

The Practitioner's Guide
to
Mirroring Hands

A Client-Responsive Therapy That Facilitates
Natural Problem Solving and Mind-Body Healing

by

Richard Hill

and

Ernest Rossi

Dedication

This book honors two extraordinary women

Kathryn Lane Rossi
and
Susan Jamie Louise Davis

who have not only made our lives an
immeasurable pleasure, but have been
a source of healing for many thousands of people.

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Foreword

Introduction

The Practitioners' Guide to Mirroring Hands

Richard Hill Meets Ernest Rossi

I first saw Ernest Rossi demonstrate Mirroring Hands in December of 2005. My reaction to Dr Rossi's undeniable intellect and broad ranging ideas was to be, simply, blown away. I knew this was a turning point, a phase shift, in my life. There had to be a reason why I had flown 7,500 miles to attend the *Evolution of Psychotherapy* conference. I did not even imagine I was embarking on a journey that would lead to a decade long engagement with Ernest Rossi, culminating in this book.

But, things happen and they have a way of telling you what you need to know. Sometimes you notice quickly and easily, other times you need to be smacked in the face a few times before it all falls into place. So, what were the smacks in my face? Frankly, there have been quite a few over the past decade. Let me share an experience from a few years ago that absolutely convinced me why I was so drawn to Mirroring Hands. I hope that in describing a case, you can more easily "walk in my shoes," for a while.

From Richard Hill's Casebook

I answered an unexpected knock on the door at my clinic. A woman in her mid to late thirties asked if I could see her straight away. That is a little unusual, but, as it happened, I was available and I invited her in. She spoke quickly and had a way of gazing intently that was a little unnerving, but I didn't feel she was psychotic, just intense. In something of a machine-gun delivery she set up the conditions for the session.

Your sign says counselling and brain training. I don't know what brain training is. She didn't pause for explanation. I've just come from seeing another psychiatrist. In fact, I've seen a lot of different therapists, had just about every therapy... and read everything. You reckon you can do something different? I'll give you 60 minutes.

Well, it was nothing if not a challenge and so we began. She sat down and I went through my standard intake process. She wasn't all that keen on telling her story in detail, to another therapist, again. Then she looked at her watch,

You have 45 minutes left.

No pressure! In the tradition of Milton Erickson, I was looking for her to show me some clues as to how to proceed¹. She had been clear so far: don't do any of the standard treatments. She almost seemed to be saying, don't treat me at all. Wow! This was such a unique experience and, to be honest, I really didn't know what to do. So I watched her. She was very expressive with her hands, pushing them toward me to highlight things as she spoke. I was suddenly transported back to my workshops with Ernest Rossi. This looked something like what happens during a Mirroring Hands experience. I took the gamble that no other therapist had used this technique with her.

I'm noticing that you are very expressive with your hands. Have you ever really looked at your hands...noticed what is really interesting about them?

She was surprisingly co-operative and stared at her hands for about 30 seconds, then flicked her gaze back to me,

What are you doing?

Well, she had basically told me that she didn't think much of what therapist's thought. She was also sick and tired of them forcing different therapies down her throat. Feigning a surprised confusion, I replied,

I don't know, but you said you'd done everything. So... have you ever done anything like this before?

She stared intently at me for a moment, looked at her watch and told me as a matter of fact,

You have 35 minutes.

I began to facilitate Mirroring Hands. We will learn the details of the procedure later in the book, but, suffice it to say, as the experience unfolded, she told me, with some surprise, that she felt her hands were representing two aspects of her persona. One hand was representing a part of herself she keeps private and the other hand was representing her public face. It was like watching someone open doors to rooms she had not seen for a long time. Sometimes she shared what was happening and other times she just explored her “rooms” privately. Many things happened over the next 30 minutes that are not vital to replay here, but finally, her hands settled together, with her “public self” hand totally covering her “private self” hand.

She was quiet for little while, then looked up. Her eyes had softened their intense gaze. Her voice was slower and more contemplative. It was clear that she knew something now that she did not know 30 minutes ago. Over the next 15 minutes – yes she stayed beyond her 60 minute deadline – she told me how she had created this “public self” as a protector against early family difficulties. Now she knew why she felt so frustrated and resisted previous therapy. Everyone was trying to “fix” her public face, but that was her protector. To take away her protector would be disastrous for her private self.

After all those years of therapy, when she only allowed people to see her *protector self*, today she allowed her hands to become mirrors into her deeper self. In this Mirroring Hands experience she was able explore “rooms” that were usually locked or avoided. She was able to tend to her vulnerable “private” self and begin the process of letting her protective “guardian self” take a well-earned rest. The most amazing thing is that she did the bulk of this work without my interference, imposition or direction. She found what she was searching for: how to begin her own healing. I expect she might say that was 30 minutes that truly changed her life. Equally, that was 30 minutes that truly set my sails.

What is this book about?

We will show how to create and facilitate therapeutic experiences like this, utilizing the Mirroring Hands technique. We will also show how to integrate our therapeutic approach across all therapies, and even into daily life. The woman found natural “inner” and “between” connections on numerous levels that literally change her psycho-neuro-biology. The realizations and changes that happened for her indicate a variety of implicit activities, including, brain plasticity and neural integrations; cognitive perceptions entering and altering conscious awareness; the necessary gene expression and protein synthesis to enable these processes; and the possibility of epigenetic changes to her DNA². On the observable level, she clearly experienced new thoughts and a deeper self-understanding. It was evident that she had connected with her own capacities for problem solving and was ready to begin her own healing. We will describe and show how Mirroring Hands is conducted, but equally, if not more importantly, we will explore the framework of knowledge and understanding that surrounds and supports the process. We have differentiated seven variations of Mirroring Hands. These are punctuated with chapters that reveal different aspects of the surrounding and supporting framework. The complete picture gradually emerges over the course of the book as we guide you around the activities of the technique and into the foundational frameworks of the Mirroring Hands approach.

When, Where, and Why?

It is important to clarify at the very beginning that we are not presenting Mirroring Hands as *the therapy* for everything and everyone. It is not a magic bullet, any more than any other therapy. In fact, current research is concluding that no one therapy is necessarily more effective therapy than any other³. As if to confuse and confound, practitioners know from their personal cases that a particular therapy *can be* much more successful with a particular client. Equally, with another client, a different therapy is more effective. The conundrum is resolved when we position the client as central to the therapeutic process; when the qualities of experience and efficacy of the therapist, and the therapies they utilize are taken into account; and when there is a comfortable and collaborative relationship between the therapist and the client (the therapeutic alliance)⁴. A pragmatic definition of *evidence based practice* has created a pressure towards determining preferable therapies or perhaps permissible therapies that should be applied to clients only by available, research based

evidence. This appears to be a growing construct in agencies, insurance funded therapies and other funded institutions, as well as many educational institutions. Although we appreciate the responsibility to produce predictably successful outcomes, we feel that these limiting determinations are not the right path.

You may be surprised that The American Psychological Association's Presidential Task Force produced and published a formal definition in 2006 that is not evidence-centric: *Evidence-based practice in psychology (EBPP) is the integration of the best available research with clinical expertise in the context of patient characteristics, culture, and preferences*⁵. It is quite clear that the *client* is the context and the therapy, intervention or technique utilized is only one part of an integration of reliable practice, practitioner expertise, and how the client responds. A client centered approach is hardly new, first introduced by Carl Rogers in the latter half of the 20th Century⁶. We suggest that it is possible to create an even deeper degree of engagement by the client in their pursuit of effective therapy, by asking the therapist to take one more step back from the client once they are "centered", and allow the therapy to emerge in a *client-responsive* way. So, the answer to *when, where, and why* is much more about the client than it is about prescribed or usual treatment, and predetermined therapeutic programs or plans. Again, it is important to qualify this by acknowledging that there are times when a therapist *needs* to do much of the work and, perhaps, impose a therapeutic program on a particular client. On close examination, however, even those situations can be seen as client-responsive, because the client is showing they need help to get to a place where they can start to work for themselves.

Mirroring Hands is introduced at the best time, in the best place and with the best intention – when, where, and why – in response to the client's indications of needs. We suggest this is possible for all therapy because the best therapy *emerges* from the interaction between the client and the therapist⁷. It is, therefore, not our desire to predetermine the conditions in which you should utilize Mirroring Hands, but having said that, we would like to give some guidance based on our experience.

When you just don't know

Mirroring Hands is often utilized to break through the impasse of the client's "I don't know", or even "We don't know", when both client *and* therapist are unsure. You saw this dual "not knowing" in the case at the beginning of this introduction. Admittedly, this is why people come to therapy – because they don't know what to do or they don't know what their problem is really all about. Sometimes clients talk of a feeling that they know there is something to know, but that knowledge just can't be reached or there is something blocking access to it.

Regardless of the techniques or processes that emerge during a session, the first task is always to create and build the therapeutic alliance⁸. This often starts with talking things through. That is a very familiar beginning for most therapists. This conversation largely comes from *explicit awareness*, where both client and therapist can verbalize or in some other way consciously express what we are thinking or feeling. Establishing and building an interpersonal rapport is essential to earn the trust of the client and for the client to feel safe. From trust and safety, it is possible to deal with the issue that has moved the client to come for therapy.

Beneath conscious control there is an inner, implicit world which does not have direct access to vocalization or consciously directed behavior. It is hidden, elusive, and abstract. Memories and feeling that are too difficult to bear are often "purposefully" hidden in the implicit, inner world. Behaviors and emotions can appear on the surface almost as if arising from somewhere unknown. These are usually called symptoms, but, equally, they are how the implicit makes itself known in the explicit. Symptoms create feelings of disconnection and dis-integration creating a disharmony that triggers a client to seek therapy. Mirroring Hands is a *natural* and *responsive* way to enable the client to repair those disconnections. We will show how this can be done safely and with natural comfort, even when the therapeutic experience is difficult and testing.

Exactly how therapy proceeds depends on what the client is able to do, is expecting to do, and is prepared to do. It can also depend on what the client knows of you and your practice. Clients who have come specifically for Mirroring Hands might want to start with that process almost straight away. That doesn't mean that we always do. We still work carefully with *all* the messages coming from the client. We discuss this

sensitivity of the therapist to the client's many levels of communication in Chapter 7, *Natural, Comfortable, and Sensitive Observation*.

Although we describe a number of variations, Mirroring Hands can be utilized in countless ways. The interplay between client and therapist creates whatever is needed in that moment. We discuss this in Chapter 12, *Improvisation with Mirroring Hands*. Improvising is, fundamentally, the unplanned utilization of your knowledge base and skill set. The exact therapeutic experience that emerges is the hallmark of the artisan nature of psychotherapy⁹. Think of a pianist who shifts away from the predetermined melody and begins to improvise. The musical notes that emerge are qualities from the musician's skills, experience, and expertise, as well as the interplay with other musicians, the audience, and the marvel of the player's own imagination. A poorly educated, technically weak or inexperienced player is simply not able to improvise as well. This is a capacity that develops over time. Because we want each therapist to add their own unique qualities to their Mirroring Hands experience, we strongly encourage and highlight the importance of learning all that interests you. We *really want* you to be interested. We also encourage you to seek feedback about your work through regular supervision, and regularly ask your client what is working well for them¹⁰. We will explore different ways that you can receive client feedback, and check on therapeutic effectiveness, as we work through the variations and some of our case examples. We hope this brings you, as a practitioner, confidence and comfort in your ability to flow within and around all your possibilities. Surely that is why the client has sought to bring you into their experience!

Where do we begin?

It is not unusual to begin a book with an historical reflection and evaluation. In that tradition, our first chapter explores *The History of Mirroring Hands* and how the approach emerged from psychotherapy, therapeutic hypnosis, and Ernest Rossi's years with Milton H Erickson. It *is* unusual, however, to have access to a central player in that history. Chapter 1 reproduces an interview, a conversation really, between Ernest Rossi and Richard Hill. You will find that the conversation introduces information that has never been revealed before, and also challenges some of the

established ways in which we approach psychotherapy and our personal approach to health and wellbeing.

That conversation sets up the first challenge which is addressed in Chapter 2. We begin our exploration with a fresh look at how we think. We have an educational tradition of logic, based around the principle of cause and effect, but the reality of the world in which we live is somewhat different. *Thinking IN the System* explores the wonders and seemingly mysterious processes that occur in systems, complexity, and chaos. Complexity Theory is, simply, a way of explaining what happens when many things make connections, interact, integrate and produce outcomes. At any given moment, most of us can see that we are involved and engaged with all kinds of influences and it is hard to know exactly what is going to happen. It would be great if things were as simple as one cause and one predictable outcome, but our life experience tells us it is more unpredictable than that.

The very latest brain research occurring in the Brain Initiative, launched by President Obama in 2013, in the USA¹¹, is shifting research focus from individual brain components and processing mechanisms to looking at the brain as a complex system that shifts and changes as a function of energy and information flow. As you work through the book, we also seek to create a shift from the way we have been taught to think. Rather than being the therapist who sits with, but outside the client, introducing interventions that will produce a resolution, we will show you how it is possible to be a therapist who enters a *therapeutic system with the client*. We will show how being *in* the system (instead of acting *on* the system) produces a very different engagement with the client. The therapist naturally becomes client-responsive, and the client is able to shift from *following* the therapist to being in the center of the therapeutic process. The client becomes the source of their own therapeutic change¹².

A framework for all therapies?

Although we are committed to concepts and principles that are well-founded in science, each of the theoretical chapters is not delivered as dry academic theory. These chapters describe and explore what is natural to the practice of all psychotherapy. We hope that you will find that you can apply the framework and

foundations we set out here for Mirroring Hands to everything you practice, both professionally and in your daily life. These chapters establish how systems function, how they self-organize and how we can, as practitioners, clients or private individuals, be comfortable and creative participants in the experience. We are trying to shift thinking away from being the conscious controller or the dominating influence, to embracing a state of participation in the natural qualities of our being that do not need control or domination. Instead we can participate in a creative, integration of our whole system. Our argument is that this very control and domination of the experience can make therapy *less* effective and *harder* for both practitioner and client¹³. Again, it is important to qualify that we are well aware that sometimes it may be necessary to be pragmatic, controlling, and even dominant, but this is rarely being done as a therapy. This is, most often, to stabilize the client or their situation *before therapy can begin*.

So, this book is largely addressing situations that are receptive to therapy. Having said that, you will be able to apply the knowledge about our natural rhythms and cycles to the most difficult of cases. You may discover wider applications when we explore the deeper elements of curiosity, what turns it on and what might be turning it off, in *Curiosity and the Elephant in the Room*. The chapter on what is *Natural and Comfortable* will explain what we mean by natural rhythms and cycles. We believe this puts the practice of psychotherapy in the context of what is natural about us, about the way the world functions around us, and the ways in which we function in the world.

Is There More?

The final two chapters might be considered more like an addendum or appendix, but we feel that we have not finished our guided tour, yet. Anyone who has participated in Mirroring Hands has had the felt experience of an energetic difference and shift occurring in the hands. Is this just a cognitive invention or is something really happening? In *Research and Experiments* we review the research of Leonard Ravitz and our current updates. This fascinating work produces a graphical electrodynamic recording, in real time, of the millivolt changes in the left and right hands. Recordings show not only the energetic changes, but that there is a difference between the left and right sides. Having established that these are energetic processes, which occur

at the micro-particle level, we have opened the door to Quantum Field Theory. We feel incumbent to provide a sketch, at least, of this fascinating topic to give you some foundation and open your curiosity to seek out more detailed information elsewhere. In *Down the Rabbit hole*, we explore the quantum world and, also, speculate on what the future might hold. Finally, we have kept the hard science for two special papers added as a *Scientific Appendix* where you can dive as deeply as you wish.

The Creative, Growing Edge

We conclude this introduction as we began, with a personal perspective from Richard Hill: “Despite my great good fortune and privilege of being mentored by Ernest Rossi, it has always been about where the experience *takes* me - how *I* change, where *I* grow. This book is an expression of what has emerged over the past decade of exploring new ideas and techniques with Ernest Rossi. Something certainly began on that auspicious day in December, 2005, but the burden of responsibility for my development, however, has always been mine. It was my task to create effective and productive growth at the most exciting region of my being - my *growing edge*¹⁴. This is the edge of your known space, your known capacities and your known comfortableness. From the growing edge you step into a creative space where everything is new and unknown. When you step out, it is not a rupture or disconnection from who and what you are. It is just as it sounds - a point of growth. Always keep in your mind that you remain connected to everything *you are*. This adventure is growth into a space where you become more – more than you are right now. I am still expanding at my growing edge and Ernest Rossi tells me, even in his mid-80s, he also continues to push outward at his growing edge.”

The creative, growing edge can be a difficult place to be. By its nature, you are there on your own. Even though you may be supported on many different fronts, cheered on and encouraged, it is an unknown space. Our unique expression of what we learn, and the way we integrate that learning into daily life, is our expansion at our growing edge. Every therapeutic technique, process, and protocol is the expression of someone’s movement outward at *their* creative growing edge. In that context, there is no therapy or technique or process, that is ever entirely a perfect fit for you, because they have all been created at someone else’s growing edge. That is not to say that some can be very close. This is why *Ericksonian Psychotherapy* is so hard

to reproduce exactly, because the only perfect Ericksonian practitioner was Milton Erickson himself. We each must find our own best form and expression in order to be natural and comfortable, and unburdened as we practice.

We genuinely wonder where you will take this. What you might do with our words and ideas. How this book might enable or encourage or inspire you to explore *your* growing edge. What will you create? It may be something very small. It may be a radical diversion. The *Curiosity Approach* has developed out of Richard Hill's years with Ernest Rossi, but also out of everything in life. What does this say to *you*? What do you have in your mind that may spill out beyond your growing edge? The intention of this book is to show you how it is done, so that you can explore how you will do it.

You cannot discover new oceans unless you have the courage to lose sight of the shore – Andre Gide, French author, Nobel Prize winner for Literature, 1947¹⁵.

To get to where we are now, however, there has already been a journey. It is natural to wonder about the history, about how things changed and how they grew. It is natural, therefore, to begin this book with an historic review, and we are able to tap into the source, Ernest Rossi himself. Let's ask him how it all began.

Chapter 1

The History of Mirror Hands

Ernest Rossi in Conversation with Richard Hill

In June of 2016 I met with Ernest Rossi and his wife, Kathryn Rossi, at their home in California. The main reason for the visit was to explore the writing of this book. We met every day over 7 seven days recording over 25 hours of interviews and conversations. On the second session of Day 1 of my “week with the Rossi’s”, I asked Ernest Rossi, “What is the history of the Mirroring Hands approach? How did it emerge from your ‘apprenticeship’ with Milton Erickson?” I have reproduced the bulk of the answer. The transcript has been edited for clarity and some additional commentary has been added. *Italicised* words indicate emphasis.

In this transcript, and throughout the book, Richard Hill is represented by RH and Ernest Rossi by ER.

From the Rossi/Hill Conversations, 2016

Los Osos, California, 2pm, June 1, 2016:

RH: Maybe this is the opportunity, what do you think, in amongst all the questions that I have, one was, really, to hear from you about the emergence of this Mirroring Hands approach.

ER: Oh... what’s the essence, profoundly the essence...

RH: Yes!

ER: I remember once being introduced from the lectern, “And now Ernie Rossi will show his approach with the hands” (we laugh). Isn’t that silly?

RH: And that was... that?

ER: I think, “He doesn’t get it.” So, what doesn’t he get? We have two sides... you know all this stuff about the left and right hemisphere? It’s all true from the quantum field theory perspective of consciousness and cognition, empathy,

personality, brain plasticity, molecules, and gene expression all the way down to the quantum level. It's built in here (ER indicates his head).

RH: Yes, I'm very familiar with much of that...

ER pauses as he contemplates where to begin...

ER: I was with Milton Erickson many times when David Cheek was there, so it was a 3-way conversation between us... just like I was there many times when Ravitz was there... and I learned in these informal shop-talk dialogues a lot that the public's perception of therapeutic hypnosis seemed to have no appreciation of...

Milton Erickson might reasonably be considered one of the major thinkers about modern psychotherapy and therapeutic hypnosis. He qualified as a psychiatrist in the 1920's and conducted extensive research in the field of therapeutic hypnosis. The *Milton H Erickson Foundation*¹⁶ led by Jeffrey Zeig, PhD, continues the legacy of Erickson through education, a huge archive and the organization of an annual conference to celebrate his work and the ongoing evolution of psychotherapy. Erickson's publications are best recorded in the 16 volumes of *The Collected Works of Milton H Erickson*, (2015) edited by Ernest Rossi, Kathryn Rossi and Roxanna Erickson-Klein¹⁷. He was a master teacher and the people who spent time with him, learnt from him and developed their work in association with him is a Who's Who of modern psychotherapy.

ER regularly visited Erickson, often monthly, and usually for about a week, beginning in 1972 until Erickson's passing in 1980. Many significant people would visit Erickson, so being at the Erickson house was a fertile ground for any developing student, researcher or writer. Leonard Ravitz, a psychiatrist from Yale, was a student of Erickson's from around 1945. Ravitz was involved in the pioneer work of the measurement of human electrodynamic fields and the variations between left and right sides of the body. He and Erickson applied this technique to subjects during hypnosis in the 1950's. Let it suffice to say that the apparatus had similarities to other electrodynamic measuring apparatus such as an EEG, measuring brain activity or an EKG/ECG machine measuring the electrical activity of the heart. He and

Erickson mentored Rossi in the use of the measuring apparatus and they conducted a number of experiments with patients, themselves and family members during the mid-1970's, much of which is documented in Ravitz's book *Electrodynamic Man*¹⁸. During my visit with ER, we conducted several experiments using a modern version of the apparatus, including the first ever measurement of two people in trance. ER and I became the "left" and "right" sides of a dyad connected by the holding of hands to create the circuit. The details of our solo experiments and other experiments conducted previously¹⁹ are detailed in Chapter 14. The important aspect to note is that the measuring electrodes were adhered to the palms of each hand. The voltage was recorded as a line on a strip of paper that showed the variations over the time of the experiment. The right and left side were recorded as different lines and so it was possible to see the variations happening in one side and the differences in activity between the two sides of the body.

Dr David Cheek was also an important mentor for Rossi. He began his medical career as a specialist in gynecology and obstetrics. He became very interested in hypnosis and developed the process of "ideomotor signalling"²⁰. Cheek first learnt this from hypnosis training seminars presented by Erickson in the 1950's. In essence, the positive, or "yes", attribution was given to one finger and the negative, or "no", to another. The subject is trained to raise one finger or the other as a response. During trance it was found that one or other of these fingers would rise or move in a non-conscious way – "almost by themselves" – indicating a connection with implicit, unconscious regions of the subject. These movements may agree with the conscious dialogue or may disagree to indicate discord or incongruence between the conscious and non-conscious worlds of the subject. The non-conscious, or non self-directed, action is similar to hand levitation which is also an ideomotor response that occurs "by itself" and is a behavior during hypnosis that can indicate a state of trance. The important aspect to note is that the different finger responses reflected opposites and mirror aspects of the situation being investigated.

ER: So, I'm reading the literature and sitting with these guys and I realize that in the literature there is a term – the ideomotor – the *idea* gives rise to a push, an activity... that's what I connected with. I'm intrinsically a top-down person.

It's the *idea* that evokes (ER indicates with his hands a movement down the body from his head.)

This was one of the things I found brilliant about Cheek that the rest of the hypnosis world did not understand. Apparently there were some high science guys who pride themselves on their "science" and "experiment" and "research" in the field of hypnosis who demolished Cheek.

What they found was unreliability in the movement of the fingers. Cheek says, "This is your 'yes' finger and this is your 'no' finger and this is your 'I don't know' finger". These guys did some experiments and found the subjects to be unreliable, "Cheek is not *scientific!*" (ER describes this with high pantomime). They turned the whole world of hypnosis and psychotherapy against the idea of the "ideodynamic".

But... if you stop to think about it... *ideo* means "idea", but it also means "the individual". So, what kind of simple minded mechanism would it be if every time I say, "yay", your yay finger goes up, and every time I say "Nay", your nay finger goes up? In other words, *human complexity* is involved, not human unreliability.

These scientific types were looking for some objective science just like the 1890s – the beginning of experimental psychology in Wurtzberg in Germany – and they said, "Ah, psychology is a science, an experimental science" and it's been futzing around with the subjective humanities ever since... really, these so-called scientists were talking about the experience of the world only from their left hemisphere – the verbal, the mathematical – rather than the right hemisphere – the episodic and experiential. So, it was an effort to see the truth. I saw the truth in Erickson and I saw the truth in Cheek. But, I saw that the finger signals could be unreliable and it concerned me, too.

So, I did a book with Cheek²¹ and I developed all those paradigms, all those techniques, all those boxes in the book, and they really are still good. I haven't used them that much because I moved on to other things, but I was looking for something else, because there was one thing that did bother me – that the finger signals – some people just didn't show them.

Somehow, when you were in the atmosphere of Cheek – he carried such an authority, that the subject’s finger really did go up by itself. Other people, the scientific types, said it wasn’t by itself, Cheek was “programming” you. So, I was looking for something that was less programmable, so to speak.

...you’re really asking what were the steps that led to my inventing the Mirroring Hands technique...

It was the idea of the ideodynamic – the essence of that so called “trance” thing – it was also the ideodynamic that was a split between my point of view and Cheek. He called it “ideomotor”, but if there is ideomotor, there must be ideosensory and I thought the word “ideodynamic” included both of them. When I wrote the book, I used the word ideodynamic, but he really never went for that.

RH: How did you get to using the hands?

ER: I think it really just came out of body language. (ER demonstrates the use of one hand and then the other while in discussion).

So, I thought, “Why not use the whole hand?” Now that’s the connection with Erickson, who invented the hand levitation approach in therapeutic hypnosis. I’m not exactly sure of when, in my memory, but I believe that I put the ideas of Erickson and Cheek together to create the mind-hand mirroring approach to therapeutic hypnosis. Where Erickson did this (ER raises his arm off the chair like a hand levitation), but, actually, this was kind of hard for a lot of people, but maybe...

(ER’s eyes sparkle in a numinous a-ha! moment of discovery) ...Oh, now I recall the connection...

This was one of the earliest ideas about what *was* hypnosis - that it was a manifestation of *electromagnetism*. I think... I don’t know if it was me or somebody else ... sometimes I really do think “was that really me or did I read that somewhere?” Anyway, those old historical books on hypnosis show pictures of old guys with big eyes... and so-called magical gestures... I know I’ve seen in these historical documents the idea of magnetic movements, but I found, somehow, a connection between magnetic and hands and fascination

in what I call the “Novelty-Numinosum-Neurogenesis-Effect” which is the scientific basis of therapeutic hypnosis²².

So, if you put your hands together like that (placing his hands in front and separated) you can feel – ideosensory – you actually feel it subjectively... Now, as I closed my eyes when I demonstrated that - I was really feeling it... (acts out his thinking processes) ... was I really feeling the pulling together? Yes! But, could I also feel a “no” response, where the hands come apart? Right now with you, Richard, I am experiencing that pushing apart...

Now, when I did this, I put together the ideomotor with ideosensory... now I'm speculating that this very fragile subjective experience is *a quantum quale of inner sensation and perception that can only be felt and realized by me, myself and I*. It is the essence of the Self, a secret sense of my aliveness that no one else can possibly experience! Shall we call it the “Quantum Sense of being” or “The Uncertainty of Self”? I wonder... is this the essence of the very fragile and numinous experiences of empathy, compassion, relationship and healing during Mind Mirroring between people in love in real life as well as in the psychotherapeutic relationship? I've never written about this, have I?

RH: Not really... no

ER: So, here was Rossi “doubling down” so to speak. I'm trying to increase the person's hypnotizability – I don't like that word – I want to say, instead of hypnotizability – a quantum hypersensitivity to one's inner ideodynamic... *a quantum quale of inner sensation and perception*. Part of my shift now, by the way, to the Quantum Field Theory is that finally somebody got it. There was an article in *American Journal of Clinical Hypnosis*²³ and they said, “Ernie Rossi said that it was not so much suggestion...” and they say correctly, “... Erickson was not a genius of manipulation... Rossi said it was more correct to say that Erickson was a *genius of observation*.”

RH: You say this in Volume 6 of the Collected Works²⁴...

ER: Now that heartened me. Somebody's got it! Yes, that's what I really think. That's the new connection to the quantum level of human experience...

RH: ...the observation...

ER: ... and the deeper quantum level of sensitivity. Quantum and hypnosis are not *strange* and *weird*. They are another dimension of being hypersensitive to your inner world.

The problem of psychotherapy is: people have problems - why? Because they don't know how to listen to themselves and their own impulses, their own truth, their own myth. Why don't people all follow their inner passion? Because the outside world overwhelms them.

RH: Following your bliss is what Joseph Campbell²⁵ was saying ...

ER: Yes! The typical teacher says, "Now you are going to make an 'a' like this, not like that... and the kid has to practice making an 'a', a small 'a' and then a big 'A'. So, a lot of learning that is taught to kids is learning how "not to". There's a million ways, infinite ways, of "not to", but, apparently, only one way that is "correct".

RH: This is the Winner/Loser²⁶ idea of mine that is based on the idea there is a winning – a way that wins – and everything else loses...

ER: Yes...

RH: ...and losing is bad.

ER: ...and so, we see the "power" instinct...

RH: Yeah...

ER: ... aggression, rather than sensitivity and positive empathy. That is what I am exploring – can humans educate themselves to the values of quantum level sensitivity and wellbeing, rather than stress, anxiety, addictions and depression?

RH: Yes.

ER: I was about to say "subjective awareness", but subjective awareness can be your finest quantum quale level of sensitivity. So fine that many people don't get it because it is directly dependent on your particular brain structures and the classical as well as quantum contingencies environment. All of us have infinitely different possibilities in life...

Basically, people have problems because they are overwhelmed by the outside world saying it's "my way or the highway". By saying we have to do it only one way just deepens the pathology. So, a politician is truly great when you have someone like Lincoln say, give voice to, something that is emerging in the fragile shadows of human consciousness and cognition...

RH: The zeitgeist?

ER: Yes – we should not make slaves of each other, and so forth. So, I don't think I ever wrote it, but the basic human problem is that you've lost your voice. No-one told you to be a poet when you were a child... it's the educational system... reliance on group testing and so forth and competition... the competition for who is going to be the dominant voice, rather than who has the most sensitive understanding... who is going to see the world in a new light – like Einstein.

You know that Einstein was a "duffer"? He wasn't that good at mathematics and he was an inspector 3rd class in the patent office²⁷.

So, people have problems not because they have problems, but because nobody taught them how to respect their own genius. Everybody has a genius when they learn how to optimize their best self! How do we help each other find their own opportunities in self-development? That's the real problem of nation building for politicians – not perpetual self-aggrandisement, which is a crime...

So, now it's quantum sensitivity, observation, empathy and compassion for yourself and others that is the important thing... not suggestion...

RH: And certainly not direction...

ER: You bet... and so, when I wrote the *Symptom Path to Enlightenment* in 1996²⁸, it suddenly came as a great insight to me that the symptoms, really, are your guide. Symptoms show where you are bumping against consensual reality and so you've got to learn to work on that... But, of course, the outside world isn't fair. It doesn't say "Oh yes, that's right. You're really right after all, Richard..." I know a politician currently fighting for dominance that would never say *that* to you.

So, this is how I made the connection between hypnosis and quantum self-sensitivity and Novelty-Numinosum-Neurogenesis-Effect [NNNE]. The dominant outside world said, “It’s not your self-sensitivity and self-creation that’s important, it’s my direction that’s making everything good for you.”

My struggle has always been – how do I get the person to be more sensitive to themselves, to explore their own best experience to find their own unique truth and then when they find their truth, their passion, so to speak, how do they develop more skills to share their truth with the world around them? That is Stage 4 of the creative cycle – you do your inner work, using the NNNE to create the best of yourself and give back something of value.

So, this became a very important transition from Cheek, who pointed out the fingers which would say “yes” and which “no”. My first shift away from this was to move the focus to “Let’s see which would be your ‘yes’ finger and which will be your ‘no’ finger”. We would get the client to say “yes, yes, yes, yes...” and see which finger moved. This is a sensitive process. When Cheek would work with me though, my finger would *really go*... But that didn’t happen for everyone. Did you ever meet Dr. Cheek?

RH: No

ER: He was a rather large presence - a wonderfully benign family doctor. You’d love just looking at him. He’d smile and you’d feel comfortably, confidently contained - wrapped in the wings of his wellbeing...

Then, I went through a phase where those fingers could be like magnets. I went through all those transitional things and finally I came up with the importance of inner awareness and self-care in daily life (ER demonstrates by making a large sweeping circle with his arms, with his hands very slowly swirling in the space around himself) ... I found that in my personal experience, even though I am not particularly “suggestible”, even *I can feel* something. When I’m working with someone, I’m habitually in deep empathy and rapport. I try to extend my sense of union with the person by asking, “Can you feel how one part of you is pushing away what you no longer need and another part of you is pulling together what you need to receive?” And the person would look and see their hands slowly going together, “Are they really

going together or are you just doing that deliberately?” and they would say “No, I’m not doing it!”

And then, one day, after a person’s fingers touched, I dared to ask, “Ok, now, what would happen if the magnets, the inner forces, reversed? Could you feel - sense the hands pushing apart?” and sure enough the hands would draw apart. I would say, “Are you just trying to be a good subject for me or is that really happening all by itself?” So, *happening by itself* what some hypnotherapists would call “a mild sense of dissociation” became a very important thing for me in conceptualizing changing novel states of consciousness and cognition. I now speculate that such heightened states of inner ideosensory dynamics may be a currently evolving dimension of consciousness at the quantum level of the Novelty-Numinosum-Neurogenesis-Effect.

So, if the NNNE is happening by itself well, of course, everything in nature is unconscious on a quantum level of uncertainty, probability and potentiality for creative change. This is how we are making contact – a connection between newly evolving consciousness, cognition, dreams and the probabilistic nature of the quantum unconscious. So, for many years, this is how it was – facilitating essential ‘yes’ or ‘no’ states of emotional transitions through my mind mirroring hands technique drawing brain/mind states together or pushing them apart via the NNNE. Then came the final switch. I discovered I could do this without using the hypnotic metaphor. I could say “Place your hands together, about chest height and the palms facing each other – just like *mirroring* each other - and let’s see what starts to happen - all by itself.”

I think, the first time I said this it was a mistake, I forgot to use the term “magnetic”. I just forgot to use the term. Maybe I was tired that day, but I said, “Let’s see if those hands come together or maybe push apart”. Of course, I meant like a magnet, but I forgot to say magnet and I found that it was really happening all by itself without the magnetic metaphor that was from historical, classical therapeutic hypnosis.

RH: So, no suggestion?

ER: Right. Then came the next step which was... I'm trying to remember how I made the jump... "Can you get a sense of which hand feels like it is expressing your problem?" And that was *very* easy for people whether they believed they were experiencing hypnosis or not! Hand levitation had its problems – not everyone can do it. Fingers weren't reliable, but everyone could suddenly experience, "Oh yeah, this hand feels like the problem..."

Then later I would generalize it, "If you have your problem in one hand, what do you have in the opposite hand?" What's the opposite of a problem, well, obviously, a solution! So, if this is the problem, what is happening in the other hand is the opposite – a cure or a-ha experience of psychological insight or stage 3 of the creative cycle. Then the word "opposite" became very important in my mind just as it was for Carl Jung.

So, I'm finding a path – an idiosyncratic path between the problem and its solution – a *Symptom Path to Enlightenment* – and that's how that book got written.

RH: Oh, wow. Everything fits together.

ER: Yes, that's my daily and hourly work! I had found a way of doing what people were doing with hypnosis without calling it hypnosis, without calling it magnetic, without even calling it suggestion. What was I doing? Facilitating ideodynamic consciousness and cognition. Purely ideodynamic – ideosensory and ideomotor – hey, let's go wild with this... we could call it ideo-pleasure, and write a book about mindful positive psychology! Ideo-pain? So with pain patients and perhaps PTSD, "Let's see which hand expresses the pain and what's the opposite? Keep that pain in that hand for a moment and then let yourself experience the opposite."

Here I am reinforcing the ideosensory, "... and let's see what the opposite of pain would be..."

So, instead of pain, it's going to be some sort of pleasure. So what I'm doing is shifting the focus of sensory/perceptual consciousness and cognition from the pain spot in the brain, to the pleasure spot. This can now be called the quantum experiential essence of neuroscience and neuropsychotherapy.

We talked for a while about the recent Nature paper²⁹ which maps the position of words and how they are globally distributed indicating that communication requires global interactivity, an interplay of the whole brain.

ER: This may be the origin of the ideosensory. I've got to look at that *Nature* paper more carefully to see if they use the term ideosensory. This gives me a new insight into the neuroscientific basis for therapeutic hypnosis. When I say a word – I say “puppy” - you're going to get an image, a feeling about “puppy”: the image – verbal; the feeling – sensory; associations to gentleness, sweetness and the puppy side to your personality... and you can start being the puppy within you. There is an ideosensory dynamic within your brain. In fact, this is the whole issue with all schools of psychotherapy as well. Now we have all these modern multi-million dollar machines with real scientists showing it. This is the new neuro psychotherapy. You could write a book on that!

RH: I have just written as you suggested – “A New Approach to Psychotherapy”. I suppose you had experiences with Erickson where you thought “Gosh, am I in this room?” because for me to write that on a piece of paper as “Yeah, sure, Richard will do that...” that's extraordinary! I will get past that limitation, but 12 years ago I was nothing in the world of psychotherapy...

ER: You're still searching for some kind of a foundation?

RH: This is the beginning of a surprising shift in what is happening to me...

You will see when you read on that ER has perceived that I am realizing and releasing something that is important for me. Suddenly the conversation is no longer about ER's recollections, but something very real and *present* in *my* inner world. The shift seems effortless, perhaps better described as an *effortless effort*, but it is also a reflection of ER's *personal naturalness* as a facilitator for others – in this case, me.

RH: Well, I'm in a room with Ernie Rossi who says “You can write that book”.
Yeah, that's pretty good. It satisfies my confidence...

ER: Confidence. You're feeling confidence now?

RH: Well, you make me feel confident

ER: Let's pause for a few moments and feel your confidence...

We sit quietly for a couple of minutes.

ER: See how sensitive I was and how self-sensitive you are right now? You've finally come out with the word "confidence" and you are smiling and animated, so I shut off my own thoughts and say to myself "Shut up, you damned fool... just listen". Then I say to you, "Ok, let's be quiet for a couple of moments to enjoy your confidence." You closed your eyes and you immediately said, "Yes...yes!" That was my sensitivity – our quantum level of rapport, our mind mirroring – we finally got a spot where Richard reached for something at his growing edge, his very own NNNE without me asking "Well, what's your growing edge, Richard? What's your passion?" You were *manifesting* your passion and I saw this tiny manifestation and *that's* my therapeutic sensitivity as a "quantum field theory psychotherapist" (gentle laughter, because we both know neither of us *really* know what that means yet). I'm very sensitive to growing edges, your passions – where you need to go. I'm very sensitive to Stage 2 of the creative process - your difficulty, where you get stuck, where you can't experience your confidence.

And at that crucial moment I have the wit to say – "let's be quiet about this for a couple of minutes" and let you go with a natural inner search, an exploration about that. That got a hit! You said "yeah...yeah". You immediately felt something good inside, and warm and self-confident as your own self-generated motivation for writing a book. This is an ideal example of how I work. If you want to use a hypnotic metaphor, you can call it a hypnotic induction, but you went down into yourself near your growing edge. Of course, I'm ruining it now by analysing and talking about it, but I wanted to give you an example. See how simple that was. That was Ericksonian sensitivity, not manipulative genius. You felt very good when I reflected, mirrored back to you your hunger for your own confidence, which is what you needed to manifest your own best self. You made another shift. Confidence is not just like that politician (laughs). You are confident because it vibrates well. It feels well within you and you are on the right path – from symptom to security on your current path to enlightenment...

... and it's happening in you, now!

This is the secret behind Erickson's teaching therapists that their task is to *shift the burden of responsibility for effective psychotherapy back to the person*³⁰. It's old fashioned language and sounds simple, but this has been an example of how Erickson would shift your burden back to yourself and that inner task naturally evokes the 4-stage creative cycle and the NNNE so you automatically go into a so-called "private therapeutic trance". You need to go into trance to self-facilitate the sometimes difficult transition between stage 2 and stage 3 of the creative cycle, then you can take time to pause and enjoy. Because you are motivated to make this interview a part of your personal development...

We pause for half a minute in another spontaneous state of inner focus and rapport – a feeling of accomplishment in shifting to stage 4 of the creative cycle.

RH: When I teach, I use a piece of footage I found of you on YouTube where you tell the therapists to "Get out of the way..."

ER: Yes! Exactly where therapy begins.

RH: ...and having you say it before I say it, helps. Maybe it is old fashioned language, but I like it. I think it is good language and some people say I have an old style of language in the way I speak... I don't know...

ER: The therapist's focus of attention is to be very interested in what the experience is rather than focus on the therapy. The best answer that is going to come from the therapist is for the therapist to work out how to get more sensitive to what's *really* going on in the ideodynamic within their client – what warms their heart and soul.

RH: So, everyone operates with this dynamic and this is motor and sensory which can also be a bottom-up. We need to trigger... This is where I'm suggesting *Curiosity* energizes the motion in a particular and helpful way. Then an idea comes or maybe it's a motor action that comes ...

ER: ...or it might be a pleasure of some sort...

RH: ...a sensation...

ER: Yes, you've made a connection between curiosity and the essence of therapy, so write something about that now...

I write in my notepad: *Novelty – something catching your “notice”: Curiosity for Information; Numinosum – wondering and amazement at this novel stimulus – Curiosity for Play; and Neurogenesis – the facilitation of gene activity, protein synthesis and brain plasticity – Curiosity for Possibility.*

Numinosum is a word that is a key element in ER's teaching and practice. The term was coined by the German theologian, Rudolph Otto, in his famous book *The Idea of the Holy* from 1923³¹, which is still in print. It is a term often used by Carl Jung. It describes an “indescribable” feeling that arises, almost independent of will, a feeling that is more than oneself - fascination; mysterious; wondrous; amazing; tremendous.

ER: Yes. This is what I now call the novelty-numinosum-neurogenesis effect. Something is novel to you - and this is basic neuroscience - something in the environment caught your interest. The numinosum is your sense of fascination and wonder about something very important to you. You're entranced by that novel stimulus and that is what turns on the spiritual sense of Otto's numinosum. I believe it's the essential neuroscience dynamic of gene expression, protein formation and brain plasticity that potentially underpins the generation of new consciousness, cognition and mind-body healing every 90-120 minutes, the basic rest-activity cycle³², about twelve times a day.

RH: The dynamic flow of activity that occurs on many levels in a complex response to what seems like such a simple behavior or emotion on the surface...

ER: Now we've gone from a sensory perceptual - ideodynamic – from there to emotions - to turning on genes that actually make new proteins and new cells, heightening appropriate neural and immune systems and healing factors. But, at the top of all these unknowable quantum level activities, essentially makes an impression on you...

...and that's the new consciousness...You get more engaged in the "opposite of the pain" which is pleasure – the opposite of the problem which is a therapeutic consciousness. I'm using the phrase - *Facilitating Therapeutic Consciousness and Cognition*. That's my name for my daily work. I'm a facilitator of optimising consciousness and cognition

RH: ...through sensitivity...

ER: Yes, through sensitivity and your curiosity. Curiosity leads to the numinosum when you are *really* sensitive. Not just behaving in the ordinary way. When you are entranced by the novel you are able to enter a new space in your mind-gene-brain and you are actually *re-creating* yourself. That's the simple neuroscience statement of all this.

RH: Curiosity for Possibility!

ER: Yes! – possibility thinking...

RH: ...and I see a difference between the general understanding of curiosity. I'm keen to show there is the generally thought of *Curiosity for Information* and then there is also curiosity for unexpected Information – *Curiosity for Play* – which become the starting points for Possibility because curiosity for information and play only function during and until the information is found. Curiosity for Possibility is as to Numinosum – open ended – because it is on the growing edge, to which there is no limitation.

ER: Yes! Have you got that written there?

RH: Yes, I have this recorded...

ER: Good...

RH: To put it simply, Curiosity turns on the "good stuff" by putting you in the best state of being to start with. I think there is a "curiosity system" based around all those nuclei in what looks like a small gathering at the top of the brainstem and base of the midbrain (see Chapter 9) that I'm calling the *nuntius nuclei*. It seems to me that this is just a nice little way of describing physically and neurobiologically what we've just said – We like it! – it turns on good stuff...

ER: Yes! That's right...

RH: And we can all be confident. I mean more than just emotional confidence, but I am also meaning body confidence...

ER: Yes... and comfort - that's a *big* word!

RH: ...and that allows you to *feel* the numinosum and the curiosity...

ER: ...wonder, fascination and tremendousness

RH: Novelty is a trigger – novelty/surprise/interest – which the outside world, the winner/loser world as I call it, this dominating outside world, suppresses. If you are not sensitive to the novelty, the system may not begin...

ER: Yeah...

RH: So, *sensitive* is the big word for me today. A very important word...

[We pause for a moment, enjoying these revelations...]

RH: I've been sitting here looking across at the bookshelf to a book edited by a friend of mine, Michael Hoyt, *Creating the Moment*...

The actual title of the book is *Capturing the Moment*, edited by Michael Hoyt and Moshe Talmon³³. I spoke to Michael about mis-speaking the title. His reply was that I should mention the correct title, but to leave the "error" because it was relevant to the moment. He felt we were, indeed, *creating a moment* and we should leave the serendipity to speak for itself.

ER: Exactly, that's the most important thing. The "creative moment" is Stage 3 – the Aha! - the positive, and that's what a lot of therapists don't know how to do – to grab the moment.

RH: [We both enjoy a contemplative pause] I'm wondering... there is so much here for me to consider... I'm wondering if there is any more that we could do today?

ER: You can carry some of this away with you and perhaps write this afternoon?

RH: Yes... that I will do. We've shared so many wonderful ideas... lots of interesting terms, concepts and principles that need more explanation. We'll be using these throughout the book so we really need to begin by establishing the basics. I think we need to do a section on these fundamentals...? I mean, these fundamentals aren't things that we "do", they're the things that lie *beneath and within* the things we do. What we do *emerges* from these *fundamental principles*, so I think we should start there, be clear and have everyone understanding... that's a good plan. I'd better go and do some work!

Chapter 2

Thinking *IN* the Systems of Life

Preparing the therapeutic mind.

E.R. *Did you find the story about Leeuwenhoek in the books I left you?*

R.H. *I did, Ernie! He developed the microscope and was the first to see red blood cells and bacteria... How amazing to look into the body for the first time.*

E.R. *What do you make of that?*

R.H. *They could see what we were made of.*

E.R. *Ah, there's more to us than meets the eye?*

R.H. *And we've gone much deeper since then... right down to the DNA.*

E.R. *What do you make of that?*

R.H. *Well, we've been changing the way we deal with all kinds of health treatments, medicines and psychotherapy, too...*

E.R. *Sure...*

R.H. *So, we should know more about what we are made of?*

E.R. *And how the whole system works...*

R.H. *The system?*

E.R. *OK... just a moment.* (Ernie goes to the shelf and pulls out a book) *Read this...*

from the Rossi/Hill conversations, 2016

Preparing the Therapeutic Mind

A new client comes to the clinic and, once the induction formalities are completed, the therapist and client settle down to what will be about an hour or so of talk.

