



The Biopsychosocial Model is not a Strawman How Jaspers' Phenomenology Opens The Way to A Paradigm Shift In Psychiatry

Michael Alan Schwartz

Texas A&M Health Science Center School of Medicine, Austin State Hospital
michael.schwartz@mas1.cnc.net

Aaron L. Mishara

The Chicago School of Professional Psychology
amishara@thechicagoschool.edu

Osborne P. Wiggins

University of Louisville
opwigg01@louisville.edu

Abstract: Inheriting the nineteenth century division between the natural- and human-historical sciences, Karl Jaspers emphasizes the psychological understanding of mental disorders as narrative-based, holistic and contextual. However, he also affirms the value of explanatory physiological and neurobiological approaches. Nassir Ghaemi nonetheless interprets Jaspers person-centered, methodologically based pluralism as contradicting George Engel's biopsychosocial project. In our view, Jaspers advances this project. Emphatically, Engel proposed a project and not a product. We have tried to develop a narrative somewhat different than Ghaemi's, with a synergistic consequence, a biopsychosocial model for medicine and psychiatry indebted to both Jaspers and Engel. It is our conclusion that Jaspers' person-centered, methodological pluralism does not contradict biopsychosocial medicine and psychiatry but in fact complements and advances the broader medical model that Engel sought but never achieved.

Nassir Ghaemi's essay¹ makes short work of George Engel's biopsychosocial psychiatry. According to Ghaemi's trenchant analysis, Engel's model for

psychiatric practice opposes a falsely narrow conception of biology and consequently cannot withstand the present-day resurgence of modern biological dogmatism; it misunderstands the mind/body relationship; "if true, it is trivial" and no advance beyond Osler; it muddies boundaries as well as the difference between etiology and treatment; it

¹ S. Nassir Ghaemi, "The Biopsychosocial Model in Psychiatry: A Critique," *Existenz* 6/1 (2011), 1-8. [Henceforth cited as *BMP*]

falsely presumes superiority for psychiatry over allied health professions; and it is an unfit approach for teachers; payers, and managed care in general. Far better, for Ghaemi, is a non-eclectic, pluralistic model for psychiatry based (so he claims) upon the seminal ideas of Karl Jaspers.

We begin this response by agreeing with Ghaemi's two major assertions. Present-day biopsychosocial medicine and psychiatry are deeply flawed, and Jaspers' existentially informed, pluralistic, and method-based psychiatry offers corrective direction. Nonetheless, we and Ghaemi have substantive disagreements. Ghaemi interprets Jaspers person-centered, methodologically based pluralism as contradicting Engel's medical project. In our view, Jaspers advances this project. Emphatically, Engel proposed a project and not a product, and were Engel alive today and witness to the "silos" (biological, psychological and social) of present-day biopsychosocial psychiatry, he would doubtlessly wonder what if anything all this has to do with his work. Indeed, Engel was well aware of the "silophication" lurking in the term "bio-psycho-social" (the tendency to concretize the term and then have medicine divided up into three parts). Engel abandoned biopsychosocial for about a decade and replaced it with "infomedicine." He writes in 1987, "the very word biopsychosocial, as though linking three entities, all too readily pulls one back towards the classical Newtonian-Cartesian position, a tripartite dualistic re-edition of *psychosomatic* or *psychophysiological*."² Anticipating a broader, more integrative practice of medicine, Engel called for "medical revolution" suffused with "postmodern scientific thinking," and for this task the term biopsychosocial was "clearly inadequate" (*SMR* viii). Later on, toward the end of his life, still searching for a way and presumably disappointed with "infomedicine," (we can only speculate as to why as there is no reliable source for the reasons for Engel's discouragement), he returned to the term "biopsychosocial."³ Once again, as we will see

below, the term remained a call rather than an outcome. Ghaemi, as we will also see below, is unsympathetic to postmodernism, and Engel's appeals to postmodern science are one of the major foci of Ghaemi's critique. At this point in our essay, we will only comment that Ghaemi's criticism of Engel, curiously dissociated as it is from any historical context, is strikingly postmodern.

