

## Strength of Vital Force in Classical Homeopathy: Bio-Psycho-Social-Spiritual Correlates Within a Complex Systems Context

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### ABSTRACT

**Objective:** To explore associations between a global rating for the classical homeopathic construct of vital force and clinician and patient ratings on previously validated bio-psycho-social-spiritual questionnaires.

**Methods:** Sixty-two (62) community-recruited patients with fibromyalgia (FM) were assessed at baseline prior to a clinical trial of individualized homeopathy. Two homeopaths jointly performed case-taking interviews. A conventional medical provider independently evaluated patients with a standardized history and physical examination. Homeopaths rated each patient's vital force (five-point Likert scale, with 1 = very weak to 5 = very strong). Homeopaths and the conventional medical provider rated their Clinical Global Impression (CGI) of the severity of illness (1 = normal; 7 = among the most extremely ill). Patients completed self-rating scales on pain, global health, mood, quality of life, coping style, health locus of control, multidimensional well-being, spirituality, sense of coherence, positive states of mind, and social desirability.

**Results:** Greater vital force ratings (mean 2.9 standard deviation [SD] 0.6) correlated moderately ( $p \leq 0.005$ ) with less severe CGI illness ratings by the homeopaths ( $r = -0.59$ ), decreased patient-rated mental confusion ( $r = -0.43$ ), higher vigor ( $r = 0.38$ ), and greater positive states of mind ( $r = 0.36$ ). Vital force also showed correlations ( $p < 0.05$ ) with lower CGI ratings by the conventional medical provider ( $r = -0.32$ ), better self-rated quality of life ( $r = 0.33$ ), lesser fatigue ( $r = -0.31$ ), better global health ( $r = 0.29$ ), greater sense of coherence ( $r = 0.28$ ), powerful-others health locus of control ( $r = 0.27$ ), increased emotional well-being ( $r = 0.27$ ), and higher social desirability ( $r = 0.27$ ), but not with age, pain, or illness duration.

**Conclusion:** Homeopathic vital force ratings reflect better perceived mental function, energy, and positive dimensions of the individual, beyond absence of disease.

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## INTRODUCTION

The concept of the vital force or life force (i.e., the spiritalike dynamism that flows through the material human organism) (Rowe, 1998) is as fundamental within classical homeopathy as *qi* is within Chinese medicine and other forms of energy medicine. Homeopaths believe that their medicines or remedies mobilize the vital force to orchestrate healing responses throughout the organism in a coordinated fashion (Hahnemann, 1843), rather than by local actions on specific drug receptors in the physical body. The body translates the information of the vital force into local physical changes and hence recovery from acute and chronic diseases.

The homeopathic inference from finding an individual less resilient or adaptable to environmental stressors of many types is that the person has a weaker vital force. Given the lack of tools with which to make direct assessments, patients' symptoms and changes in symptoms are the primary, albeit indirect, measure of the strength and specific expression of the vital force. Symptoms can be bio-psycho-social-spiritual in nature, typically including both disease-specific and nonspecific manifestations. Grasping patterns and themes of the symptoms is crucial to correct remedy selection (Geraghty, 2002; Scholten, 1996). To evaluate vital force clinically, homeopaths synthesize their observations of a patient's appearance, verbal and nonverbal behaviors, resilience to daily hassles and major life events, personal medical status and history, family history, and capacity to live fully in joy and purpose. Homeopaths use the vital force assessment to guide dose (potency) selection and treatment pace and to judge the likely clinical course and prognosis.

Milgrom's recent theoretical paper (Milgrom, 2002b) presents a well-reasoned case for reconceptualizing homeopathic vital force within contemporary complex systems theory. In complex systems theory, the whole is more than the sum of its parts; and the whole system (e.g., the person) expresses properties not seen or predicted from those of its constituent elements (e.g., molecules, cells, organs) (Bar-Yam, 1997). For example, the capacity for behavior in an organism as a whole is more complex and different from the behavior of its brain cells *per se* (Schwartz, 1981). Milgrom (2002b) argues that the homeopathic construct of "vital force" can be understood as an emergent property of the totality of an organism's interdependent system of living cells. He further posits that this emergent property generates a self-organizing field for the organism as a whole. In brief, the life force field maintains the overall organism in its self-ness and resists environmental insults that might compromise the whole. The nonlinear dynamics inherent in complex systems capture the overall real-world functioning of living organisms more accurately than do the linear approximations of biomedicine (Goldberger, 1996).