Regardless of what methods you use, the client eventually reveals something about why they have come to see you: the *something* that bothers them; the *something* that is not right; the *something* that is not good or feels bad. No-one visits a therapist to tell them that all is well and they feel great and there's nothing in their life that

needs to change. They come to figure out, and fix, whatever it is that is making them *not* feel ok.

How is it that we know we are *not ok*? There is, clearly, something about us that knows. Equally there is something about us that *prefers* to be ok and will try to move us towards being ok: toward health, feeling positive, loved, connected, and a part of something that means something. We are *attracted* to these ways of being. When someone comes for therapy, they are responding to these natural needs, tendencies, inclinations and preferences. Unfortunately, what they are doing in their current life isn't working, and possibly making things worse. Frankly, who knows? At this point, not the client, nor the therapist.

Something needs to break the impasse. There are dozens, in fact hundreds, of therapeutic methods designed to fix the client's problem. Could we just put all those to the side for the moment and consider the natural capacities *within* the client? If we can turn them on and activate them, then maybe the system that seems keen to make us ok will kick into gear. Can the client access those inner capacities that they either don't know about, or perhaps have lost faith in?

In this book we call those processes our natural problem solving and mind-body healing. In order to access these inner self healing capacities, we need to be in a *therapeutic consciousness*. By that we mean the *mindset* that knows you are not ok, but is willing and able to engage in the necessary processes to become ok. Not being ok is a different state of consciousness where it is hard to connect with problem solving and healing. In this state of being we are *un-well* or in *dis-ease*. This is a *disrupted consciousness*. Therapy is intended to take us through processes that produce beneficial change towards a state of wellness and wellbeing. This occurs when we not only make the connections to our better self, but when we are able to integrate those changes into our whole system from neurons to genes. This is an *integrated consciousness*. Mirroring hands takes us from disruption into the therapeutic and from there to integration, resolution and a state of wellbeing. Mirroring Hands seeks to open the connections to our inner capacities for problem solving and our mind-body healing to find our best self.

All By Itself

Have you ever experienced a client who declares they are feeling better, or solved something, or have had an amazing insight or recovery, and you are not exactly sure what caused the problem to be solved, what part of the therapy, what you said or did that was the breakthrough for the client? This might seem strange in one sense, but to be expected in another. That is what we would like to explore with you, now. How is it normal for there to be an unexpected response, that seems to have come from no direct cause, that is a major breakthrough for the client? The answer is found in the physics of how complex systems function.

Doorway to Reality

The rest of this chapter will explore the nature of systems and show what Non-Linear Dynamics, Self-organizing, Adaptive Complexity, and Chaos Theory are all about and why they are important. We will be succinct and put theory into context with therapeutic practice where we can. We will also take it slowly, and carefully, because these theories and concepts challenge many of society's familiar approaches to how to think about the way things work. This is particularly relevant when trying to understand the processes of psychotherapy. How do we know we are doing what is needed to effect change and growth? There are so many aspects to a person's life, and to the problem that brought them to therapy. How do we know what to do to fix the problem and let the client go with a much brighter future? How do we find the cause and implement the necessary therapy? To answer these questions, it is necessary to show why these are not the right questions. These questions come from thinking *about* the system. We will show how any human system that you can think *about* is a system that you are *in*. In therapy, the therapist is unquestionably *IN* the system and this notion radically changes the way we approach therapy and approach life. We begin this exploration with a journey.

Birds Know How

In the skies over Cornwall in England, or Olvoortseweg, Nijerk in The Netherlands, or Sacramento, California in the USA, you can witness tens of thousands of starlings taking to the air in a spectacle that defies logic. The birds form a fluid display that ebbs and flows across the sky³⁴. There is, however, no conductor, no leader, no organizer, just a very special set of conditions and factors from which this

extraordinary shape shifting display emerges. It is impossible to predict exactly the shape and flow in any given moment, other than that there *will be* a shape and flow.

This flock of birds is self-organizing. The ebb and flow of the birds is something that emerges from a set of parameters that is inextricably woven into their existence. This display happens almost “all by itself”, which may seem an odd suggestion because humans generally think that for complex things to function successfully they need to be directed, organised and led. In our modern world, it seems a little crazy to suggest that a business could organize itself, or that children could learn in an undirected education system, or a community could function with no rules and no police to enforce right and wrong. It is a logical step to imagine that psychotherapy requires organized techniques with predictable outcomes. The technical term for such organized approaches is *linear causation* which means that there is a cause and effect relationship, in a step by step process, that has predictable results. More pertinently, this suggests that we, and by we, I mean humans, are able to exert a direct cause-effect control on the world around us. Linear causation has become the central focus of scientific inquiry and analytical process. Linear causality has been the dominant paradigm in education³⁵, scientific research³⁶, and industrialized corporate thinking³⁷ for the better part of the past century. This can be traced back to ancient Greece, but was firmly established by Isaac Newton in his *Principia*, (*The Mathematical Principles of Natural Philosophy*) in 1687³⁸.

Yet, a flock of starlings, a school of fish, the flow of people passing by each other on a crowded crosswalk, DNA, planets, solar systems and galaxies, and the functioning of the human brain, all emerge from a collective group of parts that self-organize, in concert with principles and intentions to produce health and wellbeing, which creates something more than just the parts themselves, without any guidance, direction or instruction from anyone. How is that possible? The answer is that self-organization and non-linear dynamics are the natural stuff of life. We have just shifted our attention to linear causation and lost sight of the whole picture. It is important to note that this is not saying that linear causality does not exist or is not important. Linear processes occur between elements *within* nonlinear systems. They do not cancel each other out. They are complimentary aspects of Nature and natural experience. It's how we think about them that makes the difference. It is very difficult to think

about non-linear systems from a linear perspective, but it is not difficult at all to see linear processes occurring within non-linear systems. Perhaps linear systems are the dominant our thinking because a lot of things we deal with day to day have a basis in Newtonian, linear physics. Learning how to appreciate the complex, non-linear world, you will be pleased to know, is not that complicated.

Complex Systems³⁹

A **complex system**⁴⁰ is simply where there are a large number of different, but interconnected and interdependent elements or parts. Open, complex systems tend to become more complex over time. A human being is, certainly, an open complex system. It is possible to differentiate a complex system into autonomous parts. Our body is made from trillions of individual cells. These cells are also parts of subsystems like the heart or liver or brain. Those subsystems can interconnect or be interdependent with other parts and become larger subsystems like the digestive system or the limbic system. The message here, is that there is a lot going on within the whole human body “system” and, although it is possible to discern some parts separately, they are all integral to the outcome, or emergent property, of the system – a human being. The parts give rise to something that is more than just the parts and these parts give no clear indication of the what the whole system will become. Clients are often experiencing disruption and disconnection in the complex system of their psyche. There are lots of ways that a system can be disrupted and disorganized. Trauma, negative attachments, negative criticism, social rejection, and many more affective and biological insults can cause disruptions to a healthy psyche. Clients come to therapy seeking to understand why and how they have become disconnected and disrupted, to solve the problem and repair the damage, and to re-integrate into a whole and healthy psyche.

- **Complex system** - many parts are interconnected and interdependent and the whole that arises from the complexity is *more* than the individual parts of the system.

Non-Linear Systems

A **non-linear system** is, of course, very different from the linear system we have already discussed. A nonlinear system is a system whose output is not directly proportional to its input due to the interconnections and interdependencies within the

system. In a linear system, the energy that goes in is equal to the energy that comes out and is, therefore, predictable. Newtonian physics tells us that if you hit a ball with a bat, then the force of the bat will determine how far the ball will travel and this can be predicted by a mathematical formula. This is true if you isolate the ball and the bat from everything else around it. Systems that have no physical interaction with anything else are called closed systems. In scientific research there is a lot of effort made to exclude all the variables and confounders to produce a reliable, repeatable result. In reality, the ball and bat are a non-linear, complex system that is interdependent and interactive with the air, the weather, the skill of the batsman, the part of the bat that hits the ball, the angle the ball is struck and maybe even whether a bird flies by and is struck by the ball. In the natural (complex) system, that ball could go anywhere. It is unpredictable. A big swing might get a small result and a small swing might get a large result, especially if the local dog catches the ball and runs away with it. But, you will know the result when it happens. This is what is like when working with a client. The same task given to different people can produce a very different result. In fact, the same task given to the same person at a different time or in a different way can have very different results.

- **Non-linear systems** – the output or outcome or resulting experience is not directly proportional to the input because of the unknowable combined effect of the interconnections and interdependencies of all the other parts of the system.

Chaos

Chaos Theory takes us a little bit further into the unusual and more counter-intuitive aspects of complex systems. Chaos in a complex system has two relevant fundamental properties. Firstly, it is **sensitive to initial conditions** and secondly, a struggles between **order and disorder**. Sensitivity to initial conditions is what is commonly known as the “butterfly effect”. This was an analogy used by the originator of Chaos Theory, Edward Lorenz, as a subtitle for a lecture on “Predictability” at MIT, in Cambridge in 1972⁴¹. The question is that if a butterfly flaps its wings in Brazil, does this set off a tornado in Texas? This is not to say that the butterfly was the *cause* of the tornado, but that the butterfly wings were the initial condition that set up a cascade of interactive events that made a big change in another part of the system. Whenever we add something new into the therapeutic experience, we are

potentially altering the initial conditions from which surprising changes might occur. Drawing a client’s attention to a different viewpoint or perspective is one example, but what is more effective is if the client changes their viewpoint or perspective. Effective therapeutic change always lies within the client. So, small changes can have large effects.

- **Chaos** in a complex system is sensitive to the initial conditions. When the initial conditions change by even a small amount, large effects can be felt elsewhere in the system.

Order and Disorder

The second aspect of chaos is in the effect or **order and disorder**. When the system is so overactive that it has no order, it is unable to exhibit useful form or behavior. Schizophrenia and rage might be considered a chaotic condition. At the other end, when there is too much order, activity is constrained and stuck in rigidity where the system is unable to exhibit functional forms or behaviors. Depression and OCD might be seen as rigid conditions. Daniel Siegel suggests that almost all mental health conditions described in the DSM V can be categorized as a chaotic or rigid condition⁴². There is a, however, a natural inclination toward order, especially in open, living systems, because chaos and rigidity can lead to an inability to function successfully and to cease to function. We are naturally inclined toward a manageable degree of order for survival. At the edge of chaos or rigidity there is an abstract boundary between order and disorder. This is a space where transition from a chaotic or rigid phase to a more ordered and successfully functioning phase can occur.

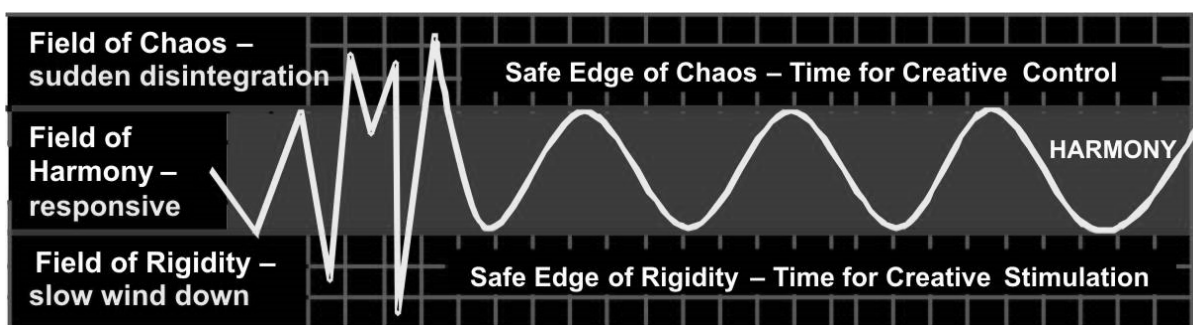


Figure 1. This figure represents our proposed “Field of Harmony” that exists between disintegrating chaos and dissipating rigidity. Harmony is not a straight line, but a flow of activity that moves between the safe edges of chaos and rigidity. At times of chaos there needs to be some creative restraint, calming and turning expansive creativity into something practical. At times of rigidity there needs to be creative stimulation to energize and activate. When the white line is nearing the edge the need for change is called a “phase shift”. When very close to the edge it can be a “critical phase shift”. An adaptive response will maintain the flow of harmony. A

maladaptive response will create excessive chaos or rigidity. Excessive chaos or rigidity produces problems and difficulties that are often experienced as a mental or emotional disorders.

This is called a point of phase transition at the space between the edges of chaos or rigidity. This is a natural period for effective therapy because the client's system is under the most "pressure" to move toward a more ordered or disordered state. This means that there is enough volatility for change to occur. You can see this play out in the behavior of water. We know that water boils at 100C or 212F and freezes at 0C or -32F. Although the temperature of water changes gradually between the state of being ice, a fluid, or a gas, the transitional change does not begin to occur until water is within just a few degrees of state change. Then the change is rapid and dramatic. This small temperature range is the region of phase transition⁴³. For all the temperatures between the phase transitions, water is stable because it is able to adjust and adapt to the temperature changes to maintain its current state ie water is a stable liquid between about 2C and 98C. Water is in a harmonious balance with being in a liquid state between those temperatures, even though the temperature has a range of change. If liquid water comes close to freezing, all you need is some stimulating heat to maintain the harmonious liquid state. Equally, near boiling, all that is needed is for heating to be turned down for the water molecules to calm back into a harmonious liquid state. The harmonious state is not that this liquid water stays the same temperature. The harmonious state is that the water remains a liquid. Now, that has been a lengthy analogy, but just replace the element of "water" with the human condition of "health and wellbeing" and the human story is comparable. So, the experiential field between regions of phase shift or phase transition is the "field of harmony". The "temperature" may vary, but the state of being is relatively stable (see Figure 1).

Clients often come for therapy when they are near, or in, the conditions of phase shift. They might experience a phase transitions during the course of therapy. Reaching a phase transition is expressed in the client's behaviors. This could be tears or some rise in energy such as stress or anxiety in the session. It is not unhealthy or unnatural to wander close to the edge of chaos or rigidity because it is through being both sensitive to and responding to points of phase transition that enables living systems to react to the world, to be spontaneous, adaptive, and maintain life.

- **Order and disorder** meet at an abstract boundary at the edge of chaos (or rigidity) where a phase transition from disorder to order, or *vice versa*, can occur. Periods of phase transition are where therapeutic change can most effectively be made (equally, so can disruptive shifts into disorder).

Attractors

An **attractor** is something that draws a complex adaptive system towards a particular outcome, or state, especially when the system is unstable or under stress⁴⁴. An attractor is not the same as an organizing principle, which is a fundamental aspect of self-organization. An attractor influences the state of a system by drawing the system towards specific types of patterns. They can be a restriction on the system, but can also stimulate creative shifts. This gives us some insight into those repetitive but puzzling aspects of mind and behavior that don't seem to make sense. Why do we repeat the same mistake, choose the wrong job, or think the same thoughts? Why do we repetitively experience compulsions, addictions, and habits we would rather not have? On the positive side, what drives some creative people to explore and make new discoveries? Attractors are points of energy and information that have become embedded in the system. They can be past experiences that are embedded in memory; thoughts and actions that have been encoded into neural structures like the amygdala and basal ganglia; social attitudes, family traditions, or religious doctrines and rituals. The Freudian *unconscious complex*, Jungian *archetypal patterns*, and *cognitive schemas* are, roughly speaking, forms of cognitive attractors in the complex system of the psyche.

A person's life may be stuck at a **fixed point attractor**, producing symptoms such as depression, negative self-criticism, or PTSD. A **periodic attractor** may be expressed as a bipolar mood disorder, or one may be going around in repetitive circles, such as OCD in response to a **limit-cycle attractor**. The most interesting life is one that manifests **chaotic or strange attractors** which invoke continually changing, novel experiences within a creative framework.

There are four main types of attractors:

1. *The Fixed Point or Steady State Attractor* draws a system towards a final resting place: a rock that rolls down a cliff to a final resting place has reached a fixed point attractor.
2. *The Periodic or Limit Cycle Attractor* is most common in biological and ecological systems as a continuous, but isolated state: the swing of a pendulum and the orbit of a planet.
3. *The Quasi-periodic Cycle Attractor* is found when two or more rhythms of different periods interact to produce oscillations that never repeat themselves exactly: a pendulum with two hinged swinging arms; and biological systems like heartbeat and the brain.
4. *The Chaotic or Strange Attractor* produce an adaptive, fractal pattern of response that can change the initial conditions. Systems can change radically when initial conditions change. Examples include the weather, fluid turbulence, electric circuits, chemical systems, molecular dynamics at the cellular-genetic level, social dynamics; and the personal dynamics of mind, personality, emotions and behavior.

The therapist seeks to help the client find their courage and capacity to move out of the stagnant *fixed points* and out-moded *limit cycles* that are producing problems and symptoms. Getting out of a stuck, or repetitive state, will change the client's *initial conditions*, effectively creating a new starting point. This systemic change can be heard in colloquial expressions like, *I have turned over a new leaf* or *I have turned a corner* or *I am ready to start over*. The whole system is then at a creative period of phase shift where effective problem solving and mind-body healing can occur.

- **Attractors** are points of influence in a system that can alter the pattern of flow within the system and the predictability of the system's end state.

Natural Problem Solving and Mind-Body Healing

So, how do we create the order that is needed to survive, be stable, be healthy and be well? What can the client do when they are suffering from the fragmentation of chaos or the stuckness of rigidity in their lives? How can they escape the restrictive grasp of attractors that past experiences have locked into the system? Perhaps it is not so much what the therapist and the client *do*, but how well they work together to

give the system the opportunity to resolve itself. This next section is not about magic. It is about *natural problem solving and mind-body healing* which can be utilized in all therapies.

Emergence, self-organization, and feedback are the very important properties of complex systems that help explain the effectiveness of Mirroring Hands. These are, essentially, what happens when the elements of a complex system interact, spontaneously resolve problems, and naturally move towards healing and wellbeing.

Emergence

Emergence is when properties and qualities arise from the interactions of the elements of the system. New properties and features are naturally created when separate elements come together. Emergence is a product of the synergies between those elements. In our previous description of the flock of starlings, the emergent property was the flowing cloud of birds. The cloud is not a quality of an individual bird, but is something that arises, or emerges, from the collective, synergetic activity of the birds. Emergent properties and qualities alter in relation to the scale of the complex system. As you might imagine, a hundred birds will create a different flowing cloud to a thousand birds. The important message is that what emerges is not the same as the parts themselves⁴⁵.

Insight is a human example. The interaction of a variety of elements, which might include neuronal potentiation, brain associations, thoughts and ideas coming from others, and seemingly unrelated things in the environment, can suddenly and unexpectedly coalesce into a radical and transformational cognitive realization. In the television show *House*⁴⁶, a brilliant doctor was challenged with finding the diagnoses of patients with completely mysterious complaints. He would often struggle with logic and scour his brain for information. Just when he was about to give up, he would be inspired by something as mundane as an empty chip packet rolling across the floor or some unrelated comment made in conversation. Like magic, the answer emerged. Equally, as we work with a client, we might be introducing all kinds of educated, evidence based therapy, but when the client improves they tell us it was something they saw in the way the flowers were arranged in the vase behind us that triggered their recovery.

Emotions, sensations, affective states, thoughts, behaviors, and intuitions are all emergent properties and qualities. Affective states like depression, anxiety, panic anger, love, happiness, joy and so many more, are all emergent properties and qualities from the interactions, both positive and negative, within the complex human system. Why these emotional states have emerged is the therapeutic question we need to ask. What is going on in the system that is driving those emotions to arise? What is the message about the client's inner world that is being heralded by these emergent emotions, or thoughts, or behaviors? This is how to think IN the system. Emergence, in some form, is inevitable, but exactly what the emergent property or quality *means* is the therapeutic question.

- Emergence is when new properties, qualities and features naturally self-organize when elements of a complex system interconnect and interact.

Self-organization

The most interesting emergent quality from complex systems is **self-organization**. The mathematics of complex systems tells us that closed complex systems become more complex and more disordered over time in a process called entropy. Living systems, however, are open systems that may become more complex over time, but move towards order in response to internal rules and regulating processes. Self-organization is the emergent process of a complex system that acts to find a balance between lack of order and too much order. The great astrophysicist, Murry Gell-Mann, described emergence and self-organization as *fundamental properties plus lots of accidents*⁴⁷. Complex systems have an internal set of rules and principles that affect the nature of order within the system. This explains why complexity and non-linear dynamics do not mean that systems are *totally* unpredictable. There are parameters that seem to move systems toward certain sets of probabilities. In living systems, survival is, obviously, a fundamental principle. A living system is naturally inclined to move towards states of order that prolong and promote life. You may be surprised to learn that for all those thousands of starlings to produce a flowing cloud, called a *murmuration*, there are only three fundamental rules of organization. Over time, these have become encoded into their biology in various ways:

1. When a neighbor moves, so do you.

2. Fly away from a danger like a hawk or peregrine falcon.
3. Act together, almost instantaneously, with 7 neighboring birds.

That's it. When you add some essential fundamentals, like the nature of flight, air in which to fly, chemistry, and biology, then you have a system that is ready to self-organize. Humans, of course, have many more "parts", and have a much more complex set of environmental factors, but the process of self-organization is the same. We suggest that is reasonable to assume that a fundamental organizing principle in humans is to naturally self-organize toward health and wellbeing. The most obvious evidence is our immune system. When we get sick our immune system is triggered into a host of activities, from cell to gene, but with the intention and purpose of returning us to health. We know from gene expression research into the Mirroring Hands therapeutic experience that there is an ongoing genetic cascade that includes anti-inflammatory proteins and stem cell activation, which are positive for physical and mental health⁴⁸.

- Self-organization is the spontaneous creation of order in a complex system. Order arises from an initially disordered system in relation to fundamental and organizing principles. The process is spontaneous and without needing control by any external agent.

Feedback

Self-organization results in emergent properties and qualities arising as additions to the system. These new properties are then included in the next phase of self-organization through a **feedback loop**. In this way, the new state of the system, created by emergence, whether it is order or disorder, feeds back into the system to interact with the existing elements. In effect, the principles of emergence and self-organization mean that a system changes itself. The feedback loop enables systems to change over time in relation to the nature of what is emerging from within the system, as well as those things being added from outside of the system. This means that negative emergent properties can cause the system to become more negative. This is why people can remain in disrupted, damaged and disintegrated mental and emotional states for many years, repeating the same errors, placing themselves in the same destructive situations. It is difficult to recover from *within* a disrupted consciousness and while in damaging environments. Equally, adding positive things

to the system, be that a safe therapeutic environment, a caring therapeutic rapport, or a helpful therapeutic approach, not only feeds back to create positive change, but the positive changes that emerge feed back to generate more positive change.

The therapeutic process can be quite a roller coaster ride for a client. Negative and positive influences will competitively feed back, and flow through, a client's complex therapeutic experience. As we will discuss later, therapy can be a *dark night of the soul*, but that "night" can be worth the effort if there is a bright light of positive possibility swirling through and feeding back into the whole system. The flowing pattern created by the starlings, that we consider to be so beautiful, is not just for their own aerobic pleasure, but also because the flock is constantly re-organizing itself in reaction to the negative disruption of swooping attacks by hawks and peregrine falcons. But, the beautiful pattern is the visual expression of self-organization resolving problems, difficulties and disruptions in order to maintain the health and well-being of the flock. That is the true beauty of our natural, inner processes of problem solving and mind-body healing.

- Feedback is a circular process in which a system's emergent output and introductions into the system is returned or "fed back" into the system as input.

The Mind Is Not Just the Brain

A client's mental activity can be imagined as similar to the many birds that populate the flock of starlings. The "mind", however, is something different. The mind is more like the shape-shifting pattern that is the self-organized, emergent property of the flock, as an aerial display. The *murmuration* of starlings is not simply an emergent property of the activity of the birds. There are many more elements involved. The whole system includes the hawks and falcons, the wind directions, the fixed objects such as trees, buildings and the terrain. Alter any of those components and the magical ebb and flow of starlings is different. Many describe the mind as simply an emergent quality of the brain, but it is more logical to think of the mind as an emergent property of not only our neurobiology, but also our biology, the surrounding environment, and the influence of other people, including their minds.

As with the movements of the flock of starlings, the mind is an emergent property that feeds back to the system from which it emerged. It may test our rational thinking, but, in a complex self-organizing system, the mind is actively creating itself every moment. This challenging concept is thoroughly explored by Daniel Siegel in his book, *Mind*⁴⁹, so we won't expand further here, but this gives us some insight into how mind-body healing works. This wider concept of mind means that the therapist becomes an element in the mind of the client simply by being present. The therapist does not need to overtly impose, direct, intervene or try to control the client's brain. The therapist can effectively facilitate an engagement with the client's mind-body processes simply by adding gentle, client-responsive, positive input into the therapeutic experience. The Mirroring Hands practice prevents the therapist from dominating the client's experience or adding anything that removes the client from the locus of control.

Therapy IN the System

What a therapist adds into the "client's system" is very important. We suggest that the more the therapist imposes and directs, the more the client can be disrupted from connecting with their own problem solving and mind-body healing – the own natural self-organizing processes. Finding the right balance can be very difficult and the therapist needs to progress carefully and with sensitive observation of the client. We will discuss sensitive observation more in Chapter 7, but for now it will suffice to say that there is a time to hold and be still with the client, there is a time to help them into a therapeutic consciousness and then there is a time to be present with the client lightly, only facilitating *their* process and acting in concert with *their* problem solving and mind-body healing activity.

Review

The concept of complex, non-linear systems that self-organize, producing problem solving, and mind-body healing without overt direction or control, may challenge how we think about therapy and the world. We hope it also stimulates a sense of wonder about the world. From the very early years of education we are taught to think in a logical process that builds our understanding of the world in a set of linear, step by step, progressions – *this leads to that, which leads to the next thing*, and so on. We are told that having the right knowledge is what we need to reliably predict future

outcomes and to provide a sense of security about the future. Complex systems, unfortunately, are not conducive to predictability and control, but complex systems *will* move towards an order that is regulated by the organizing principles, attractors, disruptors and other systemic influencers. Affecting those regulators is what enables the client to move through the phase shifts to return themselves to an harmonious state of well-being.

As soon as a client enters the room the therapist and client becomes part of a complex therapeutic system. What the therapist says and does will have an impact. Our presence changes the initial conditions of the client's system, and that alone can trigger surprising outcomes. What the therapist and client add into the system, as a relationship, will feedback into their self-organizing processes to facilitate the activation of the client's own, inner, healing capacity.

In this chapter, we have explored the terms and definitions, and put these into the therapeutic context when we could. This chapter is by no means exhaustive. We expect it to stimulate further inquiry, but now we have prepared your mind for thinking *IN* the system, we move on to the next step - preparing the client for a Mirroring Hands experience.

Chapter 3

Unlocking Natural Connections

How we begin

RH: *There's so much to observe and share and sense...*

ER: *Where is the client at today? They sit, "How is it today". What were their dreams, their early morning thoughts? Sometimes you sit there and wait and see, but always looking to see... where is the client?... do they really want to talk to me? Something is growing in them...*

RH: *Sometimes they teach us, too...*

ER: *Yes, that's always a great place to begin...*

from the Rossi/Hill conversations, June, 2016.

How We Begin – Preparing the Client

The most effective healing is when someone is able to access and activate their *own natural* problem solving capacities and mind-body healing. As we described in Chapter 2, this requires the client to be in a state of being that allows healing to occur - a *therapeutic consciousness*. The client usually enters the therapy room in a consciousness that is fractured and troubled by their personal difficulty and disturbance - a *disrupted consciousness*. At the other end of the scale, there is a state of wellbeing that emerges as problems are recognized, resolved, repaired and re-integrated back into the system enabling a phase shift to wellbeing - an *integrated consciousness*. That is the ideal goal.

Creating a Therapeutic Consciousness

The work of therapy is achieved in between the disrupted, or *unhealed state*, and the integrated, or *healed state*. *Therapeutic consciousness* is where realization, resolution, repair, re-integration, and the process of *healing* is possible. The first task of the therapist is to facilitate a shift from a disrupted (disengaged), to a therapeutic (engaged) consciousness. This can be facilitated through a surprisingly simple set of actions. The three key elements are:

1. Focused attention
2. Curiosity – for information, playfulness *and* meaning

3. Nascent confidence (confidence in the potential of the process)

Focused attention is an important component in a number of mind and mind-body processes including therapeutic hypnosis, meditation and mindfulness⁵⁰. By drawing the attention to something specific, preferably something calming, benign or safe, it is possible to change the way energy and information flows in the brain which is reflected in the neural and biochemical processes that inform and alter body state. Change in energy and information flow affects us on many levels, all the way to gene expression and to changes in quantum probability fields, but we will leave that fascinating discussion until Chapter 15. For those familiar with our work to date in relation to gene expression and quantum theory, you will already have some insight into what is being suggested. For practical purposes now, it is relevant to know that focused attention facilitates an altered quality of consciousness.

Curiosity will be explored in greater depth in Chapter 9, but the essence of curiosity is that the curious mind is, by nature, a “moving toward” state. The client is often in a “moving away state” or a “stuck state” which is not compatible with a curious, toward state. It is difficult, if not impossible, to be in a moving away or stuck state at the same time as being in a curious state. Curiosity both triggers and requires the mental and physical biology to change. As curiosity is stimulated there is, among other responses, a reduction in fear and fearfulness; a shift of intention from a constrained to a more adventurous or exploratory mode; a broadening of positive emotions; and an increase in sensitive awareness⁵¹. These are qualities that are very helpful, if not fundamentally vital, when conducting therapy - in both client *and* therapist.

Nascent confidence is the feeling that what is happening is worth the effort of continuing; that there is potential and possibility that is worth pursuing. This harks back to Albert Bandura’s “self-efficacy”⁵² which has been adopted into Positive Psychology: when there is some evidence that you are able to do something, and it is working, then it amplifies the inclination to follow that line of action. Nascent confidence interacts with curiosity to support and amplify this inclination, enabling the client to feel progressively more willing and able to effectively participate in the therapeutic experience.

Unlocking Therapeutic Consciousness with the Three Keys

You may already be thinking about the ways you activate these three key elements in your usual practice. We suggest this because we know that these key elements are present in many different therapeutic techniques, sometimes intentionally included in the method, other times as a serendipitous outcome. Also, the order and timing may well vary, but these three keys to unlocking therapeutic consciousness are fundamental organizing principles of a therapeutic consciousness.

In Mirroring Hands, we activate and utilize these keys at the very beginning in order to move directly toward a therapeutic space. This is not, however, an irreversible drive into therapy. The client-responsive nature of the Mirroring Hands process can help the therapist, and client, to realize that the time might not yet be right, or the client is not yet ready to move into a therapeutic space. This client may need more “first aid” to stabilize their situation. For the therapist, it can mean that this may not be the most appropriate therapy and/or not the most appropriate time to begin. This is one of the ways in which preparation for Mirroring Hands has a “fail safe” mechanism inherent in the process. We will discuss this further in the next section.

We wondered whether to write an objective description of the process or a spoken transcript of the words spoken to the client. We have chosen the spoken transcript, with some objective commentary. We feel this will be a more experiential model. Again, however, we want to stress that these are not formal scripts to be repeated, word for word. We appreciate that while you are learning you may feel safer using our words, but you will soon discover that the words you speak will emerge as a response to the individual “therapeutic system” at the time.

Our final recommendation is that we find it best for the therapist to perform the actions *with* the client, like a mirror (not leading, but co-creating). This models the movements for the client and helps if they are unsure of how to interpret your verbal instructions. This also stimulates mirror neurons, in both client and therapist, which helps create a deeper awareness of each other on both explicit and implicit levels.

Induction to Therapeutic Consciousness

Step1: Inducing Focused Attention

There are numerous practices that ask the client to focus their attention on the body. Meditation often begins with focus on the breath or the heartbeat. Some relaxation practices begin with the feet and move slowly up the body releasing muscle tension. Mirroring Hands asks the client to focus on the hands. As we have already discussed, the hands have the added safety of being both close and at a distance from the body, which the client can vary in accordance with their needs.

Some people have difficulty focusing on breathing because it draws their attention inward, where many feel their implicit painfulness, trauma, and distress reside.

Hands

Our hands are extraordinary things. There are no muscles in the fingers and only a bare minimum in the palms. The majority of muscles that operate the hand's complex and intricate movements are in the forearm. The engineering of our arms - the hinges in our elbows and the ball and socket joint in our shoulders - enable us to move our hands in and around our immediate spatial environment. The ability to touch each finger with our thumb has enabled our species to achieve an almost miraculous acceleration in evolutionary development both physically and socially. Our ability to grasp, hold and manipulate objects has given human beings the ability to become both creators and masters of tools, more than any other species. Although only a small part of our anatomy, they occupy large areas of "real estate" in the brain. The somatosensory cortex and motor cortex, which regulates activity and sensitivity, dedicates nearly 25% of its neurons to the hands. Avatar models of a sensory and motor "homunculus", based on these neuron counts, produces a strange looking person with very large hands at the end of tiny arms, supported by tiny legs, with a very large head and protruding lips and tongue. We explore and test the world around us more with lips, tongue and hands than anything else. Mirroring Hands taps into that neural disproportion and our subsequent heightened awareness of the hands. Not only are the hands ideally suited to focus and capture our attention, they can also be moved through our spatial environment by the arms. We can twist and turn at the wrist, as well as move all the fingers. The hands are sensitive, noticeable, mobile and flexible. This means our hands can have a dynamic relationship with our surrounding environment. Although connected to our body at the end of our arm, it is possible for the hands to feel distant from the rest of the body, and even disconnected in some circumstances. From the therapeutic perspective, this is very useful. We are able to utilize the hands to hold things away from the body, including abstract things like fears and problems. Externalizing fears and problems into the hands creates a sense of distance from the vulnerable spaces of the inner self, protecting the client from re-traumatizing through *internalizing* recall of trauma, or other potentially disturbing memories, during therapy. At the same time, the client is able to hold the therapeutic experience within their spatial sense of self, so they continue to be in the locus of control.

We begin by asking the client's permission to begin -



Is it ok if you sit upright, as comfortably as you can, so that you can raise your hands in front of you, about chest height, your elbows not resting anywhere, somewhere above your lap? Hold your hands maybe a foot (30 centimetres) or so apart. I wonder if you can look at your hands. I mean, really look at them, carefully, as if you have never looked at those hands quite so carefully and closely before. Notice the different sizes of your fingers and the shape of your palm... I want to tell you that every time I do this I notice more lines. I must be getting older...

The non-directive tone is established in the opening words. Even the request to look at the hands is framed as a curiosity. This shows that you are not instructing, you are *interested* in what the client may or may not do. The client is at the center and in control. Performing the actions with the client helps them to both hear and see what to do. I have also found that sharing my own experience helps the client feel that we are doing this together in a playful way. In addition, this gives them some suggestions of what they might look for if they are unsure. It is important to allow the client to work silently at times during the process. You are facilitating, but it is their experience. How long you remain silent is intuited by your sensitive observation of the client. This sensitivity builds over time and will be discussed more in Chapter 7. You may feel that it is helpful to add supportive general comments -

How extraordinary hands can be. So easily taken for granted...

Although we are not seeking to make suggestions or give directions, these sorts of phrases can be added to seed the situation with ideas and concepts that might expand the client's awareness. In this example, we use the words "extraordinary" and "taken for granted" which are words you might use with a client who has shown they have become blasé and habituated to their discomforts. The most appropriate words to use are those that emerge unrehearsed and unplanned in response to your sensitive observation of the client.

Being responsive and supportive -

That's wonderful... I see you are very focused... you have relaxed your shoulders... your breathing is easier... (again, allow an appropriate time for the client to continue in silence, as you carefully observe)

The description of body changes, obviously, depends on what the client is actually doing. Your description is only a word or two to help show you are paying attention. You are not trying to be clever and describe every subtlety, it is only necessary to show that you are there with them. There will be a natural moment to shift into the next step. The timing will differ for each client, but to give you some indication, this first step might be less than a couple of minutes.

Step 2: Introducing Curiosity:

Curiosity is, by its nature, exploratory, playful and open to the unexpected. Several words are very evocative for curiosity. My favorite words are “wonder”, “wonderful” and “interesting”. There are also words that support and encourage progress such as “yes” and “can you keep going?” and the ubiquitous “ok”. You are seeking to trigger the client’s curiosity to find an inner connection. The method we utilize to do this, is to invite the client to create a “sensation” in their hands. Below, we describe the three most effective sensations that have emerged over the years of Mirroring Hands practice. The client will settle into the sensation that suits them best. The therapist facilitates by offering reflections that are responding to the client, not leading. If you find that your reflections are not *in sync* with the client, simply shift the invitation to another option. Sensitive observation will pick up cues from the client. Remember, it is also never a bad idea to simply ask the client. The three sensations are:

1) Energy sensation -



I wonder if it is comfortable for you to move your hands so that the palms are facing each other, about body width, still at around chest height? Will you feel an energy between the hands... (allow time for the client to engage, test and play with the experience)

Wonderful! I wonder if those hands feel like they are being drawn together or perhaps pushed apart, or

maybe held in the same place... almost all by themselves...

These requests are not suggestions or directives, just curious wondering about whether the client is able to feel anything energetic happening between their hands.

2) Contrasting sensation

This variation invites the client to determine a contrast between the hands. There are probably countless examples, but we most often use temperature or weight.



I wonder if you can tell me which hand feels cooler? (another version is to ask which is heavier) Just allow your conscious mind to become aware of this feeling, as if it is happening all by itself... (allow time for the client to engage, test and play with the experience)

If the client is having trouble with the sensation you have nominated, then simply change to the opposite form – *warmer* or *lighter*. If the client is not responding to your specific invitation, but they still seem to be comfortable with the process, then it is perfectly acceptable to ask the client if they feel some difference of their own. In many respects this is an excellent sign that the client is fully engaged as the operator of the experience and is also observing their experience at the same time.

3) Conceptual sensation

This variation invites the client to feel a conceptual difference between the hands. Again, there may be countless examples, but we most often use periods of time or a sense of inner strength.

I wonder if one hand represents an earlier time in your life... perhaps your childhood or school years - your young self - and the other hand represents a different time, your later years - your adult self? (another version is to ask which hand represents their strengths and which their weaknesses) Just allow your conscious mind to become aware of this feeling, as if it is emerging in your hands all by itself... (allow time for the client to engage, test and play with the experience)

Now we are ready to seek some evidence that something is happening in the client's hands that is unusual, unexpected and outside of their direct conscious control.

Step 3: Validating Nascent Confidence –

The words below can apply to all three variations above, with some changes to suit the specific scenario.



... yes... wonderful... is it possible, with just a little movement of the hand and a word or two if you wish, to share with me... (whichever of the three sensations the client has chosen to work with e.g. 1) that you feel the energy between your hands; 2) which hand is feeling cooler/heavier; 3) which hand is holding your younger self/your strengths. Wait patiently until one of the hands moves in some way)... wonderful... yes... that's the hand that feels (whatever the sensation is)... how interesting...

The response is not always immediate or obvious. Depending on their level of focused attention the client may move their hand consciously or may stare intently at their hands waiting for something to happen. It is a matter of the therapist having the patience and the confidence to wait and allow the movement of the client's hand to emerge in whatever way the client wishes. The client may not wish to be speak much at this time. It is also not uncommon for there to be just a twitch or two in the fingers. You can assist the client by noticing, commenting, and asking if that is the hand they wish to indicate, but only the client knows. Always try to follow the client's lead. It is important for the therapist to keep out of the way and not interfere with the client as they build connections within themselves.

Review

We have now explored the preparation stage of Mirroring Hands where the client has some evidence that they have made connections to their inner self and has reached a point where they are in, or can readily shift into, a therapeutic consciousness. The client can feel and see that they have created a reality based on something *within*. We can say this because the client observes that one or other hand is experiencing

a sensation, which has appeared independent of their conscious thinking - *all by itself* – and they have confirmed the sensation with a movement that identifies the appropriate hand. It is a reasonable conclusion that this sensation is being created by inner, non-conscious, implicit processes because there is no external explanation for the sensation. The client has been a witness to their own capacity to alter their perception of reality, from somewhere within themselves. We suggest that the client has: 1) Held an explicit thought. 2) A connection is made with the implicit world. 3) Implicit processes generate a sensation in the hand 4) that is consciously observed, 5) which explicitly confirms that a mind-body connection has been established. This is a mind-to-body experience. The client is now consciously aware they are connecting to their inner, non-conscious, implicit world *and* that they can continue safely to observe this unusual experience.

We now represent the preparation dialogue without the commentary. This should help you appreciate the flow. We invite you to speak the words out loud, so that you fully appreciate the natural, easy progression of the process. The preparation process is often only about 4 or 5 minutes, depending on the client's use of silent, private work, but it can be a little quicker or much longer. In this version, we will use the scenario of the cooler/warmer hand.

Is it ok if you sit upright, as comfortably as you can, so that you can raise your hands in front of you, about chest height, your elbows not resting anywhere, somewhere above your lap? Hold your hands maybe a foot (30 centimetres) or so apart... I wonder if you can look at your hands. I mean, really look at them, carefully, as if you have never looked at those hands quite so carefully and closely before. Notice the different sizes of your fingers and the shape of your palm... I have to tell you that every time I do this I notice more lines. I must be getting older...

How extraordinary hands can be... So easily taken for granted...

That's wonderful... I see you are very focused... you have relaxed your shoulders... your breathing is easier... (again, allow an appropriate time for this to continue in silence as you carefully observe)

I wonder if you can tell me which hand feels cooler? Just allow your conscious mind to become aware of this feeling, as if it is happening all by itself... (allow time for the client to engage, test and play with the experience)

... yes... wonderful... is it possible, with just a little movement of the hand and a word or two if you wish, to share with me which hand is feeling cooler... (one of the hands moves in some way)... wonderful... yes... that's the hand that feels cooler... how interesting...

Quite short when you see it as a single piece. Did you sense how the pauses might be different for each client? How long did you feel *you* needed, as the therapist, during those pauses? Did you feel that you might like to add more pauses? Being sensitive to the silent periods is important. That is where the client works privately, establishing and exploring their inner connections.

There are a number of different practical forms of Mirroring Hands and these will be explored in the chapters to come. With experience, the most suitable form often emerges spontaneously – almost all by itself. Learning to trust, notice, and respond to emerging properties and qualities, comes with experience. This is not to say that you should abandon established forms of assessing the client's, and the therapy's, progress. Sometimes it is effective to openly ask the client how things are going, especially if they give indications that they are losing connection with the process. You can then make adjustments and alterations accordingly. As much as possible, however, the therapist needs to allow things to emerge; be sensitive; notice what emerges; *and* be mindful about responding in a way that benefits the client.

We will leave the client for now, albeit that the client is in a prepared state to move forward into the next stage. It is equally important for the other person in the room to feel prepared. In the next chapter, we will show you, the therapist, how to speak in a non-directive, client responsive manner. We will describe the “language principles” that best support the Mirroring Hands approach, and maintain the integrity of the process. We have found that many therapists find it surprisingly difficult to move out of the way of the client's process. We will show you how it is possible to share your

knowledge, wisdom and reflections without imposing your opinion; to invite and encourage, rather than direct or advise; and how to be silent, observing, and responsive.

Chapter 4

Language Principles

Preparing the Therapist - Client-responsive language

ER: ... *being in sync, yes... as the client walks in from their car, they are beginning to synchronize. When they sit in the waiting room, even for a few minutes, I don't know where their conscious mind is, but I know where their unconscious mind is – getting in sync with me... so I need only be as humble and observing and as sensitive as I can to feel and then facilitate our synchrony... these are the natural fluctuations of the world that are fundamental to the quantum space... but just to notice and be genuinely interested... they know you are sincere.*

from the Rossi/Hill Conversations, June, 2016

Over the years of development and use of Mirroring Hands it is not surprising that a unique language style emerged. Over the decades, words in the therapeutic dialogue have shifted to a more humanistic form. Words like *manipulate* have been substituted with *facilitate*; *control* with *evoke*; and *technique* with *approach*⁵³. Having shown how to prepare the client in Chapter 3, we would now like to prepare the therapist for working in a non-directive, client-responsive manner. The following language principles, or you might prefer to describe them as language styles, are particularly effective in allowing the client to express themselves without undue interference and interruption by the therapist. We will explore:

- Incomplete Sentences
- Supportive Responses
- Surprise and Wonder
- The Double Bind
- Ideodynamic Questions
- The Basic Accessing Question

The Mirroring Hands approach is for the therapist to facilitate the client's connection to their own natural problem solving capacities and a deeper relationship with their inner self. The important message from our understanding of self-organization is that

whatever is added to the system can have a strong effect. When a therapist introduces something new into the system - an idea, an opinion, a direction, a suggestion - it will become part of a feedback dynamic that potentially impacts all the other elements of the system. To facilitate healing and recovery, the therapist needs to introduce elements that produce positive feedback. This creates amplification, whereas negative feedback dampens. Each of the language principles here seeks to limit the amount of interference and interruption, or negative feedback, the therapist adds to the system.

Selective language and non-direct approaches are certainly found in other methods. Carl Rogers employed the principles of minimal responses and engaged reflection to foster non-directive, client-centered practice⁵⁴. It is clear in the work of Dr Erickson that being responsive to the client is a fundamental therapeutic skill. We, as therapists, can sometimes lose sight of the balance of who is doing the work during therapy. Ultimately it is the client who will resolve their problems. Even in successful therapy, the therapist may never truly know the deeper implicit processes occurring within the client – and, on a conscious level, neither may the client.

Incomplete sentences

Utilizing incomplete sentences can be surprisingly challenging. Reflecting what you feel the client has been saying is common to a number of therapeutic methods. In the incomplete sentence, you halt *before* stating your main observation. It might be argued that the therapist's job is to be able to reflect back to the client. We agree. The therapist must be sensitive and aware of their client. This is how rapport is built and trust developed. We wish to be clear in our support for therapists to establish rapport and build trust, but we also urge therapists to be thoughtful about not doing anything that risks the client's autonomy or shifts them from their central role in the therapeutic journey.

The therapist is the *facilitator* of the client's process, not the controller. We are not suggesting that controls and impositions are never appropriate. There is no "never" in client-responsive therapy. We are saying, that if the therapist's actions interfere with the client's process, then that can disrupt the connections the client is creating to activate problem solving and mind-body healing. This is counter-productive to the

client's goal of achieving resolution, recovery and re-integration to an integrated consciousness.

The incomplete sentence is one of the most effective tools in client responsive therapy. The client is moved – emotionally activated - to fill the verbal vacuum with a comment. Be aware that the client may *not* have anything come into conscious awareness and so it is equally important to be patient and give the client time for their realization to emerge. A client may also “respond” with facial expressions or body movements instead of words. However the client manifests conscious awareness of their inner process, simply continue to observe, be aware, sensitively respond and, as much as possible, stay out of the client's way.