We have our own disagreements with Engel, and we will return to them in this essay. Akin to Ghaemi, we are indebted to Karl Jaspers. Nonetheless, while Jaspers' critique of present day practice remains fresh in many ways, we have difficulty aligning it with Ghaemi's critique. In the first place, we do not think that the sharp boundary drawn by Ghaemi between Jaspers and postmodernism holds as securely as Ghaemi presupposes. At its core, postmodernism involves a call for criticism and skepticism; we find a similar clear call in the work of Jaspers. Secondly (and more importantly for the present commentary), we dissent from Ghaemi's billiard ball metaphor—"a ball for each hole"—for proper medical and psychiatric practice. A ball for each hole? A method for each problem? Here, choice of method is "based on empirical data (as available) and on conceptual soundness (otherwise)?" Yes, that could be one, highly abstract and reductionistic pluralistic approach to a method based psychiatry (and quite different from eclecticism). Then, based on data and logic, Patient A could get her medication, and patient B his evidence-based form of psychotherapy, and Patient C a social, or perhaps a spiritual approach. And, for patient D we could reserve, serially following Ghaemi, medication and then psychotherapy. In all cases, less would be more. Managed care would be pleased, and preference would cede place to science, evidence, and conceptual rigor. So what is wrong with all of that?

Let us begin by examining Ghaemi's argument more closely. In our reading, Ghaemi is making two claims, which he states are unrelated to one another, i.e., not dependent on one another: (1) the bio-psycho-social model is no longer useful, and (2) Ghaemi is able to offer a useful alternative, a method based psychiatry, which is consilient with Jaspers' methods as outlined in

² George L. Engel, "Foreword," in Laurence Foss and Kenneth Rothenberg, *The Second Medical Revolution: From Biomedicine to Infomedicine*, Boston/London: New Science Library, Shambhala 1987, pp. vii-x. [Henceforth cited as *SMR*]

³ George L. Engel, "From Biomedical to Biopsychosocial: Being Scientific in the Human Domain," *Psychosomatics* 38/6 (1997), 521-8 [henceforth cited as *BTB*]. Originally published as "Foreword"

in Robert Charles Smith, *The Patient's Story: Integrated Patient-Doctor Interviewing*, New York/Boston: Little, Brown 1996.

the latter's *General Psychopathology* (first published in 1913).⁴

Claim (1) rests on a few sub-arguments: The bio-psycho-social model is not useful, it has been misunderstood. Moreover, even properly understood, the BPS model remains inherently deficient given its postmodernist cynicism, a pervasive permissiveness that anything goes. Such permissiveness "represents the core of the BPS model as applied in psychiatry for the past three decades" (*BMP* 2). Here, while agreeing that permissive eclecticism is problematic, we will not follow Ghaemi's dismissal of postmodernism. We agree with Ghaemi that the biopsychosocial model is problematic as presently practiced, but we find remedy for this inadequacy precisely in methodological guidance initiated by Jaspers.

Claim (2) rests on the following assumptions: Ghaemi's method-based psychiatry resembles Jaspers' methodology because it is able to place each billiard ball in the right pocket. Here, we will ask how such methodology is able to do this—without relying on the expertise or clinical decision making of the practitioner—and provide an alternative. We provide the alternative interpretation that Jaspers' phenomenology leads precisely to the appropriation of a bio-psycho-social-spiritual model but now informed by collaboration with new disciplines such as clinical neuroscience and philosophical and evolutionary biology in a person centered medicine.

As Ghaemi himself has stressed,⁵ in his methodology, Jaspers makes room for both causal explanatory natural science and a human-historical science of understanding (e.g., biographical understanding). That is we are able to approach human experience from both the neurobiological and phenomenological levels without giving priority to either, without reducing one to the other. In fact, Jaspers laments in his *GP* the current—even in his day!—decrease in the general level of education of psychiatrists in the humanities, and thus failure to employ a psychology of understanding in clinical

practice which, as a result, has become crude and oversimplified.⁶

Jaspers writes about the "givenness of the inner world not perceived by the senses"—by directly intuitively re-presenting it to ourselves and describing it (*anschaulich vergegenwärtigen und beschreiben*), or what he calls "the intuitive making present of the mental" (*anschauliche Vergegenwärtigung des Seelischen*). That is, the mental realm requires its own methodology, an "understanding psychology," where the understanding of the connections is done through a new understanding of things as in the work of Nietzsche (*ZSP* 336). We leave for the moment the epistemological status of the resultant general mental structures that the phenomenological method opens up and explores (noting some differences between Husserl and Jaspers). Jaspers writes:

genetically understood connections are connections formed by ideal types, which are in themselves not inductively obtained but evident in themselves, and serve as standards by which the currently actual processes may be assessed and recognized as more or less understandable rather than directly contributing to theories. [*ZSP* 332, our translation]

