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ankylosing spondylitis

the translucent human

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Tel. (303) 449-5903
FAX (303) 449-5978
(800) 530-8875

EDITORIAL BOARD
Gil Hedley, Ph.D., Chair
Marilyn Beech
Siana Goodwin
Aline Newton
Karna K. Handy, Managing Editor
Katy Snyder, Design and Layout

LAY-OUT & GRAPHIC DESIGN
Katy Snyder
The Write Idea
P.O. Box 11203
Boulder, CO 80301
(303) 530-0115
FAX (303) 581-0929

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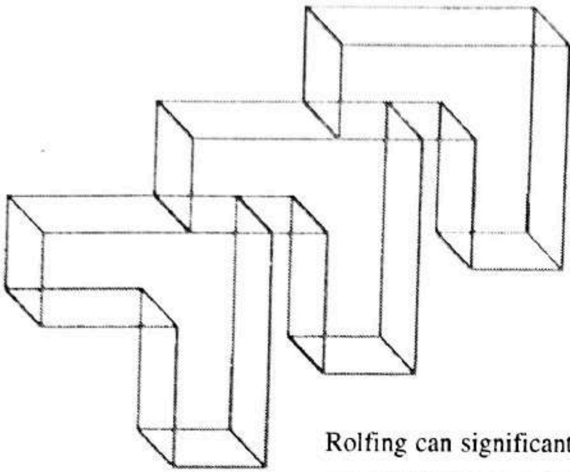
Explorations

Moving Toward Our Evolutionary Potential

By Jeffrey Maitland Ph.D.

Anyone who has spent any time reading Dr. Rolf's written word knows that she was profoundly interested in the effect of Rolfing on human evolution. But exactly what this effect might have been was never stated clearly. In some references she speaks about evolution as if it had to do with personal growth and transformation. In other places she clearly says that Rolfing can have an effect on the evolution of our species and even goes so far as to suggest that because of Rolfing we may be "seeing the first conscious attempt at evolution that any species has ever evidenced."[1] Whenever I read or heard about the latter claims I simply dismissed them because they flew in the face of accepted evolutionary theory. How could Dr. Rolf make such a claim when she of all people should know that evolutionary theory would never support her view? How could she not know that she was committing the Lamarckian heresy of claiming that acquired characteristics are inherited? As a highly trained scientist and well educated woman she had to know, of course, the full implications of what she was saying; my problem was that I just could not square it with what I knew about biology. As a result I simply ignored that part of her theory.

Then in the Fall of 1994, Jan Sultan and I taught an Advanced class in Seattle. Carla van Vlaanderen was in the class and informed us that her significant other, Bruno D'Udine, wanted to deliver a paper she helped him prepare on evolutionary biology and Rolfing to the class. Of course, we immediately said yes. Professor D'Udine is known to many Rolfers, especially in Europe as an interdisciplinary and imaginative biologist who is particularly interested in the relation between biology and Rolfing. The paper was called "Biology and Rolfing" and had been given at a European Rolfers' meeting in 1986. From listening to Bruno's paper and talking with him later, Jan and I were immediately impressed with how new developments in Biology seemed to be especially formulated to support the claims of Rolfing.



When Bruno returned to Italy he generously sent me a book and a number of papers on the latest thinking in biology. Jan and I were even more excited by what we read. Jan had been exploring the "influence of the ancestors" on our bodies and I had been studying with a Chi Gong teacher who believed her system of energy healing could undo the fixations and conflicts inherited from our ancestors. But how could such a thing be possible?

Traditional evolutionary biology claims that all inherited characteristics are the result of the random mutation of the genes, that the environment cannot affect genetic material, and that all evolutionary change occurs gradually and slowly over many many generations. If this view of evolution is accepted, then Jan's perceptions and sense that Rolfing can significantly alter ancestral influences, Dr. Rolf's suggestion that Rolfing's effect on the morphology and behavior of the human body can be passed on, and my Chi Gong teacher's claim to change genetic problems all seemed highly suspect if not downright peculiar. As it turns out, the New Biology provides startling evidence that seems to supportmany of the claims about Rolfing and its effect on evolution. This information and its relation to Rolfing is part of what I want to discuss in this article.

First, I shall show how Dr. Rolf's understanding of plasticity and biological form is very close to the conclusions of the New Biology. Then I shall show how understanding the full implications of the New Biology for Rolfing creates a conflict in the theory and practice of Rolfing. As it turns out, Dr. Rolf's Template of the Ideal Body coupled with formulistic ten session recipe, besides being problematic in themselves, are also incompatible with her and the New Biology's theory of living form and plasticity. After I discuss those developments in biological theory that are relevant to Rolfing theory and practice, I will briefly sketch how Rolfing must be expanded to accommodate these insights into the nature of living form.

Most of this article is an abridgement of a couple of sections from a book I am presently writing and articles that will be published elsewhere. Some of what follows depends on understanding what I have already written on the three paradigms of somatic practice, the principles of Rolfing intervention, and non-formulistic Rolfing.[2] Since the publication of "Rolfing: A Third Paradigm Approach to Body-Structure" a number of peculiar and rather confused attempts to reformulate the paradigms or even add a fourth paradigm have appeared. I do not want to restate the three paradigms or deal with these confusions here, but only say once again that the holistic paradigm, by its very nature, must include the transformative and spiritual aspects of Rolfing. This particular point was clearly made in my original formulations. If there are any lingering doubts about what I really meant, my recently published book, *Spacious Body*, which is devoted to the phenomenology of transformation, fleshes out the same point in considerable detail. My purpose in the present article is not to repeat these points, but to articulate the biological framework that supports a view of transformation that is, or is at least consistent with, Dr. Rolf's view of evolution and transformation.

Plasticity, Biological Form, and Evolution

Implicit in the concept of the three paradigms is a distinction between two related but different goals for any therapeutic intervention. The most commonly agreed upon therapeutic goal, and the one to which all health care practitioners are committed, is the goal of restoring normal function. Thus, a practitioner working in the *relaxation* paradigm assists the client in overcoming somatic dysfunction by introducing the relaxation response; the *corrective* practitioner attempts to return local areas of

dysfunction to their pre-dysfunctional state; and the *holistic* practitioner by attempting to introduce order, harmony, and balance throughout the whole system restores normal function as a natural by-product of enhancing the whole person. Thus we clearly see that goals of the holistic practitioner are quite different form those of the relaxation and corrective practitioners – the relaxation and corrective practitioner aim only at the restoration of normal function, whereas the holistic practitioner aims at the enhancement of function.

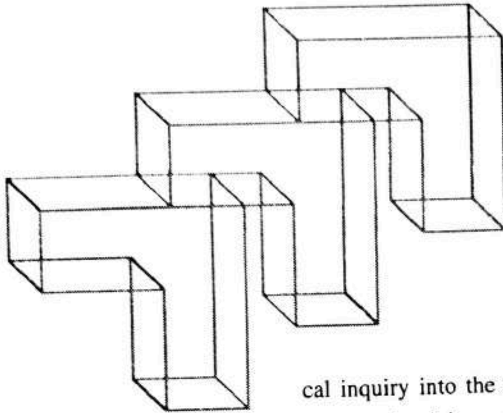
Since the restoration of normal function has been uncritically and mistakenly adopted by many Rolfers as the goal of Rolfing, it is important to re-examine what the goals of Rolfing actually are. Dr. Rolf clearly embraced the goal of restoring normal function. But, as every Rolfer knows, she also was interested in a much more comprehensive goal. Fundamentally, she was interested in creating a system of somatic manipulation and education that was capable of transforming the whole person. Although they are obviously related, the larger goal toward which her work was devoted was the enhancement of function, not merely the restoration of normal function. She was inspired by the theory and practice of Dr. Andrew Still, founder and creator of osteopathy, and saw her work as the continuation of his original insights. She agreed with him that structure determined function. She insisted that it also determined behavior and psychology. In addition, because she was convinced that function determined structure, she taught that structure and function were bidirectional and reciprocal. Restoration of normal function was important to her, but only as a stepping stone toward achieving the larger goal of enhancing function. "Form and function are a unity, two sides of one coin," she claimed. "In order to enhance function, appropriate form must exist, or be created. A joyous radiance of health is attained only as the body conforms more nearly to its inherent patten. This pattern, this form, this Platonic Idea, is the blueprint for structure. In turn, the function of this more appropriate structure is vitality, vitality of a degree unknown to the average person." [3]

When she employed her techniques to bring greater structural order to the body as a whole as it related to gravity, she discovered that she could restore long lasting normal function much better than the corrective approach. She also discovered that her holistic approach often enhanced the being and functioning of the whole person, sometimes to an astonishing degree. By achieving the goal of integrating the human structure in gravity, she found that she was able to enhance human function at many levels, from the bodily to the psychological to the energetic and beyond. Her clients discovered that their movement patterns were less encumbered, that their behavior was less sterotypic, that they were emotionally less conflicted and fixated, and that they experienced an enhanced sense of lightness, vitality, flexibility, and a greater overall sense of well-being. Some even reported experiences that rivaled the depths described by mystics and contemplatives from around the world. She said:

"Our personal evolutionary potential lies within us. Originally this was the message of the mystics...The practitioner of Structural Integration separates the confusion of random fascial structure and re-relates it around a vertical line with new appropriateness....Our ability to create these changes predictably and reliably and, by measuring, to validate them widens the scope of the word 'evolution'. Evolution is matter moving toward more effective order; in the words of Herbert Spenser, 'Evolution is an integration of matter and the concomitant disposition of motion; during which matter passes from an indefinite, incoherent homogeneity to a definite, coherent heterogeneity; and during which the related motion undergoes a parallel transformation' " [4]

The title for the chapter from which the above quote is taken is "Evolution is the Expression of Internal Events." In all of her writings Dr. Rolf clearly was interested the effect of her work on human evolution. She insisted that our evolutionary development was far from finished and that her work was capable of releasing latent development possibilities. She implied that her work could affect the course of evolution: "A human being is an erect animal...As he becomes more erect, man moves toward his evolutionary potential".[5]

Over the years Rolfing clearly demonstrated its abil-



ity to profoundly change the course of a person's life. Many clients can attest to the life altering nature of Rolfing. Certainly, we can understand how a system of manipulation might initiate and enhance one's personal growth and evolution. But, in what sense might Rolfing release inherited ancestral fixations or affect evolution in the Darwinian sense without falling prey to the Lamarckian heresy? What is meant by man moving "toward his evolutionary potential?" As the above quotes show, Dr. Rolf's answers to these questions are not well developed and are far from clear.

If Dr. Rolf had been aware of some of the more recent discoveries of developmental biology, she would have found a line of inquiry that both supported and made sense of her own scientific and philosophical inquiry into the nature of human plasticity and evolution. Before there was a New Biology she already was in agreement with many of its tenants. She would have agreed that the nature and functioning of any organism cannot be analyzed and understood apart from its environment. As she herself insisted, enhancing function requires not just that the body is organized with respect to itself but also integrated with the environment. Although I cannot be certain, I believe that she would also have agreed that genes do not completely determine biological form, that biological form is very much an epigenetic phenomenon that changes for good or ill over the entire life span of an individual as a direct result of interacting with an ever changing environment, and that many environmentally induced changes in morphology can be inherited. Perhaps she would have agreed also with the recognition that organisms and environment reciprocally influence each other and co-evolve. As it turns out, the New Biology is so much in accord with the theory and practice of Rolfing that it appears as if it were specifically formulated to support the goals and claims of Rolfing.

According to the theory of orthobiosis proposed by Elie Metchnikoff, every organism, both in relation to itself and its environment, strives to harmoniously maintain and enhance its growth, reproduction, functional integrity, configural identity, and systemic coherence over its entire life span. How effective an organism is in turning its genetic code into ordered patterns of morphology and behavior that enhances its developmental possibilities over an entire life is very much a matter of how well organized and integrated the organism is at every level of its being. The more well integrated and hierarchically organized an organism is, the more flexible and creative it can be in the face of its ever changing environment.

The evolutionary and ontogenetic processes by which every organism develops its ability to transform, modify, adjust, and fit its form to the demands of a changing environment is called "plasticity". In contrast to the New Biology, neo-Darwinian evolutionary theory claimed that all the essential causes of the phenotype were contained within the programs of the genotype. True to their Cartesian heritage, neo-Darwinian theorists believed that biological form was reducible to its components and ultimately explainable in terms of how these components interacted causally. Plasticity, therefore, was seen as a pregiven program rooted in the gene encoded blueprint of the organism.

Recent developments in molecular genetics, however, cast serious doubts on these claims.

"One of the foundations of neo-Darwinianism is August Weissmann's doctrine of the independence of the germ line: the tenet that modifications induced by the environment cannot pass from the body to the cells that make sperm or egg ... however, recombinant DNA research has shown that Weissmann's barrier is far from absolute ... Messenger RNA can be converted into DNA...which is then reinserted into the germline genome ...

*Even more striking are the changes in the DNA of the germline that can be induced by the environment within a single generation ... Molecular geneticists are being compelled to adopt the revolutionary concept of a 'fluid genome'...*Inheritance is a property of the whole system, not just the genes in the nucleus."[6]

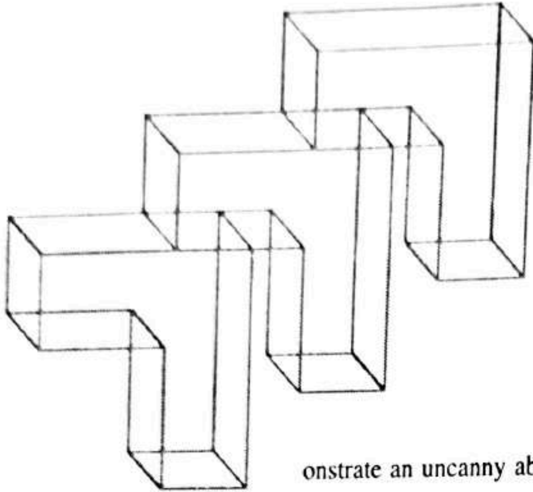
As a result of these and other discoveries, molecular genetics demonstrated that DNA cannot be solely responsible for all morphological and behavioral complexity. "Species of amphibia that are virtually identical morphologically nevertheless have great differences in the DNA content of their chromosomes, whereas ... humans and chimpanzees, with significant morphological and behavioral differences, are very similar in their DNA content. *So it is not content or composition that counts but organisation ...*"[7]

The New Biologists thus arrived at a view of vital form which was implicit in Dr. Rolf's understanding of her work. Since living systems are not made of parts, there is nothing more fundamental to the make up and organization of the whole than the whole itself. Any theory of form which tries to understand a living whole by reducing it to abstract hypostatized parts is, therefore, fundamentally mistaken. This mistake is embedded in the mechanistic paradigm that informs traditional biology and the theory and practice of most forms of Western health care. Since knowing the composition of a living system is not sufficient for determining its form, and since "organization is what counts" and "inheritance is a property of wholes," a theory of biological form must be primarily a theory of how living wholes are organized. In turn, any theory or practice of restoring or enhancing function must be based on this theory of organized vital form. Without falling prey to the temptation to reduce the form and function of living wholes to constituent parts, this theory must be capable of articulating how living wholes, as living wholes, dynamically organize themselves appropriately and inappropriately in relation to their environments. Likewise any attempt to understand the behavior of local events in a living system is radically incomplete without an understanding of the state of the whole.

Since plasticity is not essentially rooted in a pregiven genetic program, it is a developmental phenomenon that manifests over the entire life span of every living organism. Organisms are self organizing, self generating, and self arising. They possess their own immanent power to maintain harmony and stability through constant change. Plasticity arises as the inherent striving of the organism to harmoniously enhance its life through enhancing the integrity and hierarchical organization of its form and function. Plasticity is both a process and a product. Form and function are equally plastic. Organism and environment are plastic. Organisms are not just born into pregiven environments; organisms and environments coevolve and shape each other. As a process, plasticity leads to plastic outcomes in behavior, biological form, and environments which in turn can lead to further plastic processes. Structure and function, process and product, organism and environment are bidirectionally, relativistically, and reciprocally related.

The plasticity of form and function is not unlimited, however. It is always constrained by certain limitations. Indeed, these limitations are part of what make plasticity even possible in the first place. Part of what makes a form a form are its boundaries. The boundaries of form constitute a limitation. If the limitations of form could somehow beremoved, the form would cease to be. To be is to be a form and limited. Limitation by limiting makes plasticity possible. The more constrained by its limitations an organism is, the less plastic it is. The less limited it is, the more plastic it is. For any living form, therefore, there is no such thing as unlimited possibility or impossible limitation. Living wholes are self-organizing and self-regulating systems characterized by the continual ongoing attempt to balance, organize, enhance, and harmonize their lives between limitation and possibility. Although genes are not the "central directing agency that can make all conceivable things happen," they do impose some necessary constraints or limitations on an organism's plasticity: "their role is to introduce consistent biases into the patterning dynamics."[8]

The inherent plasticity of an organism can develop either into an integrated and hierarchically appropriate organization of form and behavior that



is highly flexible or it can develop into less well organized forms and behavior. Poorly adapted forms are less flexible at many levels. They exhibit a lack of integrated, hierarchically appropriate order, and as a result they exhibit patterns of function that are stereotypical and fixated in ways that are detrimental to their well-being. Flexibility of form and function allows the organism to enhance its life by adapting appropriately and well to its context. Fixation in form and function stands in the way of life enhancing adaptations. Thus, limitation is not the enemy of plasticity, fixation is.

Of all the creatures on the earth, human beings exhibit the most potential plasticity. As a direct consequence of our highly plastic natures, we also exhibit large and varying degrees of flexibility and fixation. For good or ill, we demonstrate an uncanny ability to manipulate our environment, bodies, minds, and behaviors to an astonishing degree. And even though the research shows that this enormous potential for plasticity declines as we age, it nevertheless exists throughout our life. Since a well integrated and hierarchically organized biological form is at the heart of all successful adaptations, it only stands to reason that any system of intervention that aims at appropriately organizing the human form in relation to its environment would potentially enhance the overall functioning of our whole being at every level. By releasing fixations at many levels with an eye toward organizing the whole, such a system would trigger new levels of inherent plasticity and make us more flexible at many levels. As a result, it would be capable of releasing more and more of our unrealized potentials at many levels of our being. In a very real sense the existence of biological plasticity is the organismic ground of human freedom. Plasticity is one of the essential characteristics of all living form, and with form plasticity is given as an inherent potential to be realized at higher and higher levels. Like a flower, the meaning of our life is not found just in our continued existence, but in our ability to blossom—again and again.[9]

The attempt to enhance human function and development was at the core of Dr. Rolf's practice and theory. Her goal was not just to restore normal function but to enhance the being of the whole person. She recognized the importance of restoring normal function, but she clearly understood that it was not sufficient for achieving the larger goal of enhancing the whole of our being. She believed her system of intervention could trigger the evolutionary potential of our species – she intuited that Rolfing was capable of affecting the morphology and hence behavior of future generations. In order to understand in what sense Rolfing might effect human evolution we only need to draw out the consequences of the New Biology.

Traditional neo-Darwinian biology claims that any change in form happens slowly over many generations and only by means of the random mutation of the genes. Since biological form is rooted in a pre-given genetic program and all evolutionary change is the result of their random mutation, the environment cannot effect the genetic make-up of the organism. Dr. Rolf's intuition that a profound change in the hierarchial organization of living form could trigger a release of the evolutionary potential of future generations clearly finds no support within the context of traditional biology. But, the assumptions of traditional biology are being called into question by the New Biology. As we have seen, not only can the environment alter biological form and its inheritance in sometimes as little as one generation, but the genes are not the only determinants of form.

A profoundly fascinating discovery by an American biologist, Tracey Sonneborn, shows that inheritance does not just depend on genes, but also on the impact of the environment on the organization of living form. Sonneborn surgically removed patches of cilia from the surface of a normal

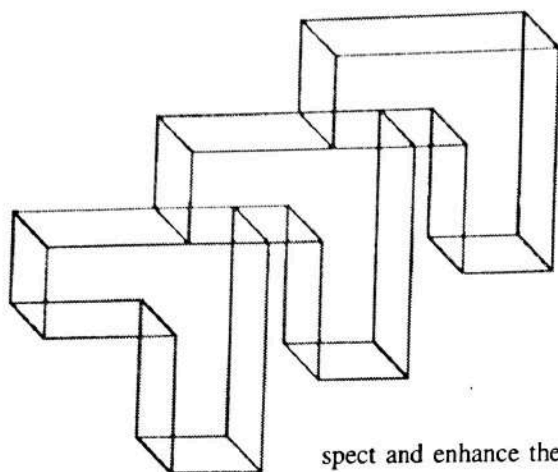
paramecium and placed the patches back onto the body in a reversed orientation. The genes were not affected by the operation. But when the *paramecium* reproduced through cell division, all of its progeny possessed the same reversed row of cilia. "So here is an example in which a mutation arises from change in a cell structure rather than in a gene...it is clear that inheritance does not just depend upon genes: it also depends upon any cytoplasmic *organization* that is transmitted from one generation to the next and can exist in different stable forms."[10]

Changes in the morphology of an organism can be passed on in two ways, through genetic and structural change. Sonneborn's investigations demonstrate structural inheritance: how the organization of form of an organism be altered and passed on to future generations without any corresponding change in the genes. As it turns out, the environment can also affect the genetic make up of an organism, and these genetic ancestral fixations also can be inherited. According to Waddington, a eminent geneticist and imaginative scientist, "prolonged exposure to particular environment can lead to genetic fixation of the adapted state that can be inherited."[11] This inherited genotype often exhibits adapted fixations in the inherent plasticity of organism.