Here are some examples of incomplete sentences:

I wonder if you are starting to feel the...

Yes... I wonder if you will have the courage to continue on, all by yourself, for a little while longer, until...

Ah, I see you taking a deep breath as you continue your important inner work and as you...wonderful...

Note that the incomplete sentence is not a question. There is no upward vocal inflection at the ellipsis (series of periods ...). You are not questioning the client as if you don't know. You are just not sharing everything you are thinking. Instead you are indicating that you are much more interested in what *the client* is thinking and feeling. When a therapist completes the sentence, they are speaking as an expert. The client is inclined to acquiesce to the therapist's opinion, even if it is not how they feel. Equally, the client might rebel against the therapist's opinion, even if it is a good one. The primary concern is that the client must pause their mental processes to consider what the therapist is saying. The client may only hold a fragile grasp of their inner connection. It is a little like day dreaming and being distracted by someone talking. The day dream is lost, but worse, any possible meaning or inspiration from the day dream is lost.

An Incomplete Sentence as a Creative Implication

An implication is different from a directive in that it only *indicates* something significant or worthy of notice. Because it is not a directive, the client is not being asked to do anything in particular. The client is free to create what they need from your words. The keywords of the creative implication emerge in response to something you see or feel in the client in that moment. It is similar to a reflective comment, but is delivered in such a way that the client is able to use your words to create something helpful for themselves

The following examples add a creative implication. The bold words are the keywords:

*Sometimes it's ok just to **simply experience** what you're feeling...*

*It takes **courage** to **explore** what is really happening...*

*Maybe your **obsessing** is how you can **explore your growing edge**...*

*You can truly **wonder** about the **nature** of your problem...*

As you can see, these are not instructions or directions, but introducing alternative possibilities. The keywords are reflective of comments and issues that the client has brought up in the moment and/or during earlier conversations. You will also find that your body position will intuitively shift in relation to the client. There is no predetermined rule for anything you might do. It is all in sensitive response to the client (this is discussed in greater depth in Chapter 7).

Supportive responses

Supportive responses give the client support and encouragement to continue with their inner therapeutic work. We seek to show the client support without trying to modify or condition the experience. Empathetic responsiveness follows the client's lead. The therapist is seeking to assure the client that the therapeutic relationship is secure and they are continuing to provide a safe space. The client knows and feels this when the therapist is watching, listening and *responding* to them.

Part of the effect is in the words, but the intention behind the words is also important. If the therapist, unfortunately, says something that disturbs the client, that is not a disaster, but an opportunity to reassess what is being done and where the intentions are based. The mark of a good therapist is one that continually assesses and adjusts their actions.

Here is a small selection:

That's right...

Yes...

Wonderful...

Please continue in your own way...

I can see your courage as you work through this...

You can also give support through verbal reflection of the client's physical activity. This gives the client confirmation of your close attention and supportive intention.

That deep breath... yes... allowing you to go deeper into your private inner work...

Ah... you swallow just a little as you relax more and...

Wonderful... adjusting and relaxing your shoulders as you create comfort and...

Your observant comments are, of course, based on what the client is actually doing. The purpose is to describe enough of the picture for the client to feel emboldened to continue with their own process, but not so much as to take their self-observer role away.

Surprise and Wonder

This type of response helps to both maintain an energetic level during the process, and reflect the energetic processes happening within the client. These words might be similar to supportive responses, but the intention is different because you are adding curiosity, wonder, and the feeling that something tremendous is happening.

Here is a selection:

Wow... amazing... I saw/felt/heard that...

You seem to be receiving/doing/feeling something wonderful/surprising/satisfying... are you not?

Wow, I can see that something is happening in your face/breathing/legs...

I wonder if you are... marvellous... yes...

Comments of surprise and wonder will also help the therapist feel encouraged and enlivened. This is one of the many ways that Mirroring Hands acts as a preventative for therapist burnout and emotional fatigue.

The Double Bind

Although the broad principle is not to direct the client, there are times when a client might need to be guided towards a particular outcome. Giving directions or instructions can, at times, be helpful, but care must be taken to remain client-responsive. Getting the client into a place where they are able to begin work can be a challenge, especially with court mandated clients or those pressed into therapy by family or partners⁵⁵. Can we do this without being directive? The problem with directives, and even suggestion, is, what you do if the client does not follow the direction? Not following or not being able to follow a directive can negatively impact the therapeutic relationship and even create a division between therapist and client. Dr Erickson found that he could bypass those problems with what he called the *double bind*. The idea of the double bind is to create a situation where the client feels they are making the choice, but the desired outcome is still achieved. This is done by creating options where the desired outcome is *bound* to all the options.

This is a very helpful technique when working with resistance. For example, a parent dealing with a child who does not wish to go to bed might suggest, “Will you go to bed now and I read you a story or will you stay up for another 10 minutes watching TV and then go to bed without a story?” The choice in the situation has now been shifted from going to bed, to whether the child gets a story, or watches a little more TV. Going to bed has been *bound* to both options, the child is still able to feel they are making the choice and the parent is getting the desired result without resistance or discomfort. If there are more than two options the principle is the same, but you will create a triple bind or a quadruple bind.

Starting a process with a Double Bind:

There can be many reasons why a client may be having difficulty beginning, other than just obstinate resistance. Perhaps they are not focused, or are distracted in relation to conditions like ADHD or compulsive disorders. Lethargic conditions can arise from affective disorders or concentration disorders. Some people are simply anxious or shy. The following triple bind helps the client feel they are back in the “driver’s seat” by empowering the client to choose when they might begin therapy, but at the same time binding the fact that therapy *will* begin at *some* time.

Will we begin our important work right now... or will we wait a little while before we begin our work... or will we continue working with your conscious thoughts before beginning that important inner work... ?

There is a deliberate pause at the end of each bind to allow the client the opportunity to agree. Once the first question is put, it is not uncommon for clients to agree to begin the inner work right away. If the client chooses to wait, it is reasonable to return to the question, “Will we begin now...,” because *starting the inner work at some time* is a bound part of the choice made by the client.

Ending the session with a double bind:

At the conclusion of Mirroring Hands it is necessary to bring the client’s attention back from their deep inner work, to normal awareness. More often than not, clients

will close their eyes at some stage during a Mirroring Hands process. They will need to open their eyes eventually, but it doesn't have to be a directive.

I wonder if you will you open your eyes as you become fully awake? Or will your eyes stayed closed as you return to feeling fully awake? Or will you find your own way to open your eyes and become fully awake? Yes... I wonder...

Double binds, as with most language elements, vary in response to the client. If you are inviting something and there is no response, you can simply invite something else. All you need do is bind the desired outcome to whatever options you create.

The Basic Accessing Question

The Basic Accessing Question is a template for constructing therapeutic questions that allows client and therapist to know if the client is ready and able. It is important that it is safe to access the client's inner, implicit world. The full history of the Basic Accessing Question is found in the work done with Dr Erickson and can be read elsewhere⁵⁶. In a brief summary, as Rossi developed his own approaches, he realized that the more the therapist got out of the way, the more the client was able to do beneficial work within and for themselves. It was Erickson's genius to realize that indirect suggestions were most effective when utilizing the client's own belief system and inner resources. This idea developed over time, away from overt imposition, and toward the subtle approach of indirect suggestion and the implied directive. The implied directive was a form of expression that shifted the locus of control away from what the therapist says and toward what the patient *does* with what the therapist says. It is not about determining what the client *should* do, but giving the client the opportunity to utilize what the therapist is making available in order to activate their own problem solving capacities. This is what we mean by *facilitation*.

Erickson's implied directive had three parts:

- (1) a time-binding introduction,
- (2) the implied (or assumed) suggestion, and

(3) a behavioral response to signal when the implied suggestion has been accomplished.

1)As soon as you know 2)you are able to begin working with your inner thoughts 3)your hand will descend to your thigh.

In the 1980's, Rossi made a simple change to the implied suggestion to create a curious question. The *Basic Accessing Question* has almost the same three elements but with a question as the third aspect:

1)As soon as you know 2)you are able to begin working with your inner thoughts 3)will your hand descend to your thigh?

The change is deceptively simple, but it has a strong effect. As we know, changing the initial conditions of a complex system can lead to surprising outcomes throughout the system. You may recognise that some elements of the Basic Accessing Question were used in our description of the preparation phase, especially asking a question with client-centered options - *I wonder if you can tell me which hand feels cooler?* - rather than a specific directive - *Now, tell me which hand feels cooler?*

The Basic Accessing Question facilitates confidence in the client, and the therapist, that the client's implicit connection is now able to engage in therapeutic activity: we have *accessed* a *basic* indication of what is possible at this time.

Practical application:

Your client has been prepared comfortably and he or she is feeling an energy between the hands. The first question is if the client is *able* to make an inner connection and implicitly explore their inner world to solve their problem. The following invitation will inform both you that the client is ready to move toward solving their problem. This is the first question in four steps that connect progressively with the client's inner self.

Stage 1:



1)When 2)your inner mind is ready to solve your problem 3)will those hands move together all by themselves to signal yes?

If the hands do move together, then both therapist and client know they are ready to continue. If there is no movement, then we utilize the fail-safe quality of the process by responding positively to the client about there being no response. There is no failure in Mirroring Hands. Even no answer is an answer. The client, and the therapist, can take a “no” response to simply mean that the *inner mind* is not yet ready to *solve the problem*. There are still many options available. For example, it might be decided, together, that more time is needed to feel safe about opening up to their inner world. You might decide to utilize a different therapeutic approach. The therapist might even ask the client if they have become aware of something interesting or surprising that was *different* from the therapist’s request. Did they feel something in another part of their body? Did they have an unusual thought or visualisation, or hear something or perhaps notice an aroma? What happens to the client is the absolute center of the process. The Basic Accessing Question thus relieves both the therapist and the patient of the stress of “fear of failure” in therapy.

Let us assume there was a movement response to that first basic accessing question. The client is often surprised that their hands moved all by themselves. Sometimes it is helpful for the therapist to give a little reassurance that it is quite normal for movements to occur outside of our conscious controls, even though it does feel strange. The important thing is for the client to feel confident a connection has been created between their inner implicit operator-self and their conscious observer-self. That means they are ready to solve problems.

The next step is to ask if the client is *able to explore* what their implicit, inner world knows and remembers. Accessing information that has been held, or perhaps even hidden in the inner space, needs to be done carefully. It may not be safe to just jump

in recklessly. Using a Basic Accessing Question is a sensitive way for a therapist to gently ask the client for permission to proceed. Even more important, the client is discovering the feeling of their outer self asking their inner self if it is safe to proceed.

Stage 2:



1)When 2)the inner you is able to experience all the sources, memories and emotions related to your problem 3)will one hand drift down towards your lap... all by itself?

If there is a positive response to this question about accessing information held in their inner world, the next step is to explore whether the client will be *able to access* problem solving capacities and abilities in their inner, implicit space.

Stage 3:



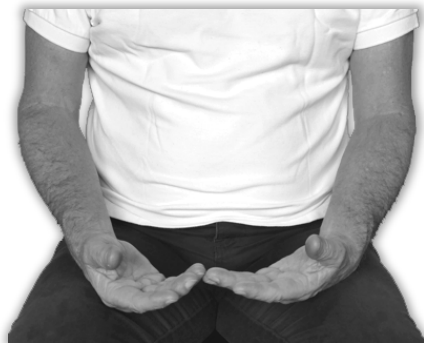
1)As soon as it is appropriate 2)to review all the options for solving that problem in the best manner 3)will that other hand go down, or perhaps rise up, or even stay just where it is?

This is a simplified and idealized example that does not include all the options that can emerge when working with a client. It is always good to offer the client other alternatives, so that every response is seen, by both therapist and client, as a positive response: *Will that other hand rise up? or Will that other hand feel like staying just where it is?* You could offer this as a double or triple bind. The purpose is

not necessarily to have the hands move, but for the client to *feel* a confirming sensation or activity, so they are *confident* to continue the process on the assumption that something helpful is happening.

The final step is to bring the client to a conclusion, prepare the client for future work, and enable the natural, implicit problem solving and mind-body healing processes to begin their activity.

Stage 4:



1)When 2)your unconscious knows it can continue with that inner healing you are feeling now, at the appropriate times during the day, and 1)when 2)your conscious mind knows it can cooperate by helping you recognize those periods during the day, 3)will you find yourself awakening?

We now repeat the four questions without commentary. You might like to read them aloud to see how simple they are and also appreciate the opportunity the client is being given to *feel* their own inner voice.

Stage 1

1)When 2)your inner mind is ready to solve your problem 3)will those hands move together all by themselves to signal yes?

Stage 2

1)When 2)the inner you is able to experience all the sources, memories and emotions related to your problem 3)will one hand drift down all by itself?

Stage 3

1)As soon as it is appropriate 2)to review all the options for solving that problem in the best manner 3)will that other hand go down (or whatever)?

Stage 4

*1)When 2)your unconscious knows it can continue that inner healing, and
1)when 2)your conscious mind knows it can cooperate by helping you
recognize those periods during the day, 3)will you find yourself awakening?*

Case Examples

The following cases show the effect of Basic Accessing Questions when working with a client who finds it difficult to speak about their issue. It is an effective strategy when dealing with shame; when the client is bound by religious/cultural barriers; has restrictions in cognitive functions; or has concerns about what might be “hiding” in their inner world.

ER Casebook:

Memory and Sexual Molestation

A rather conservative corporate executive officer presented himself for hypnotherapy to help him remember if he had really sexually molested his son and daughter more than twenty-five years ago as they were now accusing him in court of law.

He insisted with some indignation he had no memories of molesting his very own children. After discussing with him the ambiguous legal status of hypnosis, as evidence in legal cases, he then made it clear that he wanted hypnosis for his own benefit and curiosity. He decided he would not make use of his hypnotic experience in the law suit he was faced with.

Because of his sense of urgency and my surmise that this might be a single session case I proceeded immediately:

[Stage 1] If your unconscious has some valid information regarding this urgent question about sexual molestation of your children will those hands signal yes by moving together all by themselves as if a magnet were pulling them together?

After five long minutes of staring at his apparently fixed and unmoving hands I suspected we might have an inconclusive fail-safe outcome wherein nothing much happens. Out of habit, I attempted to turn the situation into a therapeutic double-bind by adding,

... or will those hands be pushed apart to signal that there is no reliable information available to answer your question...

Paradoxically, he responded to this by slowly closing his eyes as his hands hesitantly moved together with that very fine and slight but rapid vibratory movement that is so characteristic of involuntary finger and hand signaling⁵⁷. As soon as the hands touched together, I continued with stage two.

[Stage 2] When your unconscious knows it can make available privately (pause) to you alone (pause) the simple truth and only the truth, will one of those hands slowly drift down all by itself?

Tears slowly welled up as one hand began drifting down. When his hand finally reached his lap after a few minutes he gave a deep sigh with much quiet weeping. I had no way of knowing the details of what he was really going through but I suspected that his continuing privacy was necessary to obviate "resistance" that could easily rupture his experience. So I proceeded methodically to stage three.

[Stage 3] And when your unconscious is ready to explore how you can now proceed with the situation (pause) will that other hand now drift down more or less by itself to signal that you are sorting through options for dealing fairly and appropriately with your personal issues?

As the other hand drifted down he gradually composed himself so that he apparently recovered his acumen by the time it reached his lap. After a moment or two, I continued with stage four.

[Stage 4] And when you become aware that you can awaken with a full memory of all you need to know about your situation, will your eyes open as you come fully alert with a comfortable stretch?

After another moment or two he shuffled his feet, stretched, opened his eyes and casually touched himself a bit about his lap, arms, face and head as is highly characteristic of patients reorienting themselves to their fully awakened state after a trance experience. Without any prompting, he reported how he had recovered long

forgotten memories of playing and romping about naked on a bed and running about the house with his children when they were about three, or at the most four years old. He thought it was play but not sexual molestation.

Would his children believe his version of what really happened? He asked if he could bring his son and daughter to a family therapy session with me to discuss it all. I assured him that I thought that was an excellent idea. I never heard from him again, however.

RH Casebook:

A client presented with relationship issues. He had just begun a trial separation from his partner of several years and was unable to decide which direction to turn. He wanted to know whether they would be able to recover the relationship from this upset. Whatever the outcome, he wants to be sure to do all he can to work it out.

All of these concerns were about what he did not know. I wondered to myself whether he felt he did know, but was afraid to be conscious of what he really felt. At our third session, I suggested using a process that might help him connect with this inner knowing. Although he said that he wasn't usually into "that sort of thing", he was prepared to see what happens. I took him through the preparation process and he felt, quite clearly, that one hand was heavier than the other. He told me that he found this to be strange, but he agreed this was a clear indication that something unusual was happening and he was keen to proceed.

[Stage 1] As you think about your partner and all the things you don't know, will one of your hands move in some way to show you are safe to explore what you know inside?

The fingers of his "heavy" hand twitch noticeably.

...wonderful...

[Stage 2] And now, as you explore that "not knowing", will your heavy hand drift down to your lap?

His “heavy” hand began to slowly descend. His eyes had spontaneously closed and he seemed deeply engrossed in private work. After about 10 or 15 seconds of his hand drifting downwards he spoke, *“This is weird!”*, but continued the process. His hand finally settled in his lap. Some supportive and a few encouraging surprise comments were all that was spoken during the nearly two minutes his hand descended.

[Stage 3] And now, as you explore what you can know, what your inner mind can tell you, will your other hand, the “not heavy” hand, drift down toward your lap?

After just a moment we both realized that his hand was drifting upward and I simply responded with a confirming incomplete sentence.

Ah... moving upwards... all by itself... continuing to work through... yes...

His hand eventually came to rest on his shoulder. His face was very relaxed and calm for the first time that I had seen.

[Stage 4] And when, you feel that you can create that comfort at appropriate times during the day, will you find yourself opening your eyes, stretching a little, or whatever you need to do right now...

He took only a few moments to return his focus to me and the room. He repeated that it felt weird and that he usually doesn’t like those sorts of things, but he had really liked this experience. He stated simply, *“I know what I need to know.”*

It is important to note that I did not ask him what he had discovered. I didn’t want to interrupt his thoughts or feelings by shifting his focus to an explanation for me. I waited for him to decide what he wanted to do next. As it happened, he chose to volunteer more about what he learnt, *“I now know that I don’t need to know what is going to happen. I need to let what is going to happen, happen, without expectations.”* We continue to work together and the relationship is still repairing.

Review.

When the client creates a connection with their inner self, an opportunity, a doorway of possibility, opens for access, and activation, of the client's own problem solving, and mind-body healing capacities. The therapist is charged with helping the client facilitate that connection, but then deftly keeps out of the way while the client effectively works on solving their difficulties through processes of realization, resolution, and repair. Everything that a therapist adds into the client's therapeutic experience circulates in a dynamic feedback that affects the entire complex system of the client. To that end, the best way to create a positive experience for the client is to *follow* the client and act in *response* to the client. It is not always possible to be responsive, but if the therapist firmly establishes that as their intention, then responsiveness will be the natural priority.

The Language Principles in this chapter have emerged from this intention. Over our many years of practicing Mirroring Hands these language principles have come to feel natural and comfortable, but experience has shown that not everyone finds it easy to adjust to these principles. We recommend, as with any new skill, that these language principles be practiced and reviewed regularly. Each therapist will find their most comfortable expressions in their own time. We know, and expect, each therapist to gradually formulate their own best words and phrases to convey the intentions of these language principles. As we have said before, this chapter shows you how the language of Mirroring Hands is done, so that you can, eventually, evolve how *you* will do it.

Our use of four steps and the subsequent listing of them as 4 Stages was not accidental. These 4 Stages are very important and fundamental to Mirroring Hands. The next chapter will explore this *4 stage cycle*, along with another fundamental rhythm of life, as we continue to embrace not only the practice of Mirroring Hands, but the broader Mirroring Hands approach.

Chapter 5
The Rhythms and Cycles of Life in Therapy
The natural foundations of Mirroring Hands

ER: *Every couple of hours we go through an activity cycle. The resting part – about 20 minutes – is when we sink close to the quantum, the energetic shifts, in concert with our intentional frame of creating development and transformation... Unfortunately, in the modern world, we take another gulp of coffee, stimulate ourselves to satisfy the “real world”, which is only the shadows in Plato’s cave⁵⁸...*

RH: *... and it drives us crazy!⁵⁹...*

ER: *Yeah...*

RH: *... and people mistake the shadows for their essence, but they’re only the shallow surface of what is possible.*

ER: *We give away our self-possibilities to Plato’s “puppeteers” to manipulate the essence of our lives for us, denying our access to those natural things that are wonderful, and enlightening.*

from The Rossi/Hill conversations, 2016

This chapter explores the natural psychobiological processes that underpin the psychodynamics of Mirroring Hands. Two volumes of international research, edited by David Lloyd and Ernest Rossi⁶⁰, (1998, 2002) provide the deep biological and mathematical scientific data base for these key concepts of life and well-being which document how these rhythms and cycles are fundamental to all effective therapies. Understanding and attuning to these natural rhythms and cycles creates a common bond and exchange of truth between therapist and client. This is what therapeutic consciousness, cognition, and rapport in effective therapy is really all about. The therapist and client engage in something that is natural, healing and mutually accessible. We will describe and explore:

- The natural 90-120-Minute Basic Rest-Activity Cycle (BRAC), the is the basis of the *Ultradian Rhythm*.

- The 4-Stage Creative Cycle, originally outlined by Ernest Rossi in 1967 and 1968⁶¹ as the basis of humanistic psychotherapy, which has been noted throughout human history, in many independent autobiographical accounts by scholars, scientists, mathematicians, creative artists and philosophers.

The Ultradian Rhythm

The Natural 90-120 Minute Cycle of Rest and Activity

When Dr Erickson conducted therapy, the sessions would regularly extend beyond the standard hour. When asked why he did this, he replied that it just seemed to take that long to get something done!⁶² Because Erickson's focus was on the client, he would continue to work until the client gave some implicitly motivated indication they had done enough for that session. This might be a body movement, a deep sigh, or a shift in focus and attention such as the client's eyes flicking away from the therapist or looking down. The signal varied, but the message was clear: the client had completed their work for now. This shift would most regularly occur around the 90-120 minutes.

An exploration of the literature for research that might shed light on this phenomenon uncovered work by a sleep researcher named Nathaniel Kleitman. He found that there was a discernible cycle of behavioral and cognitive activity throughout the night. He described it as a 90-120 minute cycle, which he called the Basic Rest and Activity Cycle (BRAC)⁶³. The stages of sleep, from early deep sleep to dreaming REM (rapid eye movement), occur within a single BRAC, collectively forming a nightly rhythm of around four or five BRACs. Further research showed that this rhythm existed throughout the day as well. While we are awake, the first part of the BRAC exhibits faster brainwave activity so we feel more alert and focused. In the second half, brainwaves slow, alertness reduces, and in the final 20 minutes we feel calmer and even sleepy as our system prepares for the next upregulation of energy in the following BRAC.

We refer to this flow of cycles throughout a 24 hour period, as the *ultradian rhythm*⁶⁴. "Ultradian" simply means a period of time less than one day. A rhythm is a cycle that progresses in a repetitive flow. We do have other rhythms. Our daily rhythm is called

the *circadian* rhythm and is related to repetitions over a 24 hour cycle. There are other natural rhythms that are shorter than 90-120 minutes, such as heartbeat and eye blink. The 90-120 minute rhythm, however, is most relevant to human behaviour because it relates to our mental activity. Each cycle in the ultradian rhythm has its unique variation in relation to the natural energy changes throughout each 24 hours.

It is not difficult to find expressions of the 90-120 minute ultradian rhythm in daily life. Movies are generally between 90-120 minutes. Many sports are played for 90 minutes⁶⁵, with a half time break, and in quite a few of those that do not, there is still an expression of an ultradian rhythm. Cricket, which is played over 5 days, is segmented into sessions of 120 minutes⁶⁶. The captain's tactics can be seen to take advantage of the energetic ebb and flow of the ultradian rhythm through the day. Baseball, which is played over nine innings, averages out about 3 ½ hours, but some tacticians say the 5th Innings is the most important and can determine the game. This is partly because the pitcher often begins to tire - at about 100-120 minutes⁶⁷. Meal times follow the ultradian rhythm and we'll discuss that more shortly. Daily energy levels ebb and flow in the ultradian rhythm. In a psychotherapy session it is important to pay attention to this energetic ebb and flow and work with it. The ultradian rhythm begins with a rise into a *high phase* of level mental activity and then eases down to a low phase that includes a period of mental rest. During Mirroring Hands, it is important for the therapist to be aware and responsive to the fluctuations of energy and the subsequent shifts in the therapeutic process as the client flows along with their ultradian rhythm.

Ultradian Healing Response

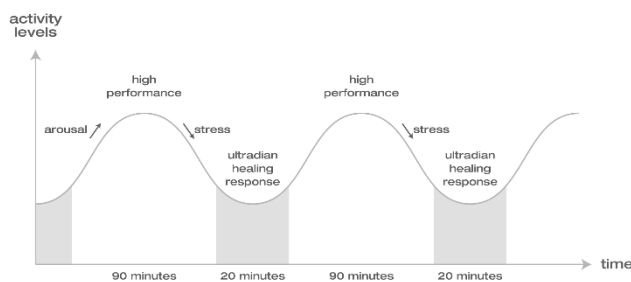


Figure 2 The ultradian healing response

The graphic to the left (Figure 1), shows the rise and fall of energy and activity during the BRAC and how this continues as the ultradian rhythm. The twenty minute rest phase at the end of the BRAC is a normal low phase of mental activity

that is often the best time to experience a nap or practice naturalistic forms of meditation, prayer, deep self-reflection, and holistic healing. This is a very important

period of time in daily life which we call the *ultradian healing response*⁶⁸. We are naturally organized to take something of a pause or shift of activity about every couple of hours in order to maximise our learning, engage in reflection, and open our psycho-neuro-biology to integrate the benefits of recent experience. Pushing through these periods of natural pause interferes with processes of brain-plasticity which enables learning and memory, as well as adaptation, which is the integration of newly formed ideas and realizations. Brain-plasticity is generated by a complex set of implicit biochemical process that include gene expression for the protein synthesis that produces the building blocks for new neural connections⁶⁹. Fortunately, we don't need to be consciously aware of all these processes. All we need is to be aware of the natural call to enjoy a period of *ultradian healing response* for 10-20 minutes every two hours or so, or, at least, as often as we can.

As clients enter this period of pause and reflection, there are a variety of indicators. Clients might show a loss of focus or attention. They could look away, blink slowly, or adjust their body position. During the Mirroring Hands process, the client might indicate they are entering the ultradian healing response period by relaxing their face and body. The client might begin to speak quietly about their experience or become quite calm and quiet in a state of private inner reflection. The downregulation of energy, animation and stress indicate to the therapist that the client has done all the active work they can for now. The therapist need only facilitate the client's return to present awareness or perhaps leave them to enjoy the quiet, regenerative, healing space they have opened within themselves for a little while.

Ultradian Stress Syndrome

If the client, or therapist, persistently choose to ignore nature's call for rest and restoration, they will fall into the *ultradian stress syndrome* where the disruption and disturbance to these natural healing processes can lead to psychosomatic symptoms and the development of affective disorders such as depression or anxiety. In our current world, there is a constant pressure to push through the ultradian pause. It is now common in business, and even in schools, to work through meals and breaks, and constantly try to be stimulated and energized in the drive for success⁷⁰. There is now another powerful external distraction in online devices and social media. Curiously, modern business culture is now encouraging a "power nap"⁷¹, which,

although it may be an intuitive response to the ultradian rhythm, the power nap is a somewhat desperate compensation for disruptions to both daily and nightly ultradian cycles. Modern society suffers from sleep debt⁷² and a desperate need to find relief from the pressured stress of daily expectation and demand whether it is school, work, family and even social engagement. The power nap is, however, better than nothing.

The rise in mindfulness is, therefore, hardly surprising in such a driven world. The value and benefit of mindfulness is well researched⁷³, but there is little written about the relationship of mindfulness and the ultradian pause. Like the ultradian rhythm, mindfulness is a natural emergent activity that has evolved into an implicit quality of human health and wellbeing. Mindfulness is likely to have emerged as a beneficial activity in relation to the ultradian healing response. The ultradian healing response has been our natural opportunity to enjoy a change, shift or pause in activity as many as seven or eight times a day, and four or five times each night, for a very long time. Some of these ultradian pauses have become the pauses taken to eat and engage with others in the family and village. Some have been for distractions such as play, dancing, music, story-telling and spontaneous enjoyment through laughter and comedy. Other pauses are ideal for mindfulness types of experiences such as meditation, self-reflection, and trance inducing dance, music, and rituals.

We would like to suggest a natural daily experience that may account for why mindfulness, meditation and contemplation have evolved into an important activity for our wellbeing. At the end of each day sunset heralds the time to stop work as light fades; a wondrous, spectacular, and numinous vision appears on the horizon, producing a sense of grandeur that overwhelms personal issues; and as the daylight shifts to evening there is an opportunity to contemplate the activities of the day, talk, eat, share stories, and explore the day's experience for learning, meaning, and purpose. So, at the very least, sunset has given humans the opportunity to experience of at least *one* daily, natural, ultradian healing response for the entire evolutionary span of our species, and before. Unfortunately, our modern time pressured, constantly rushing, and now device distracted society has increased the prevalence of ultradian stress. Informing and assisting clients to function in concert with their natural ultradian rhythm is fundamental for wellbeing. Engaging in the

ultradian healing response, even if only a few times in the day, utilizing any or all of the forms suggested above, including Mirroring Hands of course, is a wonderful and simple way for the client to reduce ultradian stresses and benefit from regular daily engagement with their own natural problem solving and mind-body healing.

In Practice

Unfortunately, we must conclude that the generally practiced '50-minute hour' therapy session is not in concert with the 90-120 ultradian rhythm. Therapists are no doubt familiar with the experience of a client who suddenly begins to "open up" just as we usher them to the door. Our compensation is the promise of another meeting in a week. On the other hand, have you ever gone beyond the hour, as did Erickson, and noticed the client not only happy to continue working, but making important progress? Both authors have found that some of the most productive and effective work can occur between the 65-80 minute mark. If another 10-15 minutes can be allowed for the client to enter a quiet phase, or a short period of pause, then the client can complete a single cycle of their ultradian rhythm. Sometimes this quiet contemplation can be conducted privately by the client as they travel home. Recently, a client declared as he left that he wanted to go for a long walk. Another texted that he enjoyed the session very much, but ended up needing to sleep when he arrived home. Both these clients intuitively engaged in the ultradian healing response period as it naturally occurred, but is so often ignored or overridden.

If it is simply not possible to extend the therapy session, then we suggest that you could say something that, at least, acknowledges the client's "unfinished" state. It can be very helpful to give the client a task, or something to contemplate. This is not so much "homework" as it is an opportunity to remain connected with their ongoing processes, capture them in some way, and continue the work without feeling such an abrupt end to the session.

I can see/hear that you are suddenly aware of some wonderful thoughts and feelings you wish to share, but unfortunately our session has to conclude. I wonder if you might be able to take a few moments before you head home to write these down, or perhaps do a voice recording on your phone? It's a great idea to journal your thoughts

between sessions, anyway. Not only can we look at these when you arrive for the next session, but you can review them yourself when you have a quiet moment. Maybe next session you can begin by telling me the amazing things that emerged into your mind, just because you listened to, or re-read, your own thoughts.

The exact dialogue will vary, of course, depending on the client. The important thing we are putting forward is that when you and the client tap into the ultradian rhythm, this begins a natural mental energy flow, both in the session and between. Between sessions, the client has the opportunity to take advantage of ultradian healing responses up to twelve times each day. If the next session is in one week, then there are 84 opportunities between sessions for the client to pause, consciously or non-consciously, to allow natural, implicit, self-organizing problem solving processes to occur.

The Interplay of Systems and Cycles

Noticing, tuning-in, and engaging with the ultradian rhythm, which includes enjoying the ultradian healing response several times each day, is the ideal, but mental processes are not the only way to tune into our ultradian rhythm. Kleitman's original research was about ultradian rhythms during sleep. If a client has poor sleep, and many who present for therapy do, then attention to improving sleep with various sleep hygiene practices can improve the positive function of their daily ultradian rhythm⁷⁴. Another daily activity that is in sync with the 90-120 minute daily ultradian rhythm, that we mentioned earlier, are meal times and eating habits. Feeling hungry and taking a meal is the experiential emergence of our inner, implicit, self-organizing nutrition system that is timed to the ultradian rhythm. There are usually two cycles between meals. The biology of digestion is complex, but basically we digest for one ultradian cycle and then store excess food and use existing adipose tissue (fat cells) for the second cycle when we feel hungry again⁷⁵. Mealtimes ideally involve social engagement, story-telling, laughter and the pleasure of taste, smell and touch⁷⁶.

Encouraging clients to make mealtimes a time of pause and engagement is another way to refresh the flow of their natural ultradian rhythm. Many more systems are likely to be a part of this interplay because feeling hungry emerges after implicit

changes in endocrine systems, neurobiology, energy production, and more⁷⁷. This interplay of systems partly explains why some symptoms of mental and affective health can emerge as digestive disorders, sleep problems, immune system dysfunction, and endocrine system dysfunctions. We are not divisible between what happens in our head and what happens in the body and *vice versa*. Everything is connected in the interplay of living. Repairing disruptions to other 90-120 minute ultradian rhythms can be an effective side door to facilitating effective therapy.

The 4-Stage Creative Cycle

The ultradian rhythm is an emergent property of biological and mental function. The 4 Stage Creative Cycle is not so much a specific function, as a fundamental organizing principle that affects all creative processes. Creativity is, at its heart, the process of utilizing what is available in this moment to make something new, or something more, in the next. Creativity involves a sense of personal engagement and self-relevance; the ability to perceive the world in new ways; to find patterns; and make connections between seemingly unrelated phenomena in order to generate something that did not exist before. The 4 Stage Creative Cycle is a universal pattern that underlies creative activity and is evident in just about everything from the stimulation of gene expression, to the emergence of the universe. In the human experience, this is how the 4 Stages play out⁷⁸.

Stage 1 **Information** - gathering information and data - *what is this all about?*

Stage 2 **Incubation** - Working out what the problem is *really* all about – *How does this affect me? What does this mean to me?*

Stage 3 **Breakthrough and Illumination** - A flash of insight, resolution or revelation - an *aha moment* – followed by an expansive and creative response to change - *things makes sense now and I can create something better in my life!*

Stage 4 **Verification** - The whole experience is quietly reviewed, considered, and the benefits integrated into everyday life – *I understand, appreciate, and accept what I have learned.*

Let us expand a little more:

Stage 1: Information

Whenever we encounter something new, we first need to check it out, see what it is, what it is made of, how each sense reacts, and answer the question, “*What have we got here?*” This might also be termed a **preparation** stage when we define the problem, need, or desire and gather as much information, both pre-existing and new, that might help us to not only understand the situation, but also help us resolve or improve the situation later.

Stage 2: Incubation

Information is not enough on its own, so we need to dig deeper to find what might be the meaning and purpose behind the new information. We often need to take a step back from the problem and let our minds contemplate and work it through. Incubation can last minutes, weeks, and even years, especially if there is some form of dissociation or avoidance to working with the information as might be seen in a trauma case. The questions in Stage 2 are: *How does this situation or this problem relate to me? How do I relate to it? What is it that I don't understand? What is it that I don't know or understand? What is it that I don't want to know or understand?* This stage is the struggle to try to make sense of the new experience and figure out what to do with it. It can be very challenging and confronting and is sometimes likened to, “*the dark night of the soul*”.

Stage 3: The Breakthrough and Illumination

The breakthrough is usually sudden and short. It can be an *insight* or *surprising realization* or the *shifting of a barrier* or a *sudden change in perception* that creates a burst of excitement and a release. The intensity of the breakthrough varies in relation to the context and the individuals involved. The Breakthrough is followed by a period of creativity, celebration, relief, openness, engagement with others, idea generation that generate new plans, hopes and expectations. This a sudden and rapidly expansive stage which reflects the extent to which the breakthrough has created a shift in the person. Stage 3 acknowledges, appreciates and utilizes the insight that emerged at the breakthrough to create beneficial change and growth. After an initial energetic arousal in response to the breakthrough, there is a winding down of

energy towards relaxation, calm, and a satisfying sense of relief, resolution and renewal.

Stage 4: Verification

This is a quiet time when the experience, learning and new frame of being is contemplated, most importantly, to verify the value and benefit of both the Breakthrough and the flurry of mental activity in Stage 3. This is a time to consider how these new revelations, realizations and resolutions can be incorporated into daily living. On an implicit level, the new state of mind is transformationally integrated into our being through various biological encoding processes. New memories, and new neural connections, are encoded through brain plasticity; endocrine activity and immune system responses begin natural mind-body healing; and biomolecular changes in the DNA as well as epigenetic changes self-organize to reflect the new state. We literally become a new being. These integrations will continue to occur during sleep and during future daily ultradian healing responses.

Timelessness, Entrainment, and Stuck Stages

The 4-stage Creative Cycle entrains to the varied timing of each and every creative process. In evolution, the 4 Stages might play out over geological time. In the ultradian rhythm the 4 Stages are expressed across the 90-120 minutes of the cycle. This is why we purposefully differentiate Mirroring Hands into the 4 Stages. It would be folly to ignore or be unaware of this fundamental principle of life's self-organizing processes. We expect you will be able to see the 4 Stages being expressed in whatever therapy or activity you utilize.

Because the 4 Stages are not time limited, clients can get stuck in one of the stages. Many clients come to therapy having been stuck in Stage 1 or Stage 2 for years. Clients commonly arrive for therapy stuck in stage 2, but primed for a phase shift. In recent years we find that many people have a near addiction to Stage 1 – *new, new, new* – with very little motivation or inclination to seek out what might be the personal meaning and purpose. This contributes to a shallowness of character, due to the resistance to personal growth, and to an increased sense of isolation and

disengagement as people get caught up in the distraction of the outside world (we discuss this more in Chapter 9). *Mirroring Hands* is an excellent approach to help move clients on from *stuck* conditions because we are actively turning on and engaging them in their natural rhythms and cycles. The most important thing to remember is that once the client connects to their natural problem solving and mind-body healing, the client is both consciously and implicitly in a place where *they are able* to continue working through the 4 Stages of their creative process, in concert with their ultradian rhythm and their ultradian healing responses.

A Little History

Creative cycles can be found in the literature as far back as Pyramid texts of Ancient Egypt from over 4500 years ago⁷⁹. The German philosopher and physician Herman von Helmholtz described 3 stages of creativity in his *Lectures and Papers* in 1896⁸⁰. The mathematician, Henri Poincare, was fascinated to notice that after studying a subject it was often when you *stopped thinking* about it that the realization would come to mind. He described the process of non-conscious incubation of ideas and the subsequent stages of thought in his essay, *Mathematical Creation*, in 1908⁸¹. These were a foundation in the thinking of the Professor of Political Science at The London School of Economics, Graham Wallas, who published the *4-Stage Creative Cycle* in his seminal book, *The Art of Thought*, in 1926⁸². Wallas' framework has been persistent for more than century and *4-Stage Creative Cycle* has been adopted and adapted on many occasions. It is evident in David Kolb's *Experiential Learning Cycle*⁸³; Goleman and Boyatzis's *Intentional Change Theory*⁸⁴; and Scharmer's *Theory U*⁸⁵. Dr Rossi also saw these stages reflected in Joseph Campbell's *Hero's Journey*⁸⁶. Campbell described 17 elements of the "monomyth" which were grouped into three stages that reflect the natural, organizing principle of the 4-Stage Creative Cycle. Whether considering the problem solving activity of a human being, the movement of a worm, or even something inanimate like the developing flow pattern of rainwater, the 4 stages play out.

The 4 Stages in Pictures

As we have already shown, learning to recognize where the client is in the 4-Stage Creative Cycle is a key skill that assists the therapist to heighten engagement with the client's current experience and how to best facilitate their natural progress. It is

also a key for the therapist to understand their *own* state of mind and progress. The therapeutic experience itself is flowing through the stages. Tracking the different stage progressions is a challenge for the therapist, but it makes all the difference in successfully facilitating the client's capacity to access their natural problem solving and mind-body healing.

The following diagrams show the 4 Stage Creative Cycle from different perspectives and in relation to different experiences to assist your understanding of how the 4 stages entrain to life's creative processes.

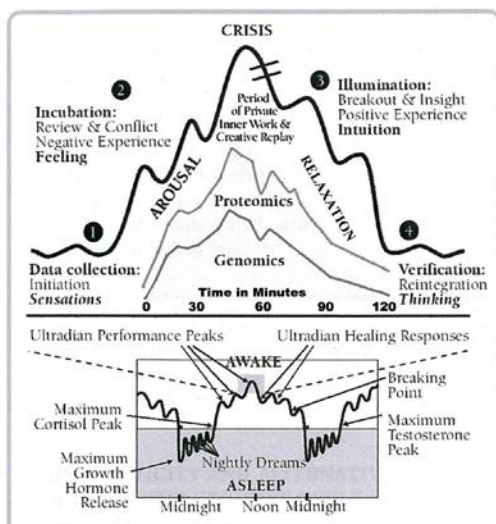


Figure 3

Figure 3 is ER's integration of the 4-Stages and the Ultradian Rhythm. The top part of the image is a single unit of the cycle which is highlighted from the 24 hours of the cycle in the bottom part. The inner lines are related to the co-occurring implicit biological processes in our proteomics (protein building) and genomics (gene expression). The lower part also indicates some of the hormonal peaks of cortisol and growth hormone.

Figure 4 is RH's linear depiction of the 4 stages in response to a threatening stressor. In a danger based stress response we close out attention around resolving the problem. At the cellular level, a danger warning is responded to in the same way regardless of whether it is a physical threat or an emotional one.

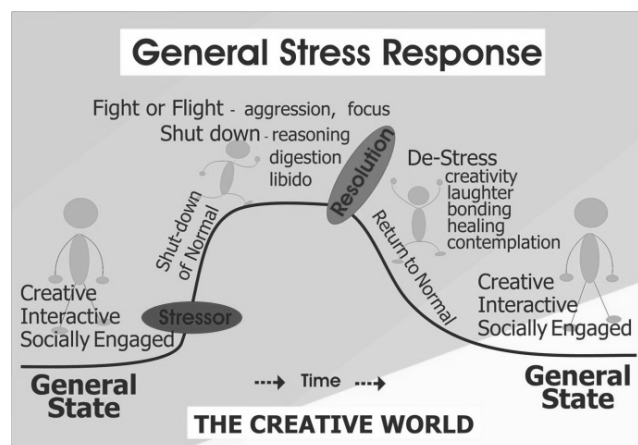


Figure 4

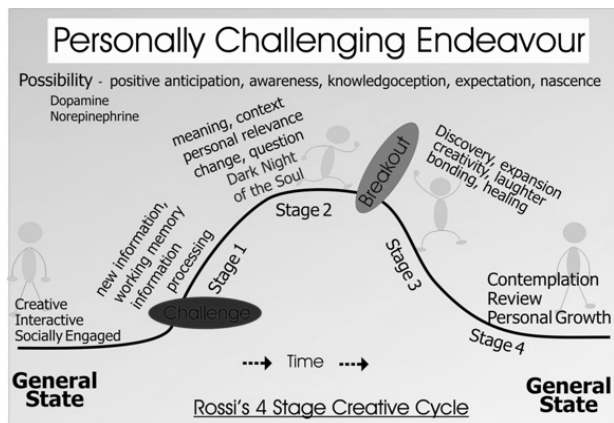


Figure 5

Figure 5 is the 4-Stage Creative Cycle in the context of a Challenge ie not a distressing situation, but a positive experience. This doesn't mean that Stage 2 is an easy stage. Even when voluntarily exploring there are still major issues to be resolved. In the challenge mindset, however, there is an openness to possibility at the growing edge.

Practical Application of The 4 Stage Creative Cycle During Mirroring Hands

We will now focus on the therapeutic experience of Mirroring Hands, differentiating what is happening for the client *and* therapist. Some scripted dialogue is included, but only as a guide to the language style you choose to suit your specific client.

Stage 1 - Information:

The Client -

When the client attends for the first time they are often in Stage 2 of the problem, but the therapeutic experience is beginning in Stage 1. New information is shared in the first conversations. Client responses vary from positive to difficult and can range between curiosity, hope, expectancy, confusion, uncertainty, and resistance. There can also be a vacillation between an exploratory attitude and a fearful attitude. These are typical experiences at this initial stage. The client's major task is to identify what issues or problems are most pressing in the here and now. It is not surprising that clients might express stress, anxiety, anger hopelessness, frustration and a variety of negative attitudes about themselves and the therapeutic process. The client is usually accepts that revealing their information is a difficult process, but they do this in the hope that the therapist will guide them into a therapeutic consciousness so they can move toward productive and beneficial work.

The Therapist

The typical therapeutic session ideally begins with client and therapist cooperating in a search for the problems and issues that the client hopes to resolve. Stage 1 includes the establishment of rapport, building the therapeutic alliance and may, at the appropriate time, include the preparation for Mirroring Hands and utilization of some Basic Accessing Questions. Mirroring Hands may not even be mentioned as an option during Stage 1. This all depends on the client. Fundamentally, though, the therapist's role in this initial stage is to facilitate the client's search for a place to start. Open ended questions allow the client the latitude they need to reveal themselves, while maintaining a feeling of safety.

What's most important on your mind today?

What issue is absorbing your attention today?

What is most interesting to you right now?

What is the most important emotional problem right now?

What would you like to tell me about what has brought you here today?

Just start with whatever feels ok for you right now?

Stage 2 - Incubation:

The Client

Stage 2 is often the most difficult stage. The client is revealing *and* facing the very problems that are causing them so much disturbance. At the same time they are exploring within themselves for their own inner resources. It is not surprising that Stage 2 is called *the dark night of the soul*. The intensity of the process means that the client's sympathetic nervous system is usually aroused, which is often accompanied by psychobiological responses such as an increase in sweating, heart rate, pulse and breathing, together with a feeling of heat. Clients have literally said it feel as if they are "burning up". This is highly characteristic of client experiences in Stage 2. The client needs to re-learn how to access their natural problem-solving capacities after long periods of resisting, avoiding or dissociating from their issues. Therapeutic reframing questions that reflection the client's immediate behaviors can be helpful here:

Yes, breathing like that often means your mind and body are getting ready to deal with an important issue — Will you allow it to continue for another moment or two until you recognize what it is?

Can you actually enjoy how you are... (sweating, shaking, trembling, nervous, confused, uncertain or whatever)... for just a moment or two, as a sign that you are working hard and on your way to dealing with whatever is troubling you?

Have you ever let yourself have a good shakeup (or whatever) before, just like this, so you could really reorganize yourself?