Historically, homeopathic vitalism fueled an intense scientific, philosophical, and political schism in medicine in

which mainstream physicians, who identify with a more mechanistic, Cartesian paradigm of care, effectively marginalized homeopaths as "unscientific" for much of the 20th century (Coulter, 1988). Ironically, viewing homeopathic vital force as a complex systems construct now puts homeopaths in better step with current scientific thinking than does the mechanistic determinism of conventional biomedicine (Milgrom, 2002b).

Although Milgrom's theory offers a valuable conceptual framework, practical empirical work on vital force is lacking. From a methodological perspective, vital force is an abstraction or latent variable (i.e., a variable not amenable to direct measurement) (Tabachnick and Fidell, 2001). In such situations, researchers typically rely on a subjective judgment of a rater and assessment of other, multiple-measured variables to infer the status of the construct. In evaluating the organism's self-organizing field, separate scales that cover bio-psycho-social-spiritual aspects and dynamic dimensions of the person together may capture the notion of vital force.

At the same time, vital force is inherently a global or unitary property of an organism. As a result, a single-item, clinician-assessed global rating scale for vital force, modeled after those used extensively in clinical psychiatry and medicine research for overall outcome (Davidson et al., 1997; Fankhauser et al., 1992; Lyden et al., 1997), is a necessary first step. Evaluating the relationships of such a global rating to various standardized questionnaires that address potentially relevant properties of the organism may facilitate more detailed characterization of vital force and development of new, multidimensional scales. To date, no previous homeopathic clinical research has attempted to examine these issues. The purpose of the present study was to create a homeopathic vital force global rating tool and to explore correlations between the strength of the vital force and other, previously validated patient self-report questionnaires.

## METHODS

### *Subjects*

Nonalcoholic adults of both genders with a physician diagnosis of fibromyalgia (FM) were recruited from the greater Tucson, AZ, and Phoenix, AZ, communities by media announcements, newspaper advertisements, flyers in local health food stores, and word-of-mouth in patient support organizations. Excluded medications included steroid drugs, narcotic analgesics, benzodiazepines, and antihypertensives. Patients with serious comorbid medical (heart, lung, liver, kidney disease; diabetes; seizures; anaphylaxis history) or psychiatric (psychoses; acute suicidality) conditions, as well as nasal trauma (because of the subsequent olfactory psychophysiology laboratory component of the study) were also excluded. Subjects were permitted to continue any long-term

medications or other complementary medicine treatments that had been stabilized for at least 2 months prior to enrollment (prerequisite for a subsequent placebo-controlled clinical trial of homeopathy (Bell et al., 2004).

### Questionnaires

For exploratory purposes, we administered a set of patient self-report questionnaires prior to the initial clinician visits. The scales covered multiple potential elements that clinicians might probe to determine strength of the vital force. These included:

- McGill Pain Questionnaire (short form; Melzack, 1987): Sensory (11 items) and affective (4 items) aspects of subjective pain, on four-point Likert subscales.
- Global Health Rating Scale (Bell et al., 1998): Three-item, five-point Likert scale (possible range, 3–15) for current health, health compared to 6 months ago, health compared to that of peers.
- Profile of Mood States Scale (POMS; McNair et al., 1981): Sixty-five (65) item, five-point Likert scale, generating mood subscale scores for vigor, fatigue, confusion, depression, tension-anxiety, anger-hostility. Notably, confusion items are: “confused, unable to concentrate, muddled, bewildered, inefficient, forgetful, uncertain about things.” The vigor items are: “lively, active, energetic, cheerful, alert, full of pep, carefree, vigorous.”
- Positive States of Mind Scale (Horowitz et al., 1988): Seven (7)-item measure of positive rather than negative dimensions of life experiences, including focused attention, productivity, sharing, responsible caretaking, restful repose, sensuous nonsexual and sexual pleasure.
- Patrick Quality of Life Scale (Patrick et al., 1988): Twelve (12)-item scale rated on a 0–10 point range addressing satisfaction with a wide range of domains, including health, thinking and memory ability, happiness, relationships with family and friends, community involvement, finances, work/retirement, leisure activities, sense of meaning/purpose in life.
- Functional Assessment of Chronic Illness Therapy (FACIT) (Cella and Nowinski, 2002; Peterman et al., 2002): Thirty-nine (39)-item, five-point Likert modular disease-related quality of well-being questionnaire with subscales on physical, emotional, social-family, functional, and spiritual status.
- JAREL Spirituality Questionnaire (Hungelmann et al., 1996): Twenty-one (21)-item Likert scale measure of spiritual orientation, sense of meaning, religious involvement with three factors (faith/belief, life/self-responsibility, life satisfaction/self-actualization).
- Sense of Coherence Scale (Antonovsky, 1993): Twenty-nine (29)-item seven-point Likert trait scale assessing a global orientation toward the comprehensibility, manageability, and meaningfulness of life (i.e., a dynamic feel-

ing that internal and external stimuli are “structured, predictable, and explicable”) that the individual has resources to find appropriate coping strategies for dealing with stimuli, and that environmental demands are challenges with which the person can engage meaningfully.

- Multidimensional Health Locus of Control Scale (Wallston et al., 1976): Eighteen (18)-item, six-point Likert scale, with subscale scores for perceived locus of control that is internal, chance, or powerful-other-related (e.g., physician, health professionals).
- Active and Passive Pain Coping Subscales of the Pain Management Inventory (Brown and Nicassio, 1987): Measure of pain-specific coping strategies in patients when pain levels are moderate or higher.
- Marlowe-Crowne Social Desirability Scale (MCSD, short-form) (Reynolds, 1982): Thirteen (13)-item true/false measure of defensiveness, (i.e., the tendency to deny negative information about oneself to oneself and to others in order to present the perceived socially desirable response). High-defensive people report lower rates of lifetime psychiatric disorders (Lane et al., 1990) and exhibit higher pain thresholds (Jamner et al., 1988) than do low-defensive individuals.

### Clinical assessments

At baseline, prior to randomization and the treatment phase of the study, all patients underwent a 1½ hour or longer in-depth homeopathic case-taking interview to determine the single individualized remedy deemed appropriate for them. Two experienced homeopaths from a pool of three practitioners (two physicians and one homeopathic medical assistant [HMA], all trained in a similar school of classical homeopathy and certified by the Council for Homeopathic Certification [CCH]) had to agree on a specific remedy with a confidence of at least 7 of 10.

At the end of the case-taking interview, the homeopaths each rated the patient’s strength of vital force on a one-item, global five-point Likert scale (where 1 = very weak, 2 = weak, 3 = moderate, 4 = strong, 5 = very strong). The homeopaths indicated that they included the following considerations in their assessment of vital force: exposure to suppressive treatments (e.g., steroid creams for skin rashes; antibiotics for recurrent strep throat), age, past medical history, family history, current freedom of expression, and center of gravity.