In a very real way, the adaptations of our ancestors, whether genetic or structural, live in and through our bodies. When form and function are fixated at any level of our being, it can be due either to ancestral or present life environmental influences. Whenever some aspect of our being is fixated, whether at the bodily, emotional, mental, or energetic levels, the flexibility of our plasticity (our freedom) is compromised. As the New Biology demonstrates, at every level of our being, form and function are profoundly plastic. But, this plasticity of form and function is a double edged sword. It can work in our favor when it is the source of flexibility and it can work against us when it is the source of fixátion.

"The existence of plasticity is not a point of minor significance. If all levels of life are open to change, then there is great reason to be optimistic about the ability of intervention programs to enhance human development."[12] Since integrated and hierarchically organized form and function is one of the hallmarks of a flexible and well adapted organism, one obvious way to enhance human development would be to enhance the integrity and organization of the human form in relation to its environment. Given that some genetic fixations are the result of environmental influences, it is not too far fetched to speculate that another environmental influence in the form of a system of holistic somatic manipulation and education might be capable of releasing these fixations. And given that many ancestral fixations in form are not determined primarily by genetics, but by fixations in the organization of form, it is even easier to suppose that these fixations in plasticity can be released through appropriate forms of intervention. If these ancestral and present life fixations are released, a flexibility in plasticity could be triggered to the benefit of our whole being. Thus, it is possible that by introducing integrated and hierarchical organization into our form and function, we can, as a species, consciously move ourselves toward realizing our evolutionary potential, just as Dr. Rolf believed.

Since the corrective approach to somatic dysfunction has no understanding of the profound importance of enhancing the whole, Dr. Rolf insisted to the end of her life that she had "bigger fish to fry" than just fixing aches and pains. Richard M. Lerner, whom I quoted in the previous paragraph, argues that we should be optimistic about the ability of intervention programs to enhance development. In an effort to understand what such intervention programs might look like, Lerner concludes his book with a discussion of values. Once we recognize that every level of our being from our DNA to our cells to our organs to the structure of our body to our emotions to our psyche to our energetic processes to our social nature to our history and beyond is plastic and radically contextualized, and that any intervention at any level could profoundly alter for good or ill any and every other level, the difficult question of where and how to intervene becomes highly significant. Lerner asks, "What is enhancement and how does one choose a target to enhance?...Does enhancement mean increasing people's intelligence? Does it involve increasing personal freedom and/or individuality, or does it pertain to building



group cohesiveness and the respect for the collective nature of human life?"[13]

The way Lerner asks and answers these questions suggests that, even though he briefly discusses holism, he does not fully grasp the nature of biological form. Instead of dealing directly with the theoretical difficulties surrounding what to enhance, he abruptly concludes his study with a rather unproductive relativistic stance toward what different people might consider valuable to enhance. Instead of trying to decide what component of the body we should enhance from a relativistic stance, the obvious answer about what to enhance seems to be Dr. Rolf's: enhance the hierarchial organization of the human form in relation to its environment from a holistic perspective.

Enhancement must respect and enhance the whole, not components or "parts." If any attempt is made to enhance some aspect or part of our being, *e.g.*, our intelligence or group cohesiveness, from an unexamined corrective standpoint without understanding the potential compensatory effect on the whole, we run serious risks. Dr. Rolf anticipated these difficulties. She cautioned against enhancing any system of the body at the expensè of enhancing the whole. She said, "a man's overall vital or psychic competence is determined not by the individual energy level of any one component system...but by the functioning of all as they interrelate in the total somatic individual. It means specifically that training the nervous system in an effort to produce a superior person cannot be successful. Part of the general malaise of our culture is the over-stimulation of the nervous system."[14]

Lerner's issues about what to enhance are the same issues that face somatic practitioners every day: what do we do first, what do we do next, and when are we finished? In order to formulate a rational decision making process for intervening in a living form, we must be clear about how to work holistically; we must know what the principles of holistic intervention are, and we must know how to sequence our interventions according to these principles and in accordance with what is empirically observable. When one considers the enormity of the task of enhancing the human species, we should remain cautious about assuming that we have stated all the principles of intervention. Nevertheless, the principles of Rolfing intervention, or something very much like them, are what we need to know and understand in order to carry out any program of intervention that Lerner or any other plasticity theorist might imagine.

When Lerner wonders whether enhancement involves increasing freedom, he reaches the heart of the matter. The investigation into the nature of plasticity is the investigation into the biological ground of freedom. Such an investigation requires a theory and description of human freedom which Lerner does not provide. A theory of freedom and form that is in accord with the theory of plasticity is absolutely essential to any discussion of enhancement and has already been worked out in my book, *Spacious Body*, and in the articles mentioned in footnote 9. Other places to look for a biological and physiological basis for a theory of human freedom are in the works of Brian Goodwin, Peter Levine, Hubert Godard, and the research of John Cottingham and Steven Porges.

Somatic Idealism

Dr. Rolf's understanding of plasticity and the unified nature of living wholes led her to attempt to instill in her students a reverence for vital form. In order to lead Rolfers away form being seduced into treating the body symptom by symptom, she quipped "If at first you don't succeed, get the hell out and work somewhere else" and "Go where it ain't." Whether we are interested in the therapeutic goal of restoring long lasting normal function or in the more comprehensive goal of enhancing the whole being, a holistic per-

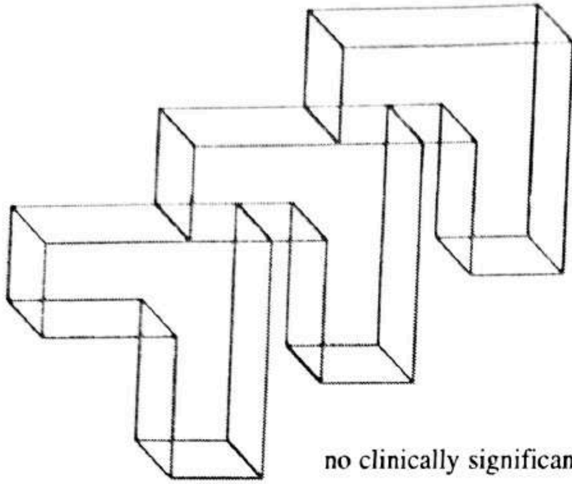
spective is absolutely critical to how we sequence our therapeutic interventions. Dr. Rolf clearly understood this requirement and attempted to lay out a comprehensive and systematic holistic approach coupled with an understanding of the body as a living form in relation to its environment. In her struggle to pass on her work to others she created a system of manipulation and education in the form of a ten session formulistic protocol. Since the description of what appropriate human form looked like was critical to the theory and practice of Rolfing, she struggled until the end of her life to find a way to articulate her vision. What she left to her students was a vision of an ideal form to which every body was supposed to conform and that was enshrined as a kind of Platonic goal for every Rolfing session or series.

Without an appreciation of the difficulties she faced as a pioneer in holistic somatic education, it is easy to criticize her for creating a form of somatic Platonism.[15] Recall that she claimed enhanced vitality resulted only as the body conforms to its inherent pattern. "In order to enhance function, appropriate form must exist or be created...This pattern, this form, this Platonic idea is the blueprint for structure."[16] On occasion, she also described the process of manipulation to be one in which the inherent pattern of normal structure and economy of function were uncovered. "A structural pattern exists; work in Structural Integration is not so much creating this pattern as uncovering it."[17] The fact that she said this pattern was inherent to the body shows that she did not understand Platonism. To be more precise, her position more nearly approaches the Aristotelian view that the universal is present in the particular. Her mistake was not the belief in somatic Platonism, but the assumption that only one inherent pattern was to be uncovered in all bodies. Therefore, it is more correct to call her position *somatic idealism*.

Like all other somatic theorists and practitioners, Dr. Rolf never articulated a clear understanding of the principles of intervention. Unfortunately without this understanding of principles, teaching a holistic approach by means of formulistic protocols and a template of the ideal body actually undercuts the ability of practitioners to think and intervene holistically. Although we can be critical of Dr. Rolf's formulistic ten series and of her idealizations of structural and functional order, we must recognize that she was a pioneer in the holistic approach to somatic education struggling to free her system from the corrective approaches and from the more mundane goal of restoring normal function. The goal of enhancing the whole being arose from her own experiences and what she observed when her interventions were successful. She *perceived* this possibility first and then struggled with great frustration to articulate it properly. It was what she attempted to train her students to look for in order to determine both the strategies for each session and whether a session or series of sessions were finished. It became part of the way in which she attempted to answer the three fundamental questions (what do I do first, what do I do next, and when am I finished?) in clinical decision making. Unfortunately formulism and somatic idealism cannot provide us with a rational and empirically based decision making process and they are ultimately incapable of understanding and responding to the rich diversity of human form.

No matter how comprehensive the techniques and protocols, no matter how extensive the research that supports them, and no matter how often holism is espoused, the formulistic approach will never constitute a rational decision making process in either the corrective or holistic paradigm.[18] Formulism forces the practitioner to follow the same protocols in every case. By necessity, formulistic protocols must impose the same sequence of interventions and therapeutic outcomes on every body, regardless of whether the body is helped or hindered by their application. Imposing the same therapeutic outcomes on every body amounts to accepting a form of somatic idealism. Somatic idealism is, therefore, implicit in every formulistic approach. Furthermore, somatic idealism, by its very nature, is a theory of what constitutes normal. So, whether a somatic practitioner consciously realizes it or not, this concept of normal informs every step of his or her clinical decision making process.

Formulistic protocols are like cook book recipes. They specify how much and in what order. Even though recipes and formulistic protocols allow for variations, they never-



theless always specify a particular order and sequence of actions. In the formulistic ten session recipe, for example, it is unthinkable to perform something like the seventh session as the fourth session, even though at times just such an approach and nothing else is what is required. The application of a formulistic protocol is always tantamount to imposing a concept of normal in the form of a somatic ideal on every client. No matter how many variations it permits, a formulistic protocol cannot be sufficiently attentive to individual differences. Because a formulistic protocol provides no rationale for how to sequence techniques and strategies and imposes the same therapeutic outcome on every client, it also tends to blind practitioners to the system wide effects of their work. In some cases, it either produces no clinically significant effect or it actually creates dysfunction.

Except in the hands of the more gifted and intuitive practitioners, what usually passes as a holistic approach to somatic therapy or education is often only a kind of formulism coupled with a set of segmental or bodily ideals. In some cases, the holistic approach is in name only. Often it is nothing more than a series of techniquès applied in the corrective paradigm according to formulistic protocols that are neither sufficiently attentive to individual differences nor to the system wide effects the application of these techniques have on the whole. In other cases, like traditional Rolfing and its imitators, it is a formulistic sequence of treatment strategies that is also neither sufficiently attentive to individual differences nor to the system wide effects the application of these protocols have on the whole. To make matters worse, practitioners in both the corrective and holistic systems often are committed unwittingly to the mechanistic paradigm which sees the body as a soft machine composed of parts. Since they do not grasp fully the implications of the mechanistic conception of vital form, they are seduced easily into chasing symptoms and again missing the system wide effects of their interventions.

When practitioners schooled in these systems of intervention are asked to state the basis on which they sequence their interventions, they often reply that they proceed intuitively. Clearly however, such an answer is inadequate. If intuition alone were the basis of clinical decision making, we would be left with an unwelcome consequence. We could never know in any given case whether an intervention was successful because the so-called intuitions were correct or because a treatment protocol just happened to match the needs of the client. We could never know whether our intuitions were indeed veridical or just accidental occurrences that have nothing to do with intuitions. To reply to this difficulty by claiming that intuition tells us that our intuitive decision making process was correct only involves us in an infinite regress of empty justifications. Since the pure intuitive practitioner has no way to evaluate the effectiveness of his work, he has no way to determine which interventions are best applied or not applied in any given case. I do not dispute the importance or existence of intuition in clinical decision making. I only contend that much of what passes as intuition among somatic practitioners is not intuition at all and that intuition alone does not provide the basis for knowing what to do first, what to do next, and when to finish. As the philosopher Kant pointed out in a rather different context, "Principles without intuitions are empty and intuitions without principles are blind."

Formulism and somatic idealism, with their attendant concept of what constitutes normal, are always linked together conceptually and practically. The confusions that result from this unhappy marriage are found in each and every form of formulistic Rolfing, in all the schools of structural integration that found inspiration in Dr. Rolf's traditional recipe, and in all correc-

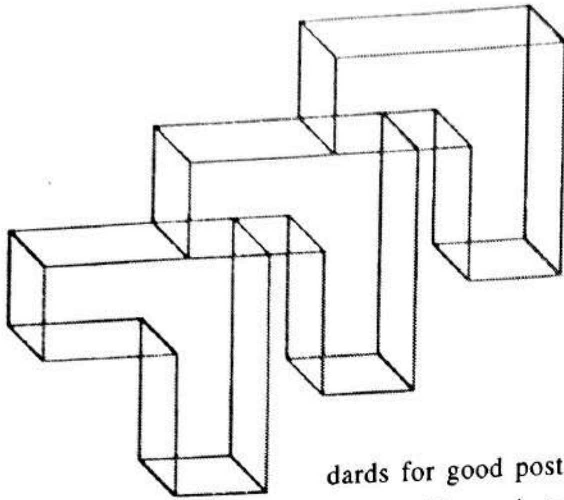
tive and holistic approaches. These confusions clearly have practical consequences for every somatic practitioner. Following formulistic protocols and evaluating the effectiveness of our work against somatic ideals very often undermines our ability to attain restoration or enhancement of function. The commonly accepted views of good posture, ideal structure, or proper positions for individual bony segments not only create dysfunction when indiscriminately applied to certain people, but also lead to a faulty understanding of somatic dysfunction. Since somatic idealism defines what is normal for all bodies, it predisposes practitioners to look for the same therapeutic outcome in every case and to either see somatic disorder where none is present or miss it when it is. As a result, it tends to blind practitioners in the evaluation process – both in the beginning when strategies are planned and in the end when the results of interventions are evaluated. By creating yet another set of blinders, somatic idealism adds to the blinders already created by formulism. As a result of being schooled in this double set of blinders, practitioners tend to miss both the desirable and undesirable system wide results of their interventions.

Formulistic protocols are taught in each and every form of health care throughout the world. It is quite common for somatic practitioners in other disciplines to criticize Rolfing for being a form of somatic Platonism. Often those who are the most vocal are the ones who have been the most profoundly influenced by Dr. Rolf. While proudly proclaiming to have freed themselves from Platonism, they teach their work by means of formulistic protocols. Because they do not realize that formulistic protocols by necessity impose the same somatic ideals on every client, they end up unconsciously teaching and practicing a form of somatic idealism far more pernicious than the one they claim to have abandoned. Their predicament reminds me of Nietzsche's warning that when fighting dragons one must take care not to become one. The unfortunate consequence of such confused training programs is not the creation of highly skilled practitioners, but often the graduation of somatic Philistines.

What is Normal?

Clearly, an understanding of the nature of the principles of intervention and how to apply them in the clinical decision making process is part of what will allow us to free ourselves from the grip of formulism. Understanding the principles of intervention, however, does not automatically free us from somatic idealism. Somatic idealism shows up in many different forms and in every system of intervention. Somatic ideals are typically put forward as standards against which practitioners can evaluate their client's bodies in order to determine what areas need work. These ideals are also used to gauge the effectiveness of their work. In fact, these ideal norms play a role from beginning to end in the clinical decision making process. Because these ideal norms specify a vision of normal, they appear to provide the practitioner with part of what is needed to answer the three clinical decision making questions, "What do I do first, what do I do next, and when am I finished?" So even if we have learned how to work nonformulistically, and still evaluate our clients through the lens of a somatic ideal, we will remain blind to the unique requirements of many clients. A somatic practitioner caught in the grip of formulism or somatic idealism is like a blind cat who sometimes catches a dead mouse.

Many examples of somatic ideals can be found in the manual therapies. Some theorists believe that there is only one normal pattern for the spine, regardless of how the rest of a person's body is structured.[19] Others believe that each bony segment has its own ideal position and that the appearance of this correct position after a treatment shows that the normal function has been restored. Many believe that certain bony segments are normal only if they display certain angles. For example, some argue that the femoral neck angle is normal at 125 degrees and others argue that it is normal at 135 degrees.[20] Even when faced with the obvious fact that bodies are not symmetrical, some theorists believe that normal structure is always symmetrical. And still others agree with Dr. Rolf's view that there is an ideal body and posture that every body should strive to match and that this structure is the hallmark



of normal or enhanced function.[21] All of these ideals, whether for individual segments or the whole body, are maintained quite often in the face of the profoundly obvious variations that actually exist in individual body form.

By displaying a vision of normal, idealizations of form and function provide a much needed standard against which practitioners can evaluate and gauge the success of their therapeutic interventions. But as we all recognize, the concept of "normal" is a notoriously illusive term. Many argue that there is no such thing as normal. Since these theorists are skeptical about the existence of normal structure or function, they see no sense in pursuing the question of how to recognize normal or enhanced function when it appears. When we compare the commonly agreed upon standards for good posture and ideal position against the wide diversity in human morphology and behavior, they argue, we must be struck with the huge gap that exists between these ideals and how people actually are. Perceiving this gap should lead us to reject the idea of normal as an impossible dream.

I agree that the wide diversity of human form should lead us to abandon somatic idealism. But I do not agree that the concept of "normal" also should be abandoned. Without a coherent understanding of what constitutes normal for any given person, we would be left with no way to recognize somatic dysfunction and no way to gauge the effectiveness of our work. In the place of somatic idealism we need a view of normal that squares with a biologically based concept of living form and still makes sense in the face of the great variety of human morphology and behavior.

The conclusion that there is no such thing as normal turns on the assumption that "normal" means "in accordance with an ideal standard or norm." Etymologically, "normal" is rooted in the idea of measuring up to a model or pattern like a carpenter's square. If this definition of "normal" were the only correct use of the word, then the concept clearly ought to be rejected. But "normal" also carries another meaning. It can mean "natural" in the sense of "being in accordance with the inherent nature of a person or a thing." This meaning is at work when we say that a person is a natural born artist or healer.

Like so many other theorists, it is obvious that Dr. Rolf systematically confused these two senses of "normal" throughout her writings. When I use the word "normal" I mean it in this second sense as being natural or inherent to the being of the whole person. This concept of "normal" is clearly quite different in scope and implication from the idea of measuring up to a norm, statistical average, or standard that is external to the body. "Normal" in the sense in which I use it refers to what is appropriate and optimal for each individual person. It cannot be determined apart from a careful case by case examination of the possibilities and limitations inherent in each person's form and how s/he has adapted to h/er environment. It implies Metchnikoff's theory of orthobiosis and, therefore, refers to the plasticity inherent in every organism as it strives to become most fully itself. Being normal is not a static state achieved once and for all. Like all forms of life, whether we are severely fixated or not, we are always ongoing and striving toward becoming more fully ourselves. To restore normal function means to remove enough fixations in form so that the client can return to his or her pre-dysfunctional state. To enhance function means to introduce higher levels of order and free fixations in such a way that triggers possibilities in the plasticity of the whole person, so that the evolutionary potentials inherent to the form are released.

Templates and norms make sense when the aim is to mass produce machines and other non-living products. Templates and norms are important in the development of quality controls. Clearly, living bodies are not machines or

products, and it makes little sense to claim that all human bodies function best when they measure up to some external standard or statistical average. Living wholes are self-organizing, self-regulating systems characterized by the continual ongoing attempt to balance, organize, enhance, and harmonize their lives between limitation and possibility. Given the tremendous plasticity and resulting diversity of form that actually exists among humans, clearly there cannot be one ideal way for every body or every segment of the body to be.

The meaning of the word "form" should not be limited to "shape" or "contour". It must also refer to dynamic hierarchical organization and functioning of the whole person, or, what amounts to the same point, to the way or manner in which a person is or becomes who s/he is. Every form has its own unique set of limitations and possibilities and what is normal function or structure for one individual may, if imposed on another, produce dysfunction. What constitutes normal or enhanced function for any given individual cannot be determined in isolation from the changing and unchanging limitations that are unique to each individual form. These limitations, furthermore, cannot be understood apart from gravity and the environment to which the individual form and behavior is uniquely adapted. Some limitations are time bound and changeable and some are not. What is not changeable in the present may be changeable in the future. What is changeable for one person may not be for another.