The Therapist

The most important role of the therapist in Stage 2 is to encourage and support the clients' inner journey where they are likely to encounter negative memories and emotions. In everyday life the client typically retreats, quits, or in some way blocks the natural process of ultradian arousal and their natural learning and problem solving. It might feel counter-intuitive to encourage arousal in the client. It may seem kind to guide the client to a place of calm and peacefulness in order to *manage* their distress. To *solve* a problem, however, the mind-body needs to arouse itself to do some active work.

When a client accesses past painful states they may experience varying degrees of *emotional catharsis*. The therapist's role is to support this inner accessing so the client does not break it off prematurely before natural problem solving and symptom resolution has a chance to take place. The following are some more examples of key questions the therapist may ask to facilitate the client's safe sense of control during this phase of arousal.

Can you let yourself continue to experience that for another moment or two in a private manner — but only long enough for you to know what it leads to next?

Good, can you stay with that only long enough to learn what it is all about?

Will it be okay to allow yourself to continue experiencing that privately for a while, difficult though it may be, so you can learn what you need for healing (or problem solving or whatever)?

And will it be all right to keep most of that a secret that you don't have to share with anyone... unless you choose to share just a word or two?

Each of these questions has the failsafe facility for the client to choose not to continue, but they also have the control to inform the therapist how they feel and whether they *can* continue.

Stage 3 - Breakthrough

The Client

How the client manifests the sudden burst of insight or realization that heralds the *Breakthrough* from the struggle of Stage 2 into the resolution and creative expansion of Stage 3, is very unpredictable. It can come in an energetic burst or it may happen without the therapist noticing because it has been a very private and personal experience for the client. Some clients continue on into Stage 3 and Stage 4 under the therapist's facilitation. Others have been known to simply open their eyes, declare the session a wonderful success, and begin to share a little, a lot, or sometimes, nothing at all. What is obvious, however, is that, at the moment of breakthrough, the struggle and difficulty of Stage 2 has passed through a critical phase shift and the client transforms in some way. The task of the therapist is to continue being client-responsive and facilitating the client's journey without interrupting or disrupting.

The Therapist

The therapist can share their awareness of the client's experiences with simple encouragement.

Yes, noticing interesting things there?

Umm, something important to recognize about that?

Sometimes, there seems to be an inward pulling within the eye ball and the client's whole head may even pull backward slightly — occasionally with a slight expression of surprise or a momentary frown. Again be observant and supportive:.

Ahh, something surprising?

Yes! The courage to receive that as well?

Experiencing that too, can you not?

Sometimes there is a moment of absolute stillness as if the client is receiving something from within with bated breath. There may a slight smile and the head may slowly nod “yes” with minimal repetitive movement. Support this behavior with these questions.

Mmm — receiving something you like?

Worth receiving?

Yes — and more?

Stage 3 - Illumination:

The Client

The profoundly significant shift from crisis and catharsis to the moment of insight and then the release of tension as they move into Stage 3 is often accompanied by a sense of relief, surprise and laughter. Clients may softly whisper, “*It’s strange, weird, odd!*” The usage of such words means that they are experiencing something new. They may even mention, “*Something really new, something I was never aware of before suddenly popped into my mind.*” Clients can be full of questions about these moments of creative experiencing. The client might seem to be asking questions of the therapist, but it is not uncommon for the client to be talking to themselves as if the new, resolved person is telling the old problem riddled person how and why everything is much better. Whether a monologue or dialogue, this process is important to ratify and stabilize the client’s new reality.

The Therapist - Stage 3:

During this period of inner exploration and emotional release, the client can exhibit many subtle shifts of behavior. There may be sudden increases or reductions in

tension. If the client has been working with their eyes closed, there is often periodic, or momentary bursts of rapid eyelid vibration, or a shifting of the eyeballs from side to side as if the client is following an inner moving scene. Eye movement is something deliberately enacted during EMDR, and there is some research about the relationship of eye movement to healing processes⁸⁷. We also see eyeball movement in REM sleep which indicates dreaming and activity between limbic area and cortex. Simply observe and be aware that something transformative is probably happening.

It is not always easy to recognize the transition from the arousal phases of Stage 2 to the moments of significant insight in Stage 3. Some clients shift uncertainly for a while back and forth between Stages 2 and 3 several times before a settling into Stage 3. Confirmation that a *unit of the inner work* may be completed can be seen in larger postural adjustments of the head, neck, arms or legs as if an opening, loosening or relaxation is taking place. Previous muscle constrictions and tensions evident in the jaws, hands and arms seem to “*let go*” and clients may actually shake themselves out. The client shifts from the metaphorical postures and movements of defensiveness, anger, frustration, sorrow or depression so characteristic of Stage 2 to expressions of lifting, lightness and wellbeing.

Oddly enough, many clients need help to recognize the value of the spontaneous creative breakthroughs they are experiencing in Stage 3. Some clients can find it hard to accept that it is their creative experience that is the essence of their therapy. It can be difficult to shake loose from the belief that the answer or magic of healing has to come from the therapist or somewhere outside of themselves. Clients can be all too ready to diminish their critical phase transitions as something immature, inadequate or pathetic somehow. This may be because that is how their creative moments have been put down since childhood when parents or teachers or elders did not recognize and support the client’s mini-breakthroughs and developing awareness. Creative experience is so often accompanied by what seems to be confusion, rebellion and emotional chaos⁸⁸. The task of the therapist is to help such clients recognize the value of their own spontaneous therapeutic transitions at this critical moment — and above all help clients recognize that the locus of creativity and therapy is within themselves

It is natural for the client to feel very strange, and out of their comfort zone. They have moved outward at their growing edge and are best helped with simple, gentle, supportive remarks that are broadly rhetoric. The following questions help the clients recognize and stabilize their still nascent creative state and emergent insights.

Interesting?

Curious, isn't it?

A little surprise?

Umm — rather unexpected somehow?

Yes, are you experiencing something a little different now?

My goodness, is something really changing now?

It is an error, at this crucial time, for the therapist to distract the client by asking for a report or explanation of what has happened. Hold back from efforts to document or interpret the client's process with intrusive questions such as:

Where did the pain go?

What's happening now?

Tell me why you feel better now.

What do you understand about yourself now?

Such questions at this stage can interrupt, and block the flow of the client's ongoing creative experience. This is the time for the therapist to be patient, to be client-responsive, and stay out of the way.

Stage 4 - Verification:

The Client

Clients invariably feel good in Stage 4 with a sense of relief and well-being. If you utilized some form of symptom scaling in the early part of the session, usually done in Stage 1, then Stage 4 is the best time to ask them to re-scale their symptoms. If you haven't, then it is just as effective to simply ask the client if there is an improvement. If the client reports that their symptom is less intense, then that helps validate the therapeutic experience they have just gone through. If the symptom has

disappeared completely this is the time to plan how the client can learn to do this type of inner healing for themselves in everyday life. This is a good opportunity to remind clients that during their ultradian rest periods they have their best access to this type of inner healing.

If the symptoms have only eased a small amount, then the client may have only achieved partial success. How can that be built upon in future sessions? To prepare for that further improvement, encourage the client to explore their ultradian healing responses – their natural times of pause about every 2 hours - in everyday life. This is an opportunity to invite the client to start a journal of their experiences, if they are so disposed. The journal, if the client chooses to share, can provide hints of the next step that is needed to facilitate further creative phase transitions in healing and problem solving.

In Stage 4, the client is able to develop a conviction of what options are truly possible for them as they facilitate their own development in a practical and realistic way. The exciting thing is when they begin to tell you, the therapist, how they will change their behavior and try to do things differently.

The Therapist - Stage 4:

Sometimes clients will spontaneously stretch and open their eyes entirely on their own. When clients do not open their eyes and awaken spontaneously they may prefer the therapist to facilitate a conclusion to the session. The following Basic Accessing Question style of concluding the session is an excellent way to be sure that the client continues to hold the locus of control within themselves.

1. *When*
2. *Something within you knows it can continue this creative healing entirely on its own at appropriate times throughout the day when it feels natural to take a break — and when your conscious mind knows it can simply cooperate in helping you recognize when it is the right time to tune inward —*
3. *Will that give you a feeling, a signal that it's time for you to stretch, open your eyes and come fully alert so you can discuss whatever is necessary for now?*

It is in this final period - Stage 4 - that the client often chooses to engage in some of the talk, analysis, plans and intentions for future actions. We still recommend maintaining an attitude of restraint, even if the client is keen to talk. The task of the therapist is to continue to facilitate the locus of control within the clients so that *they* can interpret, synthesize and rationalize *their own internal experiences, in their own way.*

These questions are open-ended and undemanding of a response. Clients may choose to remain silent and work on their realizations and resolutions privately or they may begin to spout a fountain of words:

Is there something you would like to share about... ?

Yes... can you say more about it?

How much of this is new to you?

What is most significant about this for you?

Have you ever understood this before?

What does this lead you to now?

How will this experience help you to make changes in your life?

I wonder if you will you actually do something different in your life this week?

Review

This chapter has explored two important elements, but it has really been about one thing: being engaged with what is natural to life. Therapy is best when it is an expression of the healing capacities of our natural being. The Ultradian Rhythm and 4 Stage Creative Cycle are natural patterns and principles that are ubiquitous not only throughout a wide range of therapeutic theories, techniques, and methods, but also throughout all of life and nature. There are a few more conceptual ideas and principles to discuss in chapters to come, but the foundations for Mirroring Hands have now been presented. We hope you are now comfortable to be shown specific forms of the Mirroring Hands technique. We begin with *What Is and What Can Be.*

Chapter 6
What Is and What Can Be
Internal Review

ER: *The client is trying to figure out, “Who am I?”*

RH: *...and the hands... these somatosensory vehicles have been the main contact points for giving and receiving for... ever...*

ER: *This is not us trying to be clever. This is the human condition. Now, we are trying to put the locus of the power for transformation inside the client, not inside the therapist...*

RH: *That can be hard to do...*

ER: *There are a number of paths, and you must find yours... embracing your uniqueness... that is what you want for you... and the client.*

from the Rossi/Hill Conversations, June 2016.

Mirroring Hands has many variations. Each client creates a new experience. Having said that, we have found, over many years of practice, that a handful of variations have emerged as a reliable group for teaching and for practice. This chapter describes a form of Mirroring Hands that allows the client to, first, review their story and the history of their problem. Then, to explore the solutions, and other possibilities, that have not yet risen to their conscious awareness.

Each form can be differentiated into the 4 stages. Each stage has a fundamental intention that can be expressed as a basic question. First we will review the basic questions paired with a sample image. Then, we will explore in more detail how the process flows in practice. This includes the language that can be utilized and the typical responses from clients. Finally, we will share a case study.



Stage 1: Initiation — Sensations

I wonder if you can look at your hands, really look at them as if you have never looked at them before. As you focus deeply into your hands, I wonder if one hand feels different from the other. Is one hand warmer... heavier... etc



Stage 2: Incubation, Arousal — Feeling

I wonder which hand is able to experience your issue? Will that hand slowly drift to your lap as you gently review the story, the history and those things you aren't able to say or even remember.



Stage 3: Insight, Breakthrough — Intuition

Now... as we explore the solutions you don't know yet... will you allow your other hand to drift slowly?... will it drift downwards or... perhaps upwards or... some other way that happens all by itself... as you explore new possibilities about how to solve your problem today... Explore all your hopes... the most interesting and wonderful possibilities of healing and wellbeing.



Stage 4: Reintegration — Thinking

Something interesting you would like to share about that?

What is surprising and unexpected about this that is new to you?

What is most significant and life changing about this for you?

What does this lead you to now?

How will this change your life?

Stage 1: Information - Evoking Observing Consciousness, Curiosity, Focused Awareness, and Positive Expectancy

Begin by guiding the client through the preparation stage (refer to Chapter 3). It is not vital what sensation differentiates the hands, whether one hand is warmer, or heavier, or a different age period, or whatever, allow this to emerge naturally and comfortably. The important thing is that the therapist is responding to the client, gently leading when necessary, but quickly shifting if the client wishes to take some initiative. It is wonderful if the locus of control can move to the client at this early stage, but it is equally good for the client and therapist to proceed together.

It is also assumed that the therapist is confident the client is ready to begin exploratory work. This may come from the therapist's sensitive observation or the client may have told the therapist directly. If the therapist is not feeling comfortable or feels the client is not comfortable, it can be helpful to go through the Basic Accessing Questions first (Chapter 4), just to be sure that everything, and everyone, is ready to proceed.

Stage 2: Incubation - Past Problem Review to Activate Positive Motivation and Inner Resources

In Stage 2 we will be asking the client to review the origin and history of their problem. The implicit behavioural response that is commonly suggested is for the hand to drift down slowly to their lap. The client's focus and attention creates an expectancy, and curiosity that allows them to safely access the neural networks of their brain that encode their problem, maladaptive behavior, and consciousness, both explicitly and implicitly⁸⁹. Some memories will be familiar and consciously available, others may be hidden, repressed or forgotten. It is important for the therapist to be closely attentive and responsive to the client as they reveal and face their difficulties. First, we establish which hand is receiving the problem.

I wonder which hand might be able to experience your issue (concern, problem or symptom) and...

Allow a moment or two for the client to respond to the suggestion.

... will that hand be able to make a movement or somehow indicate it's ready to begin...

Wait for the response, adding small encouragements as the client may require and responding with delight and surprise when one hand does, indeed, make a movement.

Wonderful... I see that your issue is held in your (right or left) hand... wonderful...

I wonder... as you let that hand experience your issue (concern or problem or symptom) now, will that hand begin to drift down very slowly . . .all by itself. . . as your inner mind privately reviews the history, memories, and feelings of your issue (concern, problem or symptom)... from the beginning and back to the present moment... or perhaps from the present moment all the way back to the beginning...

This review can take some time, sometimes several minutes and often longer. If the client begins to show negative cathartic reactions (frowning, weeping, etc.) the therapist simply offers emotional support through empathetic supporting and encouraging words (Chapter 4) or comments such as these:

That's right! Do you have the courage... to allow that hand and arm to drift down a bit. . . with each memory you find yourself reviewing?

Yes, not easy... just allow your inner mind to feel as much of that memory as you need to... and then move on... allow the next memory... to come up more or less by itself... only as much as you need...

That's right... let yourself have the courage to continue... only as long as you need... to experience everything as fully as you need to... privately... and comfortably...

That's right... you can really feel this... while another part of you observes wisely... as you learn how to take care of yourself... and expect the best possible outcome.

A simple, but very effective way to facilitate a shift in the intensity of the experience for the client, is to ask -

Would you like to share a word or two about what you are feeling or what is happening right now... or would you like to just continue with your own important work privately... in your own way...?

This question gives the client an opportunity to share their experience if they wish and vent any excess build up of anxiety or stress. This question can be utilized at any time during Mirror Hands, but we recommend you use this sparingly. Sometimes it is just the opportunity that the client is looking for. Other times clients will make it clear that they are in no need of assistance. On one occasion a client put her fingers to her lips to tell the therapist to be quiet. This is an excellent example that clients can genuinely enjoy the difficult work because they have a clear sense their situation is improving.

We have found this therapeutic review of their concerns to be “safe”. Clients do not undergo a “re-traumatization”, even though they are reviewing negative past experiences, because they are in a safe context⁹⁰. Firstly, the negative memories and emotions are not being experienced internally. The review has been externalized by being projected into their hand. If the client begins to internalize, the therapist can remind the client to refocus their attention on the experience being played out in their hand. As a final “fail safe” the client can be directed to shift their focus and attention to the other hand.

Assuming all has gone well, the “problem” hand will finally touch down in the client’s lap. The therapist can now facilitate the transition to stage three of the creative process with:

Wonderful . . . a job well done . . .and now, I wonder if you will shift your attention to your other hand that is holding the resolution of this issue (concern, problem or symptom).

Breakthrough and Stage 3: Illumination - Facilitating Implicit Problem Solving and Mind-Body Healing

The emergence of the Breakthrough is not easily predictable. Sometimes a Breakthrough occurs in the final moments of the “problem” hand arriving on the client’s lap. More often, the breakthrough emerges spontaneously during this positive exploration of solutions. The famous “Aha” or “Eureka” experience of insight is a truly exciting moment whenever it occurs during the Mirroring Hands process and it is wonderful moment for the therapist, too. *The therapist’s main job at this stage is to help the client recognize and appreciate the value of the new and creative thoughts, feelings, and ideas that emerge spontaneously and unheralded.* Sometimes the client realizes they have thought of these problem-solving options before, but dismissed them due to lack of confidence or lack of support. Here we strongly support them.

Now... as we explore the solutions you don't know yet... will you allow your other hand to drift slowly?... will it drift downwards or... perhaps upwards... or some other way that happens all by itself... as you explore new possibilities about how to solve your problem today... Will that hand now begin to move slowly as you begin to experience something new?... Yes... moving all by itself... (acknowledge and encourage whichever direction the hands moves)... Explore all your hopes... the most interesting and wonderful possibilities of healing and well being... Speculate about exciting and fascinating turning points in your life... Create the best of all possible worlds for yourself... Enjoy your best dreams about yourself!

The small elements of that dialogue are spoken over whatever timeframe the client needs. Transitioning from the difficulties of the previous question of Stage 2, to the creative possibilities of Stage 3 can be fragile and tenuous. Delicate shifts can often be read in the client’s facial expressions. Equally, the shifts can emerge in any part of the body. Everything that happens for the client is relevant. Notice carefully the

shifts from negativity, stress, sadness, and conflict (of Stage 2), to the more searching expressions of expectation in Stage 3 that are often punctuated with a slight smile and even a short laugh. Sometimes client's will manifest other minimal behavioral cues of their positive attitude and enjoyment of this third stage of their creative experience by spontaneous head-nodding "yes"; shaking, rocking, or caressing themselves comfortably; or enjoying spontaneous relaxation or a release in other parts of the body. The therapist simply supports these positive shifts with warm and engaged support.

Something pleasantly surprising you can look forward to? . . .

Yes, what you really need that is most interesting and important to you?...

*Simply receiving and continuing to explore the sources of your strength...
dealing successfully with that issue.*

*Yes... appreciating the value of that as fully as you need... while taking good
care of yourself as that hand finally comes to rest...*

Allow the time for the client's hand to come to rest on the lap if the hand drifted down, or on the chest or shoulder if the hand drifted up, or wherever seems settled and comfortable if the hand moved to the side.

*Wonderful . . . really appreciating yourself for a job well done! . . . so much
happening and changing...*

Stage Four: Integration and Reality Testing

It is now likely that the client is ready to return their attention to the general world of the room. Sometimes client's will spontaneously open their eyes and refocus their attention. The following dialogue, that you have seen in Chapter 4, helps the client to reframe their attention and adds a gentle suggestion regarding continuing their therapeutic work in relation to their ongoing ultradian rhythm at "*appropriate times throughout the day*" and when it is "*the right time to tune in*". As much as possible, continue to facilitate the client as the locus of control.

When . . . [pause]

A part of you knows it can continue this creative work entirely on its own at appropriate times throughout the day . . . [pause]

And when your conscious mind knows it can simply cooperate in helping you recognize when it is the right time to tune in . . . [Pause]

Will that give you a feeling, a signal that it's time for you to stretch, open your eyes and come fully alert so you can consider what has happened and share, if you wish, what you might do with what you have learned, in your real everyday life?

The therapist's task in Stage 4 is to optimize the benefits that have emerged in Stage 3. Depending, of course, on the client's preference to talk about the experience or to remain quiet and private about their discoveries, the therapist can:

- facilitate a follow-up discussion to validate the value of the client's experiences;
- help the client reframe the negative symptoms they brought with them to therapy into an understanding of their strengths and inner resources;
- explore ways that the client may incorporate their new realizations into daily life; or
- simply sit quietly in the new healed space, perhaps enjoying just a word or two that emerges relating to their joy, pleasure, strength or whatever other positive feeling they wish to express.

In Stage 4 there is a shift of focus from expanding creativity to incorporating and integrating what has emerged, both explicitly and implicitly. Some clients want to jump back in and do more discovery, others are unsure and untrusting of their own ability to produce such excellent work. It is important to allow time for the ultradian healing response to do its part as the client integrates their new state of being. Biological encoding is self-organized through many processes all the way down to the molecular level of state related gene expression, brain plasticity, and mind-body healing⁹¹. The following statements can help the client remain in the space.

Something interesting you would like to share about that?

What is surprising and unexpected about this that is new to you?

What is most significant and life changing about this for you?

How will you remind yourself to do this several times a day?

What does this lead you to now?

How will this change your life?

What will you do in your life that is different now?

If symptom scaling was used prior to this Mirroring Hands process, then this is a good time to check in on how the client feels now. If there has only been a minor change in stress and symptom reduction, perhaps if less than 50% is reported, it may be useful to facilitate another Mirroring Hands process. The client may prefer to not repeat Mirroring Hands, which is just fine, but if you feel the client may benefit, a basic accessing question can be utilized.

If your inner nature knows it can do another unit of creative work right now so you can reach a more satisfactory state, will those eyes close for a few moments so you can fully receive everything you need at this time?

The client's response will inform you whether they wish to try again or not. If the client is not ready to proceed, or there is just not enough time, it is helpful to remind the client that their mind and body go through a natural cycle of ultradian healing and problem solving every couple of hours throughout the day and at night, even when you are asleep and dreaming. Assure them that their healing process can continue all by itself, and ask them to notice any changes and improvements that occur over the next few days.

From RH's Casebook:

A woman in her late 40s presented with a deep sense of upset that had persisted for nearly a year following her divorce. Surprisingly, she appeared to be quite cheery and positive about her future. She had one of those faces that generally looks like she is happy. We spoke about the divorce, and some of the difficulties since then, including another relationship that was very unsatisfying. She felt that she had always been able to manage other problems in her life, but just didn't seem to be able to access those resources now. She wanted to find something that was seemed hidden from her at this time. We spent most of the first session talking about the past and exploring some of her hopes for the future. She felt confident that another session would help and so we arranged to meet in one week.

In the second session, I spoke about the mysteries of our inner world and that I could use a process that could connect her conscious mind to these inner resources. All she had to do was hold her hands out in front of her. She was immediately willing and curious, so I decided to introduce her to Mirroring Hands.

Stage 1: We began with a standard preparation of focus on her hands, explore her hands like she had never done before. I wondered if one of her hands seemed heavier than the other. It is hard to know why, as the therapist, one sensation is used above another. Perhaps, in this case, it was because her divorce, and the history around it, sounded quite "heavy" and dramatic. Perhaps I was sensitive to her heavy heart. Regardless, her right hand began to bounce within a few moments of asking the question. It was very clear.

Stage 2: *I wonder which hand might be able to hold this upset... will that upsetting energy flow out into that hand... and will that hand make a movement or some kind to show it is receiving...?*

The fingers of her "heavy" hand began to flatten out and then a moment later, curl up.

Wonderful, your heavy hand is taking this feeling, this upset... yes... and... I wonder if you can allow your inner mind to review the story about this upset... more than the words we have already spoken... things about this story you

have not yet thought about or remembered... from this moment back to the beginning or perhaps from the beginning back to this moment... and as these thoughts come to your mind will your hand gently drift down to your lap..?

Each ellipsis represents a pause that was entirely client responsive and interactive. The dialogue took several minutes. Her eyes closed spontaneously midway through the initiating dialogue, and her hand drifted down a tiny distance and stopped. The movements of her hand down to her lap was unlike any I had experienced before. For the next 20 minutes, we continued, mostly in silence. It was clear that a lot was happening for her. Her hand would be still, almost rigidly held, then suddenly drop about an inch (25mm), and stop for another period of internal processing. Tears flowed a number of times, but she showed no interest in wiping the tears away. She was totally engrossed in something of great significance. I would add simple supportive comments when moved to do so – *yes...wonderful...; experiencing extraordinary things...; tears... yes...; continuing bravely... feeling your story.*

When her hand finally landed in her lap she gave a big sigh and her head and shoulders fell forward as if exhausted.

Stage 3: *Wonderful... what an extraordinary journey... will we shift our attention now to your other hand... can we explore the resources and skills and strengths that have been hidden or held back... will that hand begin to move in whatever way you wish as you rediscover what you know is within you?*

This part of the process was very different. Her hand began to drift upwards, but not in the jerky motion of the heavy hand. As her hand drifted up toward her shoulder, her head and shoulders also lifted. Her hand reached her shoulder within a few minutes. I only made two or three supportive comments. In retrospect, it would have been just as well if I had said nothing. When her hand touched her shoulder, she was sitting upright, her eyes remained closed, but her face seemed calm and content. I invited her to return to the space with me.

Stage 4: *When... a part of you knows it can continue this creative work entirely on its own at appropriate times throughout the day... and when your conscious*

mind knows it can simply cooperate in helping you recognize when it is the right time to tune in... will that give you a feeling, a signal that it's time for you to stretch, open your eyes and come fully alert so you can consider what has happened and share, if you wish, what you might do with what you have learned, in your real everyday life?

Within a few moments she opened her eyes, while stretching her arms upwards, and giving a large sigh. She was quiet for about one minute and then asked how long we had been going. I asked her how long she thought it was. She felt it was about 10-15 minutes. When I told it was closer to 30 minutes she was startled. Time distortion is a common indicator of deep inward focus and General Waking Trance⁹². We spoke about her experience, but the most pertinent comment was:

I felt bound, tied down by something. I don't really know what it was... just... bound. But then, something happened and it was just all gone. When my hand touched my shoulder I was... no longer bound... I now feel I am able to make all kinds of decisions. I'm not bound anymore...

On follow up, several years later, she reported:

I really can't tell you what happened. I don't really understand the problem other than I was bound, and I don't know what released it, but I just stopped being bound... and that feeling has never returned. The divorce was awful, but being bound up by something I couldn't see or touch was so distressing. I guess none of it was in my conscious mind, like you said, and it took something else not in my conscious mind to fix it. Whatever... it worked.

Review

It can seem to be against normal training to imagine that a client can produce effective and successful therapy without being able to verbally describe what occurred. We have, however, learnt that the messages that emerge from the implicit can be simplistic. The client was only able to describe the problem simply, but the conscious message, *feeling bound*, was enough for her to know that the problem

had been detected. That the implicit problem solving processes emerged as something equally simple, the feeling of *no longer feeling bound*, was also enough for her know there had been a shift and she could begin making positive decisions, and plan for her future. All we need is what we need, even if we don't know *exactly* why or how we have arrived at where we need to be.

Chapter 7

Natural, Comfortable, and Sensitive Observation

The Art of Client-Responsive Therapy

RH: ... *everything I learn, everything that I come to know, becomes a springboard, not a safe platform.*

ER: *Yes!*

RH: ... *and from that learning, you springboard into the unknown – beyond the growing edge...*

ER: ... *you are finding comfort in the unknown, the “I don’t know”...*

RH: *Yes, being comfortable that “not knowing” is just an invitation to discover a new springboard...*

Have you wondered about the terms we have been consistently using - *natural, natural problem solving, comfort, and sensitive observation*? In many ways, these words are reasonably well understood, but this chapter will explore these a little more deeply. Although this book is presented as a practitioner’s guide to a technique, we expect you may know by now that Mirroring Hands embraces a fresh and sometimes challenging approach to therapy and practice.

Our Journey so Far

We have introduced you to a different approach to thinking that engages with the complexity of life in *Thinking IN the Systems of Life*. Then we took you into non-directive ways of using language with clients as we explored *Unlocking Natural Connections* and *Language Principles*. We have asked you to consider shifting the responsibility for therapeutic change to the client, so that the client becomes the locus of control. As an extension to the Rogerian client centered approach and reflection, we have asked you to consider being a *client-responsive* therapist, who *facilitates* their client’s journey through observation and response, without instruction or direction. This approach allows the most effective therapy to *emerge* because the client is the central agent who is connecting to their own, natural problem solving and mind-body healing.

Instead of directing therapy, we ask the therapist to utilize skills of sensitive observation to *observe*, *notice*, and *respond* to whatever might emerge into the therapeutic experience. Like a musician performing an improvisation, the therapist intuitively self-organizes their technical knowledge, academic study, and years of practice and experience to spontaneously produce what is needed and what is appropriate in that moment. Erickson often spoke of the uniqueness of every therapeutic experience. The therapy we utilize is best when it is in *response* to the client⁹³. Clients *utilize us*, our knowledge, skills and experience, to find their own natural problem solving capacities and generate mind-body healing. We are not the healers, after all. We are, however, beautiful, natural, sensitively observing facilitators that help bring resolution and comfort to the lives of others and to our own lives. What a wonderful profession.

Natural

What is Natural?

Of all the things that we might call natural - living things, inanimate things, trees, rivers, rocks, animals, birds, humans and so much more - the most significant wonder is how all these things interact to produce a natural world. Before human beings developed a brain that can know, understand and manipulate nature, the development of the natural world occurred without direction, purely from creative interaction⁹⁴. About 13.8 billion years ago, an aggregation of just half a dozen forms of matter, the energy of heat and cooling, density, and time, engaged in an interplay that eventually resulted in the emergence of hydrogen and helium atoms⁹⁵.

Reactions and interactions continued, constantly feeding emergent changes and creations back into the system, which triggered more change and development. Over billions of years, new properties, qualities and quantities emerged to become the stars, and the galaxies, and the planets, and, on at least one planet, living organisms that changed and evolved over time into the many millions of species that live on Earth today⁹⁶. These living species include one that not only knows it is alive, but knows that it knows - humans are conscious of their consciousness (modern human sub-species: homo sapien sapiens – the “wise human who knows it knows”)⁹⁷. What an extraordinary journey from the existence of matter and energy to the emergence

of sentient life. It is hard to imagine that the essential key to this process is such a simple, fundamental quality of complex adaptive systems: self organization⁹⁸.

Self-Organization is Natural Problem Solving

Self-organization, as we described in Chapter 2, is one of the most important, natural processes of nature. It is how nature solves problems. Our inner, implicit world is not dependent on cognitive direction, and, largely, relies on natural, self-organizing processes to successfully function⁹⁹. Connecting explicit, conscious, cognitive awareness with inner, implicit processing is how we actively contribute to our survival and wellbeing. Before a thought emerges into consciousness numerous implicit processes occur. When the necessary preparation has self-organized there is a rise in emotional intensity that emerges as a conscious, self-directing thought¹⁰⁰, such as *I'm hungry*. Unfortunately, there are many things that interfere with a healthy flow between implicit processes and conscious awareness. Trauma, negative attitudes, pathological injuries, social problems, drugs, violence and all too many more things interfere with that connection. The barriers, inhibitions and dysfunctions are all part of the discomfort that motivates clients to seek therapy. Mirroring Hands is able to open that connection and we know the connection has been opened when the client observes movement and sensations occurring in the hands as if *all by themselves*, independent of conscious thoughts and directions.

The connection that Mirroring Hands opens enables an in-the-moment, conscious awareness of the sensations that are emerging from internal processes. The client's appreciation of their own awareness usually starts when they become aware that their hands seem to be moving all by themselves. This is an indicator that the connection has been made. Once the connection has been made it becomes possible to be aware of the ongoing inner processes that are emerging as thoughts, ideas, realizations and even resolutions. These emergent properties and qualities emerge into the client's consciousness in numerous ways. It might be in their felt experience, as breathing changes, relaxation, or other shifts in energy levels; in emotive perceptions, such as relief, surprise, or happiness; in beneficial thoughts, such as insight, understanding, or knowing what to do next. These therapeutic insights and realizations are the natural emergent properties and qualities of implicit problem solving. The sudden insight into how to resolve the issue was not formed as

thoughtful words *internally*, but the internal milieu produced a set of processes and activities in the brain that the conscious mind *translated* into a beneficial thought.

Problem solving through self-organization occurs within the implicit, inner space as a natural function of an adaptive complex system. Many of these processes occur at the molecular level, which is, of course, the domain of molecular and quantum physics. We address quantum in Chapter 15 and in the Science Appendix, but bear in mind, as you consider the reasons behind your client's "strange" experience of their hands moving *as if all by themselves*, that this experience is arising from changes in the client's deep biology, including molecular activity in the chromosomes¹⁰¹ and the interaction of ionically charged molecules in the neurons and synapses¹⁰². These *fluctuations*, shift the balance of possibilities of the system to form probabilities in response to feedback and self-organization. In quantum, probabilities fluctuate as a result of changes to the waves of energy that are flowing through the possibility field¹⁰³. Some of these probabilities become actualities and emerge into consciousness in ways that we can both observe and, at the same time, have a subjective feeling about. This subjective feeling is called *qualia*, which is similar to saying *a felt sense*¹⁰⁴. We will discuss in Chapter 15 the finest subjective sensitivity that we call our *quantum qualia*, but for now, as you can see, there is still so much for us to understand. We are at the growing edge.

It is not essential, however, to understand at a deep level in order to do good therapy, although it is both exciting and important as we move forward in the development and evolution of our *understanding* of psychotherapy and other healing arts. The following section is an extraordinary piece of recent research that was a serendipitous opportunity that could not be missed. It gives us insight into the therapeutic advances that are possible when we learn how to tune in to inner processes that function at molecular and quantum levels of energetic activity. In this experiment, physical recordings of activity within the brain were made, which were then able to be *translated* by the researcher as what the subject was thinking.

Researching the Implicit, Inner Space

Locked-In Syndrome is the terrible situation where a client retains conscious mental awareness, while being trapped in a paralysed and speechless body. In a small

number of clients some very minor, almost unnoticeable, controlled movement has been found. In the well-known case of Jean-Dominique Bauby, it was discovered he was able to control blinking in his left eye. He used that capacity to “dictate” his memoir, *The Diving Bell and the Butterfly*, which was made into an acclaimed film¹⁰⁵.

Niels Birbaumer, and his team, made a major breakthrough in communicating with locked-in patients¹⁰⁶. In prior research, with patients who have no explicit movement, researchers have been exploring implicit brainwave patterns. Unfortunately, none of the brain-computer interfaces used to date, such as EEG, produced a response better than chance. Birbaumer and his team added a measure of the changes in oxygenation in the frontocentral region of the brain using “...functional near-infrared spectroscopy (fNIRS) and an implicit attentional processing procedure”. In essence, oxygen levels increase when brain areas become active. Could this increase produce a distinct pattern for simple thoughts? Four patients were asked simple questions over several weeks to determine the oxygenation and the EEG pattern that persistently represented a “yes” or a “no” answer. The researchers produced a greater-than-chance result of over 70% accuracy. When the patients were asked to respond to the statement, “I love to live” and “I feel happy”, to the researchers’ and family’s surprise, and relief, the patients answered “yes”.

Evidence of the Implicit “Voice”

In summary, the researcher made a non-directive, open-ended comment of which the patient was consciously aware, but physically unable to answer. In *Mirroring Hands* the therapist wonders whether the hand will drift down towards the client’s lap without the client consciously directing it to do so. In the research, instead of looking for a conscious, cognitive response, the brain-computer interface monitored the patient’s implicit responses at the molecular, energetic level. In *Mirroring Hands*, it is the movement of the hand as if *all by itself* that is also the client’s implicit response to inner processes at the molecular, energetic level. The research patient’s neural mechanisms and energy flow patterns in the brain, which include oxygenation patterns, self-organized into a state that was in concert with their conscious desire to answer “yes” or “no”. The researcher was then able to “translate” this EEG and oxygenation response as an emergent property that represented the word “yes” or “no”. In *Mirroring Hands* the internal state aligns with whatever is required for the

brain to *translate* the implicit information into a beneficial thought, sensation, or activity that enables the client to create a beneficial change not only in their thinking, but their quantum qualia and throughout their complex system of *self*.

Mind to Body to Mind Communication

This experiment shows mind-to-body-to-mind communication in action. It shows that implicit, self-organizing processes occur beneath conscious, cognitive awareness; that these properties can emerge as thoughts, ideas, emotions, and motivations; and that they can be utilized by the client to creatively facilitate their own ongoing beneficial change toward health and wellbeing. The client's inner world, which has been "paralysed", and unable to communicate, finds a way into conscious awareness through the Mirroring Hands process. Most therapists can see this unfolding as they observe the client. As tempting as it may be to inform and assist the client with our observations and knowledgeable opinion, the task of the therapist is not to be the one who *knows* about the client, but to facilitate the client's process of *knowing* about themselves.

Natural Messages in Feelings and Thoughts

It might seem surprising, but the messages that emerge into consciousness are often quite simplistic and ambiguous. We have already discussed the simple sensation that arises from the complex set of implicit processes concerned with nutritional needs which results in the thought, *I'm hungry*. It seems that evolution has not selected for detailed conscious awareness of implicit processes. Our conscious mind only needs to know enough to stimulate a helpful response. We then respond to messages that emerge into our conscious awareness with actions (behaviors), thoughts (ideas), and emotions (affect)¹⁰⁷.

Our most attention grabbing sensation is *pain*. Pain is a ubiquitous sensation that urges us to do something to resolve or repair the cause¹⁰⁸. Other behaviors are triggered by emergent sensations like "tiredness", which directs us to rest or sleep, and "sickness" which prompts a complex set of behaviors commonly called "sickness behavior" that urges us to get rest, keep infection away from others, and eat chicken broth¹⁰⁹.

Not all emergent sensations are about difficulties and problems. “Peacefulness” is an indicator of inner calmness, safety, and is one of the sensations during an ultradian healing response period. “Love” is a very simplistic conscious awareness of something that is more complex than can be described in hundreds of volumes. “Happiness”, “pleasure”, “satisfaction”, “joy”, and “contentment” are all positive sensations. These positive states invite and enable exploration and expansion at the growing edge to promote what Barbara Fredrickson described as *broaden and build*¹¹⁰. Expansion at the growing edge includes the development of new thoughts, ideas, and emotional states. It also includes all the implicit processes that are involved in the generation of those thoughts and ideas of which we are totally unaware. We now know that positive states, which includes the state created by Mirroring Hands, produce changes in gene expression that give rise to healthy activity of the immune system, promotion of cellular health, and stimulation of the endocrine system to produce the hormones that regulate our biology toward wellbeing¹¹¹. The research that has discovered these inner processes is fascinating, but the most important message is that a therapist only needs to notice and responsive to the natural messages emerging from the client to be confident that mind-body healing has been activated. There may come a time when we are able to monitor gene expression in real time to be sure, objectively, that positive mind-body healing is in progress. In the meantime, we are endowed with natural, subjective feelings and sensations, quantum qualia, that guide our therapeutic confidence.

Comfort

Comfort is a very powerful message about what is happening within. Comfort is, however, a word whose meaning seems to have been “hijacked” in recent times. Comfort has come to be about life being easy, soft, absolutely no pain or struggle, unchallenging and almost hedonistic. It seems more important and even normal, nowadays, to prefer an easy, “comfortable” life than engage in the challenge of expanding at the growing edge. In fact, marketing and advertising highlight the “comforts” of a product as the most attractive qualities¹¹². We are certainly not saying that comfort should be avoided, but it needs to be better understood. The verb “comfort” comes from the Latin *confortare* which means to *strengthen greatly*¹¹³. In

that context, to feel comfort is to feel strengthened. Equally to help someone to strengthen is to give comfort. Comfort is achieved by easing or relieving those things or feelings that make you feel weak or that weaken. Unresolved physical pain, the pain of emotional distress, constraint and restriction, tension, worry, fear, shame and guilt all cause discomfort. Easing and relieving any or all of these can produce a sensation of comfort, and in that comfort, enables someone to feel stronger, more capable, and able to find greater enjoyment of life.

When a client comes for therapy with the implicit stereotyped belief that a good life is *only* when things are easy and unchallenging, just as the advertisements tell us, then they are less likely to want to work hard to resolve their difficulties. Mirroring Hands bypasses this limitation by creating a strengthening comfort immediately. First, by being a very simple process, and, second, by connecting with the client's strengths – their natural inner processes, cycles and rhythms. In Mirroring Hands we look to the sensation of comfort, in both client and therapist, as an important indicator that the difficulties and challenges of the process are being experienced in safety, with natural ease, and with a positive expectation that any struggle is worthwhile.

Comfort as a Message

Comfort has not been extensively researched. In *Positive Psychology*, Martin Seligman describes comfort as one of the positive emotions that is involved in the experience of *Authentic Happiness*¹¹⁴. The “comfort zone” is described by some as a psychological state of feeling at ease, in control of the environment and experiencing low levels of anxiety¹¹⁵. The most detailed research comes from Katherine Kolcaba in the field of nursing¹¹⁶. She shows that healing and wellbeing are enhanced when medical care includes *giving* comfort to patients. If giving comfort enhances a patient's healing experience, then the person experiencing greater comfort must be producing changes in their implicit processes that are enhancing natural healing activity. Comforting actions that are added to the patient's experience feed back into the therapeutic system triggering implicit activities that enable problem solving and healing processes. The *feedback loop* of self-organization is how we produce mind-to-body-and-back-again-to-mind healing. The beneficial, problem solving and healing changes that occur implicitly through natural self-organization, create new conditions

within the system that emerge in the client's conscious awareness as the sense of comfort or being comfortable.

Kolkaba shows that "comforting" includes physical ease, and relief from distress. Kolkaba found that when a patient's comfort needs are met, the patient is strengthened. This is indicated by reductions in painfulness, calming of emotional centers in the brain, and a shift from negative self feelings to feelings of self efficacy. Clients in psychotherapy have often reported that when they feel they have more control, they feel more comfortable. Mirroring Hands, as we have shown, places great importance on the strength the client finds being in the locus of control.

There are two essential ways in which Mirroring Hands engages the client's comfort.

1. Using encouraging, supportive, and non-directive language that helps the client feel safe and at ease (refer to Chapter 4).
2. Using a client-responsive approach, which allows the client to remain in touch with a personally oriented "comfort zone". By carefully attending to the client, the therapist can be aware of what is natural for the client; when and where the client feels safe; and to provide rapid relief from distress.

As clients begin experiencing positive emotions, or are able to shift their focus away from the negative *toward* the positive, they often report feeling more comfortable. It simply makes sense to orient therapeutic activities to the strengths of the client. One of the most telling comments from a client is when they say something like, *I'm comfortable with that* or *That works for me*, even when the task is difficult or challenging. The Basic Accessing Question connects with the client's "permission" and "willingness" to engage in therapy at the very outset, stepping past resistance and cognitive interference.

Clients describe the comfort they feel with their therapist in a number of ways: the comfort of being eased or relieved of their difficulty; being comfortable with the therapist, which is a natural response to an engaged, client-responsive therapeutic relationship; being comfortable with the therapeutic approach, which can be achieved through negotiation between therapist and client in a client-responsive

manner; and their comfort being maintained during the therapeutic experience, which is managed by regularly checking in with the client, observing sensitively, and utilizing non-directive language. All these aspects of comfort are achievable during Mirroring Hands.

There are many more things happening within the client as they experience comfort. It is simply not possible to be consciously aware of those inner, implicit processes. During Mirroring Hands there is a promotion of positive broadening and building; natural problem solving; easing of distress; and changes in the energy and information flow patterns in brain and body. These self-organizing processes involve gene expression, protein synthesis, endocrine production, brain plasticity and more. The entire system is acting together in a simultaneous co-operation of which the client is, largely, consciously unaware. Fortunately, the client can be confident that all these things are happening simply by noticing when they are feeling more comfortable.

The Therapist's Comfort

As a final word about comfort, we have been addressing the client, but there is another important person who also needs to monitor their comfort - the therapist. Being comfortable during therapy is so important in helping to avoid the distress of therapist burnout, which is far too common. Ideally, therapists should feel comfortable in their work. Noticing feelings of discomfort in yourself, as the therapist, is can be an early warning that the therapeutic experience is not be going well, but it is often a sensitivity to the client's proximity to a phase shift when a breakthrough is imminent. Your discomfort can prepare you for client resistance and avoidance so that you can facilitate their progress toward Breakthrough and Stage 3. Whether you feel comfortable or uncomfortable, it is always good to regularly review the progress of therapy. Therapists can conduct their own inner review; check in with the client; and at a later time, seek out a deeper exploration with a supervisor or colleague. Noticing the changing experience of comfort is a valuable indicator to enhance the quality of your facilitation of the client's therapeutic experience and of your own professional performance.

Sensitive Observation

What does *sensitive observation* mean? *Observation* is a word that is fairly straightforward – to be aware through careful and directed attention¹¹⁷ - but *sensitivity* is a word that is used in general language in a number of different ways. Broadly it is a heightening of reactivity to stimuli, which might include emotions, light, movement and other sensorial experiences¹¹⁸. Jung described “innate sensitiveness” in 1913¹¹⁹ as an innate predisposition to be affected by negative childhood experiences. Sensitivity is often used in this context of fragility and negative affect. Sensitive people might be easily offended or feel like emotional sponges who both notice and absorb all the surrounding emotions. If the therapist is fragile and negatively affected by the client, then the therapeutic experience will suffer. It is not necessary to personally experience the client’s pain or emotional struggle in order to be sensitive. If sensitivity to the client causes the therapist to feel pain or distress, then this is a clear message to seek out supervision or some other assistance. Unmanaged or unregulated sensitivity is a sure path to burn-out, or what some call *empathy* or *compassion fatigue*. We suggest that therapeutic sensitivity is the *ability to notice subtle sensations and emotions*.

The operative word is *subtle*, meaning minimal, not obvious, delicate, and not easy to notice. When the two words, *sensitive observation*, are brought back together, the definition becomes the *activity of noticing, within the scope of the therapeutic environment, changes and shifts that might be very subtle and not easy to notice*. In Chapter 15 and the Science Appendix, we update how sensitivity on the quantum level (“the quantum qualia of human experience”) can become a new inner resource that functions as a widening and deepening of consciousness. That new consciousness becomes a major asset for facilitating the current and future evolution of all schools of psychotherapy. Our Mirroring Hands Protocol is, above all, an easy-to-learn method of heightening people’s most valuable hidden potentials – their natural problem-solving and mind-body healing - for facilitating the quantum qualia of their consciousness and cognition, health and well-being with the *quantum microscope* of their creative mind.

What We Do

The therapist's sensitive observation notices the emergent properties and qualities that are the indicators that the client is experiencing natural problem-solving and mind-body healing. This will include their overt emotions and thoughts as well as their implicit processes. Both explicit and implicit processes emerge as emotions, thoughts, behaviors, and reactions to the environment. The importance of sensitive observation is to be noticing all these expressions. The correct response becomes apparent at the time. We will show an example in a moment. Remember, there could be many things happening, some quite obvious, and others might be so subtle as to be almost imperceptible. The question then arises, *What if I miss something?* That is a reasonable question and certainly this can happen, but usually, there is enough that is noticed and being responded to for therapy to proceed productively. In our experience, we have never had a client complain about lack of sensitivity.

When teaching a Mirroring Hands workshop, one of the students asked about the recently completed demonstration, "Richard, when you asked the client if they *would like to share a word or two, or perhaps just continue with their private work*, was that because you noticed the volunteer's lips moving, ever so slightly...?" To the student's surprise I answered, "No, I have no recollection of her lips moving at all." This prompted a valuable conversation on the nature of explicit and implicit noticing. The therapist also has emergent properties and qualities from implicit processes. A great deal goes on within, or non-consciously, before our conscious mind "catches up". Mirror Neurons is just one of the extraordinary mechanisms in the brain that operate prior to conscious awareness.

