its more complex, larger units super-ordinate to the less complex, smaller units."[3] Furthermore, there are "two hierarchies: the individual (person) is the highest level of the organismic hierarchy and simultaneously the lowest unit of the social hierarchy."[4] Engel deduced that each level of organization requires its own study as each level has its own unique, emergent properties. In addition, because "each system is at the same time a component of higher systems," Engel concluded that "in the continuity of natural systems, every unit is at the very same time both a whole and a part."[5] Thus, a "systems-oriented" physician could start at the level of *the patient,* survey the various levels throughout the hierarchy ("above and below" the level of personhood), and use reductive-analytic thinking to assess relevant levels for pathology. The systems-oriented physician would therefore understand the big picture, not ignore psychosocial factors at any level, and direct treatment based on further evaluation.

Engel provided a clinical example of a patient with a myocardial infarction. Through the various stages of treatment, he took snapshots of what processes were occurring at each level of the hierarchy: community, family, interpersonal (doctor-patient), person (patient), nervous system, other organ systems, tissues, cells, and molecules. A biomedical-oriented physician usually neglected the personal and supra-personal levels. The biopsychosocial-oriented physician would assess these various levels to understand possible stabilizing psychosocial forces that could optimize recovery or destabilizing factors that might impede biological recovery.

Engel concluded that the biopsychosocial model is a scientific model that may be more useful than the biomedical model. He reminded the reader that "the value of a scientific model is measured not by whether it is right or wrong but by how useful it is. It is modified or discarded

when it no longer helps to generate and test new knowledge. Dogmas, in contrast, maintain their influence through authority and tradition."[6] He restated that biomedicine had become the dominant folk model, based on the long-standing dogmatic belief that all disease was exclusively reducible to biological pathology. While Engel acknowledged that the biomedical model continued to generate and test new knowledge, it also prohibited other rational research paradigms and knowledge acquisition about the psychosocial elements of patients. Thus, the biopsychosocial model broadened the "framework to heretofore neglected areas." Nonetheless, he warned the reader to examine various "holistic" and humanistic paradigms with caution. They, too, could dogmatically "eschew the scientific method and lean instead on faith and belief systems handed down from remote and obscure or charismatic authority figures."[7] He probably intuited his colleagues' resistance to welcoming a flood of alternative medical practitioners who claimed their treatments required no further scientific investigation.

Engel's ideas for a biopsychosocial model (herein called the BPS model) were brilliant for the time, addressing several medical care dilemmas that continue into the present. The BPS model was not unique in its inclusion of psychosocial determinants of disease, as this approach is found in many non-Western healthcare modalities, but it was unique in describing how these psychosocial considerations could be integrated scientifically. He described to the medical community how psychosocial elements could be included in human care without sacrificing the conventional scientific-empirical methodology, thus broadening the field of scientific inquiry.

Physicians and medical historians differ on their opinion regarding the influence of the BPS model, but many would agree that the practice of medicine and psychiatry primarily maintained strict adherence to a biomedical position. In the following sections, I will review some critiques of the BPS model to elucidate its theoretical weaknesses. I will then show that the AQAL model addresses these weaknesses and is a more comprehensive theory than the BPS model.

The Limitations of the Biopsychosocial Model

In David Pilgrim's recent article, "The Biopsychosocial Model in Anglo-American Psychiatry: Past, Present and Future?" the author acknowledges that the BPS model has advantages over the biomedical model. Pilgrim highlights that the BPS model is more inclusive, is both scientific and humanistic, and has the capacity to combine physical and psychological treatments seamlessly. Yet the psychiatric community has failed to integrate the BPS model. He offered several concrete reasons. First, the pluralistic treatment modalities in psychiatry of psychotropic medications, electroconvulsive therapy, and psychotherapy have arisen out of tolerance rather than theoretical integration of the BPS model. Second, the anti-psychiatry movement had been reconstituted as "critical psychiatry" rather than subsumed into a synthetic solution like the BPS model. Third, some think that the BPS model is losing ground altogether, as psychiatry moves increasingly towards neuropsychiatry. Finally, there has been a dearth of literature about the BPS model since the 1980's, even in works that address etiology and integrative approaches to psychiatry.

The author appealed to history and professed that the biomedical model is clearly a "hardy perennial" that has endured competing medical models. He added that "doctors may instinctively favor a biomedical model. In a sense it is odd when psychiatrists do not advocate a 'medical model'; after all they are medical practitioners."[8] Pilgrim concluded that the BPS model was "pushed into the shadows by a return to medicine and the re-ascendancy of the biomedical model."[9] He maintained hope that the critical currents in psychiatry, which are challenging reductionism, may lead to a reappraisal and acceptance of the BPS model.