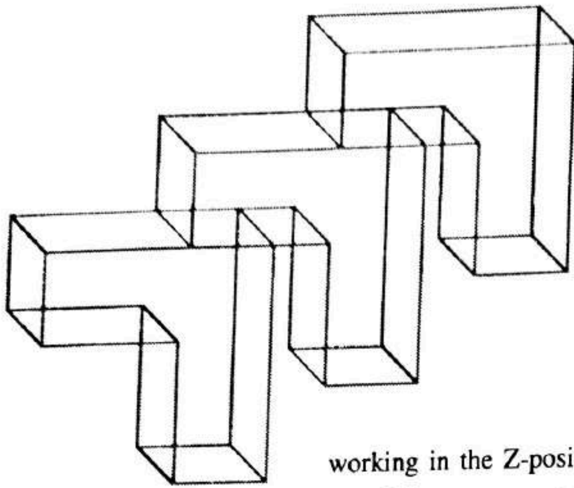
What we mean by "normal" should not be confused with an ideal standard or a statistical average. Neither of these two ways of conceiving of normal are sensitive to the diverse ways in which our unique somatic natures are capable of adapting to our environment while still maintaining a healthy functional life. What is functional, normal, or even capable of being enhanced for any given person cannot be determined properly if it is divorced from the ways in which his or her unique soma has adapted to the environment.

The New Guinea highlanders provide us with an striking example of this point. Their "urinary potassium/sodium ratios are often 400 to 1000 times the *normal* Western ratio. These people are not *sick* but rather are showing a suitable metabolic response to a sodium-scarce, water-poor niche. At the level of physiological functioning, different means are utilized to achieve functional coherence and systematic integrity."[22]

Another interesting example is found among children born to peoples living at very high altitudes. Such children "exhibit considerably lower birth weights than do the babies of comparable populations living at lower altitudes. Because the lower birth weights are associated with increases in neonatal and infant mortality..., this modification, if considered in isolation, would appear disadvantageous to the population. In this high altitude context, however, the limiting factor, a constraint, for survival is hypoxia rather than child mortality from other sources. Thus, low birth weight provides an advantage: a decrease in birth weight-placental ratios provides increases in oxygen flow and other nutrients to the fetus."[23]

These examples should make us suspicious of any form of somatic idealism. Somatic idealism puts blinders on every stage of the evaluation process. Evaluating clients by means of a somatic ideal like the line of gravity or working in accordance with formulistic protocols can result in either no clinically significant effects or create dysfunction. Such ways of evaluating and working also prevent practitioners from designing effective and efficient treatment strategies for releasing the inherent possibilities that lay dormant in the uniqueness of each client's form. The effects of these blinders show up in many ways. Through the work of Jan Sultan we now realize that the traditional recipe favored the Internal body type with embarrassing regularity. In too many cases, when the Internally biased recipe was applied to Externals with low back pain, their structures and spinal dysfunction actually worsened.

Pilates® instructors, exercise therapists, physical therapists, and many other somatic practitioners often indiscriminately recommend bringing one's waistline back while performing various exercises or tasks. Most internal bodies cannot adapt to this position without a great deal of manipulation and/or sophisticated movement education. As a result, following these instructions creates loss of mobility and very often dysfunction for Internals. Since these instruc-



tions are the very opposite of what the External body requires for bringing about normal or enhanced function, following them often creates more dysfunction in an already compromised body.

As I pointed out in another article[24], designing the third session of the five series advanced recipe around the C-position as a way to normalize spinal curves is a mistake. In some cases such an approach produces nothing more than a vigorous massage. In other cases it either has no effect on or actually aggravates the dysfunctions involved in flexion fixed Type II articular fixations, bilaterally flexion fixed facets, and retrolitheses. Likewise, as Michael Salveson and Jan Sultan realized years ago, designing the second session of the formulistic five series around the Z-position is also highly problematic. Because working in the Z-position often drives a considerable amount of strain into the spine, preparing the upper quadrant to adapt is of paramount importance. Unfortunately, the first session of the formulistic five series, no matter how it is conceived, more often than not, is completely inadequate to the job. As a result, after the Z session, many clients' spines are in something of a mess. To make matters worse, the strategies of the C session which are supposed to normalize spinal disorder are also not adequate to the job. And as we have all discovered, it is often more difficult to deal with strain that has been driven into a poorly prepared area of the body than to intervene in already existing strain patterns. So the formulistic five series sometimes creates more problems than it can solve.

One of the stated goals of the Pilates method is to lengthen the core of the body. When the External follows the instructions to flatten his lumbars against the moving platform of the Pilates table while performing various exercises, not surprisingly, the very opposite of the intended goal appears. After completing the exercises the External is characteristically shorter through the torso, displays predictable strain in the neck that results from flattened lumbars, and loses pelvic and spinal mobility in walking.

Although there are many more examples of how dysfunction can be unconsciously introduced into our clients' bodies by adhering to somatic ideals, let me conclude this part of the discussion with one more. In many clients with upper neuron problems like cerebral palsy, any attempt to align their heads on top of their bodies as the ideal of the line of gravity recommends will often result in tonal overflow to the extremities, possible increase in non-functional reflex patterns of movement, and loss of control. In neither this case nor any mentioned above would it be reasonable to assume that we have achieved the goals of normal or enhanced function, or anything close to somatic integration.

When behavior, morphology, or physiology do not measure up to accepted norms, bodily ideals, or statistical averages, we cannot automatically conclude that they are abnormal. As the above examples clearly demonstrate, the structure and functioning of our bodies is radically contextual. Any attempt to understand what constitutes normal for any given individual must take the uniqueness of both their soma and environmental context into account or ultimately fail to understand and properly treat somatic dysfunction or enhance their somatic nature.

The rejection of somatic idealism is the rejection of a theory that understands normal in terms of an ideal standard or statistical average. It is not the rejection of the concepts of "normal" and "abnormal". As long as we recognize that this use of "normal" does not mean anything like an ideal standard or statistical mean, it is clear that we are not saying there is no such thing as normal and abnormal structure and function. By "normal" I mean a rather complex context dependent concept that trades on the meanings of "natural to" or "inherent to." "Normal" in this sense refers to what is inher-

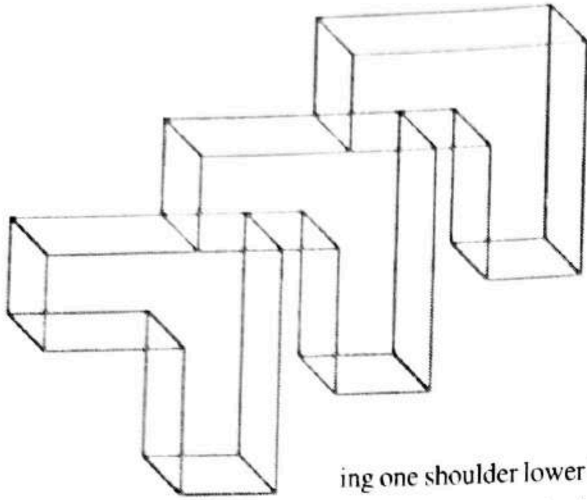
ent to the limitations and possibilities present in the plasticity, morphology, and behavior of each individual organism as it successfully or unsuccessfully strives to maintain its functional and structural coherence as well as harmonize and enhance itself over an entire life time within a unique environment that it is also capable of changing.

Many common patterns of similarity in body form and in ways of being normal and abnormal actually exist across the great diversity of human form. These overlapping patterns of similarity can be understood and evaluated only in terms of the unique set of limitations and possibilities inherent in each person's being and to the environment to which he or she is uniquely adapted. Once we abandon somatic idealism it turns out that the determination of what is normal and abnormal for any given individual is clearly far more diverse and complicated than we or the tradition ever suspected. I will briefly discuss this complexity below.

Position, Fixation, and Functional Appropriateness

For too long, somatic prac titioners in every discipline have analyzed and evaluated clients by comparing their somas to some conscious or unconscious somatic ideal. Too often contour, position, and asymmetry are used as the only indicators of somatic dysfunction and disorder. But, contour, position, and asymmetry when considered in isolation from the unique form, functional possibilities, and environment of each individual are neither necessary nor sufficient conditions for determining dysfunction. Once we abandon somatic idealism, we realize that odd contours, odd positioning of segments, and asymmetries must always be evaluated in terms of the unique limitations and possibjlities for each body and each body type. Rejecting the notions of an ideal body and ideal positions for individual segments does not destroy our ability to analyze and evaluate our clients' bodies. There are recognizable patterns of dysfunction that show up in every body type; there are also common patterns of asymmetry that show up in various types of bodies; and there are asymmetries unique to the individual client. When these patterns are associated with fixations of various sorts and are properly managed in accordance with individual needs, overall function can be enhanced. Internals and Externals, for example, are often quite different from each other in how they each manifest dysfunction. An asymmetry or odd segmental position may be dysfunctional for the Internal and functional for the External. Low back problems in Internals tend to manifest as degenerative joint disease, whereas the Externals tend to manifest low back problems as disc disease.[25]

Without understanding the unique structure, movement patterns, and fixations involved with each individual client and h/er relation to gravity, we cannot know where any given segment, whether a single vertebra or a larger component like the legs, should be positioned. Even more importantly, without understanding where and how the various fixations (myofascial, articular, emotional, energetic, etc.) show up in each individual's unique local and global patterns, we cannot know, just from a description of position alone, whether a segment is dysfunctional or a manifestation of somatic disorder. Hence, a description of position alone will not tell us whether segment or larger component of the body is dysfunctional and ought to be manipulated and repositioned. Likewise, a description of the whole body in terms of contour, position, or asymmetry alone will also not tell us whether a person's body needs some form of somatic intervention. In fact, asymmetries and what appear to be oddly positioned segments are actually quite functional and normal in many people and, therefore, require no intervention whatsoever. At every level both locally and globally, from articular fixations to asymmetries to the organization of the whole form, we cannot separate structure, position, function, and environment. The truth of the matter is that we will never understand properly the concepts of "position" and "structure" if we abstract them from the concepts of "function," "fixation," and "gravity," that is, from what is functionally appropriate for each individual client in h/er relation to the environment.



Consider spinal manipulation. When we discover a dysfunctional vertebra, we often say that it is "out of place;" but this designation is actually imprecise. The vertebra is dysfunctional because it is motion restricted, because it exhibits an articular fixation, not primarily because it is "out of place." Vertebral dysfunction can be described in positional terms because it often shows up in the form of sidebending and rotating to the same or opposite side. Ultimately, however, a vertebral segment or any other group of segments are dysfunctional and in need of intervention because they involve fixations at some level, not because they are "out of place." Dysfunction is never an isolated local problem. Somatic disorder is never a simple matter of being "out of place," having one innominate higher than the other, having one shoulder lower than the other, having anterior lumbars, being asymmetrical, or displaying odd contours. Sometimes, for example, vertebra are dysfunctional as a result of either bilateral flexion or extension fixed facets. They display this dysfunction without showing any positional change or appearing "out of place." Other times, vertebra are rotated and appear to be "out of place" when in fact they are perfectly functional and could not be positioned in any other way.

Just as fixation is the enemy of plasticity, it is also the enemy of normal or enhanced function. From the Rolfing perspective of somatic integration, every vertebral and/or larger segmental dysfunction involves more that just local articular fixations, they also involve segments that are fixated and out of appropriate structural/functional/energetic relationship with the whole body and its environment. Somatic integration results as the body becomes freer and freer of its many levels of fixations (myofascial, articular, energetic, emotional, etc.) and moves more and more toward its appropriate relationship locally and globally in spacetime, gravity, and the environment.

To generalize, then, loss of somatic integration is much more a function of fixation than position. What appears to be an oddly positioned segment is often no more than a clue for possible somatic dysfunction or disorder, not the guarantee of it. Unless accompanied by some level of fixation, it may not be even clinically significant. Asymmetries, oddly positioned segments, and odd contours do not always demand intervention. When they do demand attention and manipulation, it is under the following conditions): 1) when they are accompanied by a fixation or fixations (across the four taxonomies); 2) when they contribute to a dysfunction or fixation; or 3) when manipulating them will clearly enhance the overall functioning of the whole. For each individual, appropriate position is determined by appropriate function. The same is true for all local and global asymmetries. A perceived asymmetry may be dysfunctional in one body and entirely functional and normal in another. Appropriate function is determined by understanding what is possible in relation to each individual's unique patterns of changing and unchanging limitations. In turn, these limitations must be seen in terms of how the person has adapted, appropriately or inappropriately, to gravity and his or her environment. Position can never be abstracted from what is functionally appropriate for each individual in relation to gravity and the environment. The goal of our work is achieved when we have established appropriate or enhanced function, not when we have established ideal position.

The Art of Rolfing

Rolfing is a science and a philosophy. But, it is also an art. It consists in knowing what to do first, what to do next, and when to finish. It requires learning to see and appreciate the uniqueness of each person's form while at the same time

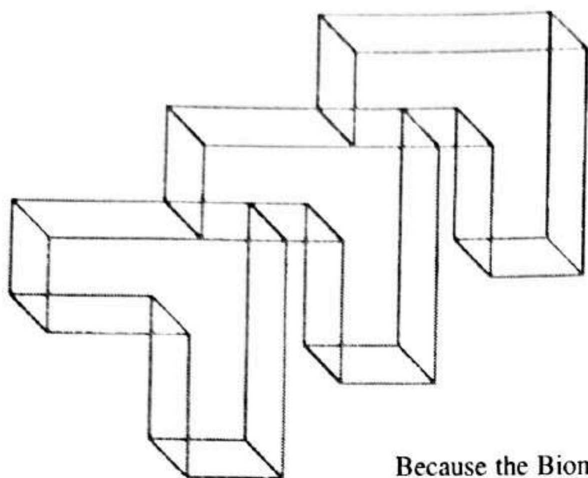
learning to see and treat appropriately the many similar patterns of fixation that show up in every body and the common fixations that typically show up in various body types. Ultimately, we must set aside formulism and somatic idealism and learn to see and appreciate the inherent form that is continually striving to become itself in each person's life. Our job is not just normalizing function and removing irritating symptoms, but also the profound attempt to enhance the being of the whole person by unearthing the potential plasticity that lives within each soma as it strives to harmonize and enhance itself over an entire lifetime. Rolfing is ultimately a process of discovery, not the process of imposing an ideal form on every body. Since normal function is often a stepping stone to enhanced function, we must always be attentive to what constitutes normal for each person. Neither the restoration nor the enhancement of normal function is an ideal or static state, but an evolving achievement that is won again and again over the course of a life. Normal is the achievement of what is inherent and natural to who we are as we continually strive to become ourselves.

There are four fundamental ways to articulate and classify the overlapping strands of similarity in what constitutes enhanced, normal, or abnormal somas. This system of classification can be called the Taxonomies. These taxonomies specify the types of classifications that are relevant to all health care practices. By recognizing and classifying the complexity of human somas, they take the place of all narrowly conceived somatic ideals in the evaluation process. These four taxonomies are as follows: 1) The Structural/Segmental, 2) The Geometrical, 3) The Functional, and 4) The Energetic. If it were possible to fill in completely all the information that properly belongs in each taxon under each of these taxonomies, we would come close to an exhaustive description of what constitutes normal and abnormal for every human being. We would have created an encyclopedic classification capable of describing common patterns among the great variety of possible somatic types without losing sight of individual differences. Although conceivable, such a goal is impossible. Nevertheless, enough work has already been accomplished in many systems of health care to provide us with a rather extensive amount of information. This information is relevant to our every attempt to evaluate, treat, and know when we are finished. Some of these taxons are descriptive, others contain tests for determining what is normal and abnormal under certain circumstances, and others give us descriptions of enhanced or somatically integrated persons.

None of this information by itself is sufficient to describe what is normal and abnormal. And none of it is sufficient by itself to describe somatic integration. But if all of this information were taken together and codified by a holistically oriented interdisciplinary group of somatic practitioners, we could begin to create a rather lengthy set of descriptive possibilities and tests for what would constitutes a normal or enhanced life. Clearly, determining and describing what is normal and abnormal for the great variety of human forms that are possible is no small task. Such a task is ever ongoing and subject to constant revision in the face of new discoveries, refinements, and the evolutionary potential of every human being. That this task can never be fully achieved should not mislead us into concluding that it cannot be achieved to the degree necessary to be useful to our clinical decision making process. Enough of it has already been accomplished to be immediately useful for every practicing health care practitioner. What has not been accomplished is the proper systematization of this information under workable taxonomies like the ones proposed here. This systematization has not been accomplished, in part, because our understanding of what constitutes normal has been informed by the mistaken notion that "normal" means "that which measures up to an ideal standard" and because the prevailing mechanistic concept of the body is incapable of understanding living form.

Understanding these taxonomies is critical to the evaluation and clinical decision making process, and to understanding many of our key theoretical concepts. For the sake of clarity and completion, all of our important concepts, from *core* and *sleeve* to *continuity* and *somatic integration,* need to be articulated in structural, geometrical, functional, and energetic terms.

At the January 1995 faculty meeting we attempted an



interesting exercise. We tried to lay out all the taxons we presently work with under their appropriate taxonomy. Since somatic integration is a matter of enhancing function, and since fixation is more important to the evaluation of somatic disorder than position, it was not too surprising to discover that the Functional taxonomy ended up with the largest number of taxons. For the purposes of the present article, I will mention just briefly some of the taxons that are engaging the attention of the faculty. It is worth pointing out that there are no hard and fast divisions between the taxonomies. Sultan's Internal/External taxon can be placed under the Structural/Segmental taxonomy. However, because it also describes gait patterns for each type, aspects of it could easily find a place among the Functional taxons.

Because the Biomechanical taxons created by the osteopaths describe joint dysfunction in terms of motion restriction they properly fall under the Functional taxonomy. Like Sultan's taxon, the biomechanical taxon also includes structural and positional considerations. Thus, aspects of these descriptions also belong under the Structural/Segmental taxonomy.

Under the Functional taxonomy, we should also include Gael Ohlgren's and David Clarke's taxon of unencumbered walking, Hubert Godard's taxon of the up and down types with its attendant theory of tonic function, Hans Flury's taxon of and tests for normal function , and the other taxons developed by our movement teachers. These movement taxons are very important because they give us more precise ways of recognizing somatic order and disorder than many of our positional indicators. They also flesh out in valuable detail our concepts of organized patterned fluidity of motion, continuity of motion, functional economy, and somatic integration. Under the Functional taxonomy also belong the neurological taxons based on the work of Peter Levine, Bill Symthe, and John Cottingham. Visceral manipulation and its resulting taxon also belong under the Functional taxonomy. We should not forget our traditional geometrical taxons, as well as the important discoveries and refinements made by Hans Flury in this area. Finally, a number of us are working on developing the Energetic taxonomy.

These and other taxons not mentioned give us a way of recognizing the appearance of a normal, abnormal, or enhanced soma (that is, a person who is somatically integrated) across the rich and wide diversity of human adaptation. Understanding the details of these taxons and how to recognize them are essential to the evaluation and analysis of clients as well as to the question of when our sessions or series of sessions are finished. When coupled with the principles of intervention they give us a non-formulistic decision making process that is both attentive to the uniqueness of our clients and based what is empirically observable, structurally, geometrically, functionally, and energetically.[26]

Once our concepts and perceptions are organized under the four taxonomies, it is immediately obvious that process of analysis, evaluation, and Rolfing intervention is far more complex than most of us were originally taught. Rolfing can no longer be conceived of as the process of imposing a template of the ideal body on clients by means of ten session, advanced three session, or advanced five session formulistic protocols. Because it has become more precise and attentive to individual differences, Rolfing is a process of discovery that seeks to uncover, normalize, and enhance the inherent form unique to the whole person. Through the application of non-formulistic intervention strategies based on the principles of Rolfing and what is empirically observable across the four taxonomies, Rolfing has finally freed itself from some of its most problematic roots.

Conclusion

The philosophy, science, and art of Rolfing is a rich tapestry of understanding and method that is undergoing continual development by many practitioners. Rolfing is a theory and practice that promises to profoundly transform the meaning and nature of human life by evoking our evolutionary potential. We are living in the midst of an amazing explosion of world wide interest in human transformation. Clearly the rest of the world has caught up with Dr. Rolf's pioneering insights. As biologists explore new realms of enhancing human life, the theory and practice of Rolfing also continues to move toward its evolutionary potential – as it surely must to be worthy of the legacy that Dr. Rolf left in all of our hands.

Footnotes

[1] Ida P. Rolf, "Rolfing: The Vertical – Experiential Side To Human Potential", available from the Rolf Institute.

[2] The interested reader may refer to the following articles all of which were published in *Rolf Lines*: "Definition and Principles of Rolfing" coauthored with Jan Sultan and "Rolfing: A Third Paradigm Approach to Body-Structure", both published in the Spring 1992 issue, Vol. XX, No. 2.; "What Is The Recipe?", June/July 1991, Vol IXX, No. 3; and "Das Boot", June 1993, Vol XXI, No. 2.

[3] Ida P. Rolf, *Rolfing: The Integration Of Human Structures*, (New York, 1971), p. 16.

[4] *Ibid.*, p. 285

[5] Rosemary Feitis, editor, *Ida Rolf Talks About Rolfing And Physical Reality*, (New York, 1978), p. 133.

[6] Mae-Wan Ho, Peter Saunders, and Sidney Fox, "A New Paradigm For Evolution", *New Scientist* (Feb 27, 1986), p. 43. My emphasis.