Implicit, Explicit and Mirror Neurons

We have known about the Mirror Neuron system since the mid-1990s. Rizzolatti and his team stumbled on the discovery that certain neurons will fire in the brain when we observe movement *as if we were making that movement ourselves* and that this occurs beneath conscious perception¹²⁰. The Mirror Neuron response gives someone an implicit sense of the movement capacities, potentials and intention of the other person (and to some extent of any moving life form). This is an innate system that allows us to make important decisions about safety, withdrawal, or attractiveness (approach), and a variety of other perceptions about the other person.

In subtle situations that don't require an overt action, like running away, people describe their toward or away "attitude" as being a *gut feeling*.

We now understand that this is an emergent property, in this case a thought and attitude, from the complex, implicit activity of the Mirror Neuron system. As we have mentioned before, emergent thoughts are often not very specific, as long as the message is enough for us to begin a helpful action. The point of this lengthy example, is that sensitive observation is occurring on an implicit level as well. There are other implicit perceptions, including emotional empathy and intuitive perceptions where we may not notice what literally happens. We rely on our implicit processes to create an emergent property or quality to push into our conscious awareness.

We need to take this one step further: the client may also not be consciously aware of the what has emerged, especially when it is a motor action. This includes body movements and facial expressions. It is the same process as when the hands move *all by themselves*. On inquiry, the volunteer in Richard's workshop reported that she was also totally unaware that her lips were moving. That movement was an emergent property for her as well. The volunteer was very clear, however, that the timing of being asked her to share a word or two was absolutely perfect. It had allowed her to move forward in the Mirroring Hands experience in a way that very important for her. This is a good example of the difference between facilitating and directing. It is also a good example of how it is possible to trust our sensitive observation at the implicit level. Experience builds the therapist's confidence to follow and work with what arises spontaneously.

The Subtlety of Synchrony – from RH's Casebook.

Later in the same demonstration, the client began to shed tears and her nose also began to run. Initially she seemed to be undisturbed by the messy fluids on her face and her eyes remained closed, so I didn't interfere. I had consciously observed her tears and gestured to the class for a tissue. A student put one in my hand. The volunteer continued and I waited patiently with the tissue in my hand, resisting all temptation to interrupt her process by directly giving her the tissue. She was loudly narrating the memory that was playing out in her head. She was emotional, but very much in control of what she was doing and what she was saying. At some point our

hands moved together simultaneously, she took the tissue, wiped her nose, and had a sudden breakthrough. She passed through the phase shift, that had been hanging in the balance for some 15 minutes, and into Stage 3. Spontaneously, she opened her eyes and began to speak rapidly and excitedly of the revelation she had just received through the action of wiping her nose. We won't share details here, but it was a profound moment.

The same student also asked, "How did you know when to give her the tissue? You held it close by for several minutes." My answer was the same as for the previous question, "Consciously, I can't tell you that I knew at all, although I expect that I was so closely in tune with the volunteer that I moved my hand forward in sensitive response to the movement her hand was making." The volunteer surprised us even more as she explained, "I needed that tissue at that exact moment. I can't remember whether I knew Richard was holding a tissue. In my mind's eye, there was a tissue floating right in front of me. I knew that all I needed to do was take it, wipe my own nose and release myself from my dependence on..." She continued to describe what she had released.

The Art of Being Client-Responsive

There are so many things that can be noticed when working with a client. Sensitive observation begins the moment the client enters your space and continues until they leave. Many things might transpire during the Mirroring Hands practice, but the Mirroring Hands approach encompasses the therapist's entire engagement with the client. An observed awareness and a felt sense of the client begins even before names are shared: how they walk; how they sit; where they sit; direction of eye gaze; fluctuation in vocal tone; the words they use; how they breathe; when and how they shift position; little body movements; and changes in facial expression. The possibilities are endless. What you, the therapist, do is also vital: where do you sit; when do you move; how do you conduct the initial intake; what is your first question; and so on. The client is noticing all these things too, and responding to them in an explicit and, also, an implicit way.

The 9 Implicit Voices

In addition to this host of subtle possibilities that may be playing out during a session, there is always more. Following is a list that we will describe briefly that we call the *9 Implicit Voices*. These are lifestyle and biological indicators that can add to your insight and awareness of the client. Wellness and movement toward health and wellbeing is something that occurs everywhere in someone's biology and so, indicators might come from unexpected, or at least, unusual places¹²¹.

1. Skin¹²² – pallid skin color is an indicator of poor circulation, which can be from affective issues such as depression, but also fear and especially anxiety/panic. Skin elasticity is an indicator of immune system health. Inelastic skin can indicate high inflammatory chemicals and oxidative stress. Both can be a response to excess cortisol from worry and distress.
2. Sleep¹²³ – sleep is one of the most important factors in all health, but especially mental health. Lack of sleep reduces tolerance to pain and can make life very uncomfortable. Mental disturbance is both caused by and causes poor sleep. The use of electronic devices before bed also negatively affects sleep.
3. Sun¹²⁴ – Sun is necessary for the production of Vitamin D. Vitamin D can be ingested with food or supplements, but there is no substitute for the action of the Sun. It is called a vitamin, but is much more like a hormone i.e. is a messenger for cellular behavior. Vitamin D is transformed in the body to become a transcription factor in gene expression in the brain.
4. Sugar¹²⁵ – this is broadly about what people eat, but also specifically about how much and what type of sugar they eat. Weight gain is a stress on the body which adds numerous problem chemicals. Cortisol and inflammatory chemical rise. This also stimulates oxidative stress. Reducing sugar is one of the easiest ways to improve mental health and strengthen the whole system.
5. Sitting¹²⁶ – this is about exercise. The majority of our biological tissue is dedicated to one thing – to help us move. Large areas of our brain are involved in motor activity. It is natural to move and unnatural not to. Many of the chemicals in the body that are now causing us problems are naturally catabolized during exercise. Increasing movement and activity is another simple way to relieve depression.

6. Stress¹²⁷ – stress has so many expressions in the brain and body which change the mindset and the state of consciousness. Short term stress, resolved within an ultradian cycle or two, is not particularly damaging, but ongoing stress becomes a confusion and disorientation. Reducing stress is readily achieved with Mirroring Hands and utilizing the Ultradian Healing Response.
7. Sex¹²⁸ – libido can be a readily noticeable indicator of mental and biological health. Illness, stress, affective disorders, PTSD, and harbored trauma, all contribute stress based chemicals into the system that negatively affect libido. The client's sexual activity can be a ready indicator of improvement or decline.
8. Pain¹²⁹ – pain is the dominant stimulus for someone to act. Pain is felt in both physical and emotional situations. Social rejection registers in the pain centers of the brain and can be useful indicator in issues of self-esteem and family/social connections.
9. Face¹³⁰ – the face tells us a million things. Facial expressions often tell us what someone is thinking before they know they are thinking it. The ability to recognize faces and to recognize facial expression is important to mental health, social inclusiveness, and managing in life. Testing can be used, but sensitive observation of how the client responds to facial cues during therapy can give some indication, too.

All Too Hard

Being aware of all these myriad of behaviors, emotions, thoughts, explicit and implicit response, and so much more might seem daunting and the question might even emerge, *Do I really need to know all these things, especially if I can easily follow the manual of a recognized therapy?* That, of course, is something that only the individual can answer, but it might be interesting to recall a conversation with Milton Erickson back in the 1970's. This exchange, and many more wonderful papers and transcriptions, is published in Volume 3 of the 16 volume set, *The Collected Works of Milton H Erickson*¹³¹:

Erickson, his friend Dr Marion Moore and I (Rossi) had spent some time discussing how to be a good therapist. We discussed the myriad of cues and

clues that emerge during the therapeutic experience. Erickson and Moore insisted that everything from minor facial expressions to metaphors to a casual comment can provide a rich resource. They counselled that a good therapist has an open heart, an open mind, subjective and objective awareness, a keen sense of noticing and being able to see the illumination of the path to enlightenment for both patient *and* therapist. The final words of the conversation capture it, in all its simplicity:

Rossi: *So we have to find out how to read faces. We have to find out how to read inflection of words, minimal cues that the patient gives about their underlying problem. That's what this is all about.*

Erickson: *Yes.*

Rossi: *That's a lot of work! You don't just sit there and talk and empathize.*

Erickson: *Yes!*

Chapter 8

Holding Both Sides of the Mirror

Revealing Potential and Possibility

ER: *Then later I would generalize it, “If you have your problem in one hand, what do you have in the opposite hand?” What’s the opposite of a problem, well, obviously, a solution! So, if this is the problem, what is happening in the other hand is the opposite – a cure or a-ha experience of psychological insight or stage 3 of the creative cycle. Then the word “opposite” became very important in my mind just as it was for Carl Jung.*

from the Rossi/Hill conversations, June 2016

In this chapter, we utilize Mirroring Hands to help the client see the other side of their problem. The old catch phrase, *Can’t see the wood for the trees*, is exactly what happens to most of us when overwhelmed by problems, difficulties and struggles. If the problem can be pushed to *one side*, allowing for the possibility of something else coming into the *other side*, then the client has a much better chance of finding a solution, rather than being stuck in the problem. To separate, or find a distinction between the parts is to *differentiate*. This form of Mirroring Hands can separate, or differentiate, to produce the fundamental essence of both the *problem* and *not the problem*.

When the problem dominates, the client creates a “problem dominated system” which is more likely to allow difficulties, stresses, and emotional disruptions to emerge. It is important to appreciate that self-organization and emergence function regardless of whether it produces a positive or a negative outcome. Self-organization responds to the qualities of the feedback. Differentiating the elements of the system, however, is not reductionism. It is separating the parts so they can be explored independently. The parts are not disconnected, just differentiated.

We can learn why this helps from Ilya Prigogine, the Nobel Laureate who developed the concept of self organization in complex system based on his studies of the *second law of thermodynamics*. He described the benefits of differentiation this way:

...differentiation between different parts of a system, or between the system and its environment (means that)... further processes that would be impossible in an undifferentiated medium may be switched on... to manifest its *potentialities*. (Differentiation is)... a prerequisite to *information*.¹³² (italics added)

Differentiation releases, or unlocks, the possibilities inherent in the individual part(s). When the parts are entwined/entrained/embedded in the product of the whole system, they lose their individual state and become part of a new combination, which has its own expression and possibilities. A simple example is when a musician isolates a small section of the music and works with just that part to see what emerges. Once all the richness of that part has been discovered, the newly enriched section is reintegrated into the larger piece. In the same way, an actor will work with just a word, a phrase or a scene in the script and explore the possibilities within that fragment. Many of the possibilities of that fragment of the play can be lost when embedded in the complete script. Again, we stress that we are not speaking of reductionism. The fragment is never considered to be a complete script. It is only differentiated in order to explore the particular scope of possibilities, then the enriched fragment is linked back into the larger work to become an integrated collective again. The same applies to the client's narrative that is their "script of life".

It may seem counter-intuitive to be separating parts of the problem when the client is most likely already suffering from dissociations and dis-integration. There is, however, an important difference between *dissociation* and *differentiation*. Dissociation is about a detachment that makes interaction and integration impossible. The barriers, disruptions and interferences are maintained in a negative feedback loop by the problem, which might include traumas, pathological problems and negative attachment. Differentiation, in the context we use here, is the process of distinguishing and temporarily isolating integrated parts in order to examine their individual qualities.

Even a simple differentiation into two elements can stimulate new information and new perspectives that can turn the whole problem around to make resolution and

recovery possible. The form of Mirroring Hands we teach in this chapter allows the client to safely explore any number of differentiated opposites – the off/on; isn't/is; can't/can; problem/not problem; failure/not failure; barrier/open; difficult/easy etc.

Using Mirroring Hands to reveal polarities can open possibilities in many difficult therapeutic situations.

- **Pain management** is so often focused on the pain. Mirroring Hands allows the client to place the pain in one hand, creating the reasonable question of what is in the other. The pain can be differentiated in regards to the location, especially non-specific peripheral neuropathy¹³³. The pain's intensity can be placed in one hand and a lower intensity into the other. How can the client shift themselves from the high intensity hand to the lower?
- **Addiction** can totally overwhelm all other thoughts. Differentiating *addiction* from *not addiction* can open the client to remember all those things that are not the addiction and are overpowered by the addiction. This is often very effective because it brings up family, being loved, health and safety. It is also possible to differentiate the elements of the addiction between the hands. It can be possible to explore the pleasant side of the addiction and the unpleasantness of the side-effects. Perhaps the fingers can be used to create a more complex differentiation.
- **Somatic responses** appear spontaneously and can be an indicator of something very important. Examples are a movement in one part of the body, changes in breathing, sudden stiffness, sudden awareness of an odor, and gut reactions. The hands can be used to explore the somatic response, the specific body location or whatever is expressed. In one hand is the noticed somatic sensation/activity. What is in the other hand?

In describing how to explore the polarities, the opposites, we will, again, first show the basic 4 stages of questions, then, we will explore more literally how those questions flow in practice. Finally, we will share case studies.

Hands Polarity: Four stages of the creative process converting a problem into a resource.

Stage 1: Initiation — Sensations



If you are ready to do some important inner work on that problem will you place your hands with your palms up as if you are ready to receive something?

As you focus on those hands in a sensitive manner, I wonder if you can begin to know which hand seems to experience or express that fear (or whatever the negative side of the client's conflict may be) more than the other? Will that hand make some kind of movement to show it is the hand that is holding that fear (or whatever)?

Stage 2: Incubation, Arousal — Feeling



Wonderful, now I wonder what you experience in your other hand by contrast at the same time?

Wonderful... I wonder how you might experience both sides of yourself at the same time! Can you let yourself continue to experience both sides together and explore what begins to happen between them? I wonder how those hands might interact with each other? Will those hands move toward each other or perhaps away, or in some way that only the two sides of the problem know how to do?... Will it be okay to share a word or two about what begins to happen? Or will you just continue your inner work privately?

Stage 3: Breakthrough, Insight and Intuition



*Interesting?
Something changing?
Is it really possible?*

Good... now can you let yourself continue to experience both sides of your "self" in those hands at the same time... in this new way... with what you have suddenly realized... becoming aware... will it be okay to share with me a word or two about what begins to happen between them? Or just continue your wonderful work privately?

Stage 4: Reintegration — Thinking



*What does all that mean to you?
How will your life be different now?
How will your behavior change now?
What will you do that is different now?*

Stage 1: Information – Voluntary engagement and hand differentiation

This preparation is much shorter than the formal version we described Chapter 3. It is a way to quickly bring the client into the process and to shift the locus of control toward the client. This is a useful method for a few reasons including that you may feel that the client is not inclined to engage in a lengthy preparation. It is also effective for a client who is familiar with Mirroring Hands and is likely to engage quickly.

If you are ready to do some important inner work on that problem, will you place your hands with your palms up as when you are ready to receive something...

It is always helpful for the therapist to demonstrate along with the client. This helps the client who is unsure, and also reinforces the action implicitly through Mirror neurons. This helps to build rapport and engagement between therapist and client. Also, always be client responsive. The client may choose to begin the process, but not want to put the hands palms up. They may want to go palms down. If the client is agreeing to engage, but also determining some of the process, then that shows they are taking on the locus of control, which is exactly what we want!

As you focus on those hands in a sensitive manner, I wonder if you can begin to know which hand seems to experience or express that fear (or whatever the negative side of the client's conflict may be) more than the other? Will that hand make some kind of movement to show it is the hand that is holding that fear (or whatever)?

Stage 2: Incubation – Allowing the Opposites to be Experienced and Interact

As soon as the client acknowledges that one hand seems to express the negative aspect of their conflict, it is a sign that the client has made some kind of connection with their previously unconscious or hidden dynamics of their conflict. The client has, in effect, given up their usual outer reality orientation and are now engaging and responding to their inner realities as they might in a dream or fantasy. The therapist continues by evoking a contrasting, opposite and what is usually a more positive side of the conflict. The client is challenging themselves to realize and acknowledge what is “not the problem”.

Wonderful, now at the same time I wonder what you experience in your other hand by contrast?

When the client responds by labelling or describing a contrasting experience in the other hand, the therapist then continues to engage the dynamics of the client's conflict...

*Wonderful how you can experience both sides of yourself at the same time!
Now I wonder if you can let yourself continue to experience both sides together and explore what begins to happen between them? I wonder how those hands might interact with each other? Will those hands move toward each other or perhaps away, or in some way that only those hands know how to do?... Will it be okay to share a word or two about what begins to happen? Or will you just continue your inner work privately?*

Clients typically respond with a series of uncertain hand movements and may begin to verbalize experiences as their emotions, symptoms and inner conflicts become engaged. It sometimes seems as if clients are “acting out” their conflicts in a self-directed mythopoetic adventure within the safe boundaries of the experimental “theater” of the Mirroring Hands experience. Clearly, we are focusing attention on the hands, but the client might have a response anywhere in the body in any number of ways. Remain observant and sensitive. The therapist’s task is to simply observe how the client seems to become *entranced* with their own spontaneous and semi-autonomous experience of *transforming* their inner conflicts into more or less involuntary observable behavior. Clients will often go through a mildly cathartic process wherein they may express anguish and pain along with the relevant psychodynamics of their problems. Their head, eyes, hands, arms and fingers sometimes seem to move in an involuntary manner, characteristic of automatic handwriting or finger signaling, that has been well described by Rossi and Cheek¹³⁴. Continue to respond to the client with supportive and encouraging responses as seems appropriate.

Whenever a client is working hard in Stage 2 there is the imminent possibility of a breakthrough spontaneously occurring. How that breakthrough manifests is, of course, unpredictable. The important thing is to be right there with the client acknowledging and reinforcing any positive changes.

Stage 3: Breakthrough: Opening Up to Possibilities – Illumination: Interactive and Positive Exploration

There is often a particular moment when the client shows a radical shift, although it can also be a bit more gradual with a number of small shifts that collectively produce a major shift. Sometimes the client will speak to you, other times they express this facially and physically. Breakthrough supportive comments recognize that something significant is shifting.

Interesting?

Something changing?

Is it really possible?

Clients usually function on many psychological levels at the same time. On one level they are experiencing and moving in a more or less involuntary manner. On another level they are simultaneously observing themselves and responding to spontaneously generated inner forces and fantasies. On yet another level they are apparently directing their own psychotherapeutic inner work and describing it to the therapist. The exact dialogue you might use will vary depending on the client. We will give some case examples shortly. In principle, you will want to use words that facilitate the client's continued exploration of this new, inner self organization.

Good... now can you let yourself continue to experience both sides of your "self" in those hands at the same time... in this new way... with what you have suddenly realized... becoming aware... will it be okay to share with me a word or two about what begins to happen between them? Or just continue your wonderful work privately?

Simply allow the client to continue their private work, and respond to whatever they might choose to speak about their experience. Again, depending on the client, you may feel it is best to help them to return to alertness with the process we have previously described (When... Some part of you knows that... etc) or the client will spontaneously bring themselves back to the room and ready themselves to talk about their experience. If the client chooses to quietly and privately explore their experience, just be with them in whatever way is appropriate.

Stage Four: Integration and Reality Testing:

What does all that mean to you?

How will your life be different now?

How will your behavior change now?

What will you do that is different now?

Allow the client to express themselves in whatever way gives them comfort and a sense of where they are now heading and how they might approach life now. Remind the client that their natural ultradian rhythm will give them numerous opportunities, as many as once every two hours or so, to continue their conscious and non-conscious integration of these new discoveries and realizations.

Case Studies

ER Casebook:

Stage One: Data Collection, Initiation. A scholarly looking young man complains of feeling weak and being a failure. He is directed to the initial palms up hand position, *Can you tell me which hand feels weaker and more of a failure at this moment?* After a moment of self-reflection he hesitantly acknowledges that his right hand feels a bit weaker. I then ask, *And what do you experience in your other hand by contrast?* He takes a slow deep breath and admits the other side seems lost in daydreams of heroic adventures.

Stage Two: Incubation, Arousal. *Wonderful how you can experience both sides of yourself at the same time! Now I wonder if you can let yourself continue to experience both sides together and explore what begins to happen between them?* The “weaker” right hand begins to tremble and after a few moments I ask, *My goodness is that hand really trembling all by itself?* Blushing somewhat the young man admits that the right hand is shaking all by itself because it is so nervous about a fantasy that the left hand is experiencing. I deeply respect his privacy by not asking him to tell me what his fantasy is. Instead, I quietly support his obvious struggle by asking, *I wonder if you have the courage to allow that to continue privately within yourself for another moment or two so you can experience what takes place next?* His eyes close at this point and many private emotions cross his face as his hands slowly approach each other and then retreat just before they touch.

Stage 3: Breakthrough, Illumination, Insight: The hands eventually touch in a seemingly accidental manner and, as they do so, his entire body goes through a slight startle response. I quietly question, *Quite a surprise?* He merely nods his head slowly a few times as the hands now touch each other again and again in a tentative, exploratory manner. After a few minutes the left “fantasy” hand covers the fearful, and still trembling, right hand. After a few moments the trembling stops and the anxious expression on his face is replaced by calm and perhaps even the slightest of smiles. After a few more moments when his apparently calm and satisfactory state seems stabilized I quietly ask, *And is that now going well?* After about thirty seconds of delay he silently nods his head yes and asks, *I wonder if that is really possible?*

After a few more minutes of silent inner contemplation he finally opens his eyes, stares at the floor and slowly stretches and touches himself on the arms, head, sides and legs that is very characteristic of people coming out of a hypnotherapeutic state. To my silent look of inquiry he describes how he had been reading recently that humans are essentially “herd animals” who take comfort in each other’s presence and touch. In his apparently spontaneous inner work he explored an inner drama of how it might be possible to touch a young woman he had met recently “without acting like a creep and offending her.” He explains how he finally imagined going on a hike with her and as they moved through more and more difficult terrain their hands might reach out to each other and then finally touch to support each other.

Stage Four: Verification, Reintegration. The final stage of this therapeutic session was to engage the young man in a discussion about the possibility that he could in fact ask his woman friend out for just such a hike in reality. He acknowledged that he could and would. At the same time, his left fantasy hand kept grasping his formerly trembling but now calm right hand. After a few moments of such absent-minded “*hand play*” he looked up at me sheepishly and said, *Such stuff as dreams are made on*¹³⁵. We both smiled, stretched, looked at the clock and realized it were time for the session to end.

We spent the next few sessions discussing how his occasional feelings of being weak and lost in fantasy were actually indications that he was going into a creative state of introversion wherein he needed to experience and recognize how he needed to take new steps to move forward in his life. His previous “*symptoms*” of being a weak failure lost in fantasy was thereby reframed into a creative resource. Instead of rejecting his fantasies, he treated them as important *messages* from his intuitive self about his strengths and positive planning ideas.

RH Casebook:

Stage One: Data Collection, Initiation. A man in his early 30’s struggles with his relationship. They have decided to separate for short time to see if they can work out if the relationship can survive. We have established a number of important issues through preliminary discovery conversations. He struggles with not knowing what to do, what his partner is really thinking, whether he really wants to rekindle the

relationship or not. He is so used to making decisions and getting on with things. Now he is lost and feels disempowered, out of control. We keep coming back to the same issue – he doesn't know. I asked him if he might like to explore what he doesn't know. He nodded. *If you are ready to look into the world of what you don't know, will you lift your hands up in front of you.* He immediately raised his hands. I purposely didn't ask whether he wanted palms up or down as I knew he was already committed to the process and I wanted to minimize my influence. *Which hand do you feel is the hand that holds what you don't know?* He stares intently at his hands and moves the hands up and down as if weighing them up. After about minute of this, the right hand stops bouncing and he shows he has decided on the left hand as the hand that doesn't know. He doesn't look to be totally comfortable and so I ask, *I wonder if you have some feeling in your hand of what you don't know? A color... a shape... a texture...?* His fingers wiggle for a moment or two and he says, *Like... nothing... smoke... empty... inside me, empty... painful...* Not wanting him to upset himself, I shift his focus...

Stage Two: Incubation, Arousal. *Ok, that's wonderful, you are really feeling what it is to not know... but if you turn your attention to your other hand. I wonder what you are holding in that hand?* After a moment he replies, *What I do know. Ah!* I respond with surprise, *That makes sense. I wonder what it feels like to hold both of those, at the same time... what your hands have to say to each other?* His hands begin to bounce again, as if weighing each other up in this new context. I ask if he wishes to share a word or two, but he quietly and privately continues to weigh up the hands.

Stage Three: Breakthrough, Illumination, Insight: After about 10 minutes his hands suddenly stop bouncing. I say something simple to assure that I am noticing, *Yes... something important...*

His hands remain still, his face showing deep concentration, then he suddenly opens his eyes, in full awareness of me and being in the room, and says, *I know what I know...* I simply encourage, *Wonderful!* He continues, *What I know is... that I don't know. That's crazy! I know I really need to know, and what is making me so upset is that I don't know, but that is what I know... I know I don't know.* I encourage and facilitate his continuing realizations. *What an amazing revelation... how incredible...*

because you have talked about this quite a bit, but now you bring them together and suddenly it's... I leave him to complete the sentence. After a moment's pause, he says ... it makes sense. I don't want to be in charge of my partner, but I do that, I know I do that. Can I really be in charge, but in charge of not knowing? I just have to wait... wait... if I push for facts and details now I'm just going to ruin everything... I have to be patient. I know that now.

Stage Four: Verification, Reintegration. We spent another 15-20 minutes talking about how this new realization can be practiced to help his relationship issue. He spontaneously began to talk about how this will help him at work as well. I reminded him that he might continue to process this, especially overnight. I suggested that he record his early morning thoughts for the next few days and we could discuss these and other things that might come up during the next few days at his next visit. We met four more times. We utilized this polarity Mirroring Hands, at various times, to explore a few more “opposites” – *separating/staying together; being alone/having another relationship; letting his partner decide/making the decision himself*. In the end, his partner decided there was no recovery possible. The last two sessions were dealing with that pain, so we explored *pain/not pain*. Each process revealing and helping him repair himself and build his personal strength.

Review

The evolution of psychotherapeutic technique from Freud to Erickson over the past one hundred years has been away from direct suggestion and programming toward the facilitation of mind-body communication within the client¹³⁶. Therapeutic innovations of this century increasingly avoid outside influence so that the client has an opportunity to explore the *critical phase transitions* of their own evolving personality and consciousness. In Mirroring Hands, as soon as the client acknowledges experiencing two or more sides of their symptom, problem or personality in different hands or parts of the body, the therapist can assume that the process of inner connection has been successfully engaged. The client's inner dynamics are primed for a self-therapeutic engagement to take place. The therapist then merely wonders aloud what will happen next between the different forces or parts that are being experienced and encourages whatever autonomous psychodynamic process that evolves, more or less, all by itself.

After about ten to twenty minutes of inner self-encounter many clients spontaneously remark that the inner process is now over, with a sense satisfaction, but sometimes with disappointment. They feel satisfied when they feel they have received an important insight. They can also be wistfully disappointed when they feel they have received something of value but they feel, intuitively, that there is much more that needs to come. This disappointment is not surprising in the context of people thinking in a linear way – *I solve this one problem and then I no longer have a problem*. This thinking ignores the complexity of the larger system of which the problem is just a part. The beauty, however, is that when we think *in* the system it is so much more exciting. We can be *comfortable* in knowing that there is more to do. In fact, we can assume that all kinds of different things might emerge when even one problem is resolved. For the therapist, it is enough to warmly support the client's reality of the moment.

Some clients solve significant problems. Others make some progress, but they need more time for their inner world to synthesize the new realities of their evolving relationship to themselves. The most important learning for the client is to recognize that there is an ongoing activity that is their inner creative experience. They have done more than just solve a single problem. It is often helpful to remind them of the four stages of the creative process and their ultradian rhythm so the client can appreciate the ongoing evolution that is taking place within themselves.

The benefits that occur from creating a deeper and more comfortable relationship with the "self" is obvious when we see clients, and ourselves, making connections between our outer and inner worlds. We see this happening physically during Mirroring Hands when the hands seem to move "all by themselves". This begs the question, Why do so many people feel disconnected from themselves and from others? Certainly, personal trauma, insecure attachment or other individual issues in life can cause this, but personal and social disconnection seems so much more widespread. Is something else happening that creates disconnection? And if there is, what can we do to counteract it? That is what we will explore in the next chapter. Is there an elephant in the room? Yes, there is. Is there a way to get rid of the elephant and turn on an interested and integrating state of being? Yes, to that, too.

Chapter 9

Curiosity and the Elephant in the Room

What We Miss

ER: *People have problems - why? Because they don't know how to listen to themselves and their own impulses, their own truth, their own myth. Why don't people all follow their inner passion? Because the outside world overwhelms them.*

RH: *This is the Winner/Loser idea of mine...*

ER: *So... I don't think I ever wrote it... but the basic human problem is that too many people have lost their voice. No-one told you to be a poet when you were a child... it's the educational system... the reliance on group testing, and competition... the competition for who is going to be the dominant voice, rather than who has the most sensitive understanding, and who is going to see the world in a new light – like Einstein.*

RH: *Yeah...*

ER: *... too many people have problems not because they have problems, but because nobody taught them how to respect their own genius.*

from the Rossi-Hill Conversations, 2016

This chapter explores two important elements of experience. One that interferes with our capacity to engage with and enjoy life – *the winner/loser world* - and another which turns on those capacities, and is fundamental to Mirroring Hands - *curiosity*. We first describe the disturbing corruption of winning and losing that pushes people into a protective, defensive and isolating consciousness. The second part dives deep into the multiple forms of curiosity and how curiosity can shift consciousness from disrupted to therapeutic and then on to the integrated consciousness of wellbeing. Curiosity supports us as we expand at the growing edge. We will explore the

wonders of curiosity in the second part of the chapter, but perhaps we should get the “elephant in the room” out of the way first.

The Winner/Loser World

How often do we see clients who are embarrassed about what they wear because they can't afford the current fashion? Do you see clients who worry about what the neighbors think or whether they have a good enough job? Have you met parents who stress over the future success of their kids? Do you see kids who are buckling under the pressure of all their extra curricula activities from summer school to gymnastics to dance classes and more? Do you hear people yearning to know how to get a win in this world, and are frustrated and disappointed with themselves when people call them a loser? Do you know people who live their lives by what they read in magazines or see on television? Something has happened to how people determine their worth and value in the world. The measure has shifted from our personal growth and development as we do our best to face the challenges of life, to whether we are good enough to live up to the expectations and needs of the outside world. Losing has become a sign of failure, and winning has become the necessary way to gain approval and acceptance. The locus of control has been shifted.

Although many seek therapy for help with personal traumatic, disturbing, and disrupting events that have become emotional and psychological problems, something else is also happening that seems to effect just about everybody. Regardless of the personal difficulties in someone's past, almost everyone will feel, at times, that they are not good enough, or not “measuring up” to what they believe the world expects of them. The outside world, the society and culture in which we live, can be so demanding that it can be overwhelming. For some people this feeling can be just a passing difficulty, but for others, especially for those who already have personal issues, it is a constant pressure that negatively affects their feelings of self-esteem and self-worth, and often leads to even more serious issues. Even more concerning, is that these “external” pressures are so common and so pervasive that they have become background assumptions in daily living. Somehow, it has become normal for many people to *only* feel ok about themselves when favorably judged by

the standards that other people set, or that society demands. We are under pressure to “win”. To be judged a failure is to be a “loser”. It seems that it is no longer about doing your best, but about winning and losing. We give this social environment of externalized expectation and judgmentalism the catchphrase *winner/loser world*.

Most people reading this will have sat for an exam and know that it can be a difficult and stressful time. How much stress and anxiety did you feel about the *need* to get a high score? If you received a low score, did you think about the people who would be disappointed, or who you had let down, and afraid of what they think of you? Was an opportunity withheld, or did you feel bad about yourself that you had failed, or that you were you to blame or at fault about what went wrong? Did you feel shame or guilt for not meeting expectations? Did you feel like not trying anymore or even giving up? If you did any of these, then you are amongst good company, including the authors. You have tasted the unpleasant “pain” of being dominated, and possibly overwhelmed, by the winner/loser world.

The Elephant in the Room

The winner/loser world creates a separation in the relationship with our *self*, and with others, as we sacrifice who we really are, to be the person that the winner/loser world approves of. In essence, this creates a *disrupted consciousness* making everything else in life more difficult. The resulting negative feedback loop triggers emergent properties of emotional, mental, and behavioral problems. One of the central functions of Mirroring Hands is to assist the client to re-establish their *self*-relationship which has become disrupted or disorganized. Certainly, there are always individual problems that need to be resolved, but even when these wounds are healed, sending the client back into the “warzone” of the winner/loser world can not only undo the good work, but sometimes make things worse¹³⁷. Revealing and understanding this “elephant in the room” can, in itself, be enough for some clients to manage and re-engage with their natural problem solving and mind-body healing. Mirroring Hands is an ideal process for helping clients differentiate the effects of the “winner/loser world”, which can be exposed into one hand, and their inner capacity to naturally face the challenges of daily life, revealed into the other. It is very exciting to

watch a client “get it” and begin to reclaim ownership of how they assess their value and worth.

The “*real world*”

Many people use the term “real world”, unwittingly, as a colloquial expression for the winner/loser world. People returning from holidays can be heard lamenting that they have had a lot of fun, enjoyed feeling calmer, more relaxed and often revitalizing their relationship, but now they have to get back to the “real world”. It is as if there is no choice, and all those enjoyable things have to be put aside. Young people who speak of their future dreams can be told by others that they won’t be able to do that in the “real world”. It is surprising that this “real world”, a place full of restrictions, limitations, needs, and expectations is given preference and hierarchical superiority. It is unfortunate, but, more and more, the winner/loser world standards and expectations are taken for granted and become the “rules” we *should* live by. No wonder people feel they are not good enough. How is it possible to cope with the confusing struggle of trying to be like someone that is not really you? People reframe the way they think, and alter the way they behave to meet those externally determined standards and expectations. Some develop affective disorders like anxiety or depression, or one of the many other negative responses that emerge from enduring the *winner/loser world* experience. The social status aspect of the winner/loser world problem was canvassed thoughtfully by Alain de Botton in his book, *Status Anxiety*¹³⁸. Can you see the pattern here? Can you relate to the problem? It is just like Cinderella’s ugly sisters who tried to force their feet into the glass slipper to *win* the heart of the Prince. They were trying to be something they were not, but they had become so used to the concept of doing whatever the winner/loser world wanted, and would reward them for, that they were prepared to submit to pain and disfigurement to “succeed”.

Winner/Loser World Mindset

The winner/loser world mindset is an emergent state of mind from a system that is persistently receiving negative feedback from a low level, chronic fear of social

rejection. Social rejection, disapproval, and exclusion from social rewards is not only a psychological distress¹³⁹, but can also be felt as a physical pain¹⁴⁰. It is, unfortunately, a maladaptive response. Graffiti on a wall in Romania astutely comments, *Adapting to a sick society is not a sign of mental health*¹⁴¹. Stress naturally triggers defensive, protective behaviors, but this is to help us survive a real and present danger¹⁴². When stress is not able to managed or resolved, it becomes distress. The winner/loser world is not resolvable. It is both not real, an abstraction, a social attitude, but it is also real in that it has become part of the social construct and, so, is persistent in the background of daily life. This creates an ongoing, chronic stress that shifts people from naturally seeking how to relieve or resolve demand, to managing by adapting to the problem, largely by normalizing it. This adaptation creates a *winner/loser world mindset*.

There are a number of tell-tale indicators that someone is in a winner/loser frame of mind¹⁴³, including:

- An increased sense of personal **isolation** and **exclusion**.
- **Events** shift from being valuable learning experiences, to being evidence of whether someone is a winner or a loser that can be used to denigrate, or to self-punish and self-sabotage.
- Information, advice, suggestions or comments that could be mindfully received as useful and helpful, are taken as **instructions**, and interpreted as a criticism that the “instructor” is better, and smarter, which means, by default, you are less knowledgeable and therefore a loser.
- Everything becomes a **competition** that needs to be won, rather than a personal challenge that is an opportunity to learn.
- An imperative need to be **right**, not at **fault** or to **blame**, promotes the defensive behavior of making sure someone else, or everyone else, is wrong, or at fault, or to blame.

In the winner/loser world, you *have to* achieve expectations, and satisfy demands, in order to be deemed a success and receive the rewards. This pressure can drive some people toward socially and ethically unacceptable behaviors, which are

justified as “just trying to get ahead”. They *need* to win. Behaviors like *cheating*, *bullying* and *dominating* others, *road rage*, *aggression*, and even *violence* become powerful temptations. Substance abuse is often about trying to “get out of it”, where the “it” they are trying to “get out of”, is often the winner/loser world.

Stereotype Threat

An important part of the foundational research that supports the “winner/loser world theory,” was conducted at Stanford University, by Aronson and Steele in 1995¹⁴⁴. They looked at “stereotype threats”. These are pervasive, social, negative attitudes about certain groups that become assumptions in the background social fabric that negatively and implicitly affect that group. They first looked at the long term negative social attitude in the US regarding the intelligence of African Americans. Their research found that they could negatively influence the scores in a questionnaire given to Stanford University students. They told a mixed group of students that the questionnaire was just a set of questions for a research project. The results were in line with the students’ general university performance. When they asked another group to do the questionnaire, they were told it was a test that diagnosed intellectual ability and would be counted in the final year’s results. On average, the African American students’ results were 5 points lower. The Caucasian and Hispanic groups showed no significant change in performance. To test the theory further, they told a third group that it just a general test and then, half way through, announced that it was an intelligence assessment test and the marks would be counted. The average results for the African American group dropped in that second half of the questionnaire. Something happened in the way these research subjects processed the questions.

Their brain processing, i.e. the pathways of neuronal firing and the information retrieved, changed for many of the students. The research did not investigate what the students were feeling, but it might be safe to assume that the responses were implicit i.e. not consciously perceived. For some, the stereotype threat may have triggered implicit self-esteem fears, some may have become nervous and defensive, some may have been more aggressive or agitated. These shifts in mental state

include what we describe as changes in the *quantum qualia* of their experience as the energetic flow of charged particles moving in and out of axons and across neurons change their probability outcomes and, therefore, the thoughts that emerge from the complex system of the brain¹⁴⁵. The bottom line is that, outside of the students' conscious control, a negative, socially pervasive concept had influenced them on an implicit level and disrupted their normal behavior and state of mind. These negative stereotype threats are *in addition* to specific negative messages that an individual receives through poor parenting, bullying, and other forms of personal negative criticism.

Other stereotype threats have been researched:

- women in math¹⁴⁶
- Whites with regard to appearing racist¹⁴⁷
- Students from low socioeconomic backgrounds compared to students from high socioeconomic backgrounds on intellectual tasks¹⁴⁸
- Men compared with women on social sensitivity¹⁴⁹
- Whites compared with Asian men in mathematics¹⁵⁰
- Whites compared with Blacks and Hispanics on tasks assumed to reflect natural sports ability¹⁵¹
- young girls whose gender has been highlighted¹⁵²

As a stereotype threat, the winner/loser world has become taken for granted, unquestioned and is literally embedded in the construct of daily life and our social institutions. We see it in our examination systems in schools; businesses push people by rewarding those who meet expectations and punishing those who don't; and advertisers use the winner/loser world to convince you to buy products to make you a "winner". "To the winner goes the spoils", "winning at all costs", and "the ends justify the means", are all common phrases that reflect the normalization of externally determined winning and losing. The unnaturalness and discomfort of the winner/loser world is reflected in the counteracting phrases that have emerged, "It's not about winning, it's how you play the game", "It's better to have loved and lost than to have never loved at all", and "You are all that you ever need to be". If the

winner/loser world did not exist, we would not have the first group of phrases and we would not need the second.

Review

Describing this in the context of complex systems, the winner/loser mindset is an emergent property from the feedback response to the constant and pervasive externalized evaluation, expectation and the associated fear of social rejection and criticism. It just *gets* you and because it is implicit, you have no conscious awareness or control of it. In the positive, natural process of personal challenge you sometimes achieve what you want and sometimes not. You can't win all the time, and *not winning* does not mean you are a loser. *Not winning* is simply a natural part of the process of learning and improving for the next challenge.

The key to resolving the winner/loser world problem is not to cure the winner/loser mindset, but shift into another. Finding release from the clutches of the winner/loser world *is* possible. Changing our mindset is about changing the energy and information flow in the brain¹⁵³. That may sound like an oversimplification, but that is exactly what Mirroring Hands can achieve. We have already discussed the importance of shifting from a disrupted consciousness to a therapeutic consciousness. This brings us to a natural quality, fundamental to Mirroring Hands, that has a profound effect on brain state and state of mind. That quality is *curiosity*.

Curiosity

Changing "State"

Einstein said, "You can't solve a problem with the same mindset that created it." You can't *make* a depressed person cheer up or *make* an anxious person calm down or *tell* a traumatized person not to worry about it. To move toward beneficial change, the client needs to find the courage and capacity to explore both the damaged parts within and their future possibilities at the growing edge. To be able to do this, the client needs to be *less afraid and fearful* so they are less likely to suffer further trauma or other personal distress. As if their own personal issues are not enough,

the winner/loser world looms secretively as an invisible elephant, and so removing that “straw” can help relieve and calm. Clients need to feel the possibility for *growth* and be encouraged by a pleasing feeling when they make that growth. Curiosity, more than any other state, enables all those requirements.

Curiosity establishes a state of being that shifts the mind, altering the flow of energy and information in the brain¹⁵⁴; changes the biology all the way down to gene expression and protein synthesis to alter the biochemical milieu¹⁵⁵; and enables the quantum qualia of a therapeutic consciousness¹⁵⁶. Recent research shows that curiosity and curious people are less affected by social rejection¹⁵⁷; have a broader scope for learning¹⁵⁸; have a positive influence on psychological well-being and emotional exhaustion¹⁵⁹; and enjoy increased arousal and activation of the natural, inner reward system¹⁶⁰. We will show you how shortly, but first, this following case example shows how curiosity can shift a client’s state of mind to allow natural problem solving and mind-body healing to emerge spontaneously.

From RH’s Casebook

I received a distressed phone call from a grieving client who had recently lost her husband. She was only in her mid-forties and the death was sudden and tragic. She was inconsolable, tearful, exhausted and desperate. There was nothing that could be said to make the grief less or brighten the starkness of her life. All the things she found unbearable were largely true. She needed to shift her *state* even though it was not possible to shift her *reality*. Neither sympathy nor even empathy had given her any solace. Being on the phone it was not conducive to utilize Mirroring Hands, so I utilized a curiosity approach.

I reminded her of something I had said in a recent session, “Your husband hasn’t gone. He’s just changed the way he stays”. I asked her to look around the room and see the places where he used to linger, his favorite chair, the books he liked to read, where she could imagine him staying. She began telling me about the various parts of the room where she could feel his presence. I was utilizing the polarity principle of Mirroring Hands – where he is, where he isn’t; where you are standing alone, where you can stand in his presence. I then asked her if she could think of other parts of the house where she could feel him “stay”. She paused and mentioned a few. Then I

suggested that when we finished the call, she could explore the house and find all those places, those things, and those memories as best she could. We were quiet for a little while, maybe 20 or 30 seconds and she discovered she had stopped crying. She also discovered that she did not feel so desolate. Suddenly she said, “Richard, what did you just do? What did you do to me? I am still sad, but I seem ok now. What did you do?” I told her that I had helped her change the way her brain was working and the way her heart was beating and the way she was breathing and, most importantly, what she believed was possible. I saw her again several days later and she told me that she continued to feel ok, at least, to manage. She was ever so grateful.

This is just one example of the sudden change of “experiential state” that happens when curiosity is ignited. In the preparation phase of Mirroring Hands we begin with the stimulation of curiosity with discovery – “Look at those hands like you have never seen them before...” We also use curiosity in a playful and imaginative way – “I wonder if one of those hands feels different, heavier or warmer...” Later in the process, we also facilitate the client’s curiosity in another, and most important way. We ask them to be curious about what their experience might mean, what it teaches, what expands out of the experience – “I wonder if those hands are able to communicate or inform each other, in some way, about something you haven’t yet known or imagined, almost all by themselves...”

The Three Pillars of Curiosity

The research into curiosity is not extensive as you might expect about something so fundamental to our wellbeing, although there have been a few more papers in recent years. Litman and Jimerson conducted interesting work in the early 2000s¹⁶¹. They described two aspects of curiosity: Curiosity for Deficit – those things that are not known driven by feelings of uncertainty; and Curiosity for Interest – a pleasurable attraction to novelty regardless of whether any information is acquired. They didn’t explore what we suggest is the most valuable aspect of curiosity - curiosity for meaning - but this is certainly discussed in other places, including philosophy¹⁶². In our update of these research terminologies, we describe the three pillars of curiosity as:

- Curiosity for Information
- Curiosity for Play
- Curiosity for Possibility/ Meaning

These facets can be differentiated for description and discussion, which we will do shortly, but, just like the facets of a gemstone or the pillars that support the roof of a building, optimal curiosity is a balanced expression of all three. Disproportionate focus on one or other of the pillars can produce an unstable situation. For example, the modern world seems disproportionately inclined towards a curiosity for information, but largely as a continuous stimulus. Rather than *being interested*, the focus is more about demanding the outside world provides *relief from boredom*. This can leave people stuck in Stage 1 of the creative cycle - craving for something new and entertaining, but little interest in using the information to develop personally.

- The curiosity approach to Stage 1 is to ignite interest, fascination and wonder – numinosum. The catchphrase is, *That's interesting!*

Stage 2 can be a difficult stage and is sometimes described as the *dark night of the soul* because this stage is the effort to discover how the new information is personally relevant, how to make sense of it, and how the information connects to create a solution or a beneficial change. Most clients come to us stuck in Stage 2 as they become enveloped by their problem and see no way out. Engaging in the Stage 2 with curiosity stimulates interest and the courage to explore. It also opens the freedom to play with the information to allow for serendipitous emergence. Being open to possibilities not only increases the likelihood of creating a breakthrough, but opens the door to personal meaning.

- The curiosity approach to Stage 2 is to search for what lies beneath the surface issue – the emergent property – and discover what this is *really* all about. The catchphrase is, *What is the message in this problem?*

Stage 3 is a creative and expansive stage that is full of play, possibility and creating with the new understanding of how to arrange the information toward positive personal growth. It is very hard, if not impossible to move into Stage 3 if stuck in Stage 1 or Stage 2. Mirroring Hands can hold the stuck state in one hand, giving the

client the opportunity to hold other possibilities in the other that can lead to a breakthrough.

- The curiosity approach to Stage 3 is to creatively explore the new realizations and how they might make it possible to re-integrate both within and without. The catchphrase is, *What can I create from this?*

In Stage 4, curiosity for possibility and meaning is directed at determining how the creative growth from Stage 3 can be encoded, organized, implemented, and then integrated into daily life.