Drawing on the work of his contemporaries, such as Brentano, Dilthey, Husserl, Simmel, Weber, and others, Jaspers emphasizes that

we understand psychic connections, how the mental arises from the mental, e.g., how actions arise from motives, how moods and affects arise situations and lived-experience ... to the extent we ascribe internal states as underlying motives to observed behavior we are making understanding connections psychologically or empathically (*empfindend*) ... empathic understanding is psychology itself. [*ZSP* 330, our translation; and *TV* 83, translation modified]

In contrast, Ghaemi, conceptualizes Jaspers in terms of an "either-or" approach, which seems to coincide with his billiard ball analogy of getting the

⁴ Karl Jaspers, *General Psychopathology*, transl. Julius Hoenig and Marian W. Hamilton, Chicago: The University of Chicago Press 1964. [Henceforth cited as *GP*]

⁵ S. Nassir Ghaemi, *The Rise and Fall of the Biopsychosocial Model*, Baltimore: The Johns Hopkins University Press, 2010.

⁶ See Karl Jaspers, "Kausale und 'verständliche' Zusammenhänge zwischen Schicksal und Psychose bei der Dementia Praecox (1913)," in Karl Jaspers, *Gesammelte Schriften zur Psychopathologie*, Springer: Berlin/ Heidelberg /New York 1963, p. 336. [Henceforth cited as *ZSP*] Translated and reprinted, Karl Jaspers, "Causal and 'meaningful' connexions between life history and psychosis," in *Themes and Variations in European Psychiatry*, eds. Steven R. Hirsch and Michael Shepherd, Charlottesville, VA: University Press of Virginia 1974, pp. 81-93, here p. 90. [Henceforth cited as *TV*]

correct ball in the correct hole. He writes that: "Jaspers was a biological reductionist too and also sometimes an existential reductionist. That is what I mean when I say he is not eclectic, and this is the alternative to BPS eclecticism that has not been understood by many psychiatrists and philosophers... Jaspers might say: "This is billiards. Each ball belongs in its own hole" (BMP 7).

In our view, this is not what Jaspers says. A careful reading of Jaspers and his fellow phenomenologists (leaving for the moment, the interesting internal disagreements between them) points us in a completely different direction than Ghaemi suggests. For example, Ghaemi writes, "Method-based psychiatry maintains that only one theory is correct, but it is not the same one for all parts of psychiatry" (BMP 8). In our view, Ghaemi's billiard ball analogy not only does not capture the spirit of Jaspers and other phenomenologists' rigorous methodological understanding but is actually a recipe for a return to the myopic, silo-like thinking and clinical practice of the medical model that Engel and others were trying to combat and which today we are finally overcoming precisely because of the tremendous interdisciplinary advances and perspectives that disciplines such as cognitive, clinical and social neuroscience, and philosophical and evolutionary biology have been supporting.

Ghaemi proposes that "choice of method is based on empirical data (as available) and on conceptual soundness (otherwise)" (BMP 8), but here Ghaemi obviates the obvious point: there is still the billiard player shooting the ball, who somehow knows—on the basis of expertise and clinical decision making—which pocket to shoot into.

Here we argue the following two points: (1) A careful reading of Jaspers and other contemporary and later phenomenologists leads to precisely the opposite conclusion: choice of method cannot be determined externally or objectively but requires contextual clinical understanding. (2) Permissive eclecticism—Ghaemi's pluralistic "ball for each hole" is not the only alternative to permissive eclecticism (which Ghaemi identifies with BPS and also with postmodernism). Ghaemi's answer, a method-based psychiatry, is instead a reductionism contrary not only to Jaspers but also to Husserl as well as a host of relevant psychiatrists and neurologists including Berze, Binswanger, Blankenburg, Conrad, Ey, Straus, or von Weizsäcker. Again, we recognize that Jaspers in his *GP* sometimes did and at other times did not differentiate his multiperspectival position from phenomenology and also from many of the methods

used by these colleagues. Details about such similarities and differences cannot be presented here given the scope of this essay.