[7] B.C. Goodwin, "Organisms and Minds As Dynamic Forms", *Leonardo*, Vol. 22, No. 1. (Great Britain, 1989), pp.27-31. My italics.

[8] Ho, Saunders, and Fox, "A New Paradigm for Evolution", *New Scientist*, (Feb. 27, 1986), p.42.

[9] For a detailed discussion of the nature of human freedom see my "Creativity," in *The Journal of Aesthetics and Art Criticism* (Summer, 1976), "Creative Performance: The Art of Life," in *Research In Phenomenology*, (Vol. X, 1980), and especially Chapter 4 of *Spacious Body: Explorations in Somatic Ontology* (Berkeley, 1995), where freedom is defined as the creative appropriation of limitation. Translating this definition of freedom into the biological realm, we could say that every successful adaptation of an organism to its environment is an example of the creative appropriation of limitation. My articles, "Creativity" and "Creative Performance," argue for the view that the aim of art is to display the achievement of human freedom in aesthetic form. The theory of plasticity demonstrates how humans are the most plastic of all the creatures on the earth. Not only do we have the ability to manipulate our plasticity, we also have the profound ability to display the achievement of this flexibility in art. Since flexible plasticity (or the ability to creatively appropriate limitation) is the biological ground of human freedom, we also could say that the aim of art is to display the achievement of flexible human plasticity in aesthetic form. For a related discussion on the nature of aesthetic form and the persistent and common mistake of understanding the work of art as a kind of object, see my "Identity, Ontology, and The Work of Art", in *The Southwestern Journal Of Philosophy*, (Nov., 1975).

[10] B.C. Goodwin, *How the Leopard Changed its Spots: The Evolution of Complexity*, (New York, 1994), p. 14. My italics

[11] B.C. Goodwin, from "The Waddington Conferences," *Significance of Form in Nature and Art*, (1993), P. 3.

[12] Richard M. Lerner, *On The Nature Of Human Plasticity*, (Cambridge, 1984), p.xii.

[13] *Ibid.*, pp. 172-173.

[14] Ida P. Rolf, *Rolfing: The Integration Of Human Structures*, p. 201.

[15] For an interesting and useful criticism of Dr. Rolf's view see, for example, Don Hanlon Johnson's "Somatic Platonism" in *Somatics*, Vol. 3, No.1, (Novato, California, 1980), pp.4-7, and his book *Body, Spirit, And Democracy*, (Berkeley, 1994).

[16] Ida P. Rolf, *Rolfing: The Integration Of Human Structures*, p. 16.

[17] *Ibid.*, p. 29.

[18] What I mean by the word "rational" is simple and straight forward and in no way opposed to intuition. I mean one of its root meanings: "to think in accordance with principles."

[19] For a drawing of Dr. Rolf's view of the ideal spine see p. 77 of her book, *Rolfing: The Integration Of Human Structures* (New York, 1971). On p. 208 she also provides a drawing of eight spines from Spalteholz's *Atlas of Human Anatomy* and claims that until the creation of her system, "there has been no criterion for judging the normal in spines; in common parlance, structures lacking in pathological symptoms are called normal. More properly, they might be called average." It is highly questionable whether Dr. Rolf's somatic idealism can provide the criterion for judging normal spines. Since the principle of Holism tells us that no component of the living form can be adequately understood in isolation from the state of the whole, it follows that the normality of a spine cannot be determined apart from the soma in which it is embodied. Since Sultan's Internal/External taxon removed the blinders from our eyes, we also have also come to see that highly functional spines exist that will never measure up to Dr. Rolf's ideal. We have also discovered spines that match her ideal but are quite dysfunctional.

[20] See Warren I. Hammer's *Functional Soft Tissue Examination and Treatment by Manual Methods*, (Gaithersburg, Maryland, 1991), p.105.

[21] See, for example, *Muscles: Testing and Function*, Third edition, by Florence Peterson Kendall and Elizabeth Kendall McCreary, (Baltimore, 1983). Although it is always difficult to determine, Kendall and McCreary claim that the center of gravity in an ideally aligned body is slightly anterior to the first or second sacral segment. They then describe on page 19 a version of the ideal body similar to Dr. Rolf's. "In the lateral view of the ideally aligned posture, starting at the base, the plumb line will coincide with the following points or skeletal parts: slightly anterior to the lateral malleolus, slightly anterior to the axis of the knee joint, slightly posterior to the axis of the hip joint, bodies of the lumbar vertebrae, external auditory meatus, slightly posterior to apex of the coronal suture. In the posterior view, starting with a fixed point midway between the heels, the plumb line will be equidistant from the medial aspects of the heels, legs, thighs; be equidistant from the scapulae; and coincide with the midline of the trunk and head."

[22] Eugene S. Gollin, Gary Stahl, and Elyse Morgan, "On The Uses Of The Concept Of Normality In Developmental Biology And Psychology," in *Advances in Child Development and Behavior*, VOL. 21, (New York, 1989), p. 65.

[23] *Ibid.*, pp. 66-67. For a plethora of examples that demonstrate how normality varies from context to context see *On The Nature Of Human Plasticity*, by Richard M. Lerner (Cambridge, 1984).

[24] "Re-thinking the C-Position," *Rolf Lines*, March, 1993 Vol. XXI, No. 1 (Boulder) pp.60-72.

[25] This issue requires much greater treatment that what I have suggested here. For a start the interested reader can refer to John Cottingham's research, some of which he summarizes in his "Effects of Soft Tissue Mobilization on Pelvic Inclination Angle, Lumbar Lordosis, and Parasympathic Tone: Implications for Treatment of Disabilities Associated with Lumbar Degenerative Joint Disease," reprinted in *Rolf Lines*, Spring, 1992, Vol XX, No. 2 (Boulder), pp. 42-45. This paper was also presented to the National Center of Medical Rehabilitation Research of the National Institute of Child Health and Human Development March 19, 1992 in Bethesda, Maryland.

[26] When I use the expression "empirically observable" I mean to refer to the rich and diversified ways we perceive our world whether through visual, tactile, or energetic means, through our feeling states, or the many other ways of which we are capable. I also believe that most of these ways of perceiving can be taught to and shared by others. I certainly do not mean to limit the observable to the simplistic metaphysical notions of scientism that reduce the objective world to the measurable.

Rolfing® As A Third Paradigm Practice

by
Michael Maskornick

As part of the effort over the past several years to create a national certification for body-workers, a great deal of time and effort was expended in trying to categorize the many forms of bodywork. Out of that process has come a three-paradigm model for characterizing bodywork. First-paradigm methods are characterized as *palliative* in nature (perception and measurement); second-paradigm methods are *corrective* (cause and effect); while third-paradigm methods are *integrative* (relationship). I have included the parenthetical comments to connect this hierarchy with that of the epistimological profiling of Gaston Bachelard. The first-paradigm most likely relates to the first and second levels of Bachelard, the second-paradigm with his third level (the level of laws), and the third-paradigm with his fourth level. Once I began thinking in this way, â fourth-paradigm entered my thinking, the level of transformation (transcendence and intuition). I mention this early in this article because I believe that many Rolfers have created practices around such a fourth-paradigm. However, since only the first three-paradigms have been discussed in previous Rolf Lines, I will direct the rest of this article to questions about paradigms one through three.

Practitioners of first-paradigm methods work within the realm of feeling and sensation. For them, technique is most likely minimal as the feelings and sensations of the client are of primary concern. Second-paradigm practitioners must have more knowledge about anatomy, physiology, and kinesiology to be competent in the realm of cause and effect. Their methods are more likely to show a wide range of techniques to alleviate symptoms. Third-paradigm practitioners, by working at the level of relationships, must combine the knowledge and techniques of the second paradigm with an overview of the relationships between and within the many systems of the body. Examining the three-paradigm model from this view certainly gives third-paradigm practitioners the lofty high ground of bodywork.

We as Rolfers are convinced that our work is deeply enmeshed in the third-paradigm. In fact, this might be considered one of the primary foundations of our training. This is the position of healers in the world. If we are to live up to that position I believe we should be able to ask ourselves a wide range of questions about how we function as third-paradigm practitioners. Questioning some unexamined assumptions about Rolfing and the third-paradigm is the focus of the rest of this article.

How do we know that we are doing third-paradigm work?

From my personal experience as a Rolfing client, it is clear that the work has deeply affected my self and has had effects far beyond the physical and symptomatic. Most sessions were not linear. It has taken years for some of the changes to become manifest in my structure. In fact, many aspects of my structure are still in transition in ways that I cannot easily articulate. It is also clear from the comments of many other Rolfing clients that they have experienced the work in a similar way. So, is this the defining characteristic of third-paradigm work, that the work is nonlinear, nonsymptomatic and slowly evolving? And if it is, what

specifically makes this happen? Is there something inherent in the **form** of the work that makes it integrative (transpersonal and transformative)? Is it some thought or intention held by the Rolfer during the sessions that evokes these changes? Is it somehow related to the expectations of the clients? Is it the recipe?

As the teaching staff has worked to take the mystery out of Rolfing manipulations, they have created a large body of knowledge related to changing the form of the human body. Much of the information takes the form of second-paradigm manipulations and has been derived from a wide range of other related professions. That is, these are specific manipulations designed to correct specific distortions in the structure. The teachers have also incorporated information from other integrative schools into the basic body of Rolfing knowledge (i.e. cranial, visceral, and movement modalities). Integrating this wide variety of specific manipulative techniques into a single third-paradigm practice is a major challenge for the Rolfing faculty.

In expanding our view of the human body and the process of integrating structure, our school has begun to examine the underlying laws of form and function and how those laws were incorporated into the 10-session format of the original Rolfing series. A result of this exploration has been movement away from looking at the body in relation to those ten sessions. In place of a static recipe is the process of working directly with form, function, and relationship—using the above laws to design sessions geared toward the unique client on the Rolfing table. Although I strongly support this direction, I question how we know that we are not losing something vital that may have been imbedded in that ten-step recipe. Remember that in their training, our faculty was deeply impressed with both the importance and specific form of Dr. Rolf's recipe, probably to the point where looking at a body through the lens of the recipe became second nature to them. It may be impossible for them to see that the recipe is such a deep part of their background knowledge that they are no longer aware of its impact on their thinking, even as they are trying to create the new laws of integration that are to become the foundation of the Rolfing training. If there are any occult formulations contained within the 10-session recipe, we need to examine the basis for any such hidden knowledge so as not to lose something important. Perhaps the answer to this question will only become evident as new practitioners begin active practices after training in a program that makes minimal use of a recipe.

How many modalities need to be incorporated into a third-paradigm practice? At the level of the body does it have to include the whole body all the time or can it be limited to considerations of the appendicular or axial skeleton? Does integration need to consider core/sleeve relationships even though we have difficulty being precise about this concept? Can a third-paradigm practice focus exclusively on symptoms or on a single system of the body and still retain its third-paradigm integrity? In this categorization of three paradigms it is implied that the higher ranking members include the lower rank. That is, third-paradigm practices include first- and second-paradigm techniques. What percentage of a third-paradigm practice is composed of first- and second-paradigm modalities? How much of a given session will be related to first- or second-paradigm concerns? If we define a practitioner profile as the relative importance of first-, second-, and third-paradigm modalities in that practice, will different practitioners have different profiles? Of course, but what determines the acceptable mix of modalities for a valid third-paradigm practice?

There are larger questions than just what part of the body is to be included in a given session. Can we have a third-paradigm practice without taking movement into account? Why? Why not? What school of movement education? I believe that movement is embedded in the unconscious response of the body to manipulation or any other physical challenges to our system. By using verbal movement clues as part of a conscious treatment strategy, we are bringing that embedded non-conscious information up to the conscious foreground of the work. However, I'm not convinced that this is always necessary or even useful with every client. There are times when it is valuable to just observe and note the changes in a client's movement patterns and to hold those images in our thoughts (intention) as we continue to work

with that client. If this is true, what is the balance between bringing movement to consciousness and letting it be as background, even perhaps being totally oblivious to any movement component to this work?

Does a third-paradigm practice necessarily include psychological aspects in the sessions? What form of psychology is appropriate? If we are thinking of an integrative form of depth psychology should it be Jungian-based? Reichian? Hakomi? Will the incorporation of psychological aspects change the very nature of Rolfing? Remember, Dr. Rolf said gravity is the therapist, implying that getting too involved in the verbal aspects of psychology would not be appropriate use of our time and skill. Yet, a great number of our clients are presenting physical symptoms that have roots in old traumatic events that may emerge during a session. What is the best way to handle such events? What are the requirements of a third-paradigm practice in this matter?

What about spiritual aspects of bodywork, so-called spiritual emergence? There is a well-documented body of knowledge addressing the energetic aspects of long-term meditative, breathing, or yogic practices. Some of these energetic patterns seriously interact with the structure and function of the body, as during the emergence of Kundalini energy. Must we know when this is the case and what to do with such emerging events? Is this a requirement for training or something to learn subsequent to certification?

What a full plate of educational material. Just how much of this should be required training prior to certification is a difficult question, just as difficult as determining when a given student is ready for certification. And even all this does not exhaust the field of inquiry.

How does client participation define a third-paradigm practice? Does each client have to know consciously everything that is going on? Is it a requirement of such a practice that every client be educated about and in agreement with the approach of the third-paradigm? That is, does he/she have to want anything more from a session than just to be free of some localized pain? Or are there elements of working with the unconscious (body) that preclude that type of participation by some clients? Are there some clients that would disrupt the Rolfing process by too active a conscious participation? Are there some practitioners who work best at a naive, unconscious level rather than at an active teaching level? Can we assume that by following a format like the old ten-session recipe that the clients needs will be taken care of automatically? Certainly this was an assumption made in the past.

Much of our language revolves around our *intention* in the work. But what exactly is our intention? Is the intention to do good work and to help the client enough, or must we be more precise in our thinking? Are there times during the session when we need to have a specific intention directed toward the long-range patterns of the work or can we work in some free floating mind-space where we just know everything will be taken care of? Clearly I do not believe that blind trust will take care of everything; yet it is an unspoken assumption around much of our work.

As we speak about intention, what does it mean if no apparent changes happen during a session? Can we trust that our intention is working to effect change even though we cannot see it? Does this mean that our manipulative skills have outstripped our ability to see and evaluate our own work? How long should we wait to see changes in a client? What are the signs that a slow unfolding is occurring rather than no change at all?

Because Rolfing is becoming more accepted by the insurance world, it is important to think about the affects of insurance coverage on our third-paradigm approach. Most insurance payments are for corrective therapy (second-paradigm). To satisfy the requirements of insurance, must we limit our practice to second-paradigm work or can we continue as integrative practitioners and then bill insurance on the second-paradigm aspects of the sessions? How does insurance involvement change the nature of our clients? Our practices? Is that change something we can incorporate easily into a third-paradigm Rolfing practice?

By writing about these questions, I hope to stimulate further discussion in future issues of *Rolf Lines*.

Keep Your Heart Open And...

An On-Going Column About General and Specific Contra-Indications to Rolfing

A Few Things We Need to Know About Diabetes Mellitus

orgette Maria Delvaux-Salveson, D.C.
tified Advanced Rolfer

Diabetes Mellitus a **serious chronic metabolic disease** will cause people to die earlier than they would without it. Diabetes Mellitus, is a greco-roman word that actually means: excessive and sweet urine. In the past, before labs existed, devoted Doctors did not only look at their patient's urine, they must have tasted it too. How else would they have known that it was sweet?

There are more than six million diabetics in the US.. Every day 2000 Americans, including children, are told that they have diabetes. Nearly 20% of all Americans over 55 have diabetes. With its complications it is a leading cause of death. It is also estimated that about five million people have diabetes but have no obvious symptoms yet. I will not go into details about the different kinds of diabetes, it is a very complex phenomenon. Do read up on it. Very basically there are two kinds: the kind where the patient needs Insulin injections, Type One or Insulin Dependent and Type Two or Non Insulin Dependent Diabetes in which diet, exercise and oral medication can help control the problem.

The problem is the inability of the body to metabolize sugar. This will damage the kidneys, peripheral nerves and blood vessels including those in the eyes. This can create a high risk for heart attacks, stroke, skin ulcers (serious enough to necessitate amputation of the feet), impotency and other things anything but sweet.

What about this is pertinent and important for Rolfers to know?

Considering the very high probability that a diabetic client, child or grown up, will come to see you for Rolfing, the crucial thing to know is that their constitution is more frail on many levels than normal people's and this may not be obvious. Basically you can not hurt them if you do very careful work and if you make sure that you do not put them into a high sympathetic response. I[illegible] their body does go into a sudden and strong sympatheti[illegible] mode an emergency situatio[illegible] may happen that you helpe[illegible] bring about. Read me correctl[illegible] You did not cause it, you ju[illegible] possibly are the straw th[illegible] breaks the camel's back.

Diabetics have to ke[illegible] their sugar and insulin leve[illegible]

balanced if they are to continue living normally. Their body does not do this automatically, like ours does. This is difficult and bothersome and diabetics are known to make mistakes. If they are well managed they usually know how to measure their blood sugar levels and adjust the insulin they inject under their skin or their own medication.

There are two basic diabetic emergencies that can happen and they can both come to the surface suddenly with stress, a strong Rolfing session, a strong release of emotion, or a difficult session around an old trauma.

First type of emergency: **Diabetic Coma**. This can happen if a diabetic is not diagnosed and not treated. It can also happen if a diagnosed diabetic has eaten a large amount of sugar but not taken his insulin, if he is very sick with a severe infection, or if he just has had a serious accident or an emotional shock. **There is too much sugar or glucose in the blood stream and not enough insulin to assimilate it.** The glucose, which is an essential nutrient, will circulate around and never get to the cells, this is hyperglycemia. The kidneys will filter some of the excess sugar out into the urine using a lot of water to do this. This is what our ancestors' doctors were talking about: excessive and sweet urination. The person will become severely dehydrated, the vascular system has not enough fluids, the circulatory system collapses, the person faints, enters a coma and may die.

This is a very simplified and partial description of the real thing but it shows us how serious it can be. The good news is that it is not very likely that a person feeling this bad comes to a Rolfing session. This condition also comes about rather slowly, one would have time to notice that something is really wrong. But lets suppose you are having bad luck and a very insensitive, harassed, undiagnosed diabetic client comes to you for his miracle cure.

What would you see?

The person has deep and labored breathing. He has a strange fruity smell on his breath. It makes you wonder if he has been drinking. He is sweating, his eyes are sunken. He may seem confused or a little angry. He will demand to go to the bathroom and to have some water to drink. When you shake hands with him (as we always do in Europe) or touch his arm he may be really hot. Above all he will look ashen, awful, you couldn't miss this.

What do you ask?

How are you feeling? Are you a diabetic? Are there any diabetics in your family? Since he may be argumentative, be careful. Tell him that he really is not well. Call the ambulance, because he is about to be in extreme danger. He urgently needs insulin administered by an M.D. under supervision, <u>if</u> the situation is Diabetic Coma. Those of you who are reading my other articles may recognize the signs of impending shock.

The other diabetic emergency, **Insulin Shock**, can happen to people who know that they are diabetic. **It happens when the diabetic has too much insulin or too little sugar.** The insulin causes the small amount of sugar to enter the cells of the body, and suddenly there is not enough sugar in the blood stream to nourish the brain cells. Your brain lives on glucose, which needs to be maintained in constant amounts. The brain cannot utilize fats or other substances. Permanent brain damage or death can occur from Insulin Shock if emergency care is not given right then.

How can this come about? The diabetic skips a meal. One day, when I was still in college, I found one of my diabetic classmates in his car, looking like a dead man, barely able to respond. He had been cramming before an exam and not paid attention to eating lunch on time. Had I known what I know now I would have known what to do. He looked so bad that we called the ambulance. They figured it out instantly. The first question they asked him, after hearing what we said, was: Are you a diabetic? The second one: When did you eat last? They did give him something sweet and took him with them for treatment. The other chiropractic students wanted to hold him up and quickly adjust his atlas. A nice little clumsy and painful atlas adjustment might have given him one more sympathetic input and finished him off!

Insulin Shock can also happen to a diabetic child who has been roughhousing for a few hours, to a diabetic athlete pushing himself too hard, to a diabetic who had an upset

stomach and vomited, to someone who takes more insulin than prescribed, or to a diabetic exposed to extreme cold. It can happen in any situation where sugar is lacking or where it burns fast, possibly even a severe emotional shock, or maybe a tough first Rolfing session with a great chest release and a little hyperventilation.

The good news here is that you know that this person is a diabetic (if you asked about diseases in your first interview), the bad news is that this can happen very fast, and is extremely dangerous.

What do you see?

The person seems uncoordinated, weak, may shake or tremble, may be confused, would be profusely sweating, may drool and almost pass out.

What do you ask?

Did you eat today? Do you have a headache? Are you dizzy? Can you see me clearly? Are your legs and hands tingling?

What do you do at the same time?

You find the sugar bowl post haste, the juice, the candy, your kid's lollipop....anything with sugar, real sugar, fast... and give it to him quickly.