- The curiosity approach to Stage 4 is to gently explore how the realizations, resolutions and creative discoveries can be integrated into the *self* for personal growth, health, and ongoing well-being. This is the period of the ultradian healing response. The catchphrase is, *How do I make this part of my life?*

The Curiosity Mindset

When a client walks in the room they are usually in a disrupted consciousness. It is reasonable to assume that they might feel uncomfortable, somewhat defensive and protective, probably not all that keen to discuss their issues, and very wary of getting in too deep. They may be feeling some anxiety or be manifesting symptoms of depression or other affective issues. We don't yet know the client's expectations, or their beliefs about the role of the therapist, or their role. This is not the best mindset, or brain-state, for engaged therapy. Moving them into a therapeutic consciousness is the first phase of work with the client. What we want the client to feel is positive anticipation of what is to come. It is important to calm the fearful activity of the limbic area and it helps for the client to shift into a broader focus of clarity and attention. All these qualities have correlations in brain activity and simultaneous adjustments in the neuro-biochemical milieu (see Science Appendix).

The brain changes in relation to conditions and so every shift of mood, of attention, of focus, and intention in response to the environment, including other brains and minds, is dynamically reflected in the neuro-biochemical milieu¹⁶³. The wonderful thing about curiosity is that it positively affects the neuro-biochemical milieu *towards*

a therapeutic consciousness. The curiosity mindset stimulates movement and interest toward things; an exploratory, interested, wondering mind; an openness to learning; heightened focus and attention; and a sense of pleasure and purposefulness – all perfect mental conditions for a therapeutic consciousness to emerge¹⁶⁴. Mirroring Hands begins this process by simply asking someone to look at their hands like they have never done before and see things they have never seen before.

Let us unpack the three pillars:

- Curiosity for Information (CFI) is the curiosity for what is not known, to fill a lack of knowledge, of understanding, of experience, or of perception. Information can come from the *bottom-up* i.e. in response to sensory information from the body; and can also be generated from top-down thinking. CFI can be triggered in different ways. It can be a personal question, a stimulation from the environment, or something that come across the “social synapse¹⁶⁵” from other people’s brains and minds. CFI begins when there is a realization that something is not known, and it continues (assuming the exploration isn’t abandoned) until the answer is found. The energetic drive and motivation from CFI wanes once the information is discovered. The moment the answer is discovered there is a pleasurable reward in the form of a puff of endomorphins. This explains, in part, the almost addictive nature of inquiry and investigation. It also gives us some insight into the attraction of quiz shows and trivia competitions.
- Curiosity for Play (CFP) is a wonder, an interest, or a fascination in *whatever is happening now*. It is in the timeframe of the immediate. Play is pleasurable, and playful curiosity is often seen in children, but also in adults when the weight of responsibility is put aside for the pleasure of playful exploration in the moment. CFP is an engagement in unregulated, self-organizing playful activity which we know is important in developing social awareness and boundaries as well as social bonds¹⁶⁶. Important information spontaneously emerges from play. People have asked why, when they play a sport, they

don't always have a pleasurable experience. This is very important, because an organized sport is not curious play. Curious play is where there are no rules, overt regulation, or organization. Interestingly, rules and organization often emerge as the play experience progresses, but that is very different from having the rules imposed. It is the same during therapy. Play is an incredibly important and useful tool in therapy to shift people out of negative states into more receptive, engaged and integrating states. Mirroring Hands often begins in a playful way and playfulness can be added during the process.

- Curiosity For Possibility/Meaning (CFPM) is a wonder, an interest, and a fascination in what else is possible and what this might mean. The timeline of CFPM is largely about the future because possibility and meaning are yet to be discovered and, so, can only be manifest in a future moment. CFPM, in a unique and strange way, can be present in the moment as a motivation to move into the future to where and when possibility might manifest. It requires the person to step out of "now", and out of the "held past", into a new state of being. CFPM changes the mindset, brain-state, and neuro-biochemical milieu of someone who is enduring depression, even if only temporarily. Loss of connection with the future is one of the damaging aspects of depression. Anxiety, on the other hand, is a fear of moving into the future. We propose that CFPM reduces the activity of the fear centers in the brain which opens the possibility of connecting and engaging with the future as a positive place - even for anxious clients. CFPM utilises our natural creative capacities and encourages us to explore metaphor and representation; to look for meaning and self-reference; to positively anticipate what else might be; and to be an agent in what might be created. CFPM is the most rewarding and beneficial pillar of curiosity that can be present at all times, even when the other pillars are not active. CFPM can be both a state of mind - a state that exists in the moment - and a state of being - a fundamental state from which all other states emerge from moment to moment. Being timeless, it is possible for CFPM to be a constant undercurrent of our persona.

You might appreciate now how the Winner/Loser World mindset, as a big “elephant in the room”, limits and restricts our interest in exploration and possibility. Possibility thinking, and meaning making, is also limited by insecure attachment styles, post-traumatic stress disorders, peer pressure, bullying, inflammatory processes affecting the immune system, stress, and overwhelming social demands¹⁶⁷. All of these things contribute to the effect of putting a lid on our access to the expansive possibilities of life. It is precisely because of all these restrictions and constraints to Curiosity for Possibility/Meaning that Mirroring Hands can be such a helpful process. We utilize curiosity at the very beginning of Mirroring Hands to facilitate the client’s connection with their implicit self-organizing inner world. By facilitating a curiosity mindset in the client, *and* in the therapist, *and* in the therapeutic experience, the transformational processes of change, realization, and healing are best able to emerge.

Stories of Curiosity

There are lots of wonderful stories of people using curiosity to shift mindsets so that problem solving can occur and lives can transform in response. These stories embrace the inspiration and possibility of curiosity as a state of mind and, even deeper, as a state of being.

Teaching:

In the dramatic film production, *The Freedom Writers* produced by Danny DeVito¹⁶⁸, in 2007, we experience a situation that is concerned with both learning and therapy. The film begins in the childhood years of one of the students witnessing a drive-by shooting. Her voiceover tells us, “... *and I saw the war for the first time.*” The story follows the experiences of teacher, Erin Gruwell, in her struggles to teach at a school which bussed in minority students from disadvantaged neighbourhoods. In a memorable scene, Gruwell draws a line on the floor and asks students who know someone who has been killed to step over the line. Every student steps across. As Gruwell increases the number of people who have been killed many students stay put. Their pain and discomfort and their total lack of curiosity is obvious. Their lives are about survival, not adventure or exploration. Gruwell tries to reach out to the students and is finally successful when she takes them to the Jewish Holocaust Museum. For the first time the student’s minds were opened to possibilities they had

never contemplated. Gruwell took them to visit Holocaust survivors. Their curiosity about these people who had suffered beyond their own suffering was the big change. Gruwell had asked them to write their stories, which were eventually published as a book. Their stories not only described the facts of their lives, but also their dreams and wishes. The stories were about their possibilities.

Interrupting Tragedy:

Don Ritchie, was known as the “Angel of the Gap”¹⁶⁹. The Gap had become a location for suicide in Sydney, Australia. He lived nearby and began to regularly patrol the cliff edge to see if he could help those who had taken themselves to the edge. He saved many lives with a very simple strategy. He would ask them to share their story over a cup of tea. It seems too simple, but this question opened a possibility in the mind of the person standing on the edge. The difficulty of suicide is that all sense of possibility, other than to suicide, has been lost. The surprise of the question was enough to shift their mindset to include something of the future and the possibility of their continued presence – at least for the timeframe of a cup of tea. There is a literal meaning to the cup of tea and the telling of their story, but it is the other meanings, metaphors and associations that can open doorways of possibility. These would vary with each person, but you can imagine that the cup of tea could represent a gift, or perhaps something that their mother or aunty would do, or something warm and comforting. The opportunity to talk, to tell their story, also meant that someone cared, that they mattered to someone. All these things were possibilities that had been disconnected and pushed away. The simple and gentle question reintroduced the possibility of living.

The Voice of Life:

An example of curiosity, and all three pillars in action, is found in an extraordinary TED talk given by Professor Clifford Stoll in Monterey in 2006¹⁷⁰. To describe him as eccentric might be an understatement, but this wonderful, wide-eyed, unkempt, grey-hair-standing-on-end professor, pranced erratically about the stage as he led us through a number of fascinating, surprising and curiosity igniting topics. The highlight was the story of when he was at the University of Buffalo in 1971. An anti-Vietnam War protest had turned into a riot on campus, to which he was largely oblivious. Stoll was walking through the campus wondering what was going on when a policeman

started to chase him. He says, *“I ran into the clock tower in Hayes Hall and I saw the pendulum swinging and thought to myself, ‘Wow, the square root of its length is proportional to its period.’”* This is a brain in play which interrupted the stress of being chased by a policeman with a club. He escapes the policeman by running up the stairs to the top of the belltower where he looks down to see students below throwing bricks, being hit by police, and bombarded with tear-gas. He wonders, *“What am I doing here?”* This is, in some part, straightforward CFI, but this question opens the door for the bigger question about what he is doing in his life. He began to wonder about something more important. *What might he discover in this belltower? What is the meaning of all this craziness?* Suddenly he remembers that a tutor once told him that bells often have an inscription, so he goes over to the bell, wipes off the pigeon droppings and finds a message that contains these words. The last words are the most extraordinary. Professor Stoll recalls, *“It is the voice of life that calls us to come and learn.”* For all his eccentricity, Professor Stoll, asks us to look beyond the literal experience of learning and see that the real purpose and meaning of learning is to respond to the *voice of life*.

Review

Are we suggesting that curiosity is a voice of life? We humbly suggest, yes. It is not the only voice, and not all voices are pleasant or even desirable, but it is a voice that has the capacity to render so many of the negative and destructive voices silent or, at least, subdued. It is very hard to be angry while being curious. It is almost impossible to be curious and gripped by fear at the same time. It is contradicting to be curious and depressed. Curiosity can tame anxiety so that the future is no longer such a frightening place. Of all the voices of life, curiosity provides a broad ranging, healthy, productive foundation. The therapist can achieve so much of their task of facilitating the client’s engagement with their own problem solving and mind-body healing by simply being curious, deeply interested in the client, and in the co-created therapeutic experience.

The winner/loser world has emerged as part of our cultural development. It has become so commonplace that it is now embedded in the constructs of modern culture to the point where it is now a negative background influence on our wellbeing – a stereotype threat. Curiosity on the other hand is a wonderful state of mind, and a

state of being, that enhances our capacity to safely and comfortably follow our symptoms, problems, and distresses to the message that they represent. In the curiosity state of mind, and especially in the curiosity state of being, we can engage with, and enable, our own natural problem solving and mind-body healing. How wonderful that we can begin to facilitate all this activity, all this inner “magic”, simply by inviting someone to look at their hands like they have never seen them before.

Chapter 10

Clearing Out the Negatives – Preparing for the Positive

Closing the Door

ER: *Our job is to get a sense of where they are, what is occupying them, and get them to work with it... and I want them to see a negative and a positive. Most people are coming to us because they are stuck in the negative, alone, and they don't know how...*

RH: *... to get out of it, get unstuck?*

ER: *Get them engaged with themselves...*

from the Rossi/Hill conversations, May/June, 2016.

Closing the Door is a form of Mirroring Hands that seeks to facilitate a shift in the balance between what is bothering the client, which they would prefer not to have, and what they would like to keep and make stronger. This is especially effective when the client has a sense of what is bothering them, but only in a general way. The client may be experiencing a difficulty in some aspect of daily life, such as not feeling good about school or work, or having difficulty sleeping, or having unwanted feelings such as jealousy or negative self-thoughts. This form is useful for behavior issues that are overwhelming or addictive, such as being unable to stop the chatter in the head, smoking, over or under eating, and for calming emotional states such as anxiousness and anger. It is equally effective for underwhelming states, such as depression, disappointment, general sadness, and grief. Anything that the client wants to have *less* in their lives.

First, we will review the fundamental questions differentiated into the 4 creative stages, then we will explore more deeply how the process flows in practice, showing the language that can be utilized and the typical responses from clients, then conclude with case studies.

Stage 1: Initiation — Sensations

(Apply the standard preparation to differentiate an energetic sensation in the hands)



I wonder if you can look at your hands, really look at them as if you have never looked at them before. As you focus deeply into your hands, I wonder if one hand feels different from the other. Perhaps one hand is warmer... (or heavier, or older, or whatever the client chooses to respond to)

If you were to send that problem out to one

hand, I wonder which hand that would be... the (warm, cool, heavy, light or whatever the client had determined)... or perhaps... will that hand give some indication that it is ready to receive this problem?

Stage 2: Incubation, Arousal — Feeling



Wonderful... and now, those things that are bothering you... the energy behind them, or whatever it is... that we don't even consciously know exactly what it is... will you be able to send that feeling, that problem, out into your chosen hand?... can you share a word or two about what you feel or see or sense or smell or whatever is happening in your hand?... or just continue with your private process... and as you feel this flow out into your hand, I wonder if your hand might drift slowly down toward your

thigh... finally landing when you have done all you can at this time?

Stage 3: Insight, Breakout — Intuition



Excellent!... now... I wonder if you can shift your attention to your other hand, that has been waiting so patiently... and will the feeling, the sense that represents all the wonderful things inside you that make you strong and able to manage this issue and solve this problem and whatever else this strength within you can do that we don't even realize at this time... will that flow out into that waiting hand?... can you share a word or two about what you feel or see or sense or smell or whatever is happening in that hand?...

or will you just continue silently with your private process... now, as your hand fills with this wonderful, powerful, healing strength... will that hand drift toward the place on your body that the negative feelings came from just a few minutes ago?... do you know where that place is?... will that hand move to that place and close the door, stopping any of that negativity being able to return?...

Stage 4: Reintegration — Thinking



How wonderful... that strong, healing hand... protecting your inner world... I wonder what you might like to do with negativity, that problem, that you have in the hand on your thigh?... will you get rid of it somehow... someway... something that satisfies you... Wonderful... let it go... throw it away... (or whatever the client chooses to do)... and now, return your attention to your strong hand, protecting you and strengthening you... and... would you like to share how you are feeling right now... or would you just like to continue concentrating that healing strength?

(At the appropriate time, use the standard recovery to attention) When... a part of you knows that you can etc...

Stage 1: Information – Externalizing the negative and discovering the positive.

It is important to establish a differentiation between the hands, although there is no limitation on how this is achieved, whether using the standard preparation that creates a heavy or warm or older hand or whatever method emerges at the time between you and the client. They are then free to choose which hand wishes to receive the “problem” and the “solution”.

I wonder if you can look at your hands, really look at them as if you have never looked at them before. As you focus deeply into your hands, I wonder if one hand feels different from the other. Perhaps one hand is warmer... (or heavier, or older, or whatever the client chooses to respond to)... and will that hand show us in some way that it is the (warmer, heavier, etc) hand...

It may be that the client's hand makes a distinct movement, but it may also be something very subtle. Facilitate the possibility that the hand is signifying something...

Just a twitch there... just your little finger... I wonder if that is the signal?... of what you feel?...

Once the client is confident which hand is which, continue with the first phase of differentiating the problem from the “not problem” within the client.

If you were to send that problem out to one hand, I wonder which hand that would be... the (warm, cool, heavy, light or whatever the client had determined)... or perhaps?... will that hand give some indication that it is ready to receive this problem?

Now that they have begun to send the “nature” of their problem out into their hand the process moves into Stage 2.

Stage 2: Incubation – Actualizing the ambiguousness of the problem.

In Stage 2 we ask the client to allow the energy to emerge from within and represent itself in the hand. Clients are usually fascinated by the forms, shapes, colours, textures and other imaginations that come to their mind during this stage.

Wonderful... and now, those things that are bothering you... the feelings behind them, or whatever it is... that we don't even consciously know exactly what it is... will you be able to send that sensation, that problem, out into your chosen hand?

Sensitively observe the client for spontaneous responses, both macro and micro, in the hands or anywhere else in their body. Add supportive and encouraging comments as seems appropriate. It is good to give the client an opportunity to speak about what is happening to them, but allow them to continue silently and privately if they wish.

... can you share a word or two about what you feel or see or sense or smell or whatever is happening in your hand?... or just continue with your private process...

Allow a moment or two for the client to respond to the suggestion.

... and as you feel the flow out into your hand, I wonder if your hand might drift slowly down toward your thigh... finally landing when you have done all you can at this time?

The hand may drift down slowly or quite quickly, both responses regularly occur. A fast movement down indicates that the larger percentage of the “problem” emerged at the first request. A slow drift down indicates a client who is enjoying creating a clearer sense of what they have in their hand, even if there are no verbal details and only sensations. Whatever emerges is true for the client and most report that they feel that their inner world “knows” what these sensations are all about. Whenever the hand lands on the thigh or in the lap, the client is declaring that they are ready to move on to the next phase.

Breakthrough and Stage 3: Illumination – Holding the power of healing and strength

Always acknowledge the client's completion of any part of the process, even if the client shifts rapidly to something new ... *wonderful... you are able to complete one thing and take yourself where you need to go... please continue in your own way...* The key to Mirroring Hands is to always be client responsive, which means that there is little or no resistance and often the therapist has to work hard to keep up.

Excellent!... now... I wonder if you can shift your attention to your other hand, that has been waiting so patiently... and will the feeling or sensation that represents all the wonderful things inside you, that make you strong and able to manage this issue and solve this problem and whatever else this strength within you can do that we don't even realize at this time... will that flow out into that waiting hand?

Include as many pauses as you feel appropriate and helpful for the client. The ellipsis periods included here are only suggestions.

... can you share a word or two about what you feel or see or sense or smell or whatever is happening in that hand?... or will you just continue silently with your private process...

The heightening of the client's sensorial, imaginative and largely symbolic awareness of their stronger, healing capacities enhances the process. This is not so much about forming a rational description, as it is forming a broad ranging awareness that there is "something" that does not require their logical brain in order to exist and be effective.

... now, as your hand fills with this wonderful, powerful, healing ability... will that hand drift toward the place on your body that the negativity came from just a few minutes ago?... do you know where that place is?... will that hand move to that place and close the door, stopping any of that negativity being able to return?...

The client may need to be helped to clarify just where the "negative" energy came from. Simply shift attention to that investigation, even if the client's hands move out of the current format. Simply facilitate the return of the hands to the recent therapeutic positions. Once the "healing hand" has arrived at its destination, allow time for the client to react and respond to the new position of the hand and however that affects them. The balance of "problem" to "not problem" is now different. We want to confirm and verify that in a Stage 4 process.

Stage Four: Integration and Reality Testing:

How wonderful... that strong, healing hand... protecting your inner world... I wonder what you might like to do with negativity, that problem, that you have in the hand on your thigh?... will you get rid of it somehow... someway... something that satisfies you... Wonderful... let it go... throw it away... (or whatever the client chooses to do)...

Clients will do all kinds of fascinating actions from throwing away what is in their hand, to wiping it on the furniture, to blowing it away. Have no hesitation to help with

a tissue or letting them clean their hand on something in the room. This is a grand moment of symbolic, ritualistic release of whatever they have been able to shift out of their inner self. All the while, encourage the client to keep “the door closed” with their strong healing hand while they rid themselves of the negative.

... and now, return you attention to your strong hand, protecting you and strengthening you... and... would you like to share how you are feeling right now... or would you just like to continue concentrating that healing strength?

At the appropriate time, if the client has not spontaneously revived themselves to begin discussing their experience, use the standard recovery to attention.

When . . . [pause]

A part of you knows it can continue this creative work entirely on its own at appropriate times throughout the day . . . [pause]

And when your conscious mind knows it can simply cooperate in helping you recognize when it is the right time to tune in . . . [Pause]

Will that give you a feeling, a signal that it's time for you to stretch, open your eyes and come fully alert so you can consider what has happened and share, if you wish, what you might do with what you have learned, in your real everyday life?

If you have not used the standard recovery, it can be helpful to remind the client that they can do this process again for themselves. It is best to utilize the ultradian healing response period of about 20 minutes to shed a little more of the negative and reinforce the positive, healing, strength that has always been there.

RH Casebook:

A woman in her mid-thirties presented for help with her extreme shyness and lack of social confidence. Over four sessions of conversation she revealed her difficulties throughout her childhood, not only with her mother, resulting in insecure attachment issues, but also her difficulties to socialize with her peers in her small village. She felt that she was making some progress in understanding more about herself, but she asked if I could do something to help her with the *horrible* way she felt when in social situations. We discussed some of the *why* and *how* that might be happening, which she felt all made sense, but that “sense” wasn’t doing anything for her feelings. I suggested we try Mirroring Hands.

Stage 1: She agreed and so I proceeded with a standard preparation. She felt that her right hand was “heavier” and that was the hand that was ready to receive the problem – that horrible feeling.

Stage 2:

I wonder if you can let that horrible feeling come out from inside you and into your heavy, right hand?...

She stared intently at her right hand, but I noticed her eyelids began to blink slowly.

... and I wonder if you might be more comfortable with your eyes closed, to imagine and feel...

Her eyes closed, she let out a long breath, and I noticed that her fingers began to close in a little.

Ah, yes... wonderful... something happening... something in your hand?...

She responded,

Yes... I feel... like a weight... cold...

I simply repeat.

... cold... yes... heavy... uh huh... and as that feeling continues to come out of you into that right, heavy hand... will that hand drift down to your lap... just as slowly or quickly as you wish... getting as much of that horrible stuff out as you possibly can... as is possible for you...

Without prompting, she tells me,

...it's like metal... hard and cold...

I support,

... hard, cold... yes...

Again she speaks unprompted,

... what is it? Why do I have this?

Even though she is asking a specific question, it is not my task to give my opinion. Instead, I continue to facilitate her experience.

I wonder if you don't need to know right now... just feel it... something in you knows what it is... cold, metal, heavy... moving out from within you... outside... your hand getting lower now...

Over the next 4-5 minutes her hand drifts slowly down to her knee. I respond.

Wonderful... you have done enough for now... so courageous of you... so brave...

Stage 3:

... and I wonder if there is something else within you that is not that cold metal... something different that is about the best of you... can that feeling come into your left hand, the lighter hand?...

Her head shifts towards her left hand, although her eyes remain closed. Her facial expression loses some tension and her mouth relaxes for a few moments and then re-tenses. She says,

I don't know... there's nothing good in me...

It is not surprising that she struggles with finding a positive feeling and believing in her self-worth. I gently encourage.

Maybe you don't need to know... I wonder if you can just let this happen for a while... almost all by itself... and see what happens even though you don't know or even believe... something else... inside...

We sit quietly for a few minutes. Her little finger seems to twitch, ever so slightly. I respond.

... something... yes... wonderful...

It can be hard to sit quietly and not try to help, but this will just impose on the client's process. Mirroring Hands is a process for patience and client responsiveness. After another couple of minutes, she declares,

Stage 3: Breakthrough: *Yes!... I feel something... surprising...*

I respond

Surprising... yes... I see...

She continues,

... stronger, but warm, soft... like a jellyball...

I support her,

... so amazing... not nothing... now warm... a jellyball... wonderful... and as you keep feeling this jellyball grow, will that hand move toward the place where that cold metal came from and close that door? Can we close that door with that jellyball so nothing gets back in?...

Slowly her hand moves towards her body eventually landing on her throat area. This relates to her many stories of being told to be quiet as a child and her social shyness which often left her speechless. When her hand landed on her throat she began to breathe heavily and tears began to fall. I stayed quiet. After a few minutes she opens her hand and protectively holds her throat.

Stage 4:

So, how about we don't let any of that cold metal back in... What would you like to do with that metal in your right hand?... Anything you want.

She opened her hand and dropped the metal object in her hand onto the floor and kicked it away.

We spoke for another 15-20 minutes about her childhood. Although we had discussed these matters before, there was a difference. This time she spoke about where the warm "jellyball" might have come from. She found some light moments and even some fun times. She was able to identify a few people that had helped her in her childhood. Until now she had forgotten about them. It seems that her inner voice had not.

She continued to improve over the next visits. She accepted her shyness as a natural temperament. The horrible feeling continued, but much less. Over time it continued to diminish.

RH Casebook 2:

The previous case took nearly 85 minutes. This case took only about 15 minutes to satisfy the client's needs. The client was a woman in her mid-eighties who regularly presented to the clinic to another therapist for remedial massage therapy. She had utilized my services three times and we had regular short conversations in the waiting room. Her main concern was about how to manage getting older. Medical problems were mounting and, recently, she had a serious operation to resolve heart issues. I saw her in the waiting room and she didn't look well or happy. She told me that she wasn't sleeping and felt nauseous most of the time. Her head was full of chatter about what will happen in the future and if there will be much future. She just couldn't quieten this chatter. I felt that directly after her massage, she would likely to be in a period of ultradian healing response. I asked if she would like to pop into my room after her massage for a quick process. She agreed, with thanks.

Stage 1: We had used Mirroring Hands once before and she was a particularly good subject. I decided to launch straight into the process without preparation, but this may also have been an intuitive response to the way that she was raising her hands as I spoke. By the time I had finished asking the first question, her hands were raised to waist height and she was staring intently at her hands.

I wonder if you might be able to send that chatter out of your head and I wonder if you already know which hand can receive and hold that chatter?...

Her eyes shifted rapidly to her left hand.

Excellent!... you already know and that left hand is ready to receive and hold that constant chatter... I wonder if you are feeling something about what is happening in your hand... do you want to share a word or two with me, or do you just want to continue with your own private thoughts?...

She closed her eyes and lifted her head, as if looking through her eyelids out into the distance and said,

It's like ants, or bugs all scrambling about my hand, but I feel like something is coming toward me from the outside, from the distance...

I respond,

Ok, something from within, like bugs, and something coming from a distance... yes... I wonder if this...

She continues to stare, blindly into the distance, as her hand starts to drift downwards. I continue to support her process,

Wonderful... your hand drifting down... I wonder if it will go all the way down to your lap... and still something... coming...

The immediateness of her self-induced “trance” is not surprising as she is such a good subject, but it is difficult for the therapist to remain client responsive and allow the client to continue their own process without helping or interfering for some explanation. I have some suspicions as to what might be coming from the distance, but it is not my task to know for the client, it is my task to assist the client to know about themselves. I continue to support,

Yes, continuing to allow the chatter to flow into your left hand... and watching that something that is...

She continues for a minute or two and then quietly speaks,

I feel it... in my hand now... it's the chatter, too... filling from both directions...

The fingers of her left hand seem to open wider and the hand seems to tremble or struggle in some way to stay up. Her face tenses and her feet move a little on the floor. The hand suddenly falls on her knee and after a few moments slides off her knee and limply down beside her, resting on the front of the chair. I continue to support and encourage. She seems very engaged with whatever she is experiencing. I encourage and support her,

Wonderful... that hand is full... has done enough... filled from inside and outside... not even holding it anymore... just dangling... I wonder if you can leave that chatter that outside something where it is and focus your attention on your right hand, that is still raised in front of you?...

Her head, eyes still closed, moves toward her right hand. She says with some surprise,

How is this hand still up like this? I can't hold my arm out like this for this long. It's not even tired...

I reply,

How amazing is that? Doing something that isn't even possible! I wonder if you can do something else that might seem impossible... I wonder if you can allow whatever it is within you that is so strong and secure and calm and relaxed to flow out, like an energy, into your right hand?... Are you ready to do that now... and will your hand do something to show us both that something wonderful is happening?...

Almost immediately her hand begins to move in a small circle. I continue facilitating the process,

... and I wonder if that right hand can know where the bugs came from and move toward that place in your body and close the door... to keep the bugs from getting back in?...

In a flowing motion, her right hand swings over her heart. She shakes her limp, left arm and raises that hand to cover her right hand in an X formation. She shakes her head and then nods her head and then shakes it again and then brings her head into the center and opens her eyes, looking over at me. Her hands stay in position, she is quiet at first and then she begins to tell me what she is thinking.

My heart is very important. It's much better now, but it's still an old heart. That thing from the outside is death. I know it's coming, but it didn't get me, it just joined the chatter. I'm letting death chatter in my head... that's a bit weird... it's a big waste of my time.

We canvassed the concept and the reality of death to her and she described how she finds it hard to not feel threatened by being older, but also how much she enjoys being alive and is still a very active woman. The important realization from this session was,

By listening to this chatter, I'm letting death in early... get out of my head... your time will come soon enough!

I suggested that each time the chatter starts, that she could do this process again for herself. Whatever it is that is in her left hand, she can call on that, hold it over her heart and make death wait. In the meantime, she can let life in. She later reported that the negative thoughts still emerged from time to time, but the uncontrollable chatter had stopped and she is sleeping much better. The nausea turned out to be a side effect from a medication she was taking for her heart. This was changed and that seemed to be much better.

Review

It can be very helpful for client and therapist to work through issues and bring them into language, description and literal understanding. It can also be very helpful to allow the process of inner self-organization to create problem-solving and mind-body healing without ever being able to describe the details. This also taps into the concepts of right hemisphere and left hemisphere functions, which is well described and discussed elsewhere by people like Allan Shore¹⁷¹ and Ian McGilchrist¹⁷². Suffice it to say that our consciousness is not limited to what can be spoken. Equally, we have an inner world that continues to process and engage a multitude of systems that are the basis of the emergent property we call our *conscious awareness*¹⁷³. There is always more to us than meets the eye. It is possible to open connections between the inner and outer world through Mirroring Hands, but it is not always necessary to use the hands to create the connection. In the next chapter, we show there are other ways to apply Mirroring Hands as a therapeutic approach.

Chapter 11

Symptom Scaling for Enlightenment

The Symptom is a Message

ER: *What are they stuck with?... and how to get them engaged with their own inner resources?... that's another task of the therapist...*

RH: *... to be sensitive and notice...*

ER: *... even if they say "I don't want to deal with it!", then go with that and allow them to spend a little time 'not dealing' with anything... to enjoy and engage in that feeling...*

RH: *Client-responsive...*

ER: *Exactly! They will want to get some work done soon enough...*

From the Rossi/Hill conversations, May/June, 2016

Most clients seek therapy because they are experiencing something that is making their lives difficult, be it emotional, behavioral, psychosomatic, or whatever they find debilitating or distressing. Therapists call these subjective feelings *symptoms*. As we have seen, Mirroring Hands can be used to differentiate a client's symptom from what is "not the symptom" – we seek to discover the message that lies behind or beneath the symptom¹⁷⁴. The protocol of Mirroring Hands shown in this chapter can be used when the client is currently experiencing or manifests their symptom during a therapy session. The process invites the client to assess the *intensity* of the symptom and find the "something more" that the symptom might represent¹⁷⁵. This creates an opportunity for the client to regain the locus of control, and, also, to engage with the *critical phase shift* that the symptom may be forecasting. We are seeking to trigger changes in the intensity and experience of the symptom to reveal the deeper message.

Symptoms are rarely the actual problem, they are emergent properties of inner processes to attract our attention in order to stimulate some action to resolve the situation. They are often simplistic, sometimes ambiguous, and even confusing because the symptom can often bear little or no resemblance to what is finally realized. The real purpose of a symptom is to stimulate us to respond, just as we find ourselves heading to the refrigerator when we get the "symptom" of *I'm hungry*¹⁷⁶. Symptoms emerge to lead us somewhere, or shine a light on something, but always to attract attention – our own or someone else's.

Symptom scaling is when the client self-assesses the severity of their symptom, usually on a scale of 1-10 where 1 is slight, 5 is average, and 10 is the very worst. Symptom scaling is an excellent way for client, and therapist, to gauge changes in the client's condition both during a session and across sessions. The therapist can utilize a symptom scaling of the client's current state to help the client maintain the safety of an objective perspective. The main benefit of symptom scaling is to begin the process of returning the locus of control to the client. It also gives the client an opportunity to both experience the symptom and hold an objective view of their subjective experience.

We will first show the essential question for the 4 stages utilizing the client's outstretched arm as a "scaling meter". We will show this in the casebook examples, as well as two other variations, one which follows the symptom as it manifests in the body and does not use the hands at all; and another which uses the standard client preparation that establishes a drawing or repelling "energy" between the hands. The focus in this form of Mirroring Hands is not so much on the differentiation or polarity created with the hands, but on the qualities and quantities of the symptom itself. We will describe a generalized structure and dialogue first, before presenting the specific case studies.

The 4 Stages of Symptom Scaling

Stage 1: Scaling Level of Awareness. When the client complains of a feeling, sensation, distress, disturbance or other distinct symptom that they are *experiencing in the current moment*, we take it as a mind-body signal that needs attention — i.e. a signal to start inner work straight away that may lead to problem solving and/or healing. We initiate this inner work by asking the client what they feel is the intensity of the symptom they are experiencing right now on a *subjective scale of awareness or intensity of the symptom* measured from one to ten where ten is most intense, five is average and one is little or no problem.



Can you hold your arm out as if it is a lever that can tell us how strongly you are experiencing those feelings? ... and will you let me know how bad they are on a scale of one to ten where ten is the worst?

The therapist accepts with positive regard whatever subjective scaling the client offers of their level of awareness or symptom intensity and continues with Stage Two as follows.

Stage 2: Initiating Inner Work.



Good! And as you continue sensing your symptoms... how are you experiencing yourself... just noticing whether you are becoming more intense or less... or becoming more aroused or relaxed... or becoming... As you continue watching your arm can you let yourself be so sensitive that your arm goes up if the feelings get worse and your arm goes down when you feel better?

That's right, the courage to allow that to continue all by itself for another moment or two until? ... Until you experience a little surprise?...

It does not matter what the client's initial state may be. We are only interested in what is changing. *Any change may mean that potentially therapeutic dynamics are being engaged!* After about three or four minutes of inner experiencing the client is again asked to subjectively scale the level of awareness that is being experienced. Of course, the therapist is being attentive to the client's wellbeing during this time, being mindful that the client does not become overly subjective and internalized with the possibility of re-traumatization. Reviewing their symptom scaling will refresh their observer state.

Yes... wonderful... what number are you experiencing at this moment?

The therapist, of course, accepts whatever the client presents. There are only three possible responses.

Option 1: A higher subjective scaling number. Some clients may become more aroused initially, sometimes with a temporary increased awareness of symptoms, emotionality, catharsis etc. That is, the initial movement of their level of awareness shifts upward to what we would call the "high phase" of the ultradian rhythm. The therapist, of course, immediately accepts and facilitates this.

Ah, that's interesting... noticing how you can become more aware of [whatever symptom] for a moment or two as you get in contact with it so the therapeutic process can begin... what courage to continue experiencing and wondering about the changes taking place, almost all by themselves...

If the client continues to move toward "high phase" with increasing arousal, maintain their objective distance with scaling questions, but also relate and reflect the courage of the client as they proceed toward their phase shift. Increased arousal is indicating that a critical point is ahead. Remember, the symptom is not the issue, just the messenger. The client's arousal is a combination of moving toward a breakthrough and the client's inner resistance to the message that is seeking to be known. The therapeutic opportunity comes up when the client begins to talk about, or even complain about, other *symptoms* or *negative thoughts* coming into their experience. This is the client's spontaneous experience of *symptom substitution* that is the

beginning of opening up to the symptom's meaningful message. The new complaints may also be other "stepping stone" emerging symptoms and the core message is still to be revealed. We call this "*The Merry Symptom Chase.*"

Option 2: A lower subjective scaling number. There may be an immediate or slow drop in the awareness of the symptom — typically with the client moving toward a natural relaxation. That is, the initial movement of their awareness is downward to the "low phase" of the ultradian rhythm. The therapist immediately accepts this and facilitates with the following.

Good, allowing yourself to appreciate your good fortune (wonderful blessing etc.) in experiencing that natural therapeutic movement... toward greater relaxation and comfort... how amazing that your [whatever symptom or problem] seems to be healing itself... when you allow it... and as you simply allow that healing to continue all by itself... will you tell me occasionally what number you are experiencing... how wonderful to know you can continue to explore this way of cooperating with your natural healing response...

It is a fortunate situation, indeed, when the client goes into a spontaneous remission or natural healing. We really don't know, of course, whether the good experience will last. Is this a deep healing experience or perhaps a mindful calming to a more comfortable state, or perhaps even a sublimation or denial of the message behind the symptom? Further work will make that more apparent. We can, however, support whatever positive possibility the client may have discovered through the process.

Continuing to deeply appreciate learning how this healing can continue all by itself... And will it be possible for you to let yourself continue learning how to experience this natural ultradian healing response a few times throughout the day when you need to?

Option 3: No change in subjective scaling number. With no change in subjective scaling number after a few minutes (at most five minutes with no subjective or objectively observable behavior change) the therapist accepts that something may not be working. For whatever reason the client's inner dynamics have not become engaged. Certainly, a seed may have been planted for future work but for now a fresh approach is needed. Interpretations by the therapists or any implication that the client is resisting or failing are to be avoided! The client needs support for learning how to do this kind of inner work.

Ummm... it is possible that you are content to just become stable, no worse, no better... if there is something else within, it is not ready to express itself yet... how wonderful for your inner world to know that it is ok to just stay with the status quo... for now... maybe you would like a little practice... would you like to continue for another moment or two now... to experience whatever

comes up all by itself that you feel you would like to talk about next?... or is that enough for now?... or is something else coming up within you right now?

Stage 3: A Path to Enlightenment. Clients may gradually shift into the dynamics of stage three of the creative process with a cognitive insight or natural ultradian shift in awareness, emotions and/or symptomatic experience. The therapist's task is to facilitate a recognition of the deeper or hidden messages that "chasing" the symptom path has revealed. Then to help the client engage with whatever meaning or wisdom comes up about themselves.



Um-mm, rather profound possibilities in what you say... yes, it is well known that an illness [or whatever problem] can sometimes lead to a new level of meaning and wisdom... lessons you can learn... a surprising path to enlightenment... is this the first time you realized that about yourself?... I wonder what else might come to you about your new understanding... and how will you continue cultivating this new awareness? Learning everything you need? ... and what number is it at now?

Stage 4: Verification, Reintegration. Most clients are pleasantly surprised by going through an experience that often feels like a *valley of shadow and doubt* to find themselves in a better place after a shorter (five or ten minutes) or longer period (up to about ninety minutes). They often wonder aloud about what the therapist did to make them feel better. Of course, the therapist did nothing but facilitate their natural ultradian dynamics of healing and problem solving. The therapist can be frank about their role in the process and introduce the idea that the client can learn to do this on their own with just a little practice.



Congratulations on staying with what your inner self really needed you to spend some time with... Notice how I simply encouraged you to experience the honesty of those feelings... and how they somehow transformed... Will you be able to do this for yourself? How can this help you from now on? What changes will you now make? What will you do differently this week?

The client may ask about how to control their symptoms, be they emotions, or thoughts, or body sensations. Therapists need to keep out of the way of natural problem-solving and healing, and sometimes the client's rational desire to cognitively control their experience can be as much of an interference. The rise in mindfulness training is a response to this same issue of wanting to find some peace, but we want to do more than just achieve a peacefulness and acceptance. We also want to allow for learning and personal development at the growing edge.

Yes, I know you want to be able to control this healing process... but, you have just had a wonderful experience of symptom relief and also a deeper understanding of meaningful things in your life now and for the future, all by simply relating to yourself in a sympathetic manner... you can continue this private inner healing experience by simply learning to recognize when the natural phase of inner healing wants to take place all by itself and you let it ... Um-hum, yes, you let it ...

A Symptom is an Emergent Property

A symptom is an emergent properties of inner processes that arise without any conscious direction. It is important to pay attention and respond to symptoms, but we now know that they can be trying to draw attention to anywhere in the complex system that involve many elements, including implicit memories and feelings, somatic memories, negative schemas, defensive “programming” from past traumas and other distressing experiences that have created disconnection and dis-integrations that need repair. Symptoms manifest to draw our conscious attention to the fact that we have a deeper problem that requires us to do something - make a decision, take some action, or make some change - in order to help resolve the deeper problem. It is also important to be aware of the physical problems that have triggered symptoms. Irritability, volatile temper¹⁷⁷, anxiety¹⁷⁸ and depression¹⁷⁹ can be symptoms of inflammation in the system which is affecting mood. Symptom scaling with Mirroring Hands can open the client's awareness to the possibility of a physical cause. The key is pay attention to the comments that emerge when there is change in the client's scaling.

Because symptoms arise from a problem oriented system, they provide negative feedback if left unchecked. This is the process behind re-traumatization and negative memory reconsolidation¹⁸⁰. Negative feedback also manifests in affective states¹⁸¹, psychosomatic complaints¹⁸², somatoform disorders¹⁸³, inflammatory processes and immune system¹⁸⁴, as well as changes to the gut biota¹⁸⁵ and the subsequent impacts on mental processes and the brains microglial “immune” system¹⁸⁶. A dysfunctional system will self-organize in an increasingly dysfunctional way. The system moves further and further away from natural problem solving and wellbeing. The expanding complexity that emerges from unresolved emotional and mental health issues can continue for long periods of time resulting in the need for all kinds of health care to treat the plethora of symptoms and subsequent disorders, rather than finding the essential problem and resolving that. People often seek therapy to cure their symptom, but a good therapist knows that the symptom is often not the problem. Symptoms are like a doorway or a pathway to the problem and to the client's problem solving and mind-body healing capacities – *a pathway to enlightenment*.

The symptom is both an opportunity to take action *and* the starting point to investigate and explore for the deeper triggers. Symptoms arise to agitate for action.

When symptoms appear, it is often an indication that the system is ready for a phase shift. This pathway can be lost when we only treat the symptom, whether this is by sublimation, denial, dissociation, medication, or directive therapy. Note: Always seek medical attention and advice if the client is physically affected, even if it is possible to assist and relieve symptoms through affective therapy.

When the client is experiencing a symptom in the session, take advantage of the opportunity for healing processes to be enacted in the moment. The following cases provide case examples of three forms of Symptom Scaling in Mirroring Hands.

Case One: Heroin Addiction

Stage One: Data Collection, Initiation. A local resident of Needle Park finally stumbled into a community rehabilitation center and, after a drying out period, is being seen for a private session by an addiction counselor, who was a former addict himself, and wise in the ways of withdrawal. The addict complains of withdrawal symptoms: pain, negative emotions and flashbacks. He feels too sick to talk. The counselor holds his arm straight out in front of himself as illustrated in Figure 7.2 and says, *Lets work with that right now! Can you hold your arm out as if it is a lever that can tell us how strongly you are experiencing those feelings?* [Pause] *And can you let me know how bad they are on a scale of one to ten where ten is the worst?* The recovering addict holds his arm out, fixes his attention on it and tentatively says it feels like six.

Stage Two: Incubation, Arousal. The counselor slowly lowers his own hand while saying in a low voice, *As you continue watching your arm can you let yourself be so sensitive that your arm goes up if the feelings get worse and your arm goes down when you feel better?*

The counselor notices that his subject's arm quivers a bit, his face flushes, his breathing becomes more shallow and a fine sheen of sweat makes his forehead and nose slightly shiny. The arm quivers up a bit and the subject begins to frown and grimace in obvious discomfort. The counselor continues, *That's right, the courage to allow that to continue all by itself for another moment or two until...?* After a full minute the arm is still going up very slowly and the subject gasps, *Until what, man?!* Cool as a cucumber the counselor replies, *Until you experience a little surprise.* [Pause] *And what number are you experiencing now?*

Stage Three: Illumination, Insight. The arm suddenly bobs downward momentarily about an inch or two and the counselor immediately responds with, *Um-mmm!?* The subject in slight surprise looks at his now drooping arm and says, *Hey it's getting tired, you know, I got problems man, I really don't need this.* The counselor persists with, *What number is it at now?* The recovering addict with a tight gasp says, *It's up to eight and getting worse all the time!* After another moment the counselor offers, *And I wonder just how bad it's going to get before...?* The subject's

face turns red, his fist clinches and he sputters, *No use even talking to you, you ain't saying nothing!* The counselor persists with, *What number is it at now?* He hears the subject grumble that it's now down to five. The counselor with mock gravity now wonders aloud whether it will get worse again before it gets better. The arm tentatively makes another effort to bob up a bit perhaps to a level six and then sags rather quickly down to a level three or four. The subject now takes a giant step toward recovery by willfully dropping his arm all the way down to his lap and says, *Enough of this shit man, I got problems I got to talk about, you know?* The traditional view might be to regard his impatient breaking off of the arm signaling as resistance. It is only resistance, however, to going on to the mere formalities of the therapist's approach to arm signaling. The client's impatience to now speak about his problems actually means that the therapist's arm signaling approach has succeeded, since the client is now ready to go on with his therapy by talking about his problems.

Stage Four: Verification, Reintegration. The now obviously relieved subject pours out his story and current concerns with a modicum of insight here and there to which the counselor responds affirmatively in his best non-directive manner. And so it goes. Toward the end of the session the counselor inquires again about what number describes how the subject now feels. The recovering addict ruefully rubs his arm and grumbles how he is sick-and-tired of feeling bad and doing this numbers game but, *I feel a lot better now and I will let you know when I need another shot in the arm.*

What are the dynamics of this therapeutic interaction? Erickson frequently explored "*polarities*" in his client's experience although he never used this word to describe it. Erickson called this process a "*yo-yoing of consciousness*" or a "*yo-yoing of symptoms*" so that they would be experienced as alternately getting worse and better.

The paradox, Erickson believed, is that clients do not realize that as they allow symptoms or pains to get worse for a moment and then better they are actually gaining control over them. I have speculated that this is not a paradox but rather the best way for clients to engage their own state-dependent memory and learning systems through alternating states of ultradian arousal and relaxation. These alternations are associated with the release of hormones and messenger molecules on all levels of mindbody communication to mediate psychotherapy (Rossi, 1986/1993).

It is now well known that all addicting drugs achieve their effects by mimicking the molecular structure and functions of the mindbody's natural hormones, messenger molecules (neurotransmitters and neuromodulators). Many of these are the same messenger molecules that encode stress and traumatic experiences in a state-dependent manner that are responsible for the amnesias, dissociated states and general symptomatology of the addictions (Rossi, 1987, 1986/1993).

ER Casebook: Vaginal Herpes

Stage One: Data Collection, Initiation. A client in her thirties going through a period of great emotional stress in personal relationships suddenly begins to experience unusual and uncomfortable sensations of heat in her vagina and, upon medical examination, is diagnosed as having an outbreak of vaginal herpes for the first time in her life. She claims she has had no new sexual partners for over three years and her current partner has apparently been faithful. How come herpes now? I initiate her into a state of inner search by introducing her to symptom scaling. *On a scale of one to ten where ten is the worst you have ever experienced that heat and five is average, just how strong is your sense of heat in your vagina right now?* She replies that the heat is *Seven right now*, and crosses her legs with a facial grimace of distaste. I ask her, *Do you have the courage to really receive honestly just what you are feeling right now so you can fully experience what it leads to next?*

Stage Two: Incubation, Arousal. She responds with her feeling that the herpes is the source of the heat she is feeling and it seems to be getting worse by the moment as she focuses on it. I slowly and quietly murmur an incomplete sentence, *I wonder if you can stay with it until...?* Her eyes close as she apparently focuses inward. Her body tenses and she leans forward slightly over the next few minutes as she hesitantly whispers the following series of apparently spontaneous symptomatic transformations and free associations with many pauses. *“Now the heat is shifting around a little to my butt on the left cheek. ... now heat is moving through my body everywhere ... it’s like a burning allergy ... my head hurts ... feels like an outbreak of psoriasis on my scalp ... I feel like I should confess it all to my mother like I did as a kid ... my right shoulder aches ... Why is my right side trembling?... Why am I starting to cry? ... Why do I still try to get approval from my mother even when she never gave it but only punished me instead?... I’m burning up with heat all over!”*

Stage Three: Illumination, Insight. For a few tense minutes she continues with, *“Burning! Burning! I know.....I know I have to leave [her current boyfriend]. I always knew it was only temporary, really, but now I really do have to leave.....He punishes me too, even when he doesn’t know it.....my left knee is twitching uncontrollably.....Can’t you make it stop?.....Oh, I’m tired of all this.....I will leave.....I’m getting sleepy.....I feel warm.....just warm now.....I really have to leave [boyfriend].”* Her body sags back and she remains silent for about three or four minutes as her face gradually becomes calm, smooth and apparently relaxed.