Let us approach the question of the different kinds of evidence at different levels of analysis by referring to Husserl's approach, also very much influenced by the nineteenth century explanation/understanding methods debate which not only Jaspers but also Dilthey, Simmel, Weber and many others at the time struggled with.

The human sciences (*Geisteswissenschaften*, the term can be traced to an anonymous script of 1787)⁷ are based on the understanding of meaningful connections between historical events, whereas the natural sciences find causal explanations between postulated natural entities.⁸ Figure 1 indicates that natural sciences generally proceed from larger, often nebulous wholes, seeking out explanatory relationships between ever-smaller, strictly defined parts of these wholes. Explanation (causal/mechanistic or statistical/probabilistic or functional/teleological) tries to establish relationships between subcomponent parts. Conversely, the historical-human sciences generally move upwards from partial views to ever-larger contexts for understanding the matter at hand. Understanding is contextual by situating parts in greater wholes, even if these totalities are not directly available to the individual perspective but transcend or "encompass" it.⁹ For example, the historical-human sciences themselves stand in a historical process, which is at the same time the object (as contextual totality) of their study.¹⁰

⁷ Alwin Diemer, "Geisteswissenschaften," in *Historisches Wörterbuch der Philosophie*, Vol. 3, ed. Joachim Ritter, Basel: Schwabe Verlag 1974, 211-5. We are indebted to Dr. Helmut Wautischer for this point.

⁸ Aaron L. Mishara, "Missing links in phenomenological clinical neuroscience? Why we are still not there yet," *Current Opinion in Psychiatry* 20/6 (2007), 559-69. [Henceforth cited as MLP]

⁹ Karl Jaspers, *Reason and Existence*, transl. and intr. William Earle, New York: Noonday 1955.

¹⁰ Hans-Georg Gadamer, *Truth and Method*, 2nd edition, transl. and intr. Joel Weinsheimer and Donald G. Marshall, New York: Continuum 1993.

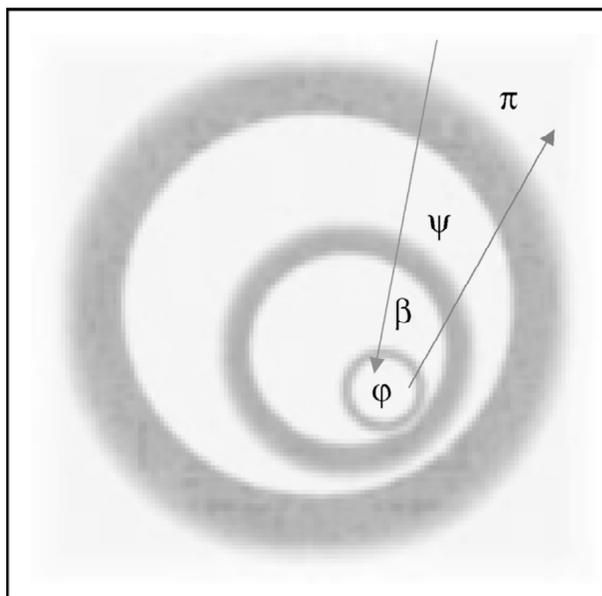


Figure 1

Methods of the natural and the human-historical sciences

φ, physis (φύσις) physical-natural sciences	β, bios (βίος) biological sciences
ψ, psyche (ψυχή) psychological-cognitive sciences	π, polis (πόλις) historical-cultural sciences