But wait.... the possibility exists that even though the client knows that he is diabetic, he may not have taken his insulin on time and this may be a Diabetic Coma and not an Insulin Shock and there he lapses into unconsciousness and you cannot ask any other questions?

By now you are so freaked out that you are brain-dead too. Just before you lapse into unconsciousness do this: Call the ambulance, tell them this is an emergency and that the person is diabetic. Only hang up after they have all the information they need to get to you and after they hang up. Then place the client on his side. Open his mouth just a little and rub a very small amount of sugar or juice between his cheek and gums or underneath his tongue, if you can.

Even if it was Diabetic Coma you would not have significantly damaged the person, the amount of sugar you would give is trivial compared to what is already in the blood. If it was Insulin Shock though, you will have helped a great deal and possibly have prevented severe brain damage, the small amount of sugar could bring the person back to consciousness even before the ambulance has arrived.

This article has been reviewed by: Bret Nye, M.D., Certified Advanced Rolfer

Reference

Pertinent specific medical information comes from: *Prehospital Emergency Care and Crisis Intervention* by Brent Q. Hafen and Keith J. Karren, Third Edition 1989, Morton Publishing Company, Englewood, CO.

New Directions

Medical Condition Database for Rolf Practitioners

Rosemary Feitis, D.O.

Ankylosing Spondylitis

This is a chronic, usually progressive condition in which there are inflammatory changes and new bone formation at the attachment of tendons and ligaments to bone.

Changes to the sacroiliac joint are most common; there is a variable degree of spinal involvement, and some patients have large peripheral joint involvement as well.

Onset is insidious, usually in the early teens-20's, rarely after age 40. There is subgluteal and low back pain and stiffness with loss of lumbar lordosis. Pleuritic chest pain is an early symptom; osteoporosis is a late complication. Inflammatory bowel disease is an associated condition, as are uveitis and iritis.

Etiology is unknown. The condition is often familial and associated with the presence of HLA B27 antigen. (This antigen is associated with other arthritic auto-immune conditions such as rheumatoid arthritis.)

Possible complications include:

- Fractures or subluxation of the cervical spine C 1 -2.
- Peripheral joint ankylosis.
- Restrictive lung disease; upper lobe fibrosis of the lung.
- Conduction defects of the heart.
- Renal problems from longterm NSAID treatment (see below).
- Bowel/digestive problems.

Standard medical treatment includes:

- Non-steroidal anti-inflammatory drugs (NSAIDs).
- Physical training, breathing therapy.
- Hip arthroplasty (replacement).

Prognosis is unpredictable; there is usually progressive disability.

Prognosis is good if mobility and upright posture are maintained.

Disease course is characterized by spontaneous remissions and exacerbations.

Rolfing Notes

During the active phase of the condition, ongoing bodywork is needed, either in batches of 4-5 sessions twice a year or on an every 2-3 week basis after the first ten-session cycle has been completed. As stated above, it is imperative to maintain mobility and upright posture, and Rolfing is ideally suited to accomplish this. Bodywork will not reverse already established ankylosis or vertebral changes, but it can slow the progression of further disability. Because of the danger of osteoporosis, bones should be well supported during direct pressure. The structure as a whole needs work. Special attention to the atlanto-occipital junction is appropriate, always remembering that this can be a target zone for osteoporosis.

Documentation

Conditions that spontaneously remit and return are difficult to document. The following information is appropriate.

1. Patient name, address, phone - for your use in follow-up.
2. Ankylosing Spondylitis -
   Diagnostic procedures - blood tests, radiology (see above) - date.
   Name and phone number of diagnosing physician if available.
3. Date patient first seen.
   Extent of disability, evaluation:
   postural erectness
   range of movement of axial skeleton
   (flex, extend, sidebend);
   location and degree of pain.
4. Evaluation at the end of treatment cycle.
   Evaluation at the beginning and end of each new treatment cycle;
   Follow up evaluation or patient report at 2-year intervals is ideal.

Further Reading

PRIMER ON THE RHEUMATIC DISEASES, published by the Arthritis Foundation, 1314 Spring Street NW, Atlanta, Georgia 30309. The 10th edition (1993) cost about $15, although the cost may have gone up. Excellent, fairly readable, exceedingly knowledgeable and up to date; better that almost all texts. Includes information on all the arthritidies.

The Translucent Human

by
Randy Mack
Certified Advanced Rolfer

(Author's note: I am not a scientist and this is not a scientific paper. The information contained within does, however, come from a multitude of published scientific articles. Please see the bibliography if you would like to investigate the source materials that I have used. Any mistakes in this article are solely my responsibility.)

Let's begin with a very simple question, one that I have asked a lot of people including a number of medical professionals. If you took all the cells out of a human body what would you have left? I mean this literally. If you removed every muscle cell, organ cell, glandular cell, nervous system cell, red blood cell, white blood cell, epithelial cell, etc., what would be left?

The answer I almost always get, especially from medical and scientifically trained people goes something like: "Why, you'd have nothing left," or "Almost nothing," or "You'd just have some bones," or "There'd just be some water and minerals," (the latter presumably in a puddle on the ground where the person used to be). More New Age types usually answer with something like: "Well there'd be spirit left." I don't feel qualified to answer this last speculation except to ask some further questions: And where would this spirit be? Would it have a shape? The same shape as the body? Would it walk or fly? And so on.

None of these answers are correct. The scientifically valid answer to this question is: You would have almost everything left! Remove all the cells from a human body and almost everything would still be there. This is because all our muscles, organs, glands, arteries and veins, nerves, sensory apparatus, etc. are mostly made up of connective tissue. This is a noncellular, strong, stringy material with tough fibers in a Jell-o-like colloidal ground substance. This composite material makes up what is known as the extracellular matrix (ECM). This material is composed primarily of long helical collagen molecules in different kinds of ground substance depending on what kind of connective tissue it is (i.e. tendons, cartilage, bone, fat, fascia, etc.). Each muscle, organ, gland, or other structure is like a sponge made up of this material with a layer around the outside and ever finer layers within layers on the inside until down to a tiny layer that enwraps each individual cell. The oxygen, nutrients, etc. that

the blood supplies to the cells must migrate from the capillaries through this matrix to the cells, and the waste products from cellular activity must migrate back out again into the blood or lymph.

Upon hearing this most medical/scientific types say something like: "Oh but of course." And I say: "What do you mean, 'Oh but of course' when just a moment ago you said there was nothing!" The vast majority of both the lay public and medical professionals don't consider the most basic material of our physical reality. If you doubt that this is true, try it out for yourself, put this question to your friends, your doctor, etc.

I am not suggesting that the cells aren't absolutely vital for most of our life functions; they are incredible miracles. But they don't compose most of our bodies, and there are some other vitally important functions that are carried on by the ECM and not by the cells. These mostly involve whole system communications and cellular regulatory functions. But before we discuss these, let's take a deeper look into the physical reality of what we are.

Imagine a human being with all of the cells removed. You would have a person with their overall shape, as well as the shape of all their internal structures, intact. For instance, the brain and the rest of the central nervous system, with its nerves and nerve plexi, would be there in the form of the perineural tissues. This whole structural complex is what I call the "translucent human."

Now it gets much more complicated. Imagine the smallest sheaths of the ECM, those enwrapping the individual cells. There are several types of fibrils that extend from these through the membranes of the cells and are continuous with a system of tiny fibers within the cells themselves. These form a cellular microskeleton and micro-nervous system called the cytoskeleton that orders and regulates the intracellular structure and functioning. It is composed of rigid struts and elastic bands forming a tensegrity structure like one of Bucky Fuller's models only much more complicated. The old model of the cell that most of us learned, with the organelles and various chemicals floating around in the cytoplasm is no longer scientifically valid. The cytoskeleton is unbelievably intricate; within a single invisibly small neuron it may be several meters long. It gets even finer, as some of the cytoskeleton's fibrils extend down through the membrane around the nucleus of the cell and form a similar structure, the karyoskeleton, that interacts with the genetic material, water, and ions there.

All of this, the ECM and the smaller intracellular and intranuclear systems, form what James Oschman Ph.D. has named the living matrix. This is what we are mostly made of, and it is barely recognized as even existing by most people, including doctors and scientists. However a number of diverse fields in the biological sciences have been studying the properties of the ECM under the general heading of biophysics. High powered electron microscopes have allowed us to look into a pretty fine level of these structures for some time, and newer research tools have been developed (like the extremely sensitive magnetometer known as a SQUID for superconducting quantum interference device) that allow us to peek into their electrical activity as well. What we are discovering is an extremely complex microscopic world of electrical currents and associated electromagnetic fields.

Think of the living matrix. This material that surrounds and interpenetrates our entire body is highly ordered. Each collagen molecule overlaps its neighbors by a precise amount in what is called a quarter stagger array. If bundles of collagen molecules are looked at in cross-section they are seen to be made up of helices in hexagonal spirals. It turns out that these molecules are also semiconductors. They conduct electric current throughout our entire bodies, as one system. So at a quantum level there is no distinct barrier between the extracellular matrix and the intracellular realms. Because of the highly ordered nature of these collagen molecules they have all the electrical properties of crystals, including being piezoelectric. Piezoelectric means that any kind of mechanical pressure is converted into electrical current and associated electromagnetic fields. This is how phonographs work. The needle transmits vibrations from the grooves in the record to a piezoelectric crystal inside the cartridge. The sounds on a record are transmitted to the sound system's amplifier as various currents depending on these vibrations. This is a very simple example compared to the multitude of activities going on in living bodies.

Piezoelectric currents in

our bodies are created regardless of whether the pressures are very slight as from the most gentle movement of our blood or breath, or the stronger forces generated by normal daily movements, or the really strong forces from a serious blow. As recently as the 1960's, most scientists thought that electrical phenomenon had no significance in life functions, but were an insignificant artifact of chemical and metabolic processes. Many scientists still give little credence to this area. Back in the 1940's Noble Prize-winning scientist Dr. Albert Szent-Gyorgyi became the honorary father of biophysics by predicting the semiconducting nature of these complex proteins. His ideas were mostly scoffed at by fellow scientists, until later studies proved him to be right.

The spacing and charges between the amino acids making up the collagen are just right for holding the hydrogen atoms of water molecules. Where these long, helical collagen molecules occur there is a surrounding layer of regular, helically-ordered water molecules. When current flows through the collagen the water molecules line up in an ordered manner, forming an insulating sheath around the collagen to protect those signals from interference. These water molecules also have currents passing through them, although the currents through the water are made up of protons (i.e. proticity), rather than being made up of electrons (i.e. electricity). This proticity appears to be a ubiquitous property of life that we barely understand at this point.

It has been discovered that light is also significant in biophysics. Cells emit measurable quantities of light, especially just before dividing. There are also phenomena called soliton waves that consist of energy with laser-like qualities that move through this matrix without becoming disorganized or losing energy. It is estimated that soliton waves could circle the earth through fiber optic cables some 4,500 times before showing any significant degrading. The mystery and complexity of what we are and how we function at this level of existence is evident. Biophysics is in its very early stages where the questions are multiplying much faster than the answers.

One pioneer in the field, orthopedic surgeon Dr. Robert Becker, studied salamanders because they are the only vertebrates that can truly regenerate severed body parts. He learned that while a salamander is regenerating a limb it produces a 9 cycle per second (9Hz) DC current in that limb, and when the limb is completely regrown that current stops. This discovery had a very profound practical application. Dr. Becker had a patient with a broken femur that would not heal. The poor man had been in a hospital bed for a year and the next step would have been to amputate the leg. But when Dr. Becker placed some silver mesh across the break and applied an artificially generated 9 Hz current through the fracture the bone quickly grew back together. This procedure has become commonplace and improvement in bone knitting has been dramatic. These are very weak currents, in this case something like + to 1 billionth of an ampere. The specific strength of these signals is important. Dr. Becker reasoned that stronger currents might be even more efficacious but increasing their amplitude out of their naturally occurring range made them ineffective.

This points up a number of problems that have to do with understanding how healing processes work, both those of regenerating injured tissue and those of recognizing and destroying invading organisms. A number of mysteries remain because much of this healing work takes place out of contact with the central nervous system (CNS) and can't be explained by hormonal responses either. These two are the only communication systems recognized by most scientists. But, for instance, if a child has a severed spine and no CNS function lower in their body, their vital functions still work and their body still grows; their arms and legs get longer, even though the musculature doesn't develop normally because of the lack of exercise. Wounds continue to heal, though perhaps not as well because of the reduced blood flow due to poor circulation. All of this demonstrates that there is a need for another communication system, one that is evolutionarily very old, because it is at work in life forms with less complex nervous systems or other modern adaptations. Earthworms and amoebas heal wounds also. The bioenergetic flow through the living matrix appears to be a perfect candidate for just such a system. Research summarized by Dr. Oschman (see bibliography) is verifying this hypothesis.

Biophysics can now explain much about how acupuncture works. (Oschman, A Biophysical Basis for Acupuncture) Most doctors and scientists accept that it works because many of its effects are verifiable and repeatable. Yet there has been relatively little effort to investigate what this system actually is. It has now been shown that this living matrix is the medium for the acupuncture meridians. Polarized collagen molecules line up along pre-existing energy pathways in the embryo and fetus, and that while invisible to even microscopic investigation these can be measured by sensitive scientific equipment.

Biophysics has aided research on a variety of other subjects. These include processes as fundamental to life as photosynthesis, as lascivious as moths' sexual attraction, and as esoteric as measuring the energy coming off the hands of healers from all over the world while they're in their healing mode. Because the currents generated by these life processes are so small it has been hard for most doctors and scientists to believe that they could have any significant effects. (In the 1940's a similar skepticism led some European chemists and behavioral scientists to ingest relatively potent doses of LSD to prove that a few hundred millionths of a gram of some chemical couldn't possibly have any obvious effect. They found out otherwise.) However our cellular structures are extremely sensitive receptors to electromagnetic fields. One scientist (W. Ross Adey and colleagues, Loma Linda, as quoted in Oschman, Biophysics of Energy Medicine) described the membranes of cells as being like "a field of waving corn, responding to an infinite variety of faint electrochemical breezes that blow along the membrane surface." There is also an amazing interchangeability between chemical signaling processes and electromagnetic fields. These same scientists demonstrated the production of hormonal responses in cells from the application of electromagnetic fields without the presence of the hormones. This occurs because the receptors for various hormones in the body are also resonant antennas that respond to specific electromagnetic frequencies. This equivalency has profound implications waiting to be explored. Many of these findings are presented in the book Biological Coherence and Response to External Stimuli, edited by Dr. Herbert Frolich, and in Dr. Oschman's review of that book.

Is there any practical significance to all of this? Biophysics shows us an emerging, intricate body of knowledge that is dramatically changing what we understand humans to be, how they function, and how they are affected by each other and their environment. Connective tissue can be said to truly connect us, not just physically, internally, but electromagnetically both throughout our body and out into our environment. The implications for improving humans' capacity to heal or even regenerate damaged tissues are truly astounding. See the works cited in the bibliography, especially Dr. Becker's books, for further information on this topic. Currently, given that the living matrix's very existence not even recognized by most doctors, scientists, and complimentary healers, it is not surprising that there are no medical tests or measurements of its vitality and well-being.

Research in biophysics may someday even lead to verifying some aspects of things usually considered far-out such as astrology; consider that Jupiter's magnetic field is 19,000 times stronger than the Earth's. (Please note that I am not saying this will happen, only that it might.)

Here's another interesting angle. What is the major source of electrical energy in the body? (IÆll give you a hint: It isn't the brain or large muscles.) It is the heart. The heart is a very complex muscle made up of crisscrossing, spirally wound layers that generate very complex toroidal (i.e. donut-like) fields in seven different axes of spin. Some researchers believe that these electromagnetic fields control much of what we normally think of as higher brain function. (Winter, Heart Intelligence and DNA Programming) Blood, among its other functions, is a wonderful conductor of electricity that moves to almost every nook and cranny of our body, carrying its charge. If these speculations are true then the heart really is the master gland as Chinese medicine has long claimed.

And how can we talk about the heart without talking about love. Electrocardiograph studies have shown that when a person is feeling love their heart rhythms are more coherent, and with a specific harmonious ratio between their peak and duration. It is thus very

possible that the act of feeling love is in itself good for our health. That isn't a hard idea for most of us to accept, but it is nice to have science come to the same place.

CONCLUSION

Human beings are not what most people think they are in their most simple physical reality. Our image of the translucent human illustrates this other view of reality, that of the living matrix. Many of the undeniable benefits attributed to many complementary healing techniques almost certainly have to do with their effects on this system. For instance I have already mentioned that the living matrix is the medium through which the acupuncture meridians travel. Homeopaths' explanation of the electromagnetic basis of their remedies' healing effects which get stronger as they become more diluted, less physical and more purely electromagnetic, are much more plausible given this worldview. We can now say that when someone touches someone else that they are literally touching from every part, every cell, every nucleus of every cell in them to the same in the other person. The widespread, richly rewarding, healing practice of laying on of hands is now beginning to be scientifically understood. Rolfers are the only therapists I know of who work exclusively and intentionally with this system throughout the body. We now have a mechanism for explaining the energetic changes we so often see in our clients.

Therefore, the recognition of this system, this living matrix, and its myriad functions is a necessary addition to the intellectual armamentarium of both, medical and biological scientists, and anyone else interested in understanding the human condition, if we are to better utilize the resources at our disposal for improving our overall well-being. This biophysical investigation is at a very early stage in its development and much more will be coming clear soon.

BIBLIOGRAPHY

Robert Becker, M.D. *Sing the Body Electric* and *Cross Currents*. These are two books written for the lay public. In addition he has published many articles in various scientific journals. Unfortunately his ground breaking research has mostly been ignored.

Herbert Frolich editor, *Biological Coherence and Response to External Stimuli*, Springer-Verlag, Berlin, 1988. Dr. Frolich is the reigning grand old man of biophysics. This is a compilation of highly technical articles. For the non-biophysicist I would recommend Dr. Oschman's review listed below.

James Oschman, Ph.D. and Nora Oschman have a number of articles and booklets available on biophysics and the living matrix. These have been my primary source of information. They include: *Structure and Properties of Ground Substances* (American Zoologist, Vol. 24, No. 1, 1984) and *A Biophysical Basis for Acupuncture*, published in the Proceedings of the First Symposium of the Committee for Acupuncture Research, held on January 23 and 24, 1993. Copies of the Proceedings are available from CAR, P.O. Box 33, New Town Branch, Boston, MA 02258, or from the author.

How Healing Energy Works

Sensing Solitons In Soft Tissues

Matter, Energy, and the Living Matrix

Physiological and Emotional Effects of Acupuncture Needle Insertion, published in the Proceedings of the Second Symposium of the Society for Acupuncture Research held on Sept. 17-18, 1994 (see address above).

Biophysics of Energy Medicine. This is an excellent introduction to this material.

Biological Coherence and Response to External Stimuli. This is a review and commentary on the book by this title listed above.

Approaching the TOES (theories of everything)

Somatic Recall (Parts 1 &2)

Biophysics of Sound Healing

New Evidence on the Nature of "Healing Energy"

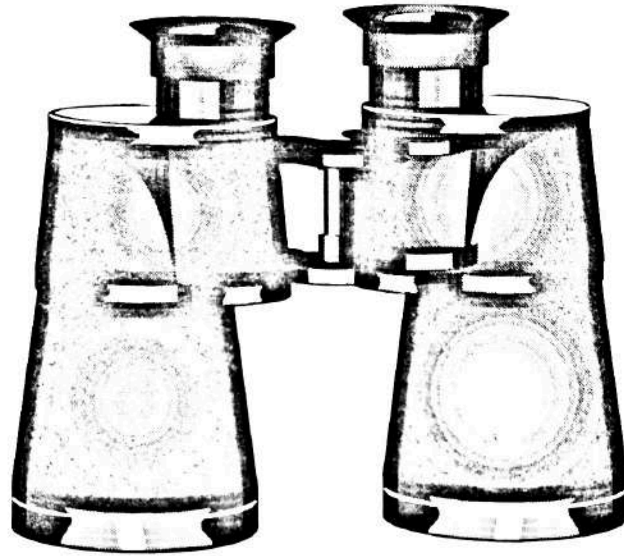
Biomedical Paradigms for Complementary Medicine This is Dr. Oschman's major treatise in this area to date. In it he greatly elaborates on and justifies with extensive endnotes most of the points raised in my article.

Continuum in Natural Systems

For more information or to order contact the authors through:
N.O.R.A. / POB 5101 / Dover, NH 03820 / 603-742-3789
The Rolf Institute also carries a number of Dr. Oschman's publications.

Daniel Winter, *Heart Intelligence and DNA Programming*. Daniel Winter is involved with the Institute for HeartMath. These people are doing very interesting research on the nature of the electrical activity of the heart and its practical significance. They have produced books and two ambient music recordings, Heart Zones and Speed of Balance by Doc Lew Childre, that are specifically designed to stimulate positive heart energy states. Contact: The Institute of HeartMath / 14700 West Park Ave. / Boulder Creek, CA 95006 / 408-338-6803.