To characterize each case, they identified a hierarchical center of gravity within the person (i.e., mental, emotional, physical plane, or indeterminate, at which the intensity of the case’s pathology currently focused; Vithoulkas, 1980). Center of gravity may or may not have been the chief complaint or other concomitant symptoms that the patient considered immediately problematical. The center of gravity identifies the plane of being at which the homeopath judges symptoms to be the most limiting for the person in his/her

freedom of functioning and quality of life. Homeopaths believe that the vital force pushes the manifestations of disturbance in the organism as far to the periphery as it can (e.g., toward lower rather than upper extremities and toward less important rather than more important organs for survival). Generally, a mental center of gravity (e.g., thought disorder such as paranoia) suggests a weaker vital force than does an emotional center of gravity (e.g., generalized anxiety disorder), which in turn suggests a weaker vital force than does a physical center of gravity (e.g., asthma). Within a given center of gravity such as the physical plane, symptoms in a more important organ (e.g., lungs) suggest a weaker vital force than do those in a less important organ (e.g., skin). Finally, the homeopaths rated severity of the obstacles to cure (Vithoulkas, 1980), e.g., involvement in abusive relationships, adverse lifestyle habits, physical impediments (where 1 = minimal, 2 = mild, 3 = moderate, 4 = strong, 5 = extreme).

All patients separately underwent a standardized history and physical examination by a conventional medical provider (rheumatologist or rheumatologist-trained physician's assistant) who was otherwise uninvolved in their care and blinded to results of the homeopathic evaluation. The homeopaths and the conventional medical provider independently completed a one-item Clinical Global Impression (CGI) severity rating after each visit (worded to ask for global assessment, taking into account the bio-psycho-social-spiritual aspects of the patient's current health, where 1 = normal, not at all ill; 2 = borderline ill; 3 = mildly ill; 4 = moderately ill; 5 = markedly ill; 6 = severely ill; 7 = among the most extremely ill patients).

### Statistical analyses

Descriptive statistics included means, standard deviations, and frequency counts. Missing values were imputed using mean substitution. Pearson correlation coefficients were computed between the mean homeopaths' vital force ratings of the patients and the patient self-report questionnaire variables. Stepwise multiple regression was used to determine the amount of variance in vital force ratings explained by variables with the most significant correlations. The relatively small sample size precluded use of factor analysis techniques to explore relationships between multiple variables beyond correlational assessments. A strict Bonferroni correction for multiple comparisons would require setting statistical significance at a conservative  $p \leq 0.0018$ . Various statisticians have pointed out that application of Bonferroni correction to limit Type I error increases the likelihood of Type II error in exploratory research studies. Consequently, the present study reports statistical significance at  $p < 0.05$ , specifying, as Rothman suggests (Rothman, 1986), that 28 correlations were computed for Table 1.

## RESULTS

The overall sample of 62 patients with FM was 94% female, with a mean age of 49 standard deviation (SD) 10 years and mean duration of FM at 13.3 SD 12.7 years. The findings within each of the two pairings of the three homeopaths (one homeopath saw all of the patients with one or the other colleague) revealed high inter-rater correlations ( $p \leq 0.001$ ), respectively, for vital force ratings,  $r = 0.83$  and  $r = 0.65$ ; for obstacles to cure,  $r = 0.83$  and  $r = 0.80$ ; and for CGI,  $r = 0.76$  and  $r = 0.84$ . Consequently, the homeopaths' ratings were averaged for use in subsequent analyses.

Averaged homeopathic vital force ratings for the patients were 2.9 SD 0.59. Mean vital force ratings correlated significantly with mean ratings of obstacles to cure (mean 2.7 SD 0.66) ( $r = -0.33$ ,  $p = 0.005$ ), but not with age ( $r = -0.15$ ,  $p = 0.2$ ) or FM duration ( $r = 0.04$ ,  $p = 0.7$ ). CGI ratings by homeopaths and the conventional medical provider correlated only weakly with one another ( $r = 0.34$ ,  $p = 0.007$ ).

Although one-third of the 62 patients (22; 35.5%) had unclear or indeterminate centers of gravity (e.g., the two homeopaths found evidence of involvement of two adjacent planes), 23 (37.1%) were assessed to have the primary focus of their symptomatology at the physical plane, 15 (24.2%) at the emotional plane, and 2 (3.2%) at the mental plane. Homeopaths rated patients whose center of gravity fell within mental or emotional planes as significantly lower in vital force strength (mean 2.5 SD 0.65) compared with patients whose center of gravity fell within the physical plane (mean 3.1 SD 0.66) ( $F(1,38) = 6.5$ ,  $p = 0.015$ ).