Here the contextuality of understanding and explanation is schematically demonstrated. Assuming an opposed directionality between explanation (the arrow is pointing to the smallest circle) and understanding (the arrow points away from smallest circle), the methods of the natural and human-historical sciences are indicated. Natural sciences proceed in terms of the classic reductionist hierarchy from sociology to psychology, biology, chemistry and physics. These generally proceed from larger, rather nebulous wholes to seek out explanatory relationships between ever-smaller parts of these wholes. Conversely, understanding is contextual by situating parts in ever-greater wholes, even if these totalities are ultimately unavailable to the individual perspective but transcend or encompass it. Each discipline requires an abstraction, reduction to, and idealization (i.e., Husserl's "naming") of the objects or entities of its discipline (which exclude the objects of neighboring disciplines). Gray areas between disciplines indicate interdisciplinary relationships which are often more fuzzy involving destabilizing relationships within interdisciplinary vocabulary and concepts.¹¹

Hence, any claim to unify the natural and human sciences is burdened by seemingly insurmountable problems. These include the integration of two opposing directions of method, and the effort necessary to make the contextual understanding of subjective experience somehow objective and testable in the terms of natural scientific explanation, i.e., in terms of the cognitive and neural processes and mechanisms.

¹¹ MLP 564, figure reprinted with permission from Wolters Kluwer Health.

This dilemma is reflected in what Levine and numerous philosophers following him, call the "explanatory gap" between neural processes and qualia,¹² i.e., what it is like to experience phenomenal states. In contrast to Ghaemi's billiard ball metaphor of a method-based psychiatry, the explanatory gap (and the attendant explanation understanding controversy) continues to be a problem.

However, this does not preclude that we are able to spontaneously shift attitudes from contextual understanding to hypotheses about underlying neurobiological contributions in our clinical practice or clinical research. Although completely opposed in directionality, they do not contradict each other as Ghaemi's billiard ball holes (Ghaemi's "silopification") that are kept separate from interdisciplinary collaboration and research.

Rather the opposing directionality of methods between explanation and understanding stand in a dialectical relationship, what Jaspers' Heidelberg colleague and founder of psychosomatic medicine in Germany, Viktor von Weizsäcker,¹³ called the "revolving door principle" of a Gestalt-circle: though mutually exclusive as abstractions, the two terms, explanation and understanding, mutually presuppose one another.

Jaspers, along with Binswanger, Blankenburg, von Weizsäcker and other colleagues did recognize the need to approach the relationship between explanation and understanding dialectically or contextually in clinical practice. We find that this resonates with recent efforts to establish a person-centered medicine. We believe that the proposed paradigm shift to a more phenomenological-clinical neuroscience will provide a more holistic, narrative, strength based (empowering), contextual, culturally sensitive approach and eventually, a new understanding of mental disorders.

Viktor von Weizsäcker had argued that we must introduce the concept of the subject into the study of life (biology). However, as human beings, we are able to reflect on our own subjectivity, but do not have access to the hidden unity between mind and body in what von Weizsäcker called the fundamental relationship

¹² Joseph Levine, "Materialism and qualia: The explanatory gap," *Pacific Philosophical Quarterly* 64 (1983), 354-61.

¹³ Viktor von Weizsäcker, *Der Gestaltkreis; Theorie der Einheit von Wahrnehmen und Bewegen*, 4. Aufl., Stuttgart: Georg Thieme Verlag 1950. [Henceforth cited as GK]

(*Grundverhältnis*) to our own being. Mind and body are rather experienced as two sides of the same coin. That is, mind and body are in hidden unity or a Gestalt-circle (*Gestaltkreis*), that is, each term presupposes but mutually excludes the other. This unity is not given directly to consciousness and thus remains in hidden relationship (*Grundverhältnis*). The comparison between Jaspers and von Weizsäcker recalls the thought provoking comparison between Jaspers and Engel that Ghaemi poses. Both von Weizsäcker and Engel were involved in overcoming mind body dualism and were open to psychoanalysis. Both were convinced that the only way to do so was not to ignore the natural sciences but to integrate them into a more contextual holistic effort. All three—Jaspers, von Weizsäcker, and Engel—were convinced of the importance of human meaning in autobiographical understanding, and how these meaningful connections may be disrupted in different disorders (and now that we are discovering the underlying processes, including molecular processes underlying the memory for self we are coming closer to their vision). Here we must agree with Jaspers but also his contemporaries (Brentano, Dilthey, Husserl, Simmel, Weber, and others) on the same point: "we understand psychic connections, how the mental arises from the mental, e.g., how actions arise from motives, how moods and affects arise situations and lived-experience" (*ZSP* 330, our translation; and *TV* 83, translation modified).