Adventures in the Jungle of the Neurofascial Net



by
Robert Schleip
Certified Advanced Rolfer

Fascia and the Brain

It is now years ago that I did some experiments with bodies under anesthesia (as had Milton Trager and Rolfer Bob Hall years before). The results lead me to the conclusion that our classical 'Gel to Sol Theory' was either not accurate or sufficient as a model to explain the immediate tissue response to manual pressure. Obviously the nervous system plays an important role in the maintenance of structure as well as in our myofascial work—and should therefore be included in our theoretical models. Working on a fresh piece of chicken meat or on an anaesthetized body is not Rolfing; something very vital is missing, something which I keep associating with the term 'aliveness', which seems to have to do with active nervous system self-regulation responses ... and which has fascinated me ever since.

Reading an article .... and going to the phone

Nov. '94: an article in the German edition of *National Geographer* gets me excited, especially the notion of a Prof.

Gollhofer that he has clear evidence that there is another muscle receptor of which we know little so far, except that it has something to do with gravity. Plus a little quote from Prof. Essfeld that the vast majority of the sensory neurons which come from the muscles carry information of unknown content; i.e. researchers don't know what they are measuring. That made me curious. How about if this new muscle receptor had something to do with fascia or with our work?

My curiosity finally led me to do something I had never done before: I grabbed the phone to see if I could talk to this Professor Gollhofer in person. I wanted to learn more about those gravity receptors in the muscles. Two days later (through the help of the directory information, his wife, and finally his institute) I got to talk to him. Yes, he could send me some articles of his recent research. And yes, this new receptor function was indeed quite likely embedded within the fascia, he said, since he and his American colleagues are now suspecting that this "new receptor" is basically a new function of the already known Golgi receptors in the fascia.

Golgi receptors? Aren't those the ones that John Cottingham had informed us about that are distributed all over in fascial sheets (and only 'more densely' in the tendinous endings of them), and about which he had suggested to us years ago that they are probably the main input devices for the immediate tissue effects in Rolfing? This new discovery now sounded like "hot stuff" for any curious Rolfer!

European train rides are good for studying

Dec. 94. A long train ride to Cologne to visit a Prof. Essfeld at the sports university there. He is among the leading experts in the study of the so-called "interstitial muscle receptors" which seem to operate quite differently than the "gravity receptors" of Dr. Gollhofer. (I had arranged to visit Dr. Gollhofer in January, but through his research literature I had learned about Dr. Essfeld and about this other research dimension of muscle receptors). Encouraged by the positive response from Dr. Gollhofer I finally called Prof. Essfeld in person and had arranged for a personal visit to his research laboratory in Cologne. Sitting in the train now I review again the stacks of material that he had sent me or that I had copied at his recommendation in the state library. His research deals with something that has already known since some time; namely the existence of so-called type III and type IV receptors in muscles. Sitting in this comfortable train I reviewed again what is written about them in my anatomy text book:

The sensory neurons from the muscle spindles are known as type Ia, those from the Golgi receptors as type Ib (since they are of a similar large diameter). Besides them there is also a type II receptor in the spindles which is considerable smaller, and only little is known about its function. And then there are even finer sensory neurons— type III the myelinated "fee nerve endings," and type IV which are unmyelinated. These are now commonly called *interstitial muscle receptors*, and about which almost nothing (!) has been known concerning their function until recently. The new research material I

Fig. 1: Proportion of the amount of neurons in a typical muscle nerve:

motor:	about one quarter
vasomotor:	more than one third
type Ia, Ib, II: from spindles and Golgi receptors	less than 10%
type III & IV: from interstitial muscle receptors	30%

now had in my lap was quite intriguing: it pointed out that we have much more of those mysterious type III & IV neurons in our muscles than of the more common types Ia, Ib and II all together. (In numbers: ¾ of all the sensory neurons in a muscle belong to this group of interstitial receptors...of which we don't know much at all. See Fig. 1).

It is now believed that the main function of the interstitial muscle receptors has to do with 'cardiovascular reflex control'. They seem to be excited by noxious and non-noxious mechanical, thermal, and chemical events in the tissue and lead to changes in arterial blood pressure, heart rate, cardiac output and venous tone. The few research data that deal with which type of stimulation leads to which cardiovascular response, are very complicated, contradictory and confusing. Nevertheless the current interpretation is that evolution has established these reflexes as a means for regulating and monitoring the cardiovascular responses to muscle activity.

Interesting detail for us Rolfers: some of the type III receptors are already excited by 'light touch with a painters brush'. Which means that even light manual work can lead to local and general metabolic changes. *"Yes,"* I think while sitting in this train, *"that's interesting ... but not so revolutionary either."* So I wonder if this visit is really worth it, if this man's work has anything to contribute to our field of Structural Integration. *"Nevertheless he's a person,"* I think, *"who is on the leading edge of neuromuscular research, and I could ask him some of my the dozen questions I have written down in the last few days. And what about the research that he did with astronauts in weightlessness a few years ago? Would that have any relevance to our field?"*

Half a day later ... same long train ride back to Munich. My notebook is filled with hasty sketches, my brain is full, stomach empty, but I am pleased and excited. It's been a very inspiring talk with a very knowledgeable man. Many new insights, information, and new questions that I am now typing into my laptop ... while gently rolling down the Rhine valley and waiting for my meal and a nice glass of wine in this InterCityEurope dining compartment. Here's some of my notes:

■ The type Ia & Ib receptors (in the spindles and Golgis) don't just register length and stretch, but also "unexpected shocks" to them. *Aha, so slow stretch is not the only thing that might trigger and excite the Golgi receptors in our work. Maybe sudden jerky movements that some osteopath make could lead to the same result.*

■ Fascia is indeed very richly enervated with nerve receptors. Mostly with Golgi receptors (type Ib), which are more dense around the tendinous endings. Furthermore there are (as in all other muscle tissue) lots of those mysterious interstitial receptors (type III & IV) which are located mostly along the small vessels, plus some Ruffini and Pacinian receptors in the fascia.

■ A revolutionary new insight from research with spastic people: the normal nerve impulses are often there, but they seem to be limited by 'connective tissue restrictions'. Recent research has apparently shown that spasticity of the feet for example can often be avoided by putting the feet into artificial dorsiflexion early on. *This is indeed a reversal of what I had been teaching all these years. Like many others I had assumed that the spasticity in cerebral palsy children was mainly a neurological problem, and had often referred them to a good Feldenkrais practitioner instead. I would not do this anymore after this information ...*

■ Quote from Dr. Essfeld: "Our muscular system is much more than just an apparatus for movement, it is quite possible our biggest and richest sensory organ." He justified this by showing that it contains many more receptors than our skin, eyes, or an other sensory organ. Our 'muscle sense' conveys much more information at a time than any other input or output device in our body.

That sounds almost like the opposite of what Peter Schwind was humorously suggesting in the 1992 Annual Rolfing conference (and to which most of us had been applauding at that time) i.e. that "muscles are basically pretty stupid."

■ This one should be interesting for Hubert Godard, who often differentiates in his language between a more alpha-motor system directed movement style and what he calls 'gamma movement', or

'gamma touch' (which, as far as I understand, seems to be usually more desirable for the client and the Rolfer). In a recent experiment they switched off all the pyramidal (alpha motor) connections in monkeys. Yet to everybody's surprise the monkeys rarely exhibited any motor deficiency or any visible changes in their movements. It was only with some "very fast and precise finger-movements" that the researchers saw any difference. Their conclusion: alpha and gamma motor system probably are always cooactivated to the same degree in all our movements, no matter how consciously we plan them or do them. *I must admit, I myself liked that "more scientific" language and differentiation in Hubert's work between alpha and gamma movement styles very much. But after this information I would feel as embarrassed to use it now as I felt about my (and several other's) distinction of "left brain" and "right brain behavior" in the eighties (which drives most neuroscientists crazy who now know better).*

■ A recent Swedish experiment demonstrated that a higher potassium concentration in the muscular blood supply leads to a higher excitability of the alpha motor neurons in that region. Conclusion: there are at least "some" reflex loops from the interstitial muscle receptors to general motor control.

Part of myofascial work might involve triggering some of those myriad of fineinterstitial muscle receptors which then could lead to a tonus change of some related muscle fibers.

■ Dr. Gellhorn's research with an astronaut during a space mission confirmed his previous experiments on earth, namely that some of the interstitial muscle receptors are getting stimulated by 'local changes in interstitial fluid volume'.

Not bad for us. Then a Rolfer's elbow could stimulate them too, I suggest.

■ A great one for Peter Schwind and all other fans of myofascial visceral work: according to Dr. Essfeld the suspensory ligaments of the visceral organs are "very richly enervated by sensory receptors." *(Yet he confirmed my understanding that unless they contain some red muscle fibers, e.g., like the Treitz ligament, most of those suspensory ligaments do not have any ability to actively changing their length or tonus within a few minutes).*

■ The type II receptors (or secondary spindle endings) are probably part of the so-called "flexor reflex afference system" which organizes the withdrawal of a stimulated leg together with an extension of the other leg. Which means that they are probably not used for the coordination of normal movements, like the type Ia or Ib for example.

■ The development of muscle spindles occurred only with land animals during evolution. Phylogenetically the polysynaptic reflex coordination came first, and only later the monosynaptic one appeared. For this reason the current trend in motor science is to associate the spindles with the "antigravity system." This is supported also by the fact that our antigravity muscles are especially densely equipped with spindles. And even more interesting: Within the animal kingdom it is human beings whose musculature contains the highest proportion (40%) of those spindle-rich antigravity muscles.

How Prof. Gollhofer Got Interested in Darrel Sanchez' Tuning Board

January '95. Several weeks later I am sitting again in a train and typing in my notes from a very inspiring talk by Prof. Gollhofer, the man to whom I had talked on the phone about his research on the discovery of new mechanoreceptor functions that seem to be related to gravity. Again, previous to my visit I had studied several of his articles and went into the state library for some additional groundwork to prepare me. He was indeed very pleased by my interest and spent a good three hours with me in his laboratory. Part of that had to do with the fact that I told him about the work Darrel Sanchez and several other Rolfers are now doing with the new "Tuning Board" (the client stands on a board which has thick foam underneath in order to allow constant shifting of the board in response to the balancing pressure of the feet). He was very interested and excited about it, since most of his recent research was done with people standing on platforms and measuring their responses

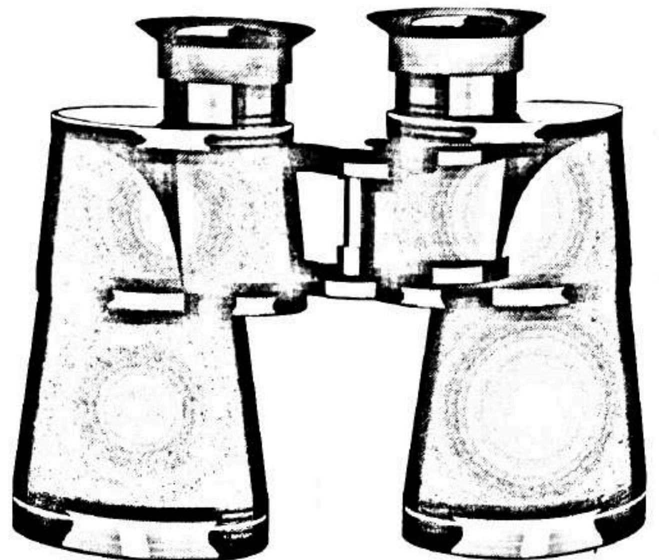
when the platform suddenly moves. Let me explain.

Earlier in the eighties, scientists studying the regulation of upright posture had already found that the leg muscles of a person standing on a platform which suddenly tilts forward or backward (i.e., rotation around a transverse axis) show balancing responses that are so fast that they can only be regulated by monosynaptic reflexes. Yet it was unclear which receptors are involved in that. Then Dr. Gollhofer and his colleagues found that when people stand on a treadmill which suddenly moves (i.e., translatory movement forward or back) the muscular response takes about twice as long. This second reaction pattern to a moving support surface involves a polysynaptic reflex loop that could reach as high as the medulla. Both reaction patterns work independently whether one has the eyes open or closed. Further research revealed that it also worked when the soles of the feet were anaesthetized, so the foot's pressure receptors could not be utilized to maintain balance. The really interesting question then came up: what tells us so quickly about the position of our gravity center in relation to the support base? There are apparently some 'gravity receptors' below the head which transmit information about the projected position of our body's center of gravity in relation to the feet.

During the last decade a research team under Pierrot-Deseilligny in Paris and Nashner and Prochazka in the United States have produced a lot of research in this new field of gravity related receptor functions. In some of his most intriguing experiments, Dr. Gollhofer studied these balancing reflexes in ten subjects who were totally immersed in water in order to simulate weightlessness (with individually adjusted weightsuits and snorkels). Here their bodies were pulled against a platform under their feet (both in a vertical position as well as in a horizontal position). When the platform suddenly moved forward or back—in either a rotational tilt pattern or in a translatory movement—he measured the responses of their leg muscles. Again he found the same muscular reaction patterns with the same short latencies as within the normal gravity field.

Meanwhile through some recent animal research it has become evident that it is not a totally new receptor type which is responsible for this, but that it is the Golgi receptors in the fascia of the muscles that can act as gravity dependent receptors. Depending on outer circumstances they can switch over from sensing stretch to become sensitive receptor for these two different balancing adjustments. My question to Dr. Gollhofer was then: who tells those Golgi receptors when to work as gravity receptors, and in which pattern? His best guess: presynaptic information (or presetting, or presynaptic inhibition) from supraspinal centers; i.e. the brain tells them when to measure what.

To be continued. Part II will deal with the latest information on 'thixotropy' or short term plasticity of fascia to mechanical pressure.



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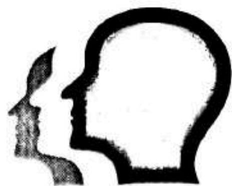
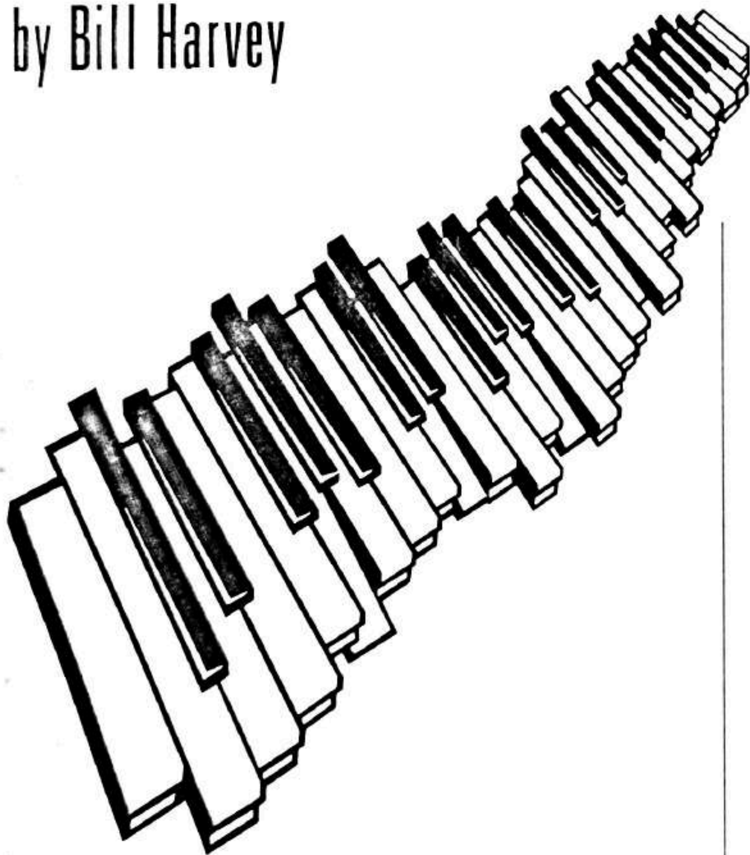


Interview with Tessy Brungardt

February 1, 1996

by Bill Harvey



Editor's Note: The People Magazine *article was published in the February 26, 1996 issue.*

BH: I recently heard on NPR about the phenomenal recovery through Rolfing of the great pianist, Leon Fleisher, who for many years was unable to use his right hand, and I found out through the grapevine that you were the person who worked with him. My first thought about this was, "Finally!" I was thinking of a very prominent person who actually got hit by a car and was on his death bed, showing no signs of improvement until he got Rolfed. But when he had recovered and went on television, he gave all the credit to God, which is fine, but he didn't give Rolfing one iota of credit.

TB: Oh isn't that amazing?

BH: So here's a situation where a famous person gave Rolfing credit for his recovery.

TB: Yes, he's really willing. He's a gracious person and willing to let it be what it is.

BH: Did you have any idea when you started working with him who you were working with?

TB: I sure did. I had Rolfed his wife and she told him to just maybe give me a try, even though he's tried everything. She said, 'Well you just might want to try this person'. And so he came. I knew he was going to be coming. And I knew something about his difficulties. I didn't know, of course, when he came in how it would turn out. It was just like, well, why don't you come in and I'll do my best job and then we'll see where it goes.

BH: What was your strategy, did you concentrate on the arms, or did you try to do...

TB: I thought maybe I'd work on some other things, but the thing is that his arm is the part that's not congruent. So I just have been working to get that to match the rest of him better.

BH: He said in the interview that the progress was really quite slow, so you worked his arm repeatedly. Were there always signs of progress? Were there discouraging moments for either of you?

TB: Each time you could tell something was different. And each time going along, almost every time, there's some incremental difference. But it is a very slow thing. After all, his arm hasn't worked for thirty years, and that was thirty years in the making, so we're looking at a sixty year old problem here. It's a wonderful exercise in the stately pace of healing... acknowledging that small steps are significant. And he's wonderful because he considers it all to be a process and it's an exploration for him. Of course he's thrilled that it's working, but he really is just exploring. He takes whatever little bit of possibility he gets from each Rolfing session and goes to the piano and works with it. And we do not only manipulation, we do some movement work and talk about the mechanics of how to use your arm and shoulder in relationtionship to the piano. And he takes whatever bit of information or little bit more possibility and develops it. He's fabulous to work with.

BH: Have you heard a recording of him playing since your work with him?

TB: I have.

BH: Must be amazing.

TB: It really is, it's heart-warming, very heart-warming. It's thrilling to see the possibility of what we can do. Somebody asked me, 'Isn't it wonderful to help someone like that?' and I said, 'yes it is and I've helped a lot of people, but this one is famous'.

BH: Right.

TB: And gracious. It's wonderful to be able to help anybody like that. I'm grateful.

BH: Do you want to talk about what you've done more, is there a language yet to discuss what you've done? The reason I ask the question that way is because of the interview I got a client right away of a jazz pianist, a very fine jazz pianist who basically, his playing has come to a halt.

TB: Actually, this is happening all over the place. Rolfers are getting pianists all over the place, and other musicians.

BH: Right, and what I can say is that after working on him one time he was in more pain than before.

TB: How long did it last?

BH: Well this only happened two days ago so I'm not the least bit discouraged, but he may be. And as I try to talk him through his concerns, I find that I really do know exactly what I am feeling and I really do know what has to happen next, but I'm not so great in a verbal vocabulary, I can show him.

TB: On a number of occasions, I've had my anatomy books out with Leon and showed him exactly what it is I'm doing and explained why, and just the mechanics of how the arm works. and why I do what I do. But one of the things that I've found very interesting about working with him is how very specific you can

be, layer by layer. What I've found, and of course I have a number of pianists now in my practice, is that there are significant motion restrictions in lateral movements of the wrist and rotation between the ulna and the radius. It's not like I'm trying to cure his conditon, what I'm trying to do is re-establish normal function and in the process of that, the healing that takes place. So I talk a lot about what the normal function of an arm is and then how that applies to the way we relate to the piano. I don't know if that helps you, but I certainly have discussions about that with the pianists all the way from sitting and how do you get a base of support, to what are the mechanics of how your arm comes from your shoulder and letting your shoulder drop while you're playing and coming all the way from the whole shoulder girdle instead of trying to make the lower arm do all the work.

BH: The analogy I used for my client, since it became clear quite quickly, is that he did the equivalent of taking a hammer and banging it on the board and then holding it down not allowing it to bounce back up so that all the force of his playing loudly...

TB: Went right up into his arm.

BH: Right, it got stuck at the elbow, got stuck at the shoulder. I'm a pianist myself.

TB: Yes, me too.

BH: Oh yes? Cool.

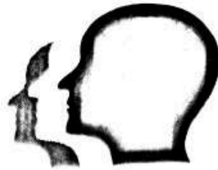
TB: So, in coaching the client I focus on the stately pace of healing, because once the door of possibility opens, its normal to want to be like a wild horse running through it. Of course you know all of this from your own practice.

BH: He said in his interview that he had been Rolfed fifteen years ago and then he went on to say that the Rolfing of today was really quite different from that, which was something that I'm sure Rolfers all over the country were delighted to have him say out loud.

TB: Have it publicly stated.

BH: Right, by a reliable source. But tell me, when you were in there, did you feel like you were contacting the Rolfing that had already happened or...I know this may be sort of a mystical question in a sense, but did you feel like you were building on anything or not?