Table 1 summarizes the means (SD) and correlation coefficients between the homeopaths' vital force ratings for the patients, the clinicians' CGI ratings, and patients' self-report scales. The four strongest correlations were for vital force with the homeopaths' averaged CGI ratings, POMS mental confusion (stronger vital force associated with lower confusion), POMS vigor (stronger vital force associated with greater vigor), and the Positive States of Mind score. Using only the four variables with the strongest correlations, stepwise multiple regression tests showed that the homeopaths' CGI rating accounted for 32% ( $\beta = -5.3$ ,  $t = -5.3$ ,  $p < 0.001$ ) and POMS vigor for an additional 8.5% ( $\beta = 0.29$ ,  $t = 2.9$ ,  $p = 0.005$ ) of the variance in vital force ratings. If homeopathic CGI ratings were not used in the regression analysis, then POMS confusion alone, of the remaining three variables, accounted for 14% of the variance in vital force ( $\beta = -3.9$ ,  $t = -3.3$ ,  $p = 0.002$ ). Notably, vital force did not correlate with pain ratings.

Weaker correlations occurred between higher vital force ratings and greater patient self-ratings for global health, Patrick Quality of Life, FACIT emotional well-being, sense of coherence, and powerful-others health locus of control. Increased social desirability also correlated weakly with homeopathic ratings of a stronger vital force. However, so-

TABLE 1. MEANS (SD) AND CORRELATION COEFFICIENTS BETWEEN HOMEOPATHS' GLOBAL VITAL FORCE RATINGS AND OTHER BASELINE MEASURES ( $n = 62$ )

	Mean	SD	Correlation ( $r$ ) with vital force rating	p
Baseline average homeopath Clinical Global Impression <sup>a</sup> (1 = normal, not ill at all; 7 = among the most extremely ill)	4.0	0.64	-0.59	<0.001
Baseline rheumatologist Clinical Global Impression <sup>b</sup> (1 = normal, not ill at all; 7 = among the most extremely ill)	2.7	0.68	-0.32	0.012
McGill Sensory Pain	15.9	5.8	-0.13	0.3
McGill Affective Pain	4.2	2.6	-0.07	0.6
Global Health Rating Scale <sup>b</sup>	7.2	2.7	0.29	0.025
POMS Vigor <sup>b</sup>	11.5	5.5	0.38	0.002
POMS Fatigue <sup>b</sup>	13.2	7.1	-0.31	0.015
POMS Mental Confusion <sup>a</sup>	8.0	5.2	-0.43	<0.001
POMS Depression	6.9	9.5	-0.19	0.14
POMS Tension-Anxiety	8.2	6.1	-0.18	0.2
POMS Anger-Hostility	3.4	5.8	-0.14	0.3
Positive States of Mind <sup>b</sup>	13.3	4.4	0.36	0.005
Patrick Quality of Life <sup>b</sup>	61.2	20.6	0.33	0.01
FACIT Physical Well-being	13.8	5.4	0.17	0.2
FACIT Emotional Well-being <sup>b</sup>	15.0	5.1	0.27	0.37
FACIT Social-Family Well-being	15.5	5.9	0.22	0.09
FACIT Functional Well-being	13.2	5.4	0.17	0.2
FACIT Spiritual Well-being	30.7	9.6	0.20	0.12
JAREL Faith	34.2	6.4	0.15	0.3
JAREL Self-Responsibility	32.5	5.8	0.07	0.6
JAREL Self-Actualization	31.0	4.9	0.24	0.06
Sense of coherence <sup>b</sup>	132.0	24.5	0.28	0.029
Powerful-others health locus of control <sup>b</sup>	15.4	4.9	0.27	0.034
Internal health locus of control	25.7	4.9	0.19	0.14
Chance health locus of control	16.9	5.1	-0.07	0.6
Active pain coping	12.1	3.1	0.07	0.6
Passive pain coping	12.4	4.2	-0.24	0.065
Marlowe-Crowne Social Desirability <sup>b</sup>	7.6	2.6	0.27	0.037

<sup>a</sup>Strict Bonferroni correction:  $p < 0.05/28$  items, statistical significance  $p \leq 0.0018$ .