Unfortunately for Ghaemi's metaphor, medical and psychiatric practice is not akin to an instrumental game such as billiards. While it is often possible and even appropriate to reduce the subject of medicine—the person(s) centered promotion of health and amelioration of illnesses—to one abstract aspect or another, all abstract moments must always be related back to the whole. Our patients are concrete human beings with all of the world relatedness that this entails. And while our sciences can indeed appropriately focus upon a singular abstract moment taken from this whole (for example, a hemoglobin A1C or a formal thought disorder), physicians must never lose sight of the whole to which this part nonetheless refers. Each perspective does reflect back upon that whole, and as a perspective rather than an answer. In his *GP*, Jaspers tirelessly asked the reader to be mindful of all of the perspectives, and the manner in which they reveal, conceal, contradict and complement each other. Furthermore, there will be other perspectives, some not yet disclosed. Always cautious, he was skeptical of the very possibility of there being correct balls for each hole.

And finally, for all of the perspectives, understanding halts (never nullifying their correct application). If there is a game that is being played, it is not billiards, but life.

Ghaemi does open a door to such existential facts of life by permitting existential approaches, presumably when appropriate, but his singular, or serially singular one-ball-for-each-hole methodology cannot suffice, we would argue, for a Jaspers-informed practice. Such a methodology is too abstract, the perspectives too reified, and their application too concrete, apart from generating the kind of silophication that Ghaemi presumably wants to overcome by doing away with the BPS model. We would further argue that Jaspers' *GP*—the very text that Ghaemi warns beginners away from—states all of this.

GP was written when Jaspers was 30 years old, and it went through several editions through his life, the most pertinent perhaps being the 1946 edition written in Germany during the WWII years when Jaspers was not permitted to work and lived day by day with his Jewish wife awaiting a knock on the door and arrest and worse. Herein, Jaspers embraces what today would be called a person-centered, methodologically pluralistic framework for psychiatry. We do agree with Ghaemi that Jaspers program is quite different from the eclecticism and silos of present day biopsychosocial psychiatry. But it also differs from Ghaemi's notion of a proper method, or sequence of methods, per problem. Rather than contradicting Engel's quest for a broader, more inclusive medical practice, we emphasize that Jaspers existentially informed methodological pluralism should be viewed as advancing it.

How does this fit into Ghaemi's billiard game? We suggest that Ghaemi is playing the wrong game. Ghaemi's instrumental game is neither person centered nor people centered, it is task or procedure oriented—getting the correct ball into the correct hole. Indeed, sometimes medicine and psychiatry sometimes may appear task oriented (for example, developing a vaccine for an illness), but even in these case the goal may be better achieved through sanitation or altering social mores. Indeed there are many ways to get to Rome, and although acknowledging this may appear to be kowtowing to postmodernism (so relative!), in the human world (and even on the billiard course, in so far as billiard is a human game) such is truth.

The reality of psychiatry as a scientific and humanistic endeavor is indeed a starting point for Jaspers' *GP*, who would agree with Ghaemi that:

We ... are asking for a systematic grasp of all the existing methods and viewpoints and insist that there should be no confusion of them, and no generalization beyond certain well-defined limits, and within these limits methods should be systematically used and carefully applied. [GP 34]

Nonetheless, in distinction to Ghaemi's ball per hole:

my own over-all point of view starts, not from an apparently known, factually demonstrable principle of things, but rather points down many perspectives and in many directions. It suggests movement in various planes and constrains us to remain alert and look far afield, while at the same time we try to keep a firm grip on all the systematised knowledge we have won so far.

Our attempt ... takes the form only of a comprehensive methodology, in which all possible knowledge can be accommodated. Such a methodology must be so constructed that it is an open one which constantly allows for new methods.

The basic attitude expressed in this book is that of fighting against all attempts to create absolutes... We want to understand and accommodate all the knowledge that is possible and find a natural place for it within the framework of our method. [GP 35]

In the end, in his seventh edition of *GP*, at age 76, Jaspers defended his book as one that "does not seem to be out of date," with "methodological principles" that remain "largely unaffected." Still, nonetheless, "it would certainly be possible nowadays to write a better book even on the methodological side. Such a task must fall to a younger scientist who might well succeed if he would appropriate the methodological clarification of this book, expand it, and put it perhaps into a different context. I would gladly welcome such a book."