TB: I didn't feel like I was so much building on something in this case. There are certainly times when I really feel that in people. But also, I haven't worked on his whole structure. We're coming to that, we're gonna get to it. It's not that both of us don't see what else there is to do, but his arm is primary right now. So when I get into the other parts that there are to work on, I may get some sense of building on something that's there, but I haven't had the opportunity yet. To quote Leon, he said his arm was 'petrified rock'. If that's what his sensations are, and I'm inclined to agree with him, it's hard to build on petrified rock. I think that his experience with Rolfing before points to one of the traps that we get into. It's kind of a double edged thing. We're so deeply associated in the culture and in our own minds with a ten session series, that it becomes like a formula. We sometimes do not address the human in front of us. So we get in our ' ten box', and it traps us in a way that doesn't serve the person that's there with us. But then again, to get completely out of that box may lead us down our own narrow path because the recipe associated with the ten series format, does keep our vision broad. I don't want to say that the recipe isn't wonderful, it is, and I teach it when I teach a basic class, but it's important to know that Rolfing is more than ten sessions, period. And I think that Rolfers fall into that trap sometimes and I think that's part of what happened with Leon. Of course you have the considerations about how ready a person is, but I think he got really a pretty standard ten series, which probably helped other stuff in his body, but it sure didn't move his goal along. I want to encourage Rolfers to understand the structure and the logic behind what they're doing so that they can dance with all the possibilities.



BH: Well that's nicely said. What has happened with your practice since this success story?

TB: My practice hasn't gone up so much, it's nice and steady and always has been. What went up was my phone bill; people from everywhere were calling me up wanting to know where they could get a Rolfer.

BH: Were you mentioned in *The New York Times* article?

TB: No.

BH: And you weren't mentioned on the radio, so how did people know?

TB: Well there are a couple of ways. One, Bill, is that *Johns Hopkins Magazine* in November, did this fabulous article about Leon Fleischer. It's called "Leon Fleischer's Grand Detour" and they have about three paragraphs about Rolfing and me. That kind of started it off. It's a beautiful article, and people write to Leon's publicist, and to Leon, and he gives them my name. So he's gotten a lot of mail. Last week, a big magazine called up to do an article on Leon and then they called and interviewed me too. It was *People Magazine.*

BH: No kidding.

TB: They said it was coming out in the next week or so. I looked at my grocery store shelves tonight and I wasn't in the one that came out this week, but Rolfing is going to be in *People Magazine*.

BH: Oh my God.

TB: So I hope it will spread throughout. Isn't that amazing?

BH: Totally amazing.

TB: It's great for Rolfing and very thrilling, but sometimes the real pleasures are smaller. *People* [Magazine] called and left this message on my machine and my son was standing here in the kitchen listening to me listen to the message and the look on his face when he realized *People Magazine* had called his mother. He's thirteen so he's cool, but still it was like '*People Magazine* called you?' 'Yeah Skyler.' So that was almost worth the whole trip right there. So look in your local grocery store.

BH: Will do.

TB: For an article about Rolfing. Of course you know how it is, it might be just some little side bar, but that on top of *The New York Times* this gets us out to a lot of places.

BH: Well, thanks. Every now and then it's a home run, you know.

TB: Well in some sense, it feels like it's just karma that Leon and my paths crossed. The fact is I've wanted to Rolf him for years, 'cause he's a Baltimore guy and I've known about him, and didn't know how I could do it, and have held it in my mind for years that I would like to do that. I'm glad that he showed up now because I'm not sure I would have had the skill earlier. All the timing came together, and in some sense I feel like I got on the tail of a star. All I did was my best job, just like with everybody, and it went off like a comet, and I'm riding along behind it.

Fresh Air with Leon Fleisher

Interviewer: Barbara Bogaev

What follows is an excerpt of the interview with Leon Fleisher which aired on National Public Radio's *Fresh Air* and was broadcast on January 25, 1996. For a tape or transcript of the entire interview call 1-800-934-6000.

BB: My guest is pianist Leon Fleisher. Last year your wife introduced you to a person who practices the technique of Rolfing. What exactly is Rolfing?

LF: I'm not a doctor, but it is a way of dealing with, I guess the best description would be deep massage in very, very, slow motion, that deals with the connective tissue that surrounds the fibers of the muscles, of the tendons, of the tissues that lie under the skin. I think the premise is that as we go through life, we become more fixed and contracted in our posture, in our movements. Every little time we bump into a piece of furniture or something, that leaves an imprint, that leaves a mark on our tissue, on our fiber, and just alters a little bit, our stance, our posture and Rolfing returns us to a kind of symmetry, to a kind of balance that is inherent in the body, and that frees us up and in my case, it deals with helping decontract overworked muscles and tissue.

BB: What was your reaction when she brought the whole idea up? Are you always game to try another remedy or had you just had your fill of the whole alternative healing scene?

LF: Oh, there were many times when I had had my fill and I would get no end of suggestions, always well meaning to try this or try that, or I know this healer here and there have been magnificent results with that person or whatever. Actually I had been Rolfed about fifteen years ago. Since then it has become far more flexible and far more applicational if I can use that word. They are willing and do attack specific problems and stay with those problems.

BB: And did your fingers, your hand respond very quickly?

LF: Slowly... if one can extract lessons and give advice from these experiences, one needs patience, it takes time. The body is extremely willing if not eager to recover its balance, to heal itself, but it does take time.

In Review

Review of Rosie Spiegel's Lessons in Embodiment: A Four Cassette Series

by Gael Ohlgren

As in her book, Bodies, Health and Consciousness, Rosie Speigel brings clarity and throughness to her subject matter. In fact, many of the same concepts of Bodies, Health, and Consciousness are conveyed through this efficient, audio medium. Rosie's delivery is well paced and professional.

Tape One:

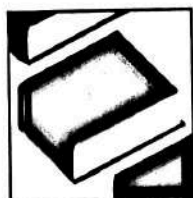
A) Lessons in Embodiment/ B) Meaning of Embodiment. Starting with an introduction of Rosie and her career, Ms. Spiegel then takes over talking about the value and meaning of embodiment. Primarily, she seems to be targeting an audience of those who have somatic troubles or are unhappy with their relationship to their own bodies. Yet, there are many statements which speak to habits and attitudes to which even the somatically sophisticated fall prey.

Tape Two:

A) The Healer Within/ B) The Pain Free Body. This tape gets to the heart of the matter. Common sense profundity prevails as Rosie details the crucial role that attitudes play in the healing process. As well as discussing conducive attitudes, Rosie also troubleshoots common pitfalls of both health practitioners and clients. Her wisdom could apply to any professional practitioner from doctor to masseuse, and to anyone seeking professional health guidance from another.

Beautifully stated Rosie-isms abound. For example, "What we resist persists." To give you a teaser, Rosie presents us with a riddle. How is it that remaining aware of self does not detract from our ability to focus on an activity or occupation, etc.? For an answer, you will have to listen to her tapes.

Another provacative concept states that one's relationship with time determines one's relationship with self.



The doing versus being or action balanced with allowing dilemma is addressed eloquently. Rosie suggests that curiosity is the best antedote for judgement. Perhaps, these one liners will give you a sense of the content.

Tape Three:

A) Dance and movement/ B) Yoga as Somatic Education. Side A extols the virtues of dancing for pure joy or just for the sake of moving. Rosie wonders out loud why some people are compelled to move while others continually fight sluggishness. In turn, I was led to wonder what exactly inspires people to change embodiment patterns. Would a nonswimmer ever be enticed by the invitation, "Come on in. The water is fine. Besides, swimming is good for you?" In other words, those who love to dance do not need to be convinced, while those who do not are unlikely to be stirred by impeccable logic. Nevertheless, this part of the series might serve to rekindle an old spark or move dance up the line of priorities.

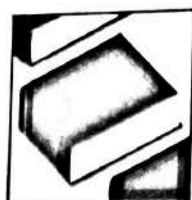
Side B brings Rosie's expertise to the fore. As Rosie takes you into the world of attending to self through the practice of yoga, it becomes self-evident that a deeper, more wholesome somatic experience will emerge. Lessons in patience, allowing present time focus and appropriate pacing, abound every step of the way. Her comments on working with injury or other physical limitations are particularly elegant.

Tape Four:

Yoga Stretches, a guided exploration. Rosie guides us into yoga asanas with clear directions and excellent self-engaging questions. Ironically, it is the very thoroughness of information which is constantly being delivered that makes it difficult at times to "drop-in" to the experience. Yet, by the completion of this tape, it is obvious that a somatic event has occurrred. This tape could be used over and over again.

I admire Rosie's creative productivity. Her ability to elucidate how one transforms a stuck somatic situation into a blessing of self-discovery and joy is a wonderful contribution. This tape series is a natural both for clients who persist in a passive, discouraged mode, as well as those who wonder what is their next step. Meanwhile, for all of us, they serve as a wake-up call to stay present and pay attention.

Lessons in Embodiment can be purchased from the Rolf Institute for $40.



Trauma Energetics A Study of Held-Energy Systems

by William M. Redpath

370 pp., Barbary Press, 02173-8025 ISBN 0-9467730-0-7

Review Essay by R. Kerrick Murray

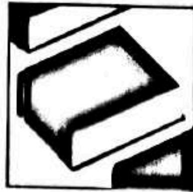
Trauma Energetics, A Study of Held-Energy Systems, introduces the visionary ideas of its author, William Redpath, who shares his insights and theories on the dynamics of traumatic phenomena and the nature of awareness. From an autobiographical base, Redpath traces his interest in the subject of tragedy and its relation with traumata to his present method of work, an experiential technique for somatic practitioners and clients which focuses on the resolution of trauma within mind-body fields. Defining the "trauma mechanism" as the neurochemistry which suspends life-force and rigidities the mind-body, he formulates the existence of "held-energy systems," the residual echoes of trauma mechanisms which remain after an organism has regained mobility. This disturbance of life-force, Redpath postulates, appears to control denser levels of manifestation such as muscle tissue, neurophysiologic function, etc.

Redpath draws on his background as a Rolfer, scholar, and student of awareness to discuss traumatic patterning in a larger context, encompassing literature, the contemporary arts, media, societies, politics, religions, and spirituality.

The author is keenly aware of the inherent difficulties encountered when attempting to describe with verbal formulations events which largely defy our current language structures. Accordingly, he states that his primary concern is with the experience of energy and not the words which describe it.

Working from a foundational premise that life-force is compassionate and erotic (not necessarily orgasmic), he postulates that held-energy is post-conceptual in nature and reveals itself within the system as the phenomenon he labels "black." The black to which he refers is not necessarily the black of achromatic color value, but rather the black of physics: the theoretical perfect absorber of all incident radiation (i.e., vibration, movement, etc.). To internally scan for the black and to subsequently track a sensate experience of it through form, texture, and a minimum of verbal narrative allows natural intelligence (termed "brain") to successfully unlock the traumatic patterning of held-energy, promoting the manifestation of the apparent highest vibrational state, beyond color, which he terms "clear."

The key to regaining a state of being "clear," Redpath argues, is to provide an environment whereby a practitioner and client can work together and minimally intrude upon the natural ability of "brain" to "follow the



directions on the package" in its own way. Reductionist rationalizations, interpretations of meaning or symbology, and physical interventions are viewed as potentially re-traumatizing influences and to the extent possible are avoided. No hypnosis or trance modes are used. Working in a conjoint meditational ambiance, the client remains clothed and supine, with the practitioner (usually) holding the suboccipitals lightly and without intention. Neither movements nor emotions are encouraged: the practitioner functions as an intuitive secretary or coach, guiding the client and monitoring neurochemistries in the search for the "black." The goal or main business of trauma resolution, Redpath states, is to get "brain" to pass through a view of body to a renewed perception of its essence as energy.

Included within the book is a full session transcript with commentary of an energetics session conducted by the author. He promises to compile a body of such transcripts for future publication as an educational aid for his work. *Trauma Energetics, Held-Energy Systems*™, is a trade/service mark with registration applied for.

He concludes with commentary on therapists and the subject of abuse, discussing his perspective on the relationship of touch and sexuality, the nature of consent, sexual energetics, and the future of legislation in therapeutic lineages.

Within the larger field of somatic practice, I can think of no other lexicon that has been as difficult to perceive and develop as the vocabulary of the "energetic." Consensus, even within schools of thought, is difficult to achieve and vague terminology abounds. In my opinion, Redpath constructively contributes to the ongoing discussions concerning the "energetic" by narrowing the inquiry to focus on the "trauma mechanism" and their potential relationship. In seeking a deeper realization as to what an experiential, spiritual neurochemistry might feel like, he grounds his search by inventing a collaborative process which may possibly determine what it is not: such an evolved neurochemistry does not have "held-energy systems" within its body-mind field. Eventually, this approach may prove more useful than the dialogues about what the "energetic" is. In questioning our concept of the unconscious as potentially the greatest barrier preventing entry into the "energetic" realms, he challenges our assumptions, revising the models of Freud and Reich to include his intuitions on life-energy. In arguing that language structure (as we use it) perpetuates a damaging status quo, he provokes thoughtful reflection. If the structure of language creates the reality it perceives, how might we change that structure to beneficially alter the reality?

A major flaw in the book, in my opinion, is the apparent lack of critical editing. The reader is duly warned that the book has a varied structure, and the friendly reader is invited to browse and overlook. However, by adopting a style of writing that resembles stream-of-consciousness, the resultant unsubstantiated statements and undeveloped arguments place a burden on the reader who may not be certain about what he/she is to consider relevant, or indeed what is being discussed. To Redpath's credit, he provides a glossary that serves as a compass for the reader seeking orientation. He assumes that the reader is familiar with classical western literature and popular (North American) culture, and may thereby unnecessarily limit his potential audience. The use of metaphorical devices can hint at intuitive perceptions, and Redpath uses them often in his writing style, with mixed results. The reader does well to bear in mind that the intent of Redpath's inquiry is experiential in nature, and is not in intellectual abstractions, however poetic or appropriate they might sound.

Profound ideas are often quite simple. I surmise that William Redpath has formulated a simple idea that may well prove to be far-reaching and powerful in its implications. With "black" as his lodestone, he is exploring the post-conceptual and the preverbal, seeking to unlock "held-energy" and thereby reveal something of true wonder and beauty about life. If his method is correct, the intentional interventions of somatic practitioners will be transformed significantly to acknowledge this new paradigm. The premise is worthy of direct inquiry and further articulation.

"Traumatic Energies" may be purchased through the Rolf Institute for $19.95.

Education

Pelvic Torsion and Structural Alignment in the Gravitational Field

by
Robert Schleip
Certified Advanced Rolfer

While I am usually very sceptical with any kind of "structural logic" in our work and prefer to think instead more in terms of nonlinear system dynamics within the complexities of human motor organization, there are few exceptions in which I have come to appreciate linear mechanical relationships. Most of them deal with gravity and its long term effect on human structure. The following article, taken from a recent class handout of mine, is one example.

In the practice of Rolfing as well as in several other methods of bodywork it is not uncommon to experience the following scene: the practitioner discovers a pelvic torsion in the client. After successfully unwinding it (with usually either direct or indirect technique) the pelvis does indeed look more balanced on the table. But when the client stands up, the trunk and spine are now suddenly less well balanced than before; sometimes an underlying scoliotic pattern becomes more apparent. The question then comes up: Has the practitioner done something wrong, or something disintegrating to the structure? Or is it an acceptable sign of a necessary "healing crisis" (like

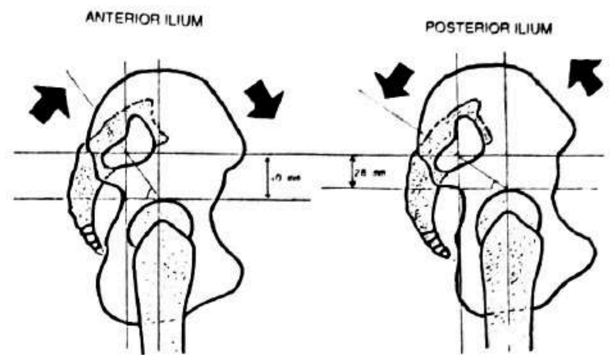
in homeopathy and some other natural healing practices)? Or is it a sign of "a beautiful unwinding" of some hidden deeper patterns that are now surfacing and which we gladly appreciate since we can now work with them? This article will explore some anatomical relationships in order to help us to decide.

A pelvic torsion is usually defined as an intersegmental pelvic pattern in which one ilium is tilted more anterior in relation to the other. Another way to say it is that one ilium is tilted more anterior and one more posterior in comparison with each other. For reasons not totally understood by me most torsions are - according to several published studies—"right anterior" (i.e. right ilium anterior and left ilium posterior in comparison with each other). When the ilium tilts more forward this brings the anterior superior iliac spine (ASIS) more anterior & inferior (and in most cases also more lateral). The ischial tuberosity will go more posterior and superior (and in most cases more medial). The posteriorly torqued ilium is in the opposite position. So far so good.

Let's now look at the relationship between the acetabulum and sacroiliac joint. Their distance from each other won't change of course. But what can change is what I call "the vertical distance" between them; i.e., the difference in height between them. As you can see in Fig. 1 **an anterior rotation of the ilium will increase the vertical distance between the sacroiliac joint and the head of the femur.** A posterior rotation of an ilium will decrease the vertical distance between the sacroiliac joint and the caput femoris. (Hint: Please check the meaning of the last two sentences—and especially of the words *"vertical distance"*—at Fig. 1 before you continue reading. Otherwise you run a considerable chance of missing the main point of this article.).

Imagine now some outside force (e.g., an accident) putting such a pelvic torsion into the body. How would this influence the overall alignment of the person standing in the gravitational field? Obviously the positión of the sacrum will be influenced by this. The sacral base will be moved higher on the side of the anterior rotated ilium. In other words the base of the spine will be tilted towards the side of the posterior rotated ilium. Supposing that the sacral base can be either seen as an important support

Figure 1



Measurements and details for this drawing adapted from W.P.Ackermann Die parietale Diagnose, Stockholm, 1983

for the spine or at the least as an important indicator for the pelvic support for the spine above, we will now quite likely see a trunk pattern with a vertical alignment less good than before. This is of course all based on the assumption that the height of the top of the femur is the same on both legs.

Now imagine a healthy person standing with her pelvis on top of two legs where one head of the femur is higher than the other. The reasons for this could be many: a higher arch in one foot which might be more supinated than the other, or for example a slightly different length of the femur or tibia, the two longest bones in the body (be it because of the fact that bone growth rates are never one-hundred-zero-zero-percent exact and symmetrical—just look at the unsymmetrical faces of people; or be it because of a previous fracture of one leg, or maybe because of a higher arch in one foot). A pelvis with no previous torsion between its ilia will be tilted now with the acetabulum downward on the side of the lower femoral head. This will tend to tilt the sacrum to that side and make it quite difficult for the person to maintain a balanced trunk. One way to cope with it (and not an unintelligent one) will be to drop the sacroiliac joint a bit lower on the side of the higher acetabulum and a bit higher on the other side in order to decrease the sideways tilt of the sacrum. We know from orthopedic measurements that a lot of weight is transmitted through those joints, therefor such a compensatory torsion will be quite easily achieved if the person tries to keep her trunk balanced as evenly as

possible over her legs. The weight of her trunk will simply tend to rotate one sacroiliac joint further down. Looking at Fig. 1 we understand that this will move the ASIS forward on one side and backwards on the other, but it will also be quite successful in horizontalizing an important base of support for the trunk.

What follows is quite simple. If a person is not complaining of any sacroiliac pain and if our main job continues to be to improve her overall alignment with gravity, then we should look at the sacral base in standing before derotating a pelvic torsion. If in a standing client the sacral base is higher on the side of the anterior rotated ilium, then it's probably useful for us as structural integrators to work on getting the torsion out of the pelvis (Fig. 2). **If the sacral base is lower on the side of the anterior rotated ilium then it is probably a good idea to leave the torsion as it is, since gravity as the therapist already has been doing a better job than we would (Fig. 3).**

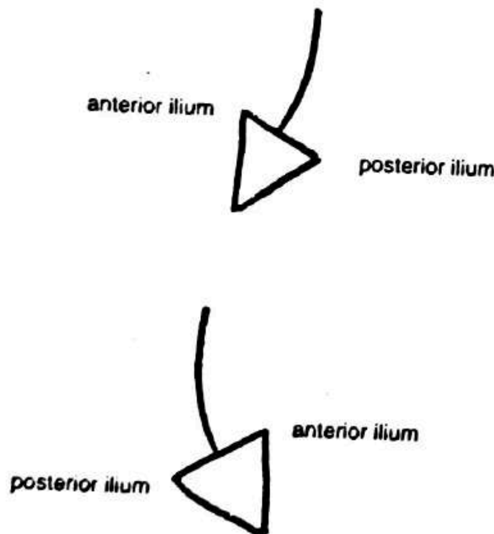
I have watched this several times, even with several advanced bodyworkers that I know in our field as well as in osteopathy, chiropractic, etc.: A practitioner discovers a pelvic torsion in a client lying on the table and works on getting it out. So the pelvis looks more balanced aesthetically to the practitioner when lying on the table. But when

Fig. 2

(Posterior view of sacrum & lower spine)

Situation A:

Sacral base higher on anterior lium side



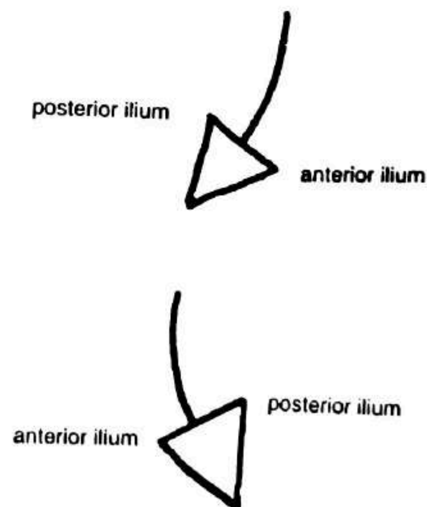
Unwinding of torsion useful.