In contrast, N. McLaren, in "A Critical Review of the Biopsychosocial Model," addressed his theoretical concerns with the BPS model. First, the author elaborated on the difference between a theory and a model. "A theory is a broad, general statement, while the model of the theory is the actualization of the theory, the (truncated) theory at work, as it were."[10] McLaren stated that the

BPS model was not actually a model, as it did not function as a working representation of an idea. At best, it was a very general theory, addressing in a heartfelt sense the psychosocial elements of medical/psychiatric patients. Furthermore, McLaren argued that Engel had no real methodology to investigate the hierarchical levels of human activity. While General Systems Theory offered the conceptual framework to understand the various levels, it failed to deliver an integrative methodology that could be applied to evaluating psychological (Upper-Left quadrant) and cultural (Lower-Left quadrant) phenomena embedded in human interaction (Upper- and Lower-Right quadrants). "Models of mind have to be based in theories of mind, although one may organize the theory of mind according to the general principles of a theory of systems."[11] Although Engel described how a BPS model might function, he never described the model itself. Thus, the BPS model has no real predictive value, and in that sense, is unscientific.

Lastly, McLaren argued that without an overarching theory integrating the biological, psychological, and sociological data, a model would yield only an incoherent heap of information. He therefore concluded that BPS cannot be salvaged as a theory or a model, and may be viewed as a historical reaction against the reductionism of the times. Though he appealed for a new scientific methodology and a new concept of science that included the mind and its contents, McLaren did not elaborate on what this might be.

Over the last decade, such a model of science has emerged providing psychiatrists with a sophisticated comprehensive approach to the human condition. This Integral approach honors the intention of the BPS model by avoiding the reductionisms of the biomedical model. From an Integral perspective, we agree with many of McLaren's criticisms and have some additional critiques. GST reveals the complex functional fit of components within dynamic systems, but it does not account for subjective or intersubjective phenomena. When it is used to explain psychological and cultural realities, subtle reductionism occurs where interior phenomena are explained by, and thereby reduced to, their exterior correlates within natural or social systems.

The Integral AQAL Model

Integral Theory and an AQAL model directly address McLaren's critique that the BPS model does not have an overarching theory. Integral Theory offers theoretical integration and a working representation. Furthermore, it offers an explicit, pluralistic methodology formally known as *Integral Methodological Pluralism*.[12] IMP offers an appropriate methodological approach to study the nested hierarchical levels of human involvement, including the psychological and cultural domains (the individual and collective interiors). IMP is an organization of major methods and general fields of inquiry in all quadrants. (See figure 1.)