<sup>b</sup>Rothman (1986) proposes that the Bonferroni correction is overly conservative and risks Type II error in exploratory studies. Instead, he proposes use of  $p < 0.05$ , with explicit statement of number of tests performed (here, 28 tests).

SD, standard deviation; POMS, Profile of Moods States Scale; FACIT, Functional Assessment of Chronic Illness Therapy.

cial desirability scores did not correlate significantly with either homeopaths' ( $r = -0.15$ ,  $p = 0.3$ ) or conventional medical provider's ( $r = -0.21$ ,  $p = -0.11$ ) CGI ratings.

## DISCUSSION

### *Bio-psycho-social-spiritual correlates of the strength of vital force*

Homeopathic ratings of the vital force of patients with FM correlated most significantly with decreased levels of patient self-rated mental confusion and greater amounts of vigor (i.e.,

mental clarity and good energy [physical, emotional, and mental, see POMS items in Methods]). Consistent with the notion that homeopaths assess positive health manifestations beyond disease status, their clinical global impression ratings (anchored between the absence of disease to extreme disease), accounted for only one third of the variance in the vital force scores. Taken together, the pattern of correlations suggest that global and disease nonspecific, positively valenced manifestations (e.g., the capacity to experience positive states of mind and current perceived global health status) were associated more with vital force ratings than were local disease-specific manifestations such as pain or duration of illness within the present sample of patients with FM.

Within any conventional medical diagnosis, especially in a relatively small sample, the universal presence of the common symptoms within a given plane (mental, emotional, or physical, for example, chronic pain in FM), will likely obscure possible correlations between such symptoms and strength of vital force that otherwise might be present across a more heterogeneous population sample. It is likely, for example, that, in contrast to the present findings, severity of physical pain would correlate with strength of vital force within a general population sample. In a general population, the whole matrix of mental, emotional, and physical symptoms would all vary in severity from none to extreme, thereby allowing sufficient variability for the detection of more symptom-specific correlations over an adequately sized sample. Moreover, in other types of scale-based research, observers and patients often have somewhat differing assessments of the patients' status. Observer-rated and patient-rated scales can have significant, but weaker correlations with each other than do those scored entirely within the observers or within the patients, as seen in these data.

At the same time, global vital force ratings reflect a homeopath's overall qualitative judgment of a complex pattern of constantly-changing, nonlinear information. Future research should examine the relative weighting of factors that homeopaths use to assess vital force. Also, evaluating scales for adaptability or resilience to environmental change and capacity to make life changes may add another key element beyond static ratings of various domains for well-being (Bell et al., 2003a). The individual complexity and dynamic quality of the vital force as a clinical phenomenon renders the present correlational approach, with its overly simplistic static and linear assumptions for averaged relationships between only two variables at a time, methodologically inadequate. Larger samples and repeated measurements will afford the possibility of performing more appropriate multivariate linear statistics such as structural equation modeling (Tabachnick and Fidell, 2001) or individual growth curve analyses (King et al., 2003), as well as nonlinear statistical approaches with computer modeling of multiple dynamic interactions between multiple variables (Heath, 2000).

Despite these limitations, the CGI ratings of the homeopaths correlated more strongly with vital force ratings than did those of the conventional medical providers. The homeopaths correlated highly with one another for all types of ratings in a given case, but only weakly with the conventional provider in the CGI assessment of the same case. These findings may reflect differences in the scope of factors that homeopaths, as opposed to conventional medical providers, take into account in their clinical approach. Notably, the Marlowe-Crowne Social Desirability data suggest a mild association between the patient's capacity for denial of negativity and the homeopathic assessment of strength of vital force, but not with the homeopathic or conventional provider CGI ratings. Spiritual faith and self-responsibility

per se were not correlated with vital force ratings. At the same time, convergent themes for a stronger vital force emerged from the patients' greater sense of coherence, self-actualization, and powerful-others health locus of control.

