

Pain, Depression, Brain-Mind, and Healing: The Potential Complementarity of Process and Purpose



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BY JAMES GIORDANO, PhD

“...*illness must be regarded as a madness of the body...*”
Novalis [1]

This issue of *The Pain Practitioner* addresses the enigma of pain and depression. It is known, and well accepted, that pain patients may (and often do) become depressed, and depressed patients become more sensitive and reactive to pain. Clearly, this reciprocity 1) can complicate diagnosis and impact the appropriateness of treatments that will be considered and/or provided, and therefore 2) compels seeking answer(s) to the questions of why and how these conditions are related.

The Hard Questions and Complementarity

But while such questions appeal to a clinical sensibility, they also reflect a deeper incentive. Victoria Hardcastle

(2) has claimed that it is unreasonable to attempt an understanding of pain without acknowledging and reflecting upon what philosopher David Chalmers has called “...the hard

questions of neuroscience,” namely, how do body and brain evoke the phenomenal process of *mind*, and what is consciousness (3)? I offer that perhaps the really hard questions are not simply how body and brain give rise to mind, but somewhat more broadly, how body, brain, and mind interact within the specific times and places of each individual’s internal and external environments to create the unique *self* that ultimately feels pain, and suffers. In other words, if we are to consider the pain patient, we must first contemplate the nature of the being who is in pain (4, 5).

To be sure, neuroscience has abandoned strict Cartesian dualism, and tends to regard environment, body, brain, and mind as complementary domains and

processes (6). This re-conceptualization brings together different scientific disciplines, and also the sciences and humanities, to more fully investigate and reveal how biological organisms are psychologically affected by—and affect—their socio-cultural environments. Explicitly, this orientation is inclusive, and allows appreciation of the intersection and interaction of the internal *and* external milieu, body *and* brain, brain *and* mind, physiological *and* phenomenological, and ultimately the self *and* other(s).

Thus, it becomes evident that the “hard questions” of pain dictate a complementary approach in how they are

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asked, studied, and how the answers we get are viewed and valued. It is said that in good science—and good philosophy—questions beget questions. This is true, at least in part, given that undeniably, progressive

answers give rise to issues and questions of ever greater and deeper magnitude. In this light, it becomes important (if not necessary) to speculate on what such a complementarity of inquiry, study, and treatment might entail, how it could be enacted, and what effects this epistemological and paradigmatic shift might incur in the way we view pain, depression, the pain patient, and healthcare.

Complementarity in Pain Care: The Science and Art of Curing and Healing

This issue of *The Pain Practitioner* brings together the work of many of my colleagues (at the Samueli Institute, Georgetown University Medical Center, and our

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**Culture and Depression:
Did You Know That?**

According to a new study from the Centre for Addiction and Mental Health (CAMH): East-Asian participants emphasize somatic or physical symptoms of depression more than North American participants. North American participants emphasize psychological symptoms of depression (e.g. report feeling sad, crying spells, or a loss of self-confidence) more than East-Asian participants, regardless of the assessment tool.

collaborative partners), whose efforts have been, and remain, devoted to exploring the dynamic relationships between body, brain, mind and environment(s), and how the sciences and arts can work together to advance more comprehensive understanding, and enhanced applications of healing and caring for chronic pain. The work presented in this issue represents but a fraction of that which is being conducted worldwide. The Human Genome

products are differentially activated by experiences occurring throughout the lifespan to alter the function and perhaps structure of the peripheral and central nervous system, and thereby produce a constellation of pain and depressive features. We “fit” this spectrum disorder hypothesis into extant models of pain and depression, and show how pain and depression (as well as other disorders) are evoked and expressed bio-psychosocially. We also posit that such genotypic and phenotypic characteristics may make certain individuals more or less susceptible to types of pain, as well as differing types of treatments.

That a pain-depressive spectrum disorder is bio-psychosocially generated and expressed compels and sustains the need for treatment approaches that identify and target these variables. Kathleen Brown, PhD, defines the bio-psychosocial nature of pain-depressive spectrum disorder(s), and illustrates the need for, and specifics of, a bio-psychosocial orientation to research, assessment, diagnoses, and care of the chronic pain-depressed patient. Axiomatically, the bio-psychosocial approach is both complementary and integrative (7,8), and Brown illustrates how different disciplines and specialties could be woven into a therapeutic program that is based upon the physiological, psycho-phenomenological, and socio-cultural needs and contingencies of the individual patient being treated.

Wayne Jonas, MD, describes this integrative model in further detail, providing personal insight to some of the historicity and canon that have been instrumental to the

Project, The Decade of the Brain, and most recently the Decade of Pain Control and Research have given rise to a worldwide “think tank” atmosphere that has fostered more of an integrative, multi-disciplinary (i.e., “consilient”) approach to studying not only the human organism, but the human condition as it relates to the environment of the world at large.