Stage Four: Verification, Reintegration. I look at the clock and with a mild sense of concern notice there are only ten minutes left to the session. I clear my throat and murmur, *Yes, and is that still going well?* After a moment she shifts her feet, nods her head yes, adjusts her posture to a more normal sitting position, blinks a bit and finally opens her eyes. I then ask, *And I wonder what number describes what your level of comfort is now?* Somewhat surprised she acknowledges that she is at one or

two or maybe zero. It's no longer a feeling of heat in her vagina, but rather a feeling of warmth, or is it a slight pressure, or an awareness somehow? I ask her if she now knows what she has to do and she nods yes. She makes a few remarks about how she experiences it as a sense of relief to know that she can make up her own mind. She will leave her boyfriend and later she will tell others about it. By the next session a week later she reports that she has navigated the separation well. The herpes and burning sensations are apparently gone.

RH Casebook 1: Anxiety Attack

Stage One: Data Collection, Initiation. A semi-regular client, who worked nearby, rang for an immediate session – she was in the beginning of an anxiety attack. I told her to come straight over. She arrived in a few minutes. She was very anxious and could have been heading for a panic attack. I immediately sought to externalize her anxiety (we had done several Mirroring Hands processes before and so she needed no explanation of what I was asking), *I wonder if you can hold your hands in front of you and really focus on them like we have done before... and with palms facing... can you feel an energy between those hands...* she nodded...*and if you can now feel that energy as the energy of your anxiety...* her gaze was fixed on her hands. I continued to facilitate her process, *...will those hands show us how intense your anxiety is right now, on a scale from 1 to 10, where 1 is slight, and 10 is the very worst?* Her hands began to move apart. I asked her to tell me the number so that I could appreciate the scale she was creating between her hands. She replied shakily, *...that's a seven and a half...*

Stage Two: Incubation, Arousal. I reacted with a simple acknowledgement of her assessment, *O.K... is there something you want to do with that energy, that anxiety between your hands?* She watched her hands intently, almost wide-eyed. The hands began to move apart slowly. *No... I want them to slow down... come closer... don't do that...* The hands were moving apart, which she didn't want, but they were moving slowly, which she did want, so I drew her attention to that quality, *Yes, I see you are slowing the hands... how wonderful that you can do that... what number do you feel you are at now?* She took a deep breath, *...nearly eight and a half...* Again, I emphasized her control of the situation *...so, not 8 and a half, maybe nearly 8 and a half, but slowed down... I wonder how much more you will slow everything down?* After about half a minute her hands seemed to stop. She seemed to have gained control of the rising of her anxiety. I saw this as an expression of a phase shift.

Stage Three: Illumination, Insight. She sat still, hands unmoving in front of her, for several minutes before suddenly speaking *...everything in my life is like a 9...* She was opening up to the extent of her distress. I continued to focus on her controls *... your life... like a 9... although here with me, not much more than 8... I wonder what number you need to be now so that we can talk about the number 9 things in your life?* She looked away from her hands for the first time and seemed to think about it *... maybe 5 or 4...* As she spoke her hands began to move closer, I waited less than

a minute till her hands seemed to stop and asked, *...and what number is your anxiety now?* I was careful to specify that I was asking about her anxiety and not other areas of her life *...about 6...* I continued supporting her achievement *...ah, that must feel a little better... we're nearly able to talk about those things in your life... as you feel more ready to talk with me, will those hands come a little closer and your anxiety come down a little more?* She was clearly feeling more relaxed *...yes, I want to talk about it... so unfair... nothing I could do...* Her eyes began to tear up. I took this as a positive discharge of her upset, at least more positive than anxiety *...so brave of you to share with me, and so wonderful that you can bring yourself down to a 5 or a 4 so we can do just that... what number are we at now?* Her hands began to lose their stiffness and she wiggled her fingers a little *...I really do want to tell you... yes, 5, maybe 4... let's talk now...* Her tears began to roll down her cheeks, but she was not sobbing and seemed to be comforted by the tears. She spoke about the relationship issue we had been dealing with previously and about the new problems with her current employment. Although this was a productive Stage 3 discharge, I wondered what her realization had been that enabled her to gain control over her anxiety. Eventually, she revealed her breakthrough, *I always put my energy in the wrong place. More than that, I let other people put my energy in the wrong place. I see that now. That's what we've been talking about all this time...* I assured her that we were working towards what she needed and it looks like she now knows what she needs to know.

Stage Four: Verification, Reintegration. For the first time she talked about what she was going to do to change things, rather than just manage them. This was our 5th and last session, although I saw her again in the street and she reported that she was now able to use her “hands” whenever her energy seemed to be in the wrong place. I was happy to see the locus of control where it should be – within her.

Review

We are not trying to teach how to control symptoms. We are looking to discover where the symptoms will lead us. Learning how to have a healing relationship with yourself is to learn how to cooperate in a natural, comfortable way with the natural cycles and rhythms and to be sensitively aware of the messages that emerge from time to time from the self-organizing processes continuously occurring in the inner, implicit world. Ernest Rossi called this, more than twenty years ago, a *Symptom Path to Enlightenment*.

It is precisely when the client, and you, feel fatigued, when the symptoms seem to be getting worse, that we know the natural inner system is calling out for a period of healing. We need to work carefully through this process with clients. There are a number of highly popular self-development programs that deliberately push participants toward critical phase shifts. This can be completely liberating for some, but if there is no regulation or individual care when allowing symptoms to intensify,

some can be left worse off than when they started. Symptom Scaling in Mirroring Hands is all about facilitating the client's safe passage along their symptom path to an enlightenment.

The important thing for therapists and clients to learn is not to be afraid of symptoms. Find a rapport with your symptom as a valuable messenger who only seeks to bring something important to your attention. The intention of our human system is, where possible, for things to get better, for problems to be solved, and for there to be a healing that produces integration and wellbeing. Find the conversation that the symptom is trying to open - right down into your inner, implicit world. Feel the intensity and ask it where it is taking the therapeutic process. It is only by ignoring or suppressing symptoms that we cause more distress. The greater the intensity, the closer you are to a place of *phase shift* where it is possible to leap outward at the *growing edge*.

Chapter 12
Improvisation, Drama, and Mirroring Hands
The Flow of Client-responsive Therapy

RH: *I remember how I was trained to respond with minimal cues, but to be client responsive, we need to be responding to minimal cues... involuntary actions, sounds, facial expressions, moods, tiredness, focus, distractedness...*

ER: *Yes, there's a lot going on...*

RH: *The crazy thing is, I learnt about being client-responsive when I was a professional actor. Really good training for psychotherapy...*

ER: *I trained with Lee Strasberg...*

RH: *My goodness, Ernie, that's amazing!*

ER: *I learnt how to be private in public. That's what actors understand...*

RH: *Yes, indeed...*

ER: *... and clients, who often have no idea how to talk about what is really troubling them, are genuinely comforted when we let them work privately. It's a big relief. Then they manage to get something out and you respond with how wonderful they are to be able to do that.*

RH: *We should all do a little acting in our lives.*

ER: *Yes, to be totally responsive...*

RH: *... and constantly surprised at not only what the other person does, but how they inspire your next action.*

ER: *We should do some acting workshops for therapists... write something about that...*

Improvisation is defined as: *to create spontaneously, without preparation, from what is available.* In essence, improvisation happens in the moment in a response to what is happening in the moment. Although it is not possible to prepare or pre-determine a spontaneous reaction, a spontaneous reaction is founded and enriched by all the ways in which life has prepared the participants up to this moment. When a therapeutic activity emerges into a therapist's mind, it is shaped by what the therapist has learned, their past experiences, and even their future imaginings and expectations.

Improvisation is used very successfully as a therapy, most notably in Drama Therapy. During Mirroring Hands, improvisation is utilized *in* the therapy. It is a fundamental factor of the process. Therapeutic techniques and approaches are commonly taught from a manualized structure. It is almost contradictory, however, to be client-responsive *and* follow a practical manual. Having said that, it can be very important and necessary sometimes for therapists to utilize a formalized therapy, administer questionnaires, and assign various tests. These have their place and can be very helpful, but they are not designed as opportunities for a client to explore themselves in a *personal, private, and self-directed* way.

Self Exploration

The primary focus of Mirroring Hands is to facilitate the client's self exploration and for the therapist to be non-directive and client-responsive. That means that every Mirroring Hands experience involves improvisation. Although Mirroring Hands, too, has a structured framework, utilizes language principles, and has distinct forms, much of what happens during Mirroring Hands is an improvisation between the client and therapist. The preparation stage, Stage 1, can often begin in a predictable way (although not always), but, if a client shows they are not ready to proceed during the preparation phase, it is not unusual to improvise with other therapies, including formal therapies. This is done in a client-responsive way to help the client shift into a more receptive, and productive, therapeutic consciousness. We remind you again that we believe a therapist needs to have a broad "classical" knowledge base, just as an improvising musician has practiced the scales and played formalized music for many years in preparation for improvisation.

Mirroring Hands is more likely to move in surprising directions in Stage 2 as the client confronts their unique problem. In Stage 3 the client enters unknown territory as they respond to their breakthrough discovery with an outpouring of creative possibilities. In Stage 4 both therapist and client are working at the growing edge as the new "territory" is embraced and implemented into what will become the client's new way of life. The following case examples show how individual sessions of Mirroring Hands can shift in unique directions quite easily. Sometimes the shifts and changes spontaneously emerge as a total surprise even for the client. The therapist

needs to have their wits about them to keep up as the client engages in their extraordinary therapeutic journey.

ER Casebook:

At a conference, Dr Rossi accepted a volunteer from the audience.

A woman in her 60s settled into the chair beside me and I began by silently raising one my hands. She mirrored my action, but, instead of looking at her own hand she was intently looking at mine. In my surprise, I didn't raise my other hand, allowing her to remained fixated on my already raised hand. Fortunately, I was quick witted enough not to try and "correct" her by telling her to look at her own hand. Instead, I waited patiently for what she would do next. Before I was able to say anything, I noticed a slight quiver in a couple of her fingers. The movement was rapid enough to indicate that it was the involuntary type of movement that comes from within, and not consciously driven. Her focus shifted from my hand to her own as her fingers began to move more noticeably. After a few minutes, I said,

And knowing you can share as much or as little of that as you wish... only what I would need to hear to help you further...

She began to speak quietly about what was happening between her fingers. She felt that the fingers were moving as if all by themselves and she felt that they represented people in her life. Her forefinger was herself, her thumb was her husband, and the little finger was one of her children. Then she brought her other hand forward, declaring that the other little finger was another child. She began to describe how fingers were representing uncles, aunts, grandmothers, brothers, and so on. Her emotional expressions began to shift and her vocalization changed as fingers were "talking" to each other. She continued to alternate between talking and a silent play between the fingers of both hands.

It seemed clear that she did not need my interference, so as she continued, I looked out into the audience to see how they were reacting to the demonstration. To my surprise, I noticed that quite a number of people in the audience were also engaged in their own private finger play. Because this was a demonstration at a conference, with limited time, I had to find an appropriate moment to bring the process to a close. We were able to spend a few minutes discussing how this had helped and what

changes she might make to her day and with her family. I finally reminded her that her learning and healing could continue in the ultradian healing periods that can occur as often as every couple of hours. I had never participated in a Mirroring Hands experience like this before, and only rarely afterwards.

RH Casebook 1:

Richard Hill's daughter, a journalist, was working in Beirut.

I answered a late night phone call from my daughter. It would have been early evening, around 8pm for her. She had recently discovered that she had "something on her brain" which may be a cancerous growth. We had found very good medical support close to where she was living, but this was a stressful time. (The following is an edited version of the highlights and relevant elements of the conversation. I am represented by "R" and my daughter as "D").

D: Dad, I'm coming back from the doctor and I'm a bit freaked out.

R: Are you home?

D: No, I'm sitting in a stairwell on the way home. I don't want to go home and upset (my husband) any more than he already is. I'm freaking out. What can I do?

We spoke about what had happened at the hospital. The information from the doctor was detailed and useful, but not very helpful for her emotional state. It was necessary for me to behave more like a therapist than a father. I carefully explained what the technical information might mean and what she might be feeling physically and emotionally. This seemed to be helpful. I began to assess her level of anxiety.

R: What can you see about you?

D: I don't know. Nothing much. The lighting is not good.

R: Are you able to get up now and go home?

D: I don't know what I want to do, Dad. Is there anything you can do to help?

Being in a poorly lit stairwell in Beirut is not comforting and she was not thinking clearly. Her voice was shaky and tense. I determined that she was in a state of

anxiety that was affecting both her thinking and her mobility. This also suggested that she might be close to panic. I wanted to draw her attention away from her internal fear and trauma. What could I do over the phone? I spontaneously began a Mirroring Hands process.

R: *Darling, can you see your hands?*

I realized as I spoke that she was holding her phone, so one hand was not available.

R: *... I know you can only see one hand. That's ok. What else can you see in front of you?*

D: *Umm... I don't...*

R: *I wonder if you can see your knees?*

D: *Yes, Dad.*

R: *I wonder... what do they look like?... what are you wearing?... can you see the color?...*

She began to describe the jeans that she was wearing. I encouraged her to look for anything interesting about the color, the material, and the way she was holding her knees. The I asked...

R: *And I wonder if one of those knees is a strong knee, maybe stronger than the other?...*

D: *Yeah... I guess my right knee is stronger... you know, because of my back...*

R: *OK... and right now... as you feel that anxiety within you, causing you all sorts of upset and worry... will you share that struggle with one of those knees... maybe the strong right knee... maybe the other knee...*

D: *The strong knee is a good idea. I can do that...*

Because I was not able to see what was happening I did not pause for too long. It was important to maintain the connection.

R: *Yes, that's wonderful... and can you feel something change for the better...*

D: *Yes, Dad, a bit better...*

R: *... and I wonder about the other knee... can you shift your attention to that left knee... I wonder what that knee feels, while your right knee has the strength to share your anxiety?...*

She began to speak about the things that were difficult, and made her feel weak, and unable to manage, and afraid for the future. Without the confusion of her anxiety, she was better able to sort out her thoughts and we planned how she could share the information from the doctor with her husband. After some 25-30 minutes on the phone she had recovered enough to get to her feet and complete the walk home.

This was the first time in my experience that Mirroring Hands had become “Mirroring Knees”, but it is a perfect example of including other parts of the body, if and when that is what the client makes available. Utilizing a Basic Accessing Question allowed us both to discover what might be possible, and what was acceptable, to both her explicit and implicit worlds. Most importantly, I was able to connect her to her own problem solving and mind-body healing because once the phone call ended she would be on her own again. We were both confident, as we said goodbye, that she had regained the locus of control.

(An excellent medical team at the hospital in Beirut were able to operate soon after. The surgeon was able to successfully remove a surface located oligoastrocytoma. She has recovered well and, several years after the event, has had no recurrence).

Improvising with Mirroring Hands During a Standardized Protocol

We have shown that Mirroring Hands is not a technique that is limited in use. Mirroring Hands can be utilized at any time. Mirroring Hands is a process that can break through a barrier or resistance, or when the client and/or the therapist feel unable to access what needs to be known. Mirroring Hands can be utilized to open a door, or reveal something hidden, and then the session can return to the previous protocol. In the very first example presented in this book’s introduction, the therapist was in the process of standard rapport building. The client’s emphatic hand gestures triggered the therapist’s spontaneous shift to Mirroring Hands. That proved to be a very beneficial direction to take.

Regardless of what therapeutic protocol has revealed the restriction, shifting the resistance can be achieved by asking the client to place the dominating position in one hand. Once this is done, attention can be shifted to what is in the other hand i.e. what is “not that dominant position”. As we described in Chapter 8, creating a differentiation between the polarities of a situation releases the potentials and possibilities of each element.

RH Casebook 2:

A client presented with a non-specific, general discomfort about her life. She had some neurological damage after an early age stroke. Although now in her thirties, she found it hard to sit still. This was quite apparent, but I wondered whether this was partly due to her very quick minded and highly imaginative mind. The session began in a Rogerian listening and supporting framework. She told a rambling narrative that was hard to follow at times. It was difficult to know which parts of her narrative were important. As the conversation proceeded, I began to notice a somatic behavior - her foot jiggled in an agitated way, but every now and again it would stop for a sentence or two and then become agitated again. After a short while she paused and asked for my reflections. I reflected back those things that she had said while her foot was still. Her eyes widened, she sat forward, and wondered incredulously how I had known to choose only the things that really mattered to her.

I asked her if she might like to agitate her foot, and notice what thoughts and feeling came to her. She began jiggling her foot and related what was coming to mind. The thoughts were short and jumped from one thing to another. We continued this for about ten minutes when she began to slow down. I asked her what was happening and she replied, *I'm actually getting bored with myself!*

I then wondered what might come to her mind if her foot was still. Again, I asked her to notice, and relate her thoughts and feeling as they emerged. For the first time since entering the room, she was quiet and thoughtful. I reassured her that she did not need to share any words with me, only those that she wished to. She began to share a few things, but then quietly enjoyed her own private thoughts for the next 15 minutes or so.

This was an improvised “Mirroring Foot” process that allowed the client to find her *important voice* and distinguish this from her *chatter*. The movement in her foot was the symptom/message that emerged from her implicit world. She now had an indicator of when her mind was producing important and meaningful thoughts. This was an important piece in the puzzle of her reclaiming some control of her mental processes. She declared this to be a very satisfying session.

RH Casebook 3:

A female in her late 20s was mandated by her workplace for cognitive behavioral therapy (CBT). She was having arguments with other staff members. It was apparent that she was not quick witted and her records showed a below average IQ. We were completing one of the standard CBT forms¹⁸⁷ that asks for, amongst other things, the current thought and a possible alternative thought. She was becoming upset as she struggled to find any alternative thought. She was having no appreciable problem naming the triggers for her thought, what emotions she was experiencing, and the justification for her thoughts. When asked, however, what were the contradictions to that thought and what alternatives might be reasonable, she was very resistant. The more she thought about the justifications for her thought, the more she was convinced that her thought was correct. Filling out the form became distressing. She was worried what the people at work would think about her answers. I suspected that part of her resistance might also be a winner/loser world issue. She seemed quite fearful of being wrong and failing in her thinking. Somehow, any alternative thought was in competition with her original thought. It suddenly felt natural for me to utilize Mirroring Hands in an attempt to shift her fear of losing and being shamed. After a brief discussion, she agreed that there *might* be another thought in her mind, and that thought *could* be interesting and helpful. I began with a very quick preparation question so as not to lose her attention:

R: We know that you are interested in finding whether there might be another thought in your mind... if you would like to do that now, will your hands raise up in front of you, so your elbows are at a right angle...

She has the option to stop the process right here, but if she raises her hands, then she is making a personal contract, with herself, to explore this possibility. She did, indeed, raise her hands.

R: *Wonderful! Already something extraordinary is happening... maybe there is a very important thought in your mind that you have never thought about before... if we look carefully at those hands... I wonder which hand might be the one that represents that extraordinary thought... but first, which hand is able to hold the thought you have already written down... the thought we have been talking about...*

The client stared at her hands quite intently...

R: *... and will the hand that can hold the thought you know all about, will that hand somehow give us a sign that it is ready... a movement... almost all by itself...*

The client moves her right hand up and down while saying...

CL: *I think it's this one...*

R: *It certainly looks that way! How extraordinary that your hand seems to know all by itself that it can hold your thought! Will that thought comfortably go into that hand?... Is there anything we need to do now to help that thought or help that right hand?...*

CL: *No... everything seems ok... pretty good...*

R: *Wonderful!... so, can we, now, shift our attention from your right hand, to your left hand... I wonder what extraordinary thought that hand might be holding?... something else within you that is not the thought you have in your right hand?... something you have never thought before...*

CL: *No... well... maybe... I don't feel like I am in any trouble in my left hand... it feels kinda... not... guilty*

R: *Yes, not guilty... not in trouble... yes...*

CL: *This hand doesn't have any thoughts... and it is not getting into trouble... maybe I think too much*

R: *...think too much... I haven't heard you say that before... I wonder what that means...*

The client then began to talk about how she becomes confused when she has to think, and sometimes wishes that she was asleep all the time so her thoughts wouldn't give her so many problems. The idea that she might think too much was an important breakthrough. We spoke for a little while and then she became quiet. I left her to quieten her brain and her thoughts. Later we returned to the CBT program sheet, which she was now able to complete. She discovered something through Mirroring hands that was a struggle with the CBT form – that her alternative thought was to not have any thought at all about the issue.

Review

Improvisation is a natural part of Mirroring Hands and is a natural factor in a client-responsive approach. When you think about it, daily living is a constant improvisation. Things continually comes along to surprise and generate an unexpected response or reaction. Improvisation, however, does not mean to be flying blind. Preparations for a therapeutic session can include various materials and a general session plan, but it is not possible to prepare the *specific* words or *detailed* actions for a *client-responsive* session.

An improvisation is as rich as what the participants bring with them into the improvisational space i.e. how they have prepared. If an actor enters an “improvisational space” with a piano, sits down, and begins to play Rachmaninoff, then it is reasonable to say that the person has had many years of preparation with piano lessons and performance experience. If they play chopsticks, then another level of preparation is being expressed. Similarly, in therapy, the client and the therapist both enter the “therapeutic space” with years of preparation, a plethora of expectations, and a host of disruptors, perturbators and attractors (factors that affect self-organizing systems - refer Chapter 2) that will pull, push and draw the therapeutic experience in various directions. The therapeutic experience is an unpredictable dance of creativity, curiosity and possibility that the client cannot ordinarily achieve, on their own, in their current day-to-day life.

Mirroring Hands follows the actions and reactions of the client, self-organizing from the client and therapist's collective well-spring of knowledge and experience, in a mutual effort to engage with the natural problem solving and mind-body healing

capacities that lie within us all. The case examples in this chapter showed a small selection of the many different and surprising directions that a Mirroring Hands process can go. Symptoms emerge as indicators, signposts, and as cracks in doorways to the deeper truth of the issue and to the natural resolution. But, what can the client do in between sessions, when the therapist is not there? Can someone assist themselves? The next chapter explores that question and shows how it is possible to facilitate a solo Mirroring Hands experience.

Chapter 13

Personal Access to Your Growing Edge

Solo and Personal Use of Mirroring Hands

ER: ... *the power for transformation is inside the client, not the therapist...*

RH: ... *and the mirroring is not deceitful, as can be in some things. Whenever I do it, with clients or even on my own, I am truly intrigued by my hands.*

ER: *There is a flow, a wisdom, and a knowing within each person that they have the ability to go towards health and I believe that everybody really wants to move toward health...*

RH: ... *the question is, 'How do I do it?'*

Can people utilize Mirroring Hands without the participation of a therapist to facilitate? The simple answer is, yes, but the experience will be very different. The therapist's years of practice, and the many other things that a therapist can facilitate beyond the Mirroring Hands process, creates a unique, therapeutic, relational experience. The purpose of Mirroring Hands, however, is to open a connection within an individual to their own natural problem solving and mind-body healing. These natural processes are available to us all in one way or another. This chapter will explore:

- how individuals can utilize Mirroring Hands outside of a formal therapy session
- how Mirroring Hands can assist in sensitive situations with cared for others including partners, family and children
- the many ways people can benefit from the Ultradian Healing Response
- a new solo Mirroring Hands process that engages with the Ultradian Healing Response, *At the Growing Edge*.

Self-care and Caution

If in any doubt or concern that self or solo work is not adequate, or you feel uncomfortable or unsure, or if symptoms persist, seek professional help. At all times in life, if there is loss of consciousness, difficulty in breathing, or serious physical distress, seek medical help immediately.

Messages from Within

Let us first recall some important fundamentals: Mirroring Hands, and the Mirroring Hands approach, is not just a cognitive process, but the opening of a connection, a communication channel, between cognitive consciousness and our inner, implicit, self-organizing world. The inner world expresses itself through emergent properties and qualities that are able to be noticed, consciously acted on, and reflected upon. When these *messages from within* are integrated positively and productively into our daily living we create *beneficial change*. These messages come in many forms including thoughts, behaviors, emotions, and sensations. In therapy, these messages are often called symptoms, but they are messages nonetheless.

It is a reasonable, common practice, not only in therapy, but also in schools, businesses, at home, and in relationships, to consider the pros and cons when trying to resolve a problem. Thinking in dichotomies – cause and effect, right and wrong, good and bad, safe and dangerous, etc – has a basis in nature, but it is a simple, and even simplistic, view of the complexity of life situations. In Mirroring Hands, we are not just simplistically looking at what is in one hand and what is in the other. The key of the act is to differentiate between our two hands to allow the *possibilities* of the elements to emerge. Otherwise there is only the dominating element.

To put it another way, it is not just about rationally thinking it through, although that is an important part of every process, but to have the patience to wait for something to emerge from within. As we have seen, implicit messages can sometimes seem to appear *all by themselves*. It is about allowing the time to “sit with” the process, to sensitively observe, and notice what emerges. Then it is a matter of responding in a way that moves you toward resolution, health and wellbeing. It is the time you take to pause and wait that makes the difference. We have already shown that we have a natural period, called the Ultradian Healing Response, about every couple of hours, when we can benefit from a 10-20 minute pause. The Ultradian Healing Response is consistent with Stage 4 of the creative cycle. Equally we have other natural periods that flow across the ultradian rhythm: a time for exploring - Stage 1; for self-examining - Stage 2; for insight and creative release - Stage 3. To be engaged with the flow of our ultradian rhythm, all we need do is pay attention to the messages and

signals, and consciously co-operate. We remind you of the script we have suggested for the closing of a Mirroring Hands process:

*When... your unconscious knows it can continue that inner healing...
and when... your conscious mind knows it can cooperate by helping
you recognize those periods during the day... will you find yourself
awakening?*

Self Care

An important part of facilitating Mirroring Hands is to help the client open and then close the process. In solo practice, it is not so difficult to begin, but a natural closing point of the process needs to be put in place. We will look at how two of the facilitated forms, *Close the Door* and *Holding Both Sides*, can be modified to close in a safe and comfortable way.

1. Close the Door (Chapter 10)

This form is the most suited to solo practice because there is a natural closing point when the “positive” hand touches the body. It is then just a matter of allowing the resulting positive feelings to strengthen and comfort for a minute or two. The intention of this practice is to both reduce and discharge what is disrupting or disturbing, and, also, to amplify the presence and awareness of hidden strengths, creative problem solving, and self-comfort. There is usually a natural sense that the process is over - all that needs to be done is complete - and it is safe to return to normal activities.

Stage 1: Selecting which hand will receive the “negative” and which will receive the “positive” only requires a moment or two of focus on the hands to notice which feels different in whatever way makes sense in that moment. Then choose which hand will receive whatever is bothering you. There is no need to raise the hands in front of you unless you wish. Because this can be practiced anywhere, and at anytime, it may not always be convenient to raise the hands. We will show that in the case examples.

Stage 2: Allow the “energy”, the feeling, or inner sensation that we also call the *quantum qualia*, to flow out into the hand, just as happens in a facilitated session. To control the timeframe, mentally set a point where you will shift attention to the

“positive” hand. This might be a feeling, such as a certain weight, or when the energy is a certain size in the hand, or even a certain time period. The

Breakthrough & Stage 3: The breakthrough is the intuitive decision that you have expelled as much of the negativity as necessary and you are ready to “close the door” on what has been expelled. Before shifting attention to the other hand, be clear in your mind that the negative property is contained in the hand and not able to flow back to your inner space. Then, allow whatever may be within you that can overcome the negative issue, solve it, resolve it, conquer it, be stronger than it, and whatever else is wonderful and extraordinary about you, to flow out to your “positive” hand. This energy does not need to come entirely out of your body, but to form an “energy pillar” between the body and the hand. When you can feel that flow between body and hand, begin to draw the hand toward the part of the body from which the negative energy emerged. When your “positive” hand touches and covers that part of the body you are “closing the door”. You may feel as if your “positive” hand has moved *all by itself*, or you might consciously move the hand. Either is effective in solo work

Stage 4: Feel the *positive wonder of you* fill what was once occupied by the negative issues to create a new, safe, stronghold within. Let that positive process continue on its own as you return your attention to the “negative” hand. What would you like to do with that energy now? Shake it off? Throw it away? Put it in the rubbish? Seal it a bag and then throw it away? Do whatever you believe gets rid of that negativity. Once rid of it, your attention can return to the positive interplay occurring under your “positive” hand. Allow that to continue for as long as you need. When you feel it is time, allow your hands to return to normal activity. Remember that you will continue to benefit from this healing process throughout the ensuing day and night, even if only at the implicit level. You can repeat the explicit, physical activity of “closing the door” as often as you feel is natural and comfortable (strengthening).

Case 1: Sleeping – *Closing the Door* is very successful to bring on a healthy sleep when the mind is racing, or you are not feeling well, or for reasons you don’t understand. An anxious client found that she could sometimes name what was keeping her awake, but she could also, just as effectively, focus on the thought, *All those things, whatever they are, that are interfering with my sleep, get out into my*

(right or left) hand. Equally, when in Stage 3, she would think, Everything inside me that can help me sleep and can give me peace and calm, please make yourself known in my (right or left) hand. Being in bed when she began the process, her hands were usually alongside her body. As she discharged the problem into her “negative” hand, she found that her arm would move away from her body. The “positive” hand moved to the wherever it needed to go to “close the door”. The first time she did this, she needed to repeat the process three times. The next time she tried, she woke some hours later to find her “positive” hand on her chest. She now finds that she falls asleep during her first attempt.

Case 2: Work stress – I follow my own advice when I feel stress during work and take a break to go for a walk. The traffic lights nearby have a surprisingly slow cycle. One day, I noticed that my left hand felt cooler in the breeze. Without moving my hands from my side, I wondered if I could send whatever energy, ideas, worries, physical sensations, and muscle aches out into my left hand. Then, I mentally sent the calming things about me and the good feelings I had in my life into my right hand. Nobody at the crossing paid much attention when my right hand lifted up to my shoulder. By the time the lights changed for pedestrians to cross, I was feeling much calmer and relaxed. This is now a regular 3-minute dose of ultradian healing that I enjoy whenever I wait for those traffic lights.

Case 3: Anger management - A client was troubled by his build-up of anger, largely from his frustration at others. Our sessions were going well and he found that Mirroring Hands was making a big difference in his ability to control the build-up. He was concerned, however, that he still had some difficulty. We rehearsed a solo use of Mirroring Hands. Instead of letting his anger building up, he found he could open the door and let the anger pour out into his hand. He would then “close the door” and discard the anger. He was then able to focus on the positive things he had revealed to himself during therapy.

Case 4: Addiction - A client needed something to help him dissipate the temptation to play poker machines. He had to pass some 5 hotels with machines on his way to and from work. We compiled a strategy that included changing the route he used to avoid the hotels, but we also used a solo practice of Mirroring Hands to help him find

his strengths. The negative hand was usually the hand nearest the hotel and his positive hand was able to draw him, he described it as being dragged away from the hotel doorway.

These are just a small sample of the ways in which an individual can amplify their strengths and diminish the disruptions that interfere with their enjoyment of life. Solo practice is to help someone manage an issue at the time it occurs. We do not consider it safe to explore unknown psychological territory and unknown areas of their inner world with solo practice. That is best left for facilitated therapy. There is no danger in solo practice that is exploring for strengths. As we have stated before, the problem is being sent *away* from the inner self, and the process is always under the user's control.

2. Holding Both Sides (Chapter 8)

The purpose of this form, as a solo Mirroring Hands, is to help shift a stuck situation or to open the mind to those things that are hidden by something dominating or overwhelming. Again, this is not about cognitive deductions, but creating a pause that allows hidden aspects of the situation to emerge and stimulate some sort of change. Stuck situations are in rigidity and need stimulation, whereas overwhelming situations are chaotic and require some sort of calming and balance. This can be hard to do when all you can see and feel is being stuck or being overwhelmed.

Stage 1: When you feel that you are ready to access something to help you change your current situation, raise your hands in front of you and calm your mind. Focus your attention on your hands and the natural processes of your body. Notice your breath, your heartbeat, what happens when you take a deep breath, what are the sounds and smells around you. Allow yourself to notice the differences between your hands, even just the obvious difference of one being on the right side and one on the left. When you know which hand is more prominent, project the stuckness or the overwhelm out to that hand.

Stage 2: When you have a clear sense that you have isolated the issue to one hand, turn your attention to the other hand. What is in that hand? Is anything in that hand? Is there something within you that wishes to be projected into that hand? Is there something in that hand that wants to help you? Ignite your

curiosity about the possibilities that you have been unable to appreciate until now, until the stuckness or the overwhelm has been moved to one side.

Breakthrough & Stage 3: Notice all the changes. How are you breathing? What does your beating heart feel like? Is there something new in what you hear and smell? Do you feel any emotions rising? Do you hear a word or a phrase or a sentence in your mind? Is there something you can feel in your hand? What is the opportunity for changes that these things are offering you? What do you know in this moment, that was hidden before? Is there any reaction from the hand that is holding the stuckness or overwhelm?

Stage 4: What can you now do with these sensations and new realizations to resolve your situation? Take some time to embrace all these new things and start to develop the strategy or begin the plan to implement these changes. Do you still feel stuck or overwhelmed?

The results of “revealing the opposite” can range in effectiveness. Regardless of the outcome, this solo practice, at the very least, shows that the stuck or overwhelming difficulty can be isolated. The benefits of this process are likely to continue throughout the day and even in your dreams, so it a good idea to pay close attention to thoughts and feelings that emerge over the next day or two. It is a good idea to write them down or record them on a mobile phone for later review. It is important to remember that the implicit world continues to self-organize problem solving and stimulate mind-body healing even though you are not consciously aware it is happening.

Case 1: Pain – The client suffered from a sharp pain in the shoulder that would wake him up. He was reticent to take too many pain killers and so we had been working on creating changes in the pain experience so that it was more manageable. Mirroring Hands had been helpful at the clinic. His Breakthrough was the realization that he had the power to change the shape of his pain. He wondered if he could use the process himself when the pain attacked and so we rehearsed solo practice. The next time he woke in pain, he was able to rapidly choose a “sharp pain” hand and isolate the sharpness to that hand. He was then able to shift his attention to his other hand which he called the “long pain” hand. He found that when he focussed his attention on the “long pain” hand, the pain would extend and distribute. Although he

still had the pain, it was not as intense and he was better able to manage the discomfort. We have attempted other transformations of the pain with varying success, but he was regularly able to convert the “sharp pain” to a “long pain” and minimise his analgesic intake.

Case 2: Creative Block – a writer sought help for what he thought was procrastination. When we discussed the issue, he realized that it was more about being stuck at a point in the writing. The longer he struggled to find what to write next, the more his mind was blank of ideas. He would then leave his computer and do other things, hence his first impression that it was procrastination. He was able to find little breakthroughs at the clinic, but he wanted to be able to do this at his desk. We rehearsed how to do solo practice. At the next session, he reported that when he isolated the “stuckness” to one hand, it felt like a high wall. When he shifted attention to his other hand he was particularly aware that his breathing changed and his heartbeat seemed to be stronger. His eyes were closed and he could imagine the wall in front of him. To his surprise he could feel himself, at least in his mind’s eye, getting taller. After a short spurt of this “growth” he found that he could look over the wall and “see” the next part of the story. He wasn’t sure if it was a literal vision or just the thought rising into his consciousness. Regardless, he was now able “get over” the barrier to his writing.

Care for Others

Solo practice is helpful for an individual to create a positive shift in a difficult situation, but sometimes a person is too overwhelmed to self-facilitate a Mirroring Hands process. A caring “other” might be able to help. A parent, or partner, or close friend usually has the trust and rapport that is needed. It can help the distressed person to move the “negative” elements to one hand which separates and even isolates the problem. It is then possible to explore the “positive” side. Projecting the overwhelming issue out into the hand can also give the person a sense of having some control over it. Rather than something that is distressingly overwhelming them or disturbingly within them, they can hold it and perhaps even move it about. This, on its own, can be very empowering shift.

The carer begins by inviting the person to imagine projecting the problem/issue/upset into their hand. Assure them it is a way they can “get a grip” of it and even “move it away”. When they are ready to shift attention to the other hand, the carer only needs to use simple language to talk about the positive thoughts and feelings that emerge. The purpose is to get the “negative” out of the way so the “positive” can be accessed to help the person feel stronger. It might feel comfortable to end with a “close the door” process, or just a comforting and relieving hug. If the carer is being responsive, then whatever spontaneously emerges will be helpful for the other person.

These are some of the situations where a “carer practice” has been helpful:

- **Parent and child** – * helping a child fall asleep in a facilitated version of *closing the door* described earlier for solo practice * calming anger and frustration can be facilitated by directing the emotion to one hand, allowing what has triggered the emotion to be expressed in the other hand * relieving and calming a fearful upset such as being bullied can be helped by putting the bullying, or the bully, into one hand, and allowing the child to engage with their self-value and self-esteem in the other hand * managing an upset between friends by isolating the immediate catastrophe in one hand, and to recall the past positive experiences of the friendship in the other hand.
- **Partners** – * when arguments turn to hyperbole - *always, never, can't* – these extremes can be sent to one hand and the more balanced truth of the matter can be explored in the other hand * a sudden and upsetting disappointment can be eased by sending the upset to one hand, and allowing the changes and new possibilities to be present in the other hand.
- **Emotional first-aid** – when the emotional response is overwhelming the other person, the carer can extend their sensitive empathy to the overwhelmed person, and, at the same time, gently direct the emotional activity to one side and eventually into one of the hands. This can help to shift the overwhelming engulfment of an emotion, to an emotion that they can hold, and perhaps even begin to observe at a distance from the body.

These examples are not meant as a thorough training program. Competency at utilizing Mirroring Hands as a solo or carer practice might require additional training

and experience. This can be gained through workshops, demonstrations and private tuition. These examples are intended to show the sorts of common issues that can be helped and suggest a few options. You might feel that your life experience and skills that you already possess resonate with the Mirroring Hands approach. We hope you can integrate our suggestions to improve your own, natural solo and carer practices.

Engaging in the Ultradian Healing Response

Whichever way you are able to utilize solo and carer practices, you can be confident that there is a readily available opportunity for everyone to gain benefit from their natural inner problem solving and mind-body healing. We are all able to engage with the natural ultradian rhythm and benefit from the Ultradian Healing Response periods throughout the day and night.

As we described in Chapter 5, the Ultradian Healing Response is an important period of time in daily life. Energetic activity and arousal levels rise and fall across the 90-120 minute Basic Rest and Activity Cycle, which repeats to create the ultradian rhythm. Energy increases through the first part of the cycle reaching a high period of peak performance. High energy, peak performance is, of course, unsustainable, and so, in the latter part of the cycle there is a natural falling away of energy and activity. This fall settles into a period of pause that is the necessary time for recharge, repair, refreshment, and reactivation in preparation for the cycle to begin again. Pushing through these periods of natural pause interferes with more than just energy flow. The 15-20 minute Ultradian Healing Response¹⁸⁸ is a time when important consolidation and integration of the previous cycle(s) take place. Essential processes at this time include brain-plasticity, for learning, memory, and problem solving; immune system responses that enable self-healing; and the integration of newly formed ideas and realizations into daily life.

Figure 6 – The Ultradian Rhythm

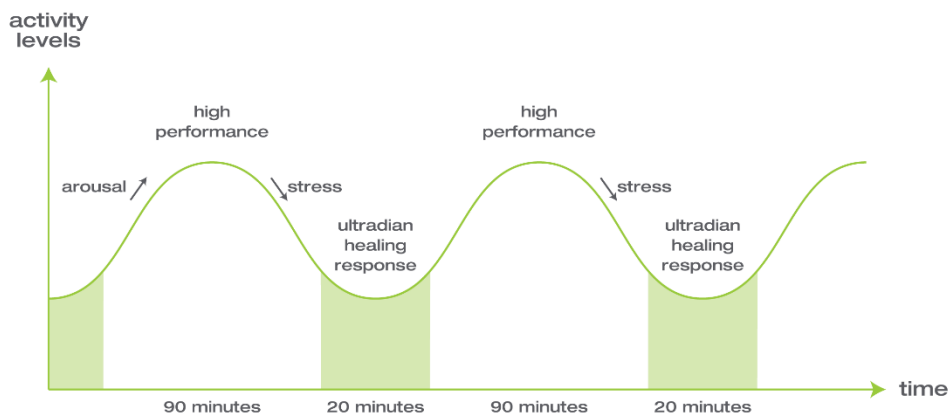


Figure 1 is an idealized representation of the Ultradian Rhythm. Life is a little less exact, but, in essence, it is natural to pause every two hours, or so, for about 10-20 minutes. It is no coincidence that it is normal to pause for a meal 3 times a day and to have a mid-meal snack another 2 or 3 times a day and that these pauses are approximately every 2 hours or so. Increasingly, modern society disregards this natural rhythm as it pushes people to be at peak performance all the time¹⁸⁹. The answer is not to push harder, but to engage with the Ultradian Healing Response. That is how we can maximise the utilization of our peak performance periods.

The good news is that there are many ways that the Ultradian Healing Response can be enjoyed. One of the most natural is to take a meal, or a break, with others. An individual will have different preferences for their natural ultradian “pause”. The best pause might be to come to a stop, or perhaps be more active to balance a very stationary cycle, or do something fun and playful, or perhaps engage in a quiet contemplative, inward reflection. The recent popularity of the “power nap”¹⁹⁰ is a lot more to do with the amount of sleep debt we all carry, but the idea of a 15-20 minute “power nap” is an intuitive response to the damage done by not taking a natural Ultradian Healing pause.

The following is a selection of common practices, other than enjoying a meal with others, that can be utilized to engage the benefits of the Ultradian Healing Response. We have differentiated the activities into categories, although these are not fixed or instructive. Please utilize these however you find they best fit your

needs. We conclude with a special contemplative, mindful Mirroring Hands process – *At the Growing Edge*:

- **Stop:** sleep; daydream; lie in the Sun; spend quiet time with a friend or partner; or listen to relaxing music.
- **Change of Activity:** doing whatever is the opposite of recent activity – if you were sitting, then walk or play a game; if previously active, then sit quietly or relax with gentle rhythmic activities like Tai Chi, yoga, or swimming; if working alone then join in social or family activity.
- **Curious and Playful:** begin or join a spontaneous game; walk in nature; play with children; singing, preferably with others; play a musical instrument; tell and listen to stories.
- **Contemplative:** there are many deliberate contemplative practices and some that are so natural we have taken them for granted – mindfulness; meditation; painting; dance; prepare a meal; listening to music; knitting; enjoy a sunrise, and especially a sunset; contemplate your gratefulness and appreciation of your life.

At the Growing Edge

The following Mirroring Hands experience is a contemplative process that can be practiced solo or can be facilitated by a therapist. Many of the qualities ascribed to the widely popular practice of mindfulness are inherent in this practice. It also stimulates natural problem solving and mind-body healing, and, as our research has shown, triggers the gene expression, protein synthesis, and brain plasticity that are the implicit processes at our growing edge. The intention of this exercise is to acknowledge and appreciate the *self* as it is in this moment *and* engage in our curiosity and wonder about the possibilities of what our life might become. The wonder of life is not in where we are now and what we are in this moment. That is our joy, our reality, our extraordinary achievement. The wonder of life is in the possibilities at our growing edge. This is where we are called to adventure to discover what we might become as we choose to grow.

You might find the content and direction of the 4 Stages easy to remember, but it is an excellent idea to record the words and be your own facilitator. You can also ask

your therapist to facilitate the process with you. Remember that, at any time, you have the capacity to change the process or even stop the process. We recommend having a notebook or a voice recording device such as a mobile phone nearby in case you wish to record some of the emergent thoughts, feeling or body sensations. You might do this at the end of the process, but even if you feel the need to record something before the end, you can immediately return to the process. You might choose to leave a voice recorder on for the entire session which you can review later.

Stage 1. Preparation

Sitting quietly with your hands on your lap, focus your attention on the body as it sits in the chair, your feet on the ground, as you breathe, as the heart beats, and know that your hands are resting patiently in your lap. Close your eyes or leave them open, just as feels natural and comfortable. When you are ready to feel your presence, in the present, who you are, right now, in this moment, will you find one of your hands wanting to rise up in front of you? Allow yourself all the time you need for that hand to rise, as you feel the reality of your own presence in your hand. Nothing right or wrong, nothing good or bad, no fault or blame, no judgement or criticism. Just the truth of who you are, right now... What thoughts or feelings are emerging? What have you learned to be where you are now? How have you grown? What have you changed in order to be here, this way, now?... Are you wondering about what are you ready to change? When are you ready for new growth?

Stage 2. Incubation

As you begin to feel the possibilities of change and growth, at what moment will you notice your other hand wanting to rise - as the future of you. What you might be. What you could be. What you are now able to become. Where you are ready to grow... Now, as you hold up the hand of who can become... that has lifted up beside the hand that hold you as you are... out in front of you... How will those hands share with each other now?... care for each other now?... strengthen each other now?... encourage each other now?... call out to adventure, now..

Stage 3. Breakthrough & Illumination

And as the interplay between your *self* in the present and your *self* that is becoming continues... What thoughts emerge? What visions appear? What feelings arise? Allowing who you are right now to be the launching pad... for what is soon to be... of what might be possible... of what will become a new reality... something more... surprising?... pleasing?... challenging?... exactly what is needed?...

Stage 4. Verification

Knowing what you now know... about the next episode of your adventure... that is now to come... How might you start to grow?... How might you be the change... and bravely explore the you that you don't yet know? Will you soon be able write down or record your inspirations and insights, and those things that you now see as the very best of you, so that you can review these when you *feel* the time is right and when your conscious mind *knows* that you can take that time...

The process will naturally come to a close when you begin writing or begin recording those important thoughts and feeling. You may like to review what you have written or recorded straight away, or you may feel you have done all you can for now and return to it later. *At the Growing Edge* is likely to feel suitable when there is a sense of imminent change i.e. at a time of phase shift. It may also be helpful when there is a *crisis of self* and this process can help to stabilize or revitalize your strengths and your sense of purpose. One client reported that she was initially a little disappointed immediately after the process that nothing vital, or spectacular had occurred. I was about to explain that implicit processes are ongoing and something may yet emerge, but she continued, excitedly, to tell me that the next day she had a most extraordinary burst of insight, an *Aha moment*, that has enabled her to make a vital decision she had been resisting for some years. She was excited to inform me that it is important to be patient.