Thus, the classic homeopathic notion of vital force may relate, in part, to the ability of the patient to perceive a sense of order, purpose, context, and meaning within which to adapt to "good" and "bad" life events. Such findings are consistent with Vithoulkas' homeopathic model of health involving the expression of creativity and freedom from restriction at mental, emotional, and physical planes of human existence (Vithoulkas, 1980), as well as with data from a recent qualitative study on the multidimensional scope of patient outcomes during homeopathic treatment (Bell et al., 2003a).

### *Vital force within a complex systems context*

Notably, several different investigators have proposed that modern complex systems theory could provide a scientifically more accessible language for the phenomena under consideration in homeopathy (Bell et al., 2002; Bellavite and Signorini, 2002; Hyland and Lewith, 2002; Hyland, 2003; Milgrom, 2002b; Shepperd, 1994; Torres, 2002). Clinically, homeopaths consider the shifts in symptom patterns during treatment as manifestations of the strength and expression of the vital force (Vithoulkas, 1980). Contemporary homeopaths emphasize that understanding the unique qualities of the organism's response to an environmental stressor is an essential element for proper case analysis (Rowe, 1998; Sankaran, 2002). Similarly, in complex systems, self-organization is an organism-level emergent property of the interdependent, indivisible complex system that is a human being (Milgrom, 2002b). Furthermore, evaluation of the local and global dynamics or evolution of the systemic response to environmental change, rather than the resting state, is key (Bar-Yam, 1997).

In such an indivisible, interdependent complex system, changes in one "part" lead to both direct and indirect effects on the rest of the system (Bar-Yam, 1997; Milgrom, 2002a, 2002b; Walach, 2003). For example, homeopaths propose that surgical removal of a diseased organ blocks the ability of the vital force (cf., complex self-organized network) to express a disturbance in the least crucial part of the system possible. Consequently, the surgery has not "removed" the disturbance (pathology), because the disease exists throughout the network connections, not in the organ part that appeared to exhibit "disease." Then the rest of the interdependent network—or vital force—self-reorganizes to express the same disturbance in another part, generally one more important for the overall system's well-being (e.g., the lungs) leading to asthma or the brain, leading to depression or panic attacks.

In contrast, homeopaths report that their remedies, by speaking to the vital force as a whole (i.e., the complex sys-

tem) catalyze system-wide reorganization and evolution toward greater health in all parts of the system (Hyland and Lewith, 2002; Milgrom, 2002b). Thus, classic homeopaths claim that their medicines cannot treat body parts, but necessarily treat the whole person—fostering greater energy, well-being, creativity, adaptability, as well as improved functioning in all parts within the mental, emotional, and physical planes (Bell et al., 2003a; Vithoulkas, 1980). The present correlations between vital force and more vigor (less fatigue), sense of coherence, and multidimensional quality of life, but not with physical pain *per se*, are consistent with the latter conceptualization.

At the same time, homeopaths view the person as hierarchically organized (Vithoulkas, 1980). They claim that a schizophrenic generally is much sicker than a person with a severe physical ailment because of the pervasive disruption of functional ability in most arenas of life associated with schizophrenia (Reed et al., 2002), but not necessarily a physical ailment. In the present study, patients with a mental or emotional center of gravity had a weaker vital force rating than did those with a physical center of gravity. It is also notable that better status in a higher order level of organization (i.e., mental function [in terms of lower scores on POMS mental confusion]), correlated better than did other variables with stronger vital force ratings.