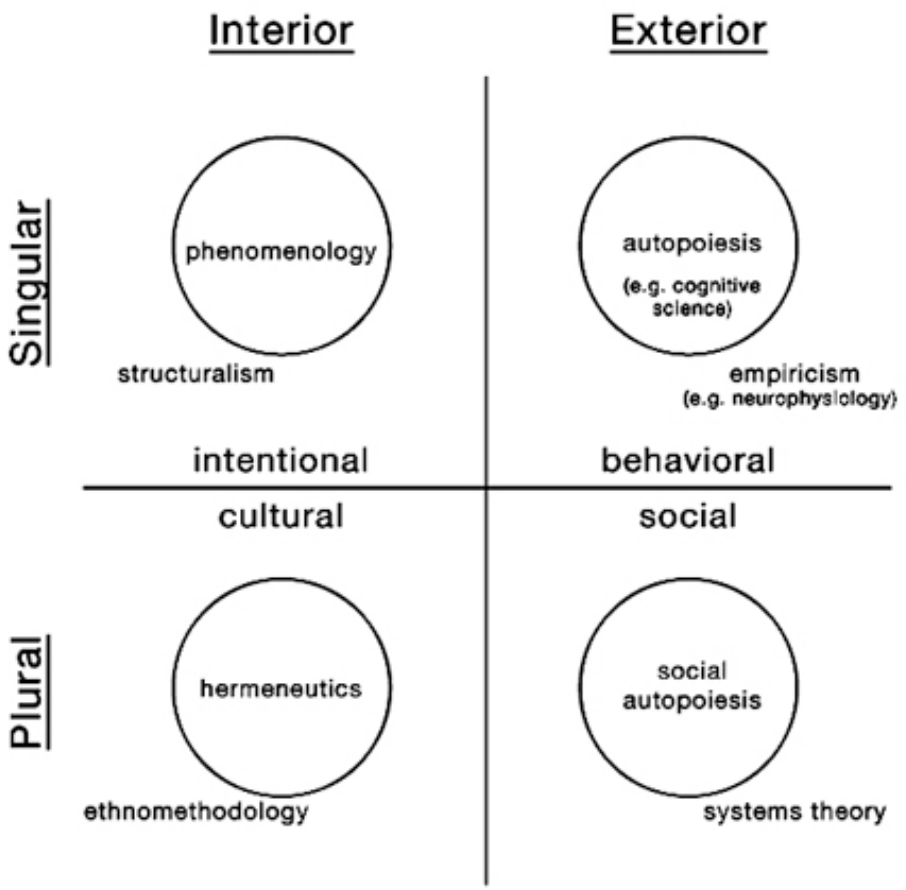

Figure 1. The Eight Major Methodologies of Integral Methodological Pluralism

Empiricism and *autopoiesis* comprise inquiry into the Upper-Right quadrant of singular exteriors. S*ocial autopoiesis* and *systems theory* primarily inquire into the Lower-Right quadrant of plural exteriors. The Right-Hand dimension addresses what is usually considered the domain of science, but Integral Methodological Pluralism also includes methodologies for studying mind, consciousness, and intersubjectivity. *Structuralism* and *phenomenology* explore the individual interior, or Upper Left, while *hermeneutics* and *ethnomethodology* reveal the collective interior, or Lower Left. IMP also demonstrates how these methodologies are related in a coherent fashion. IMP integrates interior and exterior methodologies thus offering comprehensive datum for further theories and models in any chosen domain, including medicine and psychiatry.

Thus with an integrated theory, comprehensive model, and pluralistic methodology, one can systematically test new hypotheses in any one quadrant or, more excitingly, in several at once. As more AQAL research is done, accounting for previously unstudied interiors and systemic exteriors, a more precise understanding of a variety of disorders will emerge, benefiting both medicine and psychiatry. Integral Theory, the AQAL model, and Integral Methodological Pluralism clearly offer a more inclusive theory and model for the mind, medicine, and psychiatry as called for by McLaren.

While the AQAL model satisfies McLaren's theoretical concerns, a few of Phillip's critiques have yet to be answered in the model's infancy. AQAL theoretically integrates treatments—a topic that has been and will be discussed in other articles. However, it has not yet had enough exposure to be integrated theoretically—practically and financially—by mainstream practitioners. We also do not know if physicians will accept a more comprehensive model over simple reductionism and narrow empiricism. Nevertheless, the dissident voices of patients, critical psychiatrists, and physicians, who are calling for an improved medical modality, will

hopefully foster a true test of Integral Theory and the AQAL model as a more inclusive challenge to narrow empiricism. Only time will tell.

The BPS model has many merits and is still influential today, but it hasn't succeeded in transforming the medical establishment. The AQAL model provides a more robust framework that can accomplish what the BPS model intended to do and more. Additionally, an ever larger number of psychiatrists are applying Integral Theory and the AQAL model as they attempt to transform a field in crisis. As the AQAL model becomes more widely acknowledged and applied, it should be distinguished from the BPS model.

There are several important differences to emphasize between the AQAL and BPS models. First, while the BPS model is founded on general systems theory and empiricism, the AQAL model includes *more* than these two methods and situates them within an Integral Methodological Pluralism, avoiding the subtle reductionism (collapsing interior phenomenon into their physical correlates) inherent in BPS theory.

Second, phenomenological exploration, psychological growth, and contemplative practice are actively encouraged and discussed with the AQAL framework. Some aspects of contemplative traditions are essentially awareness training, not religious beliefs or dogmas, and have their own methodologies that need to be explored as they could be of great benefit to medical and psychiatric patient care.

Third, the AQAL model (and the Integral medical movement) explicitly includes cultural, ethical, and political issues that are the valuable steam propelling the critical psychiatry movement. There is no equivalent force in the BPS model, which remains largely unreflective to the power dynamics and insights of postmodernism.

Fourth, the AQAL model also classifies collectives according to interiors (cultures) and exteriors (systems).

Fifth, the understanding of hierarchy in AQAL theory is quite different; while the BPS model categorizes community as "higher" than a person, AQAL emphasizes whole/part "holons." An individual holon, such as a patient, is not a constituent part of, and thereby not structurally "below," society, like a cell is to an organ, but rather the patient is a member of society in communicative exchange. The hierarchical differences between the BPS (individual as a part of society) and AQAL model (individual as a member of society) have immense implications, namely that the individual must not be completely subsumed, forgotten, and sacrificed to the larger society. This is a key issue when our current system cannot afford the medical and psychiatric care of all citizens and residents. If we apply the belief that an individual is just part of society—and essentially subsumed by it—this will likely lead to worsening health care, especially for the underprivileged and chronically mentally ill. Of course, Engel never would have condoned such an application of his model. Nevertheless without fleshing out these important distinctions between individual and collective hierarchies such consequences are almost inevitable.