Fig.3

(Post. view of sacrum & lower spine)

Situation B:

Sacral base lower an anterior ilium side



"Gravity as the therapist at work!"

Leave the torsion alone.

the client stands up her upper body is now less balanced than before. Sometimes the practitioners then start to work on the trunk in order to correct it, sometimes they call it a healing crisis, or even worse *"a beautiful unwinding."* But they simply forgot to relate the pelvic torsion to gravity before trying to correct it, and by doing so they disintegrated the body actively themselves. Luckily "gravity as the therapist" will be usually quite successful to retain the previous pelvic torsion after a few minutes of walking around or after walking down some stairs. So I don't think that any serious damage is usually done in those manipulations. They are simply a waste of time and energy.

What are the best ways to diagnose a pelvic torsion and to diagnose the position of the sacral base? Put a finger on the ASIS and another on the Posterior Superior Iliac Spine (PSIS) of the right ilium and compare their height in a standing client. (Note: The firmer you palpate the PSIS the more exact will you be able to locate it). Then do the same with the ilium on the left side. This is simple to do and is a reliable indicator for a pelvic torsion pattern. Then look from behind at the so-called "dimples" in the skin over the sacrum and compare their height from the floor. Their relative positions are a fairly reliable indicator for the position of the sacral base. You could also look at any visible sidetilt of the lower portion of the lumbar spine and include that in your picture.

Doing this you will find out that it is actually not so uncommon to see a "structurally intelligent" pelvic torsion where the sacroiliac joint has simply dropped down on a slightly lower femoral head. And of course there are also cases where a "structurally **un**intelligent" pelvic torsion (originating often by forceful outside events) has pushed the sacrum higher on one side and thereby decreased the structural integration of the whole person.

To sum it up: Except in cases where sacroiliac pain conditions are more important than overall structural alignment or in cases with some rare but extreme side/side asymmetry fixations above, just follow this rule of thumb:

WHEN THE SACRAL BASE IS *HIGHER* ON THE SIDE OF THE ANTERIOR ROTATED ILIUM, WORK ON DEROTATING THE PELVIC TORSION.

IF THE SACRAL BASE IS *LOWER* ON THE SIDE OF THE ANTERIOR ROTATED ILIUM, LEAVE THE TORSION AS IT IS.

"When you force a local misaligned area into line, you only shift the strain.
This is what manipulators call a chronic lesion.
A guy gets his back or hip out of order and goes to a manipulator, who adjusts it.
He says 'Oh, that's wonderful!', but he goes down the stairs and by the time he's on the street it's back again.
Gravity is the only tool that we use. I think my experience justifies making this very broad assumption.
Gravity is the only tool that deals with chronic situations in the body."

—I.P. Rolf

ITC REPORT

Liesel G. Orend

It has been a very busy spring here at the Rolf Institute! At the time that I write this, we have both a Principles of Rolfing® and a Unit III in progress, and the transition into our new curriculum is going smoothly. Requests for information about our program have been steadily increasing, keeping us busier than ever, answering questions and helping students to make choices about their training. We are looking at expanding our trainings by adding programs in New Mexico and Australia, and by increasing the number of classes offered here in Boulder, in order to meet the new, larger demand.

My assistant, Don Bruce, is beginning his Rolfing training with Pedro Prado and Michael Murphy this week, and we all wish him the very best! John Quigley will be replacing Don in the position of Educational Services Assistant.

There have been many productive meetings over the past three months. Michael Murphy and I attended an AMTA Council of Schools meeting in San Diego, with the purpose of exploring the current issues common to massage and bodywork schools, and building bridges between organizations. The full faculty met in Boulder from January 16-21, discussing many important issues around curriculum, growth, and policy development. As the training programs expand, the need for faculty development and communication has risen as well, and the contributions made by the faculty have been truly phenomenal. In addition, the advanced faculty met March 7 in Santa Fe, New Mexico, in order to further develop the format and material taught in the Advanced Training.

There has been a focus on meeting the continuing education needs of the membership, through expanded workshop offerings, the creation of the Mentoring Program, and the development of a modular presentation of the Advanced Training. For those of you who have taken the National Certification Exam, we are in the process of applying to become a "type A provider," so that workshops and trainings taken through the Rolf Institute will satisfy National Certification Board requirements. We are offering a wide range of workshops in Berkeley, California, around the time of the Conference on Structural Integration, August 16-18; please look for details in the Continuing Education Bulletin and the Fascial Flashes. Because it is our goal to develop a Continuing Education program that responds to the needs of our

members, it is helpful for me to hear from you! Please let me know what workshops or trainings are of interest. Special thanks go to those members who coordinate workshops and trainings in their areas.

Advanced Training Survey

Last fall, a survey was mailed to all those Rolfers who are past their deadline for completing the Advanced Training. The purpose was to help the faculty and Board of Directors find solutions to this very serious problem. 166 surveys were mailed, and 51 completed surveys were returned—a 31% return rate. The broad range of answers reflects the diversity of our membership and their concerns; however, some very specific concerns seemed common to many Rolfers.

Because each question can have as many answers as the respondent includes, there will more answers than there are respondents for most questions. Percentage figures are of the total number of answers received. In order to conserve space, this report does not include all of the comments made by respondents; if you would like a complete copy, please request one from the Rolf Institute.

Question 1: How important is continuing education in the development of your professional competence?

Very important/essential/neccessary - 32	60%
Somewhat important - 8	15%
Doing other CE - non-Institute - 7	13%
Money is the issue - 4	8%
Not important/not necessary - 2	4%
TOTAL - 53 answers	

Question 2: What are the benefits that you want to receive from Advanced Training?

New ideas/information/skills/techniques - 19	33%
Deepen understanding, vision, inspiration - 10	18%
Review of skills - 6	11%
Contact with other Rolfers - 5	9%
Improve as a Rolfer, improve skills, seeing - 5	9%
More benefits to bring to clients - 4	7%
Contract fulfillment - 3	5%
No benefits, nothing gained - 3	5%
Verification, validation, improve confidence - 2	3%
TOTAL - 57 answers	

Question 3: What is it that prevents you from doing these classes?

Money (unspecified and tuition expense) - 22	21%
Time away from home, practice, clients - 20	19%
Family obligations - 18	18%
Money (lost income, practice closed) - 10	10%
No interest, not needed, don't like R.I. trainings - 6	5%
Location of trainings - 5	5%
Travel - cost and inconvenience - 4	4%
Poor health, injury - 4	4%
Pursuing CE elsewhere - 4	4%
Priorities - other things more important - 3	3%
Schedule of classes not feasible - 3	3%
N.A.R. status, not Rolfing now - 2	2%
Nothing - no problem - 2	2%
TOTAL - 103 answers	

Others:

"Teachers - not available, not preferred"
"Schedule not available soon enough"
"No female teachers"

Question 4: How important would the following be in making the Advanced class more available and attractive?

a. More regional locations for the class

Very important - 31	74%
Somewhat important - 7	16%
Not important - 2	5%
Would solve some problems, not all - 2	5%
TOTAL - 42 answers	

b. Change in the focus, format, or content of the class

Note: Because less than half of the respondents answered this question, the percentages are not relevant.

Important - 4
Somewhat important - 3
Not important/no difference - 7
Change Focus - 1
Change Format - 7
Change Content - 4
Expand to include Cranial, Visceral - 2
No answer/Don't know - 27

c. More diversity of subject matter... i.e., more movement education, more technical information and application, sticking to the recipe, abandoning the recipe. Please tell us which areas interest you.

More Movement - 14	26%
More technical information - 13	24%
Abandoning the recipe - 9	17%
More on recipie/no recipe issue, interface between recipe and "fix-it" work - 5	8%
Sticking to the recipe - 4	7%
Cranial, Visceral - 3	6%
None of the above are interesting - 2	4%
Problem solving, techniques for particular problems - 2	4%
Don't change anything - 2	4%
TOTAL - 54 answers	

d. Breaking up the training into smaller units... i.e., three two week units, or two three week units, or a long series of weekends

It would help a lot - 23	64%
It would help somewhat - 5	14%
Would only help if it were local - 4	11%
It wouldn't help/ would be worse - 2	5.5%
Maybe/ not sure it's a good idea - 2	5.5%
TOTAL - 36 answers	

Three two week units - 11	37%
Two three week units - 8	26%
weekends - 7	23%
six one week segments - 2	7%
modules that can be taken a year apart - 2	7%
TOTAL - 30 answers	

e. Something else?

Subsidize it/ make it free - 1
Have in cheap location - 2
Need more advance notice - 1
More classes - 2
More teachers - 1
Female teachers - 1
Eliminate dues - 1
More pathology/injuries - 2
Mentoring - 1
Added CE requirements a problem - 1
Shouldn't have Advanced Training - 1
Neuro-Muscular work - 1
Student loans/payment plans - 2

5. What state are you from? (If California, please indicate Northern or Southern)

Switzerland - 1	Massachusetts - 1
Germany - 2	Michigan - 2
United Kingdom -1	Nevada - 2
Italy - 2	New Mexico - 2
Denmark - 2	New York - 2
	Ohio - 2
Alabama - 1	Oregon - 2
California (Northern) - 8	Tennessee - 1
(Southern) - 7	Utah - 1
Colorado - 2	Washington - 2
Georgia - 1	
Hawaii - 1	Australia - 1
Maryland - 1	
	Canada - 2

6. What is your reaction to the issues raised in Jan Sultan's letter?

This question generated a wide variety of responses, addressing a large range of issues. In general, although some respondents expressed that they did not like the issues raised in the survey, most respondents appreciated the opportunity to communicate.

Continuing Education Changes

In general, the survey showed that the main reasons Rolfers do not complete their Advanced Training are because of the cost and the time away from home. Less frequently heard reasons include poor health, the pursuit of education outside of the Rolf Institute, and lack of interest in the Advanced Training. More regional trainings seemed to be a high priority, and the suggestion of a modular format was extremely well received. Rolfers expressed the most interest in movement training, technical information, and "abandoning the recipe." Perhaps most importantly, the majority of the Rolfers who responded to the survey seemed willing to complete their training, if it could become a bit more accessible.

With this feedback, first the Continuing Education Committee, then the full faculty discussed possible solutions. It is important that members keep their legal agreements with the Rolf Institute, and that these agreements are enforced. The desired outcome, however, is that Rolfers meet their legal obligations by taking the Advanced Training, rather than leaving the organization. The faculty looked at ways to achieve this goal by making the Advanced Training more appealing and accessible. The following courses of action were agreed on:

1. The Rolf Institute will provide Advanced Trainings with more variety, in terms of location, format, subject matter, and teachers. This will include more regional trainings, and modular formats.

2. That the seven year deadline for completing Advanced Training will not include those years while members are approved for Inactive status.

3. Rolfers who choose to complete their Rolfing Movement Certification first will have an additional two years to complete their Advanced Training.

4. That trainings will be scheduled well in advance, and that the schedule will be based on the needs of the membership.

5. The Rolf Institute will attempt to obtain written signed agreements from members who have not completed their Advanced Training within the required time frame. These agreements will include a plan for the member meeting their requirements.

Advanced Training Schedule

The following trainings are being planned for the next few years:

Rome, Italy: Jeffrey Maitland and Michael Salveson
October 8 - November 17, 1996

Los Angeles: Jan Sultan & Michael Murphy (Modular format)
November 4 - 21, 1996 January 27 - February 13, 1997

Boulder: Jim Asher (Modular format)
May 5 - 16, 1997 August 4 - 21, 1997

Brazil: Jeffrey Maitland 1997
Berkeley: Michael Salveson January 1998
Europe: 1998
Hawaii: Jim Asher Nov./Dec 1998
East Coast: Late 1997, or 1998

Advanced Training Policies

To qualify for Advanced Training, members are required to accumulate 18 Continuing Education credits over a three to seven year period. One credit is given for each day of a workshop. Continuing Education credits are categorized as follows:

- 9 Rolfing Manipulation credits, taught by a Rolf Institute approved Rolfing Manipulation instructor.
- 3 Rolfing Movement credits, taught by a Rolf Institute approved Rolfing Movement instructor.
- 6 Elective credits, approved by the Rolf Institute.

The tuition for Advanced Training is $3,600, and a deposit of $300 holds a spot in a class. Deposits are refundable until 5 weeks before the training begins.

Advanced Training Prerequisite Waivers:

If you have not completed all of your credits, or if you have not been a Rolfer for three years, but there is an Advanced Training in your area, or one that works especially well for you, then you may request an Advanced Training Prerequisite waiver. These are available from the Rolf Institute, and must be submitted at least 30 days before the Advanced Training begins. They are approved by the Continuing Education Committee and by the instructors of the class. If you have completed all of your credit requirements, and take the Advanced Training early, then you receive full advanced certification upon successful completion of the class. If you have not completed all of your credit requirements, then you will need to complete them after the Advanced Training in order to receive your advanced certification. Please remember, if you are taking your training before you have been certified for 3 years, that members who are close to or past their time limit for completing their training may have registration priority for full classes.

Auditing Advanced Training:

If you have already completed your Advanced Training through the Rolf Institute, then you are welcome to repeat the training, space permitting. The full training can be repeated at half price, or $1,800. Advanced Rolfers can also attend morning lectures at no charge, with the approval of the instructors. Please check with the instructors in advance to determine whether space is available. We request that all visiting members recognize the priority of those completing the class for the first time.

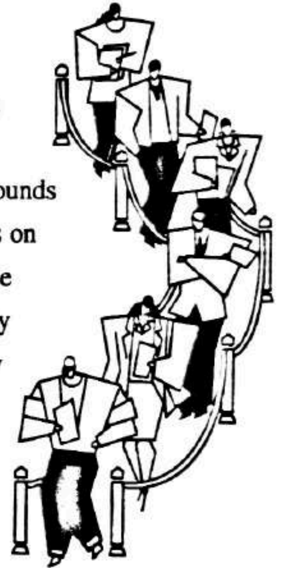
If you have any questions about Advanced Training policies, or you would like to organize a training in your area, please contact Liesel Orend at the Rolf Institute.

An Update on Admissions Process of the Rolf Institute

Patrick Ellinwood
Student Evaluation Committee Member

Many of you have probably heard that we are no longer doing admissions interview and that a number of things have changed about the admissions process. We want to communicate why we made the changes and feel it is a better system, and one that maintains our strong standards for applicants and students.

Historically, a candidate for Rolfing® trainings was required to fill out an application, write essays and pass an admissions interview. For most people who were not admitted, it was because of their interviews, and generally because of psychological issues. I do not need to point out how vague or, at times, abusive this process was because we all have colleagues who were subjected to this. It was Jim Schulke who first pointed out that we were in indefensible territory rejecting applicants on psychological grounds and that we were vulnerable to law suits on this issue. After much discussion and the development of a new process, the faculty decided to drop the admissions interview and the board approved this decision.



It was clear to everyone that some screening process was needed. We identified the areas that we felt were most important in a Rolfing student:

- An ability to handle the academic material in Rolfing training
- An appropriate quality of touch
- An understanding of therapeutic relationships
- A clear experience of the Rolfing process for them personally
- A competent structure to do this work

We asked ourselves how we could evaluate each of these categories. The academic is the easiest parameter to evaluate. If

the applicant has taken FOB we have that history, and all applicants take an Anatomy, Kinesiology, and Physiology exam. To evaluate quality of touch we rely on FOB evaluation and field evaluation forms that are filled out by a professional bodyworker (preferably a Rolfer), after receiving three massages from the applicant. The applicant also writes an essay documenting a case were the therapeutic relations with the client were significant and what they learned from it. For a sense of their experience of Rolfing we rely on their personal essay and what their Rolfer/Movement Teacher have to say. We assess the applicants structure by their Rolfer/Movement Teachers comments and their photos.

Each completed application goes out to a member of the Rolf Institute to be evaluated by well articulated criteria. If the evaluator has any strong concerns or the application does not meet standards, the application goes to the Student Evaluation committee, who review the materials, and may request an interview. This may sound presumptive, evaluating an applicant on paper, but when you read a complete application a relatively full picture of the person emerges. If the reader does not get a strong sense of the applicant, then that is grounds for further evaluation.

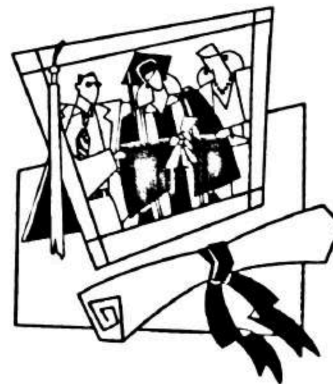
The letters of referral from the Rolfer/Movement teacher are especially important. They are read and the information is considered carefully. If you have concerns about an applicant those should be stated. It is best if any concerns can be grounded in terms of the above criteria, and is helpful if Rolfers take advantage of the Guidelines for Letters of Recommendation form available through the Rolf Institute. Please frame your comments professionally, since we must make students' files available to them, because of the Freedom of Information Act. The student files cannot be evaluated until they are complete, so it is really important, both for the admissions process and the student's peace of mind, that letters and field supervision forms are received by the deadline.

The application process is backed up by the week long Principles of Rolfing class, which is both instructive and evaluative, and must be completed before a student enters a Unit II training. Throughout this week, the instructors are evaluating the students' readiness to train. The week culminates with individual interviews, and the student must have the approval of the Principles instructors before entering the next phase of the training. With a full week to observe students in a classroom situation, supported by the application materials the student has submitted, a very clear picture emerges. The instructors of the Principles class have found that students now begin their training more open and excited about the learning process. In the previous lead-in format, students were often still processing their admissions interview, and the excitement of beginning had often been dampened.

Since our admissions process is more open, some of the evaluative burden has shifted to instructor. All classes (FOB, unit II and unit III) have mid-term and end of class interviews where students are given verbal and written feedback about their performance in class and any concerns about their readiness to move on. The instructors acknowledge that this is a difficult part of their jobs, but have committed to evaluating the students based on class performance. The positive side of this is that if a student is asked to drop out, there are well articled reasons from the instructors who have watched the student work and interact in class.

In summary the admissions process is more accessible without our old style interview. A broad base of information is used in decision making. If there is a problem, individual cases can be referred to a committee with an interview. Instructors now have a stronger role in deciding if students are not ready to continue. A lot of thought and work has gone into this and initially it is working.

Student Evaluation Committee: Jane Harrington, Chair, Patrick Ellinwood, Suzanne Picard, Liesel Orend (ex officio)



QUALIFICATIONS FOR ROLF INSTITUTE APPLICANTS

1. **Physical Preparation**: Candidates must have an experience of the benefits of Rolfing and Rolfing Movement Integration, and should have personal experience of the change that is possible through this work. Candidates should also be physically able to do the work on a regular basis.

2. **Academic Preparation:** Candidates must demonstrate an understanding of Anatomy, Kinesiology, and Physiology. They must also show an ability to follow and complete a course of study.

3. **Quality of Touch:** Candidates must have training in a hands-on bodywork/touch modality that works with soft tissue and involves feeling different textures of tissue through the use of pressure.

4. **Interpersonal Preparation:** Candidates must have a basic understanding of and experience with the therapeutic relationship. They should be aware of their own process and respectful of the processes of others. In addition, candidates should be of sound moral character.

WHAT A ROLF INSTITUTE APPLICANT NEEDS TO COMPLETE

- 10 Rolfing sessions
- 8 Rolfing Movement sessions
- Letter of recommendation from Rolfer
- Letter of recommendation from Rolfing Movement Teacher
- Completed Application Form
- Formal letter of Application, answering the questions:
  1. Why do you want to become a Rolfer?
  2. What factors made you reach this decision?
  3. What makes you feel that this is the appropriate time in your life to do the training?
- Photos
- Curriculum Vita
- College transcript or personal essay
- 50 hours of documented touch practice
- Fieldwork Experience forms showing a minimum of three hours of work
- 85 hours of documented massage/touch training (if the student did not take F.O.B.)
- Two Admissions Essays—One describing the applicant's awareness of his or her own body, and that of another person, in structural and functional terms, the other a therapeutic relationship case study addressing the issues of safety, trust, boundaries, framework, communication, psyche, transference and counter-transference.
- Successful completion (60% or higher) of the 250 question Admissions Exam on Anatomy, Kinesiology, and Physiology.