Hence, in this essay, we have tried to develop a narrative somewhat different than Ghaemi's, with a synergistic consequence, a biopsychosocial model for medicine and psychiatry indebted to both Jaspers and Engel. It is our conclusion that Jaspers' person-centered, methodological pluralism does not contradict biopsychosocial medicine and psychiatry but in fact complements and advances the broader medical model that Engel sought but never achieved. Beginning with very different presuppositions and premises, operating in very different medical worlds, and utilizing very different approaches, George Engel and Karl Jaspers both tried to rescue medical (in Engel's case) and psychiatric (in Jaspers' case) practice from improper reductionist approaches, methods, and dogmas. For all their different yet complementary programs, both saw

a proper medical starting point in a collaborative professional relationship, in so far as that is possible, between a physician and a patient (with all their subjectivity and world-relatedness) for the sake of advancing their health and ameliorating their illness. And then what? Writing in the preface to his 1942 edition of *GP*, Jaspers states:

Everything, which has been contributed to the knowledge of the sick human psyche by psychiatrists in the main, but also by general physicians, psychologists, psychotherapists, biologists and philosophers, has needed to be analysed in respect of its basic features and also found a place within a realistic classification. [GP xi]

And in his final 1997 *BTB* essay, Engel began with a 1933 quote from H.S. Jennings: "We include as biology not only the data obtained by observing other individuals and things but also those that we reach through [our own inner experiences of living]. The biologist is himself...of the same material of which are composed the living things that he studies."¹⁴

Before we close, we will disagree with Ghaemi's depiction of George Engel as a resolutely antihumanistic physician-scientist (or psychoanalytic pseudoscientist). Yes, Engel does call for physicians to be as scientific as possible, but we must ask ourselves precisely what he has in mind. Rather than banning humanism from the medical domain, Engel's intention, it seems to us, is that biopsychosocial thinking provides a conceptual framework conducive to accommodating the human domain scientifically. At age 84, in order to clarify his meaning, writing his last published essay from a senior citizen facility (to which he had gone to live earlier, still healthy and working each day, so that he could reside with his infirm wife), Engel offers us an excerpt from his own idiosyncratic personal diary as a potential source of legitimate scientific evidence: One night he cannot sleep consequent to an annoying sensation in his throat, changing his bedtime posture, drinking water and belching several times brings relief, in the morning he is "a little sad" as he recalled how his currently very ill wife would have "noticed that I slid down (and) would try to help me get repositioned before symptoms developed. She has been in a nursing home for more than a year." Pertinently for good medical practice, "experienced clinicians using

¹⁴ Herbert S. Jennings, *The Universe and Life*, New Haven, CT: Yale University Press 1933, pp. 14, 22.

observation, introspection, and dialogue can be remarkably successful in documenting the existence of explicit pathological bodily processes and associated nondisease issues first inferred simply from what the patient had to say" (*BTB* 525). Engel goes on to end his final essay with the acknowledgement that in 1997, it very much remained an open question whether the narration (in contrast to interrogation) that his approach entailed did or did not fall within the scope of science. "But characteristic of science is also surprise." One day, for example, technology (at this point in his essay Engel was referring to improved audiovisual technology) could possibly "render feasible operationalizing the methods of study of the particular engagement between physician and patient that yields the primary data (e.g., interviewing)." And on that day, we would "rejoice in the discovery....!"

In conclusion, we agree with Ghaemi that the present silos of biopsychosocial medicine and psychiatry fail to conform to Jaspers' robust, person centered methodological pluralism, but we must add that they are equally lacking from the vantage of Engel's new paradigm project. We further agree with Ghaemi's conclusion that Engel never comprehended Jaspers' methodology, but instead inappropriately rejected it as "old paradigm thinking." What Ghaemi fails to see, as did Engel, is the prospect that Jaspers' person centered methodological pluralism can in fact advance Engel's project. It is our position that Jaspers' person-centered methodological pluralism provides both the direction and the tools for present and future biopsychosocial practice in medicine and psychiatry.