Sixth, the AQAL model clearly recognizes more data between the doctor, patient, family, community, and health care system than the BPS model. The BPS model acknowledges the doctor-patient relationship and the patient's reaction to the doctor's intervention; however, it does not address the doctor's reaction to the patient. A physician, as a person and a holon with her own interiors, is affected by the patient's interior levels of awareness, lines of development, personality type, states of consciousness, cultural predispositions, social status, and behavioral compliance with treatment. Furthermore, the physician's consciousness is influenced by the medical sociocultural milieu: she may be thinking about whether the patient can afford treatment, or she may have a different approach when paid for hours worked instead of patients treated. This can dramatically alter many physicians' quality of assessment and interventions. These factors include the exchange of transference and countertransference and offer other crucial elements that affect the doctor-patient relationship and ultimately patient outcomes. One can map

these factors to any medical occasion, including the holons involved, just as Engel mapped the system interactions of the patient with a myocardial infarction. The former would provide a richer matrix of information, which changes assessments and interventions for a particular patient or population. Then the physician can reflect on his own interiors/exteriors and his impact on others. The AQAL model emphasizes the need for the physician to continually transform their own awareness in order to best serve their patients. She does not have to remain embittered with the current medical and psychiatric circumstances and instead can change the interiors and exteriors of her practice.

Finally, in considering the differences between the AQAL model and the BPS model, it is important to realize that the AQAL model also includes and transcends the BPS model. Further articles will attempt to elucidate the many more theoretical and practical applications of AQAL in psychiatric and medical practice. The works of Engel and the biopsychosocial model were a boon to the medical culture. In some sense, they prepared psychiatric culture for Integral meta-theory and the AQAL model. But before declaring Engel's work as a moment in medical history, we can be reminded of some of the final statements in his landmark article, "The Need for a New Medical Model: A Challenge for Biomedicine":

> Clearly, the gap to be closed is between teachers ready to teach and students eager to learn. But nothing will change unless or until those who control resources have the wisdom to venture off the beaten path of exclusive reliance on biomedicine as the only approach to health care…. Whether it is useful or not remains to be seen. In a free society, outcome will depend upon those who have the courage to try new paths and the wisdom to provide the necessary support.[13]

Integral Theory and the AQAL model face obstacles to acceptance similar to those faced by Engel's biopsychosocial model. Yet society and culture are begging for a change in the medical system. It is up to us as patients to take care of ourselves, to ask more of our medical care and

communicate these needs to our doctors and politicians. It is up to us as physicians to formulate such changes and apply more comprehensive health care for the health and sanity of our patients and selves. Integral Institute and its Centers are courageously dedicated to bringing such change to our society and medical care system. We invite you to share and participate in this process.

Endnotes

[1] Systems theory considers itself a holistic approach, yet systems theory only studies exteriors. It does study how multiple exteriors interact, but it ignores the interior individual and collective.
[2] Engel, "The need for a new medical model: A challenge for biomedicine," 1977, p. 134
[3] Engel, "The need for a new medical model: A challenge for biomedicine," 1977, p. 536
[4] Engel, "The need for a new medical model: A challenge for biomedicine," 1977, p. 536
[5] Engel, "The need for a new medical model: A challenge for biomedicine," 1977, p. 537
[6] Engel, "The need for a new medical model: A challenge for biomedicine," 1977, p. 543
[7] Engel, "The need for a new medical model: A challenge for biomedicine," 1977, p. 543
[8] Pilgrim, "The biopsychosocial model in Anglo-American psychiatry: Past, present and future?" 2002, p. 590
[9] Pilgrim, "The biopsychosocial model in Anglo-American psychiatry: Past, present and future?" 2002, p. 592
[10] McLaren, "A critical review of the biopsychosocial model," 1998, p. 87
[11] McLaren, "A critical review of the biopsychosocial model," 1998, p. 89
[12] For details about Integral Methodological Pluralism, please consult Wilber, "Introduction to excerpts from volume 2 of the Kosmos Trilogy," 2003a; "Excerpt A: An integral age at the leading edge," 2003b; "Excerpt B: The many ways we touch; Three principles for an integral approach," 2003c; "Excerpt C: The ways we are in this together; Intersubjectivity and interobjectivity," 2003d; "Excerpt D: The look of a feeling; The importance of post/structuralism," 2003e
[13] Engel, "The need for a new medical model: A challenge for biomedicine," 1977, p. 135

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