The implication of a better functioning brain, a higher-order controller in the hierarchically organized complex system (Hyland and Lewith 2002; Hyland, 2003), would mean that the person-system as a whole network could function better in a broad range of internal and external arenas (Bar-Yam, 1997). At an even higher level of organization, other theorists might point out that the patterning of responses to remedies appears to develop in purposeful, seemingly non-random, ways. Some writers would raise a metaphysical argument that the vital force is a nonphysical intelligence with “mental clarity,” beyond the brain *per se* (i.e., the highest order controller organizing the overall system and shaping its response to the remedy within a more universal context [Bohm 1986; Bohm and Peat, 1987; see also Sheldrake, 1995a, 1995b]). The system itself provides the energy to manifest expression of the nonphysical field or form (Milgrom, 2002b; Sheldrake, 1995a, 1995b).

## CONCLUSION

Debates over vitalism have engaged thinkers in science, philosophy, and religion for many years. The long-standing discussions over the existence and nature of the vital force both inside and outside homeopathy have led various writers to invoke models involving physical (water properties [Langton, 1991; Watterson, 1996]), bioelectromagnetic (Del Giudice and Preparata, 1998; Endler et al., 1994, 1998; Hintz et al., 2003; Rubik, 2002), quantum entanglement (Milgrom, 2002a, 2002b; Walach, 2000, 2002, 2003), morphogenetic

field (Sheldrake, 1996a, 1996b), and universal implicate order (Bohm, 1986) conceptualizations. Although different models label and interpret the vital force and related issues in divergent ways, one idea that appears common across all of the theories is that the person is a dynamical complex system embedded within a larger system (environment). The homeopathic remedy, typically derived from an animal, mineral, or plant source (Bell et al., 2003b; Elia and Niccoli, 1999; Rey, 2003), contains its own complex, perhaps archetypal information, presumed resonant with the person-system (Whitmont, 1991).

Differences between theories are often related to assumptions about the direction or lack of direction in the reaction of the vital force (e.g., is the vital force an emergent property arising from interdependent physical building blocks of a self-organizing nonlinear system [Bar-Yam, 1997; Langton, 1991; Milgrom, 2002b]), an inherent property of an entangled weak quantum system where local and global events are simultaneous (Hyland, 2003; Milgrom, 2002a; Walach, 2003), a nonphysical field that organizes the evolving dynamical system (e.g., from above, to “choose” certain forms for health or disease over a myriad of other possibilities [attractor basins; Bohm, 1986; Milgrom, 2002b; Sheldrake, 1995a, 1995b]), or an intrinsic property of the whole universe and its holographic, apparent parts)?

At this point, thoughtful consideration and empirical tests of the leading theories may eventually clarify the nature of the homeopathic vital force. Currently, no model for the vital force excludes any other model. In the least, researchers may increase understanding of the vital force by studying the relationships between the parts that collectively form the whole, rather than the parts in isolation from one another (Bar-Yam, 1997; Bohm and Peat, 1987). However, the present data do not directly address the challenging issues outlined above. Rather, these findings open the question of how the vital force, whatever its nature, form, or relationship to age-old philosophical, scientific, philosophical, religious, and spiritual questions, might manifest in measurable ways. In turn, these empirical findings at the physical plane offer some hints as to the underlying—or overarching—nature of a healthy vital force (e.g., involving intelligent order [information], energy, and purpose).

This preliminary study attempted to determine possible quantifiable manifestations of the vital force rated globally within living persons with one chronic disease (i.e., FM). These data will require replication among more homeopaths, homeopaths from different schools of theory and practice, in larger patient samples and across diverse clinical and non-clinical populations, using confirmatory statistical methods, in order to evaluate the present observations and their generalizability. Factors other than those measured in the present investigation, including nonphysical energy information or fields, may relate centrally to the construct of vital force (Milgrom, 2002b). Future studies will need to assess not only baseline status, but also the evolution of treatment

responses of the vital force over time. The risk of Type I error using multiple correlations in this investigation is a potential weakness. Homeopathic researchers still need to develop multifactorial, multiple-item scales for assessing vital force to use in addition to the present global rating tool. Nonetheless, the present study initiates the systematic empirical investigation of the homeopathic vital force, in terms of the capacity of the organism to respond in a coordinated, multidimensional way to the larger environment in which he/she lives.

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