This has been a work-in-progress spanning over twenty years, and has generated a move toward anti-reductionism, and “big(ger) picture” understanding(s), and hopefully a more studied examination of how we conduct research, what we know, what theories, tools, and technologies we’ve developed, and how we use such knowledge and technologies. Reflecting this, Rachel Wurzman, MS, Wayne Jonas, MD, and I describe how the new sciences of genomics and proteomics are shedding light on pain and depression as pathologic spectrum disorder(s), in which certain genes and gene

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development and expanding use of complexity, systems’-theory, and complementarity to guide research and medical practice. Jonas addresses the inextricability of body, brain-mind, and environment in the processes of wellness, disease, illness and healing. He urges new and novel, yet no less rigorous, research methods that

can better serve, and be integrated within, a more encompassing model of pain treatment—if not healthcare in general. Such a healthcare model would need to appreciate complementarities (e.g., of environment and organisms, body-brain and mind, wellness-disease-illness,

and of technological progress and its limitations) so as to enable an equally curative and healing orientation to patient-centered therapeutics. This becomes increasingly evident as technological developments in medicine and public health lead to an extended lifespan with durable disease that evokes chronic bio-psychosocial illness (including pain and depression).

Yet, one of the persistent difficulties with bio-psychosocial expression(s) of illness is the subjective nature of their experience, and this is certainly the case for pain and depression. As Jonas astutely notes, important steps include: determining how biological, psychological, and social factors affect the embodied systems of a particular patient; and, developing metrics that can accurately measure these complex factors in some objective way. Here again we must confront the mind-body question: given the subjectivity of pain and depression, a knowledge of the systems and mechanisms fails to afford apprehension of how a person's pain and/or depression actually feels. In this way, our knowledge of pain and depression are constrained by issues of explanation and understanding. We must rely upon the explanation of patients to gain insight into their first person understanding of pain as an experience. While we are driven to find words with objective explanatory value to describe pain, depression, and suffering, these often fail to validly resonate with the first-person experience, or adequately convey their "meaning" to others (9).

It may be that the base, irreducible (i.e., "primitive") nature of pain and depression—as experiences of the body-brain-mind—evoke expression on a somewhat more primal level. The work of Terrence Deacon (10) and Merlin Donald (11) posits the development of human cognition through a variety of stages that allowed attention and inter-personal relation to important environmental events. These processes evolved from the purely reactive (i.e., the episodic) through the mimetic (i.e., use of images and metaphors), and mythic (i.e., use of complex linguistic narratives) to the current level of

theoretical explanations. These skills, abilities, and expressive styles were iterative, yet in some way, all preserved the capacity to symbolize for others (that is, "explain" in some way) that which is subjectively experienced, understood, and is desired to be communicated (i.e., explained to others so as to gain their relative understanding).

The modern human uses all of these abilities during interpersonal interactions, albeit in a somewhat hierarchical way, employing advanced linguistic skills in direct explanation.

But as Elaine Scarry has noted, "...pain deconstructs..." the person (9), and in so doing, may,

devolve the capacity for its explanation into more fundamental forms of expression. The profundity of the experience essentially "...defies language," yet this ineffability provokes a need for the one in pain to seek means to communicate its subjective event, and for others to seek ways to more fully understand the one in pain. In this way, Robert Solso maintains that "...art bestows upon the eyes the vision to see inward..." (12), and is thus icon, symbol, and index of our inner experience, and a bridge to relate to the inner experiences of others.

Rosemary Covey discusses the process of artistic expression as a conveyance of pain and suffering, and as a nexus between understanding and explanation, and provides examples of her particular style of work (woodcut) that graphically depict its powerful iconic value.

Just as the experience and meaning of pain and depression are unique in each person, so is their expression. In light of this, we also offer the artwork of artist Jon Aley to show a different lens through which pain, depression, and suffering are felt and depicted; and how, through his painting and filmmaking, and through movement, Aley works through and addresses his pain.

In addition, the experience of pain and depression is illustrated through the narrative of Dan O'Neal—in *vox patiens*—in the voice of the one who suffers. O'Neal describes his personal journey—how he began his career

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as a successful cabinet maker and businessman to his struggles with pain and depression. And finally, how through his work as an advocate for others with pain, his spiritual beliefs and practices, and through effective pain management, he has discovered a new life with meaning.

Complementarity, Communication, and Community

Solso maintains that “...art and science may differ in superficial traits, but are linked together at a deeper level...the common denominator is the degree to which expressions in each are compatible with the mind...” (12). Most surely I agree, yet, the question may arise as to how we may bring the disciplines and practices out of their respective silos, so as to allow their interaction. I offer that perhaps the answer is not to “de-silo” the disciplines at all, but to encourage an ever deepening focus upon their specific areas of expertise. The goal, I posit, is not the homogenization of disciplines and specialties, but a more effective communication of how their interests may be communally engaged, strengths augmented through co-participation, limitations overcome through collaboration, and the outcomes of their work(s) being applied in a complementary, integrative way to the task at hand—namely the study and treatment of pain.

We have come far in our knowledge of pain as symptom, sign, disease, and illness and recognize that pain management—both as a philosophy and a discipline—must acknowledge this expanded perspective. If we are to embrace a working notion of complementarity, then it must become a working part of a philosophy of pain management. The tasks of any philosophy are epistemic (i.e., the acquisition of knowledge and analysis of how such knowledge is gained), anthropologic (i.e., consideration and applications of knowledge and these ways of knowing as relevant to the human condition), and ethical (i.e., pertaining to the relative moral value of circumstance, actions and consequences, and the systems and tools

But, I believe it is something more; by definition, complementarity refers to a well-functioning, integrative whole that results when two seemingly opposite conditions for dimensions are brought together.

that can be used in such applications) (13). Surely, philosophical complementarity reflects the apparent inter-relatedness and balance of these domains and tasks. But, I believe it is something more; by definition, complementarity refers to a well-functioning, integrative whole that results when two seemingly opposite conditions for dimensions are brought together (14). This engenders a reciprocity that allows a philosophy of pain management to be both theoretically-based, and free to embrace new ideas, methods, and applications in an original, creative, and resourceful way—what Ed Brandon refers to “philosophy as bricolage” (15). As such, we need not adhere to old theories and ideas simply because they are old, nor must we reject them at hand for the same reason. Similarly, the novelty of new ideas and methods should not directly dictate

either their use or the reluctance to consider them. Rather, this approach to philosophy is dialectical, and allows for seemingly different perspectives to be communicated, discussed, and reconciled in a synthesis of complementarity. The process of dialectic is one in which unique and differing perspectives inform each other, and together this fusion precipitates learning and positive change.

Some twenty years ago, the American Academy of Pain Management (the Academy) was conceived as a community and forum for the communication and exchange of ideas among and between clinicians, educators, administrators, and patients—all as concerned persons who enact the mission of pain management. The Academy stood, and I believe still stands today, as a viable, potential platform for dialectic, learning, intellectual and pragmatic growth, and progress. Thus, the Academy can be seen as a step-stone to bring together those disciplines of curing and healing that are essential to utilizing the most contemporary knowledge in the safe, effective, and ethically sound care of those in pain. In this way, the Academy meets the philosophic tasks of pain management, and is engaged in a mission that I feel is both necessary and realistic. It is necessary in that the

current state of professional pain medicine organizations is somewhat inchoate, retaining somewhat differing orientations to pain, the pain patient, and pain care. It is realistic because while these organizations may be grounded to the problem of pain, none fully meet the need to accommodate and serve a broad audience of trans-disciplinary professionals with diverse, yet complementary interests (e.g., clinical, academic, etc.), and practices (e.g., curative, healing, and caring approaches), as does the Academy. Yet, as I've tried to illustrate in this essay, the more we know about pain, the more such a complementary approach is needed, and this urgency underscores the importance and reality of what the Academy can achieve.

Pain management, as a field, must be committed to a

To gain this balance requires communication between the various pain organizations within the pain management community, at large.

professional environment that embodies the classical Asclepian (curative) and Hygieian (healing) dialogue of healthcare (16). This dialogue reflects the professional ecology of the field—a balance of curative and healing domains that are equally focused upon the patient, and create an environment that is an integrative whole, and therefore, by definition, healthy and thriving within itself. To gain this balance requires communication between the various pain organizations within the pain management community, at large.

I believe that the Academy can occupy that niche, and in so doing, catalyze a positive change in the professional ecology of pain medicine—meeting the needs of the field by serving groups of professionals, patients, and the public through the provision of meaningful discussion and true intellectual exchange. Toward this end, the Academy could re-assert its dedication to the integration of science(s) and the humanities, reconciling what C.P. Snow has called the “two cultures” of knowledge (17). Clearly, the time is right, as the field of pain medicine seeks to rejoin itself to a coherent purpose. Key figures within the Academy, other professional organizations, and with political influence are in

positions to instigate and mediate developments toward such progress. Perhaps the ideal of a pan-organizational pain society remains a Pollyannaish vision (18), but I believe that the Academy could establish itself as a professional organization that is committed to bringing together the disciplines necessary for a complementary, unified practice of pain management, and in this way, advance the field of pain care to a new level of community, purpose and achievement.

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