Review

This chapter has a lot of elements, but they are all concerned with ways in which Mirroring Hands can be helpful for someone outside of a formal therapy session. We have also been clear to say that we do not want people to go into unknown, and potentially risky, emotional and implicit territory without someone to assist and care

for their wellbeing. In that light, Mirroring Hands is a process that can be utilized in many ways not only in a professional setting, but also as a solo and caring practice.

The “differences” between the hands has largely been described as something that is in the *mind’s eye*, or is effective even if it is only an imagination. Mirroring Hands is a personal and subjective experience where the realizations and transformative changes that result are what is truly important for you. That still leaves us with the curious question as to whether there really is a biological energetic difference between the hands. This is an interesting question that warrants investigation. The next chapter shares the data from a set of experiments we conducted using a device that measures electrovoltage differences and changes over time. We have correlated these graphs with the phenomenological experience of the experimental subjects, including experiments conducted with the authors.

Chapter 14 Research & Experiments

The Electrometric Correlates of Therapeutic Consciousness and Cognition

ER: *Every psychotherapy encounter is a field experiment, according to Erickson... I would like to get a wearable bio-recording device... just slip it on, wireless... let the person live their normal life and after a week, get the patterns. We should see the patterns of the 90-120 minute ultradian cycle appear spontaneously...*

RH: *I guess we're not really able to do that yet, but I really felt this Pico apparatus showed me an "energy trail" that mirrored what was happening in my mind. I'm quite convinced it's showing my mental experience, you know, not just sweaty hands, um, an electrodermal response...*

ER: *Yes! When you do an EEG, you don't call it a scalp response, it's coming from the neurons, or call an ECG a chest response, you know it is coming from the heart... so, a lot is at stake here. Do we just stay at the "skin" level of cognition, or do we find a connection between the cognition and what's really going on in your brain at the quantum level?*

RH: *... everything we observe is a macro world reflection or expression of deeper quantum activity...*

ER: *Yes... I think we can assume our Pico research is a physical manifestation, observable to the human eye, of what is going on at this deep, deep level of the quantum. It's a way we can "see" what is happening at the energetic level.*

The experimental results we recount in this chapter are the current version of experiments that originated in the pioneering work of Milton Erickson and Leonard Ravitz about three generations ago¹⁹¹. As we detailed in Chapter 1, Ravitz was a pioneer in the measurement of human electrodynamics. He and Erickson explored these energy changes in subjects during hypnosis in the 1950's. He and Erickson mentored Rossi in the use of the measuring apparatus during the mid-1970's, much of which is documented in Ravitz's book, *Electrodynamic Man*¹⁹² (2002). As far as we know, Ravitz's¹⁹³, "*Electrometric Correlates of the Hypnotic State*", was the first and only scientific paper on hypnosis ever published in *Science*.

In those days, Ravitz used a Burr-Lane-Nims microvoltmeter, which had “clearly demonstrated that in vertebrates, invertebrates and plants there is a relatively steady, stable voltage gradient of considerable magnitude between any two points—altered only by changes in the fundamental biology of the organism—which exists in well-defined patterns characteristic of the species and to some extent characteristic of the individual.”¹⁹⁴ One sensor is attached to the forehead and the other on the palm of either hand (these experiments only tested one side of the body) resulting in a single line, continuous tracing of the energy fluctuations in the subject’s mental experience. Figure 1 shows that, during hypnosis, the electromotive force (EMF) tracing becomes more regular, and then either gradually increases or decreases in magnitude. At trance termination, there is usually a higher measurement than the normal waking state. The tracing eventually returns to that of the normal waking state.

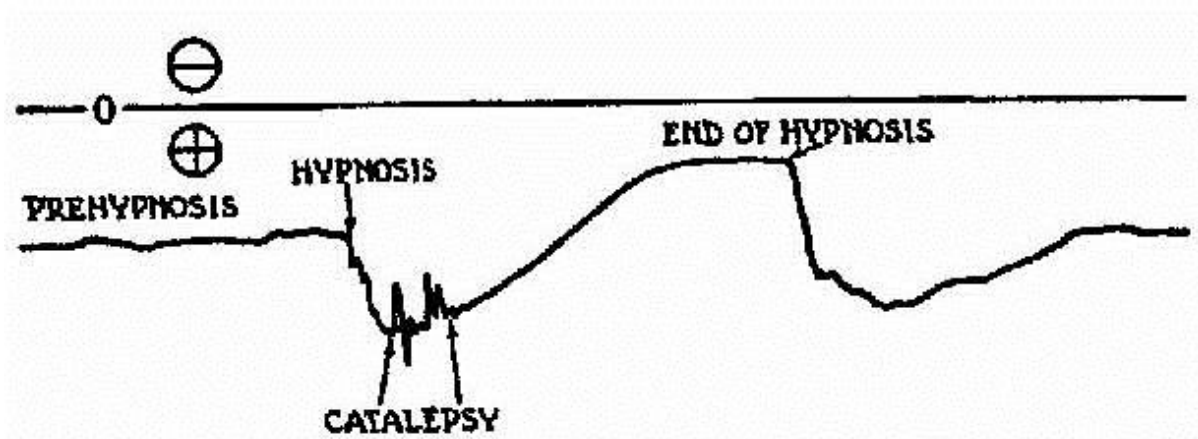


Figure 7 - Schematic DC record of hypnosis as it originally appeared in Ravitz¹⁹⁵, 1950.

Catalepsy, when used to induce hypnosis, sometimes produced marked EMF changes. Any disturbance of the hypnotic state could be detected immediately by changes in voltage and in configuration of the tracing. It is thus possible to measure objectively changes in depth of hypnosis. During the middle 1970’s, about 25 years after Ravitz’s paper was published in *Science*, Erickson, Ravitz and Rossi used an improved strip-chart recording device (Heath-Schlumberger Model SR-255B¹⁹⁶), which resulted in a more detailed line recording.

The record of a highly intelligent, normal, 24 year old female subject during her first hypnotic induction is presented in Figure 2.

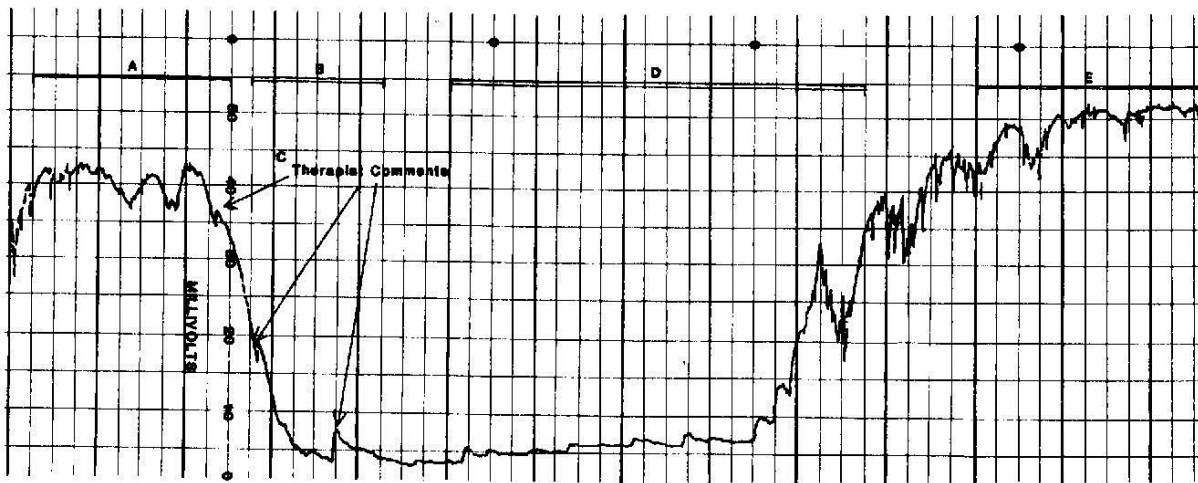


Figure 8: Electronic monitoring of DC body potential during catalepsy in millivolts (mV) on vertical axis, time scale of 0.5 inch per minute on horizontal axis: (A) normal awakens; (B) drop in DC potential during relaxation; (C) momentary response to therapist remarks; (D) characteristically low activity during catalepsy; (E) typical awakening pattern at higher electronic level than (A).

The erratic, fast activity at the beginning of the record (A) is characteristic of normal waking awareness. Every impulse to activity seems related to an upswing, which then drops out as soon as the impulse is carried through. During simple relaxation, meditation, and hypnosis the record smooths out and usually drops dramatically as the subject gives up any active effort to direct mind or body. During (B), a few slow up swings are noted during the beginning of the hypnotic induction, as the subject apparently tries to attend to the therapist's remarks. During (C), these drop out as trance deepens, and the record shows a characteristically flat, low plateau with only low amplitude slow waves. At the beginning of (D), as the trance is deeply experienced, even the low amplitude activity drops out, and a smooth line record is obtained. When the subject remains mentally quiescent with an immobile (cataleptic) body, there are no peaks or valleys in the record. When the subject initiates mental activity in the latter part of (D) the 4-stage creative cycle of peaks and valleys are frequently recorded, albeit with personal variations. The awakening periods at (E) usually appear at a higher level than the initial basal waking level (A). This higher level is maintained for a few minutes until the record comes back to normal.

It is difficult to say that these records specifically measure "hypnotic trance" because similar measures appear for a subject during relaxation, meditation, or sleep. These

states all lower mental activity (lower millivolts) and presumably greater relaxation or inward focus of attention. It is not surprising that the body responds with similar energetic patterns when moving through a mentally calming experience of whatever type. That does indicate that the energetic change the line graph depicts is a natural psychobiological process that is occurring *within* the subject. The value of the line graph as a therapeutic tool is the additional meaning that the subject can decipher as they correlate the line graph with their personal narrative of their experience. Of course, there needs to be more research measuring the validity and reliability of the objective correlations between the amplitude and frequencies of the subject's subjective experiences. It would be interested to explore how the EMF line graph can be utilized as the subject. Is there a potential for biofeedback as the subject witnesses the energetic activity that is occurring on the objective level and subjective levels? How might that alter therapeutic consciousness and cognition.

The Erickson–Ravitz archival devices are no longer available commercially. The updated technology is a Pico ADC-20/ADC-24 data logger¹⁹⁷ with ± 39 to ± 2500 mV input. This apparatus is an improvement and allows for both hands to be connected at the same time to show any difference in activity between left and right. The following section documents a selection of experiments that show the relationship between the line graph and the subject's felt experience.

Symmetry and Contrast

Case 1:¹⁹⁸ A 42-year-old woman who was a well-functioning CEO of a business enterprise sought assistance in resolving an important and stressful business issue. The line graph in Figure 3 records left and right sides concurrently, in symmetry. Interestingly her left and right side reading were almost identical. The darker line (usually blue) is the right side reading and the lighter line (usually red) is the left side reading. When she was shown this recording she immediately became brightly animated and explained: "Oh! I know what this is all about! Here right in the middle is a high peak when I became excited with a new insight that solved a business problem I've been working on! It was a real 'aha' experience! Then I reviewed it several times with these smaller peaks, and when I was sure I would remember it, I opened my eyes."

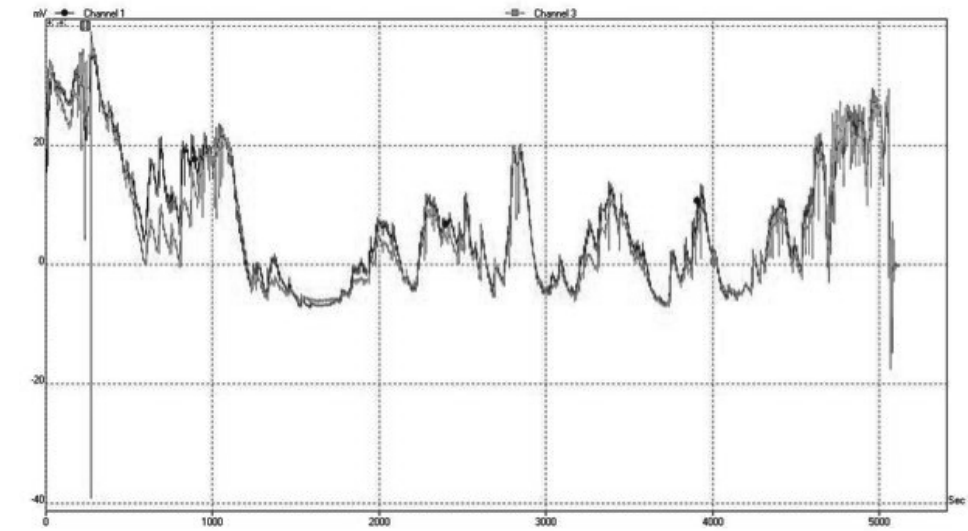


Figure 9: Symmetrical bioelectronics of consciousness (Rossi, 2002; Rossi & Rossi, 2016a, 2016b). Notice the peaking amplitude in the middle of her recording, which apparently recorded an excited Aha! experience (Stage 3), followed by three peaks of mental activity as she reviewed and verified the insight (Stage 4) after which she opened her eyes and returned to full attention (Rossi, 2007, 2012).

These observations suggest how this recording may illustrate the bioelectronic correlates of the 4-stage experience of creative consciousness and cognition during neuropsychotherapy. Stage 1 is the normal default state of ordinary consciousness at about 10 minutes. The initial neuropsychotherapeutic drop of more than 20 mV in Stage 2 is the typical indication of an inner focusing of attention and expectancy for about 15 minutes. In this particular recording, an ascent with a series of 2 or 3 rising peaks for about 10 minutes then culminated with an Aha! peak at Stage 3. This was followed by a series of 3 descending peaks for about 15 minutes when the subject was apparently reinforcing her memory, which culminated in the characteristic Stage 4 peak that was slightly higher (at about 25 mV) than her initial default state.

Case 2: The client was a professional woman who had suffered a hemorrhagic stroke 20 years previously. Her line graph (Figure 4) is recorded in a “mirror” form (as different from the symmetrical form in Figure 3). This subject also experienced an “Aha” moment. This mental insight, or what we can also describe as a *moment of phase shift*, is reflected in the bioelectronic activity measured by the Pico apparatus. Notice how the first 15 minutes of the recording began with the typically downward slope characteristic of hypnotic induction; this was interrupted by a sudden burst of bioelectronic activity at about 17 minutes with a great widening of her quantum electrodynamic field when she apparently “got it,” whatever “it” was. This very

striking expansion (widening) was followed by a symmetrical narrowing of her quantum electrodynamic field, between 0 mV and -5 mV for about 20 minutes. Such rapid changes in electromagnetic polarity were regarded by Ravitz (1962) as heralding significant shifts in consciousness, cognition, emotions, and behavioral dynamics in normal individuals as well as psychiatric patients.

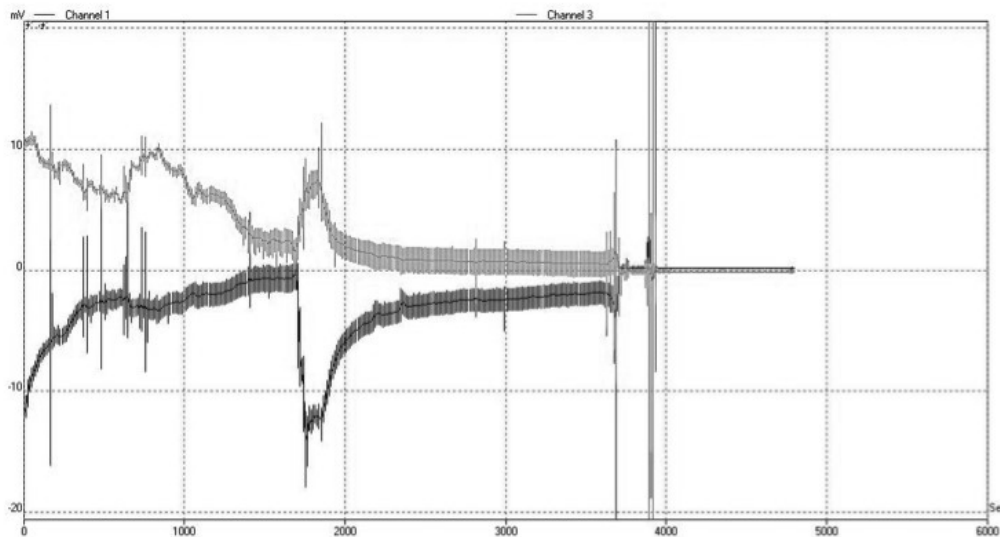


Figure 10: Electrodynamic recording of a professional woman who had suffered a hemorrhagic stroke 20 years previously.

The Rossi/Hill Experiments

During the Rossi/Hill Conversations of 2016, we conducted several experiments using the Pico apparatus. RH was the subject and ER facilitated the experience utilizing a client responsive, Mirroring Hands approach. The Pico apparatus was attached: a central sensor to the forehead, with a left and right sensor to the palm of each hand. The Pico apparatus is sensitive to movement, and so it was necessary to remain still during the experience, although this was not found to be difficult. The value of including these experiments is that we have direct access to the thoughts of the subject and the unusual conditions where the facilitator and subject are discussing the experience as equals, avoiding the stereotypical hierarchy effects of therapist/client.

Experiment 1: The following is an edited version of the notes made by RH within an hour of the session. The notes are followed by an edited version of the dialogue between ER and RH immediately after the experience. The Pico graph is shown in Figure 5. Figure 6 is a cropped image to highlight a specific event during the session.

RH's report:

The Pico system was attached and organized. I sat quietly and comfortably in the chair with no sense of urgency or impatience. ER gave a simple suggestion:

ER: So, what I want to do with this session, I want to rely on your best way of going into self hypnosis, relaxation and meditation, what we have been talking about as a positive and beneficial state of therapeutic consciousness and cognition – just do whatever is appropriate for you, that leads you to whatever you are seeking in this experience.

This request was very suitable for me and within a few minutes I felt very relaxed, with my attention focussed on the feeling of my outward breath. ER made very few verbal comments throughout the experience, but I was comfortable with his presence and the freedom to do as I wished. I took particular care to allow things to happen “all by themselves” and to just accept whatever came into my conscious awareness.

Around 1000 seconds I accidentally dislodged the sensor and caused a large blip on the graph. Shortly after the sensor was reattached, I noticed my little finger twitching. I seemed to have no ability to control it. I remember giving my forearm the mental suggestion that the movement of my little finger was in its control and perhaps it could do something about the twitching. Shortly after the twitching did stop, but I had no sense that I had consciously controlled it. The Pico reading seems to reflect this as a lift in activity of the light line at around 1400 seconds.

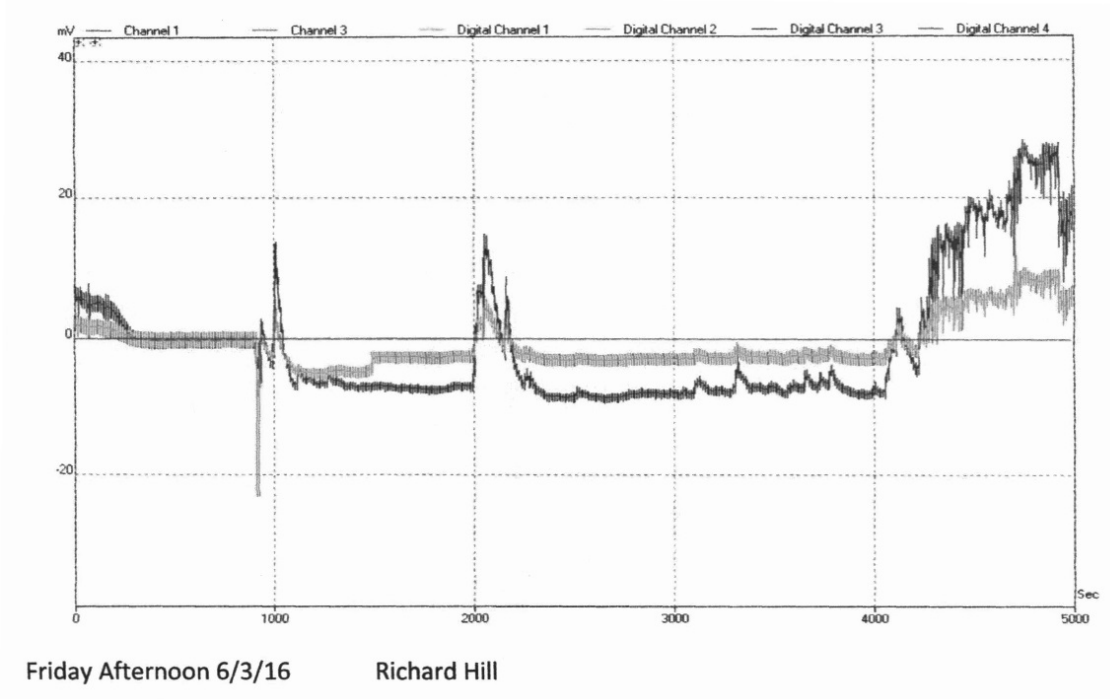


Figure 11: The first experiment with Richard Hill as subject and Ernest Rossi as facilitator

A sudden, unexpected event occurred at around 2000 seconds (Figure 6) that was shocking and disturbing. I remember I was imagining myself in a comfortable scene, something like a café or cafeteria. I was sitting at a round table. There were other people in the room. Suddenly there was something like a brightening of the light and then, almost like an atomic bomb blast, “whoosh”, everything was destroyed, vaporized. I remember having a physical reaction, most notable a sharp inward breath that made a clacking sound as my tongue and velar rattled with the sudden breath. I felt myself stiffen and my brow furrow, but I also felt no need to open my

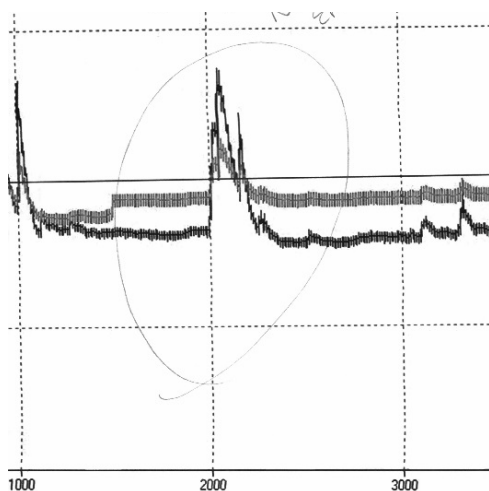


Figure 12: Highlight of the catastrophic event in the first experiment

eyes or change my body position. I found that I was still alive, somehow not annihilated, although I was now in a barren, cloudy, light filled scene. I looked around for the cause of the blast, but soon decided it pointless to continue investigating. I returned to a relaxed state and surprisingly quickly, I began to visualize more scenes. The Pico reading shows the rapid increase at the catastrophic event, but also the rapid drop in energy very soon afterwards at around 2200 seconds when I returned to relaxed

visualization. The darker line dropped even lower and this seemed to reflected my feelings that I had gone deeper into my imaginings.

I went on to experience a number of visual thoughts that had no dialogue. They came in and out like short vignettes. Not all the scenes were relevant, but I seemed to be know which ones to give heed. Several scenes left me feeling “out there on my own”, which made me partly sad, and partly accepting that this was just a truth for someone at their growing edge. Two very meaningful scenes, that were set in the future, played out in my mind, (which are not being included here) followed by a series of scenes that left me feeling positive and hopeful about the upcoming process of writing the book. I didn’t notice how much time had passed, but I eventually noticed some involuntary movement in my foot, that is reflected in the activity at around 4100seconds. This expanded to leg twitches and it became clear in my mind that the experience was drawing to a close and I was implicitly telling myself to return to general attention.

I opened my eyes and looked over to ER. He raised his eyebrow lightly in a pleasant “welcome back”. ER invited me to speak about my experience, but only if I wished. I did wish as I was keen to recount the “disaster” event.

Following is an edited transcript of the conversation immediately following RH’s return to general attention (around 4600). The Pico recording continues for a while as we spoke:

RH: It was quite an event! It felt like a catastrophic event that was happening to me... I was disturbed, but, strangely, not distressed.

ER: Just continue with your recollection. Do you see on the graph that you are coming back to your normal state, but you can see that you certainly had quite an event.

RH: But, see how I became quite content again... I enjoyed a whole series of visual imaginings that seem to show up in the peaks in the darker line 3100 to about 3900. But, that event was like an atom bomb. I think I eventually said to myself, “I survived. It hasn’t killed me. I’m still here.” I want to share with you

that my life has been like that. I'm going along well and then suddenly a catastrophe. That has happened quite a few times...

ER: *Wow!*

RH: *This reminds me... I've never been destroyed...*

ER: *Fortunately...*

RH: *Yes... it's good now... good.*

ER: *But we caught a mini psychological trauma of some sort?*

RH: *Yes, but not from within. It came from without.*

ER: *Out there... in the environment?*

RH: *But I didn't take it personally.*

ER: *Good!*

RH: *That helps... it helps... yeah.*

RH's Therapeutic review: The most prominent issue in my mind is most likely to be the task of writing this book because it is both exciting and filled with risk and difficulty. I feel that I was trying to tell myself that no matter what the world throws at me, I will survive – as I have many times before. Despite the financial catastrophes in my life and the emotional losses, I have always survived. The two main visual imaginings during the session (not included for privacy) demanded that I make a decision, or at least to choose a direction. It may be that I tend to wait for a catastrophe before I choose a change in direction? The setting for this session is that I am sitting in a room with Kathryn and Ernest Rossi, as we explore not only the book, but what is likely to be a new direction in my life. I feel I am being *informed* by my inner mind that it is not what the world throws at me that is the concern, but that I quickly and comfortably return to what my own mind can create.

Experiment 2: The second solo session was held the next morning. The Pico graph is shown in Figure 7. The induction was similar with ER inviting RH to find his own best therapeutic consciousness and cognition in order to find whatever might be found. This session, however, proved to be a very different experience. About half way through RH chose to open his eyes and engage with ER, although remaining in a relaxed, almost somnambulistic state. RH and ER watched the progress of the Pico readout on the monitor and discussed how this related to RH's experience.

Following are edited sections of the conversation:

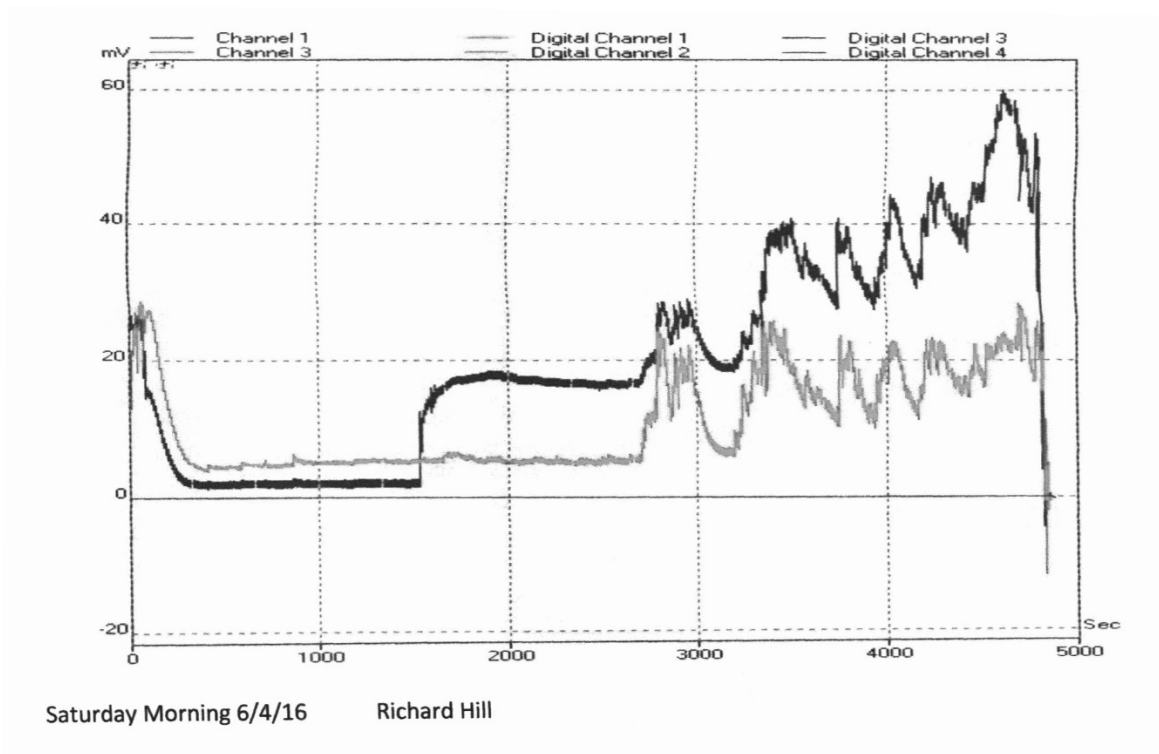


Figure 13: Second experiment with Richard Hill as subject and Ernest Rossi as facilitator

ER: ... and this is where you seemed to wake up a little (900)... and then slip back into trance even as you gazed at the screen... Now you are waking up more (1800)... you have the... the choice... to go back or stay out... it looks as though there is a struggle?

RH: Yeah...

ER: One part of you wants to come out...

RH: I keep telling myself to wake-up, but look at the red line, it's going "noooooo.." I need a little more...

RH closes his eyes and relaxes... opening his eyes again around 2800.

ER: (3200) O.K....

RH: Yeah, ah... my red line is... suddenly much more active... but my blue line is going off into the stratosphere...

ER: Holey smoley... some part of you went off... heading towards 40...

RH: Yeah...

ER: ... and what is your intuition as to what the blue is recording and what the red is recording?

RH: I feel that the red is my comfort... err... the blue feels like an activity... but I'm not sure what that activity is... I can see that a lot is going on, but... I can feel the red line more...

ER: uh huh...

RH: ... it's like waking up at 2am... somnambulistic...

ER: ... I have imagined the blue line as the observer, constantly monitoring the outside world...look it's going up again...

RH: Oh, my...

ER: The observer going up and the comfort still ok...

RH: I'm listening to you, but mostly I am interested, I'm curious...

ER: Oh, my... are we recording curiosity!

RH: ...it feels like it...

ER: How curious and profound that the lines are still apart, although they are following a similar path... I don't know which is the leader and which the follower?

RH: For me, I can feel the difference and now I can see the difference. The right and left side can be doing something different, but still be connected and working towards something that helps the whole of me... look, I am going up again (4400)... these are big thoughts... but comfortable is good with it all, still 25 or so...

ER: So this is, I believe, this is where the cognitive is matching what is within us... somehow reflecting in the macro, conscious level, reflecting something...

RH: ...that everything is made of the same conceptual stuff...

ER: Protons, and electrons, positrons and gluons, the fundamental particles.

RH: That's the nature of the particles, but even they are fundamentally inherent of a concept...

ER: Yeah...

RH: ... and that concept pervades... and it's expressed in everything else...

ER: Yes...

RH: ... so an activity of the biology is reflected in the psychology...

ER: ... and as you are expressing yourself, your blue line is taking off, while the red line is staying comfortable. It's like your intellectual functions are

manifest in your wonder, your curiosity, an intellectual adventure... you feel confident, no threat to your integrity, like an oboe player going on a riff... while the inner you feels confident that you could create an original bit... this graph looks so different from yesterday's.

RH: *Yes... and phenomenologically, my visual experiences were different from yesterday...*

ER: *The shock was yesterday...*

RH: *... but today is more interesting, maybe because of yesterday... that blue line has been...*

ER: *Yes, this is your curiosity, being at your growing edge...*

RH: *Yet, I'm comfortable...*

ER: *Exactly!*

Therapeutic review: The benefit of this experience is well captured in the conversation. It was not only the deep inner reflection of RH, but thinking about these reflections in connection with the activity recorded in the Pico graph. Even though we have not yet done the science to exactly show why the left and right energy measurements are different and how these different levels co-exist to produce a single conscious experience, there is no denying that the differences were evident and that RH could translate the technical data into a positive personal perception. Is this the same as the translation of a technological measure as shown in the locked-in patient experiments in Chapter 7? Arguably, yes. This is another interesting question for future research and investigation. The deep realizations of RH, that ER described as a creative “riff”, is a major breakthrough of this experience. These thoughts emerged into consciousness from the creative interaction between *both* RH's implicit natural problem solving processes *and* the conscious translation of the information in the Pico graph.

Review

All of the subjects were able to remember important moments of emergent insight and then recognise the corresponding spikes in the Pico graph. This was very clear to the business woman in Case 1, and the stroke victim in Case 2. RH was also able to relate conscious experiences with movements in the line record on the Pico graph. What is equally fascinating and somewhat surprising is when RH reported conscious

perceptions that did *not* correspond to the movement of one or other of the graphic lines. Because it was possible for RH to watch the Pico graph emerging, we could witness the real-time *incongruence* between conscious perception and the implicit state that the Pico graph recording. In fact, the “red” line of the Pico graph was translated by RH, at one point, to be implicitly telling him that it was more beneficial for him to quieten conscious, cognitive activity and return to inner reflection. If the therapist is sensitive to both the cognitive responses of the client *and* the implicit quantum qualia that the client may be expressing in various non-conscious ways, then the therapist’s client-responsive improvisations will be deeply in tune with the client. Even though it may feel as if it happening *all by itself* i.e. without conscious direction, these improvisations enable the client to tune into their own problem solving and mind-body healing.

The experiments with the Pico apparatus in this chapter show:

- that it is possible to have distinct differences between left and right fields of the body
- that this can be measured energetically in the hands
- that these measurements can be correlated with the phenomenological experience of the subject.

There is, of course, much more research required and more questions to be posited as we seek to better understand the mechanisms of Mirroring Hands. One of the most interesting, but demanding, fields of enquiry is to explore what is happening at the micro scale of energetic activity. To explore what is happening to produce variations in electrodynamic activity, we must explore the quantum world, which is very different from the “classical”, or macro, world we know. Although physicists are yet to understand exactly how the two worlds co-exist, there is no doubt that what happens in our observable world is a manifestation of things that also occur in the quantum field. The next chapter takes us into that extraordinary world and we share our investigations of how, among other things, our natural rhythms and cycles are the felt experience of something very small and very extraordinary.

Chapter 15

Down the Rabbit Hole

Quantum and the Yet-To-Be-Known

ER: ... *it's even deeper than being a facilitator... throughout history wise people have written lines of poetry about light... modern concepts of consciousness are tied to the amplitude, or intensity, of when you get enough... the human eye can, supposedly, make out one photon, although others say 5 or 6. How many photons do you need to get an idea from the unconscious – the quantum – up to the threshold of intuitive awareness? Then curiosity carries you through...*

RH: ...*so... it's not just science, it's a feeling... can we really feel the quantum? I think I did... well, something... during our Pico experiments... quantum, what an exciting mystery!*

from the Rossi/Hill conversations, June, 2016.

What does it *mean* to understand Quantum Field Theory? What do I need to know about it, and why? What does it do for me? The problem of understanding Quantum Field Theory is in Stage 2 of the creative cycle. It is difficult and testing and can seem distant, and even unnecessary for daily living. This, however, is natural for Stage 2, as we progress towards the breakthrough that releases the creative changes and growth that will, eventually, emerge out of this new information. At the moment, many people are in Stage 2 and the mere mention of quantum can be enough to make some eyes glaze and brains shut down.

Stage 1 has been progressing for more than 100 years. There were many people involved in the development of quantum theory. Contributors include, in the early stages, Max Planck¹⁹⁹, who was challenged by Albert Einstein²⁰⁰, who was then challenged by Niels Bohr²⁰¹. The French physicist Louis de Broglie²⁰² expanded on special relativity theory's concept that particles can exhibit wave characteristics and vice versa²⁰³. Modern quantum mechanics was established by 1925 through the work of German physicists Werner Heisenberg²⁰⁴, Max Born²⁰⁵, and Pascual Jordan²⁰⁶ and the Austrian physicist Erwin Schrödinger²⁰⁷. Heisenberg formulated his uncertainty principle in 1927²⁰⁸, and he and Niels Bohr developed the

Copenhagen interpretation²⁰⁹ around that time. Also around that time, Paul Dirac began the process of unifying quantum mechanics with special relativity by proposing the Dirac equation²¹⁰ for the electron. The Dirac equation achieves the relativistic description of the wavefunction of an electron that Schrödinger failed to obtain. We explore Dirac and his important equations in the Science Appendix where we publish ER's paper titled, *An Integrated Quantum Field Theory of Physics, Math, Biology and Psychology*.

So, you can see that quantum theories are not new, and have developed out of the greatest minds in physics. We are only now beginning to get some insight into what the personal relevance and value of the quantum world might have for our daily living. We are beginning to *feel* that the quantum world might be helpful for us. The struggle to make it so has produced a number of popular interpretations that seem to be quite wrong, but, perhaps, are just part of the struggles of Stage 2. Some, perhaps, are just finding a quick way into people's wallets, but let us leave that aside as we explore the possibilities of the quantum world for meaning and purpose in our day to day living, the practice of psychotherapy, and all the healing arts. Research is revealing that quantum processes are not so distant or unnecessary for some very familiar processes including photosynthesis in plants, and, possibly, our sense of smell. Perhaps we might begin with another story of birds.

The European Robin

There is no doubt that the quantum world is a very different place. It is described as spooky²¹¹ and weird, but this is because it is a world where particles can exist in two or more places at once, spread themselves out like ghostly waves, tunnel through impenetrable barriers and even possess instantaneous connections that stretch across vast distances²¹². We hope that you explore these mysteries of the quantum world beyond the pages of this book, but it isn't absolutely necessary for you to know the fine detail of these quantum behaviors. For this chapter, we are going to ask you to accept that these weird qualities *do* exist. We live in the "classical" world, largely based around Newtonian physics²¹³, which is also called the "macro" world. We live within a set of natural "rules" that apply even to quite small objects that we can only see with a microscope. The quantum world is even smaller and exists in sub-atomic space where the rules can be very different.

How do the activities of these sub-atomic particles help the tiny European robin fly large distances without a compass, or even the ability to recognize landmarks, and still arrive exactly where they need to go. Quantum theory suggests a possible answer and an example of how quantum behavior contributes directly to classical world functions. Studies of the European robin suggest that it utilizes the quantum concept called *entanglement*²¹⁴, which Einstein called a “spooky action at a distance”.

Entanglement is the quantum phenomenon where two separated particles maintain a correlation regardless of the distance between them. The electrons in an atom are not like orbiting planets, but exist as a wave of probability around the nucleus. In atoms with more than one electron, like helium, it is possible to separate the electrons from the nucleus for a brief period. The electrons can return to their stable state only when they return to their correct, and correlated, alignment. In simple terms, they have an up and down state and the electrons need to be in the opposite alignment for them to overcome what is called the Pauli Exclusion Principle²¹⁵, which means they cannot recombine with the nucleus until aligned. Studies have shown that electrons that have been separated are affected by a magnetic field²¹⁶. In the retina of the European robin, and perhaps other species, a photon of light entering the eye will strike the atomic particle, separating the electrons of an atom²¹⁷. The energy of the photon is absorbed by the collision and so it does not continue to the optic nerve to contribute to visual perception. Remember, we are only talking about a very small percentage of photons striking atoms. Most continue to the optic nerve for normal vision. These separated, but entangled, electrons begin to wobble in relation to the magnetic field, something they did not do while in a stable, entrained state. When the robin flies in the right direction, the electrons are oriented by the magnetic field into the proper alignment and the electrons recombine. When the electrons recombine, they release the energy they absorbed from the photon, which is received by the optic nerve. This is perceived by the robin in a way that it can “see” which way it needs to fly.

It is not that the robin has a conscious thought about electrons being in correct alignment. The robin, most likely, simply has a sensation that flying in that particular

direction is beneficial. This is a subjective experience of what it is like to be flying in the right direction. In humans this type of subjective sensation or feeling is called *qualia*²¹⁸. We don't know whether the European robin has the sense of qualia, but if it did, we suggest that the sensation is better described as *quantum qualia*²¹⁹. We will describe how humans might have quantum qualia in our experience of smell shortly, but first, we explore how a process that is fundamental to our survival is made possible through quantum activity.

Photosynthesis

Photosynthesis is the process by which the chlorophyll molecule in plants captures the energy from light, but this works with high efficiency because of the process of *quantum coherence*²²⁰. In simple terms, when a photon hits a chlorophyll molecule, it energizes one of the electrons, which is converted into what is called an *exciton*. This *exciton* passes through the cell as an energy packet to enable the conversion of carbon dioxide to create the plant. It has long been puzzling to naturalists that the energy of the *exciton*, despite being transported through the cell, is preserved at close to 100%. Classical physics suggests that it should take some time to bounce around inside the photosynthetic machinery in the cell, and lose considerable amounts of energy, before emerging on the other side. An experiment, first carried out in 2007 in Berkeley, California, showed how the energy packet achieved the extraordinary feat of choosing the perfect pathway each time. It did this by not acting like a particle, but as a quantum wave. In the quantum state, the energy packet is able to be in what is called quantum superposition, or to be in all positions at once, like a spread-out wave. The best possible pathway was then actualized, and the energy packet arrives both quickly, and with a minimal loss of energy. This can only happen in the quantum world at the sub-atomic level of energetic particles. The quantum process in photosynthesis is directly responsible for the efficiency of plant growth and, possibly, the subsequent survival of life on earth.

Our Sense of Smell

Smell is a very important sense in humans and can stimulate vivid memories and emotional responses. It is now theorized that our sensitivity to smells is directly facilitated by quantum behaviors. The early theories were that our nostrils were able to distinguish different odors through molecular receptors in the nasal cavity. The

challenge to this theory is that some molecules are very different, yet have similar smells, but others are very similar, but have very different smells. The molecular difference between vanilla and eugenol, for example, is very small, but eugenol smells like cloves. Luca Turin, a chemist at the BSRC Alexander Fleming institute in Greece, suggests that the key was not the shape of molecules, but the quantum properties of their chemical bonds²²¹. When the molecule of an odor attaches to a receptor in the nose, it is reacting at the quantum level of energetic bonds. As a result, an electron is energized in a particular way and is able to do what is called quantum tunnelling.

In quantum tunnelling, an electron can jump from point A to point B without actually having to travel through the space between. Weird, we know, but just accept this for now. When the electron leaps to the other site of the receptor, it is thought to trigger a signal to the brain that the receptor has come into contact with that particular molecule. Turin tested his hypothesis by testing two odor molecules that had very similar chemical bonds. He knew that *sodium sulphide* smells like rotten eggs. He then tested *borane*, and it did, indeed, smell very much like rotten eggs.

The qualia of smells, therefore, is more than a subjective sense of a classical world observation. It fits with the concept of *quantum qualia*. How much of our subjective experience, our *felt sense*, has a direct relationship to our sensitivity to quantum qualia is not known because we are only at the beginning of discovering how the quantum world is experienced in the classical world. We urge you to discover more about our explorations into the knowledge of quantum field theory and how it can inform us about psychotherapy, and Mirroring Hands, in the Scientific Appendix, but first, let us prepare our minds a little more.

Can We Be Quantum? Let There be Light!

If we are made up of all these atoms and these sub-atomic particles, then why can't we be in two places at once, pass through walls, and communicate instantly across distances? The link between the quantum world and the classical world is still one of the big questions of physics and has perplexed greater minds than ours. It may be that once particles become plentiful enough to create complexity that this disrupts quantum phenomena. We just don't know, but we are a body of trillions of cells and

quantum weirdness seems to shift at some point. It *is* possible to have objects of the classical world behave in quantum ways, but they need to be frozen to near absolute zero and be in a vacuum, which is not much like the classical world. Quantum sceptics like to cite this misconception - that the quantum cannot be associated with life because life could not exist near absolute zero. ER tells this story:

ER: Recent research finally convinced me of the reality of the human ability to sense, perceive and respond to the quantum level. It proves that the quantum underpins sensation and perception, which is, of course, the basis of consciousness, cognition and behaviour. A generation ago when scientists first tried to measure how many photons... you know that photons are the smallest particle or unit of light and are quantum particles²²²... the split screen experiments²²³?

RH: Yes, Ernie, both particles and waves...

ER: Right... anyway, the scientists wanted to know how many photons were necessary to hit the retina before we could see light. At first, they found varying answers from hundreds to thousands or millions of photons depending on how sensitive their measuring devices were. As their measuring devices improved over the years the number of photons needed to see light gradually became smaller and smaller. Finally, it was confirmed that a single photon was all that was necessary²²⁴. Clear evidence that we are quantum creatures, and at room temperature! The implications of this sensitivity to the quantum qualia is at the core of human experience. This is profound! (from the Rossi/Hill Conversations)

Erwin Schrödinger, who was so important in the development of our understanding of the quantum world, mused philosophically in his book, *What is Life?*²²⁵ He suggests that the quantum world might provide the *order* to maintain life in the classical world that, according to the laws of thermodynamics, moves towards increasing disorder. Schrödinger suggested that the inheritability of DNA, which is achieved with molecules made of very few particles, does not seem to fit with the thermodynamic rules of order moving to increasing disorder and increasing complexity. Paradoxically, living organisms are very orderly. Is Schrödinger right when he suggests that the order of living organisms is based on an as yet unknown

connection between the *order* of the quantum world and the *disorder* of the classical world? We wonder if this has any bearing on the way our hands seem to move all by themselves and the implicit capacity for problem solving and mind-body healing? Are these expressions of quantum qualia? Is our quantum qualia sensitive to the energetic states of the quantum world and how does this relate to the energetic states of the classical world? We just don't know, yet.

ER believes that the next step in advancing the evolution of psychotherapy is to answer these questions, and more, about these classical/quantum transitions in everyday life, which must also underlie psychotherapy. The Scientific Appendix following this chapter explores some of the more profound implications of this search:

The major practical implication for our integrated quantum field theory of physics, math, biology and psychology for the current evolution of psychotherapy is to help people learn to value, and appropriately tune in to, the most highly sensitive and ineffable quantum qualia of their observer/operator. This is how people can be helped to navigate the perils of everyday acute and chronic stress that generate the most common forms of psychopathology and the addictions. We need to do away with the common disparagement of subjective experience, of intuition, and imagination. The pursuit of the so-called virtues of 'objective thinking' and the so-called 'rational' can so easily become corrupted by narcissism, ego power, advertising, avarice and war in cultures that over-value competition... whatever the cost. We need to transcend the rather stale reductive ideologies and manipulative models of psychotherapy... and return to the living, experiencing, and primacy of the vivid quantum qualia of the Novelty-Numinosum-Neurogenesis-Effect (NNNE) to realize our best creative selves and... focus on how *the quantum qualia of the human observer/operator during subjective experience* of the here-and-now can be a *causal agent* in facilitating health and problem solving *on the objective molecular/genomic level...* (from the Scientific Appendix)

What About Energy?

The authors, have discussed this topic at length. It can be difficult and contentious to use the word “energy”. At the quantum level, energy is fundamental²²⁶. There, is however, a degree of abuse by pseudoscientific practitioners that creates confusion in the meaning and usage of “energy”. Some would have you think that it is a power that can be accessed to raise you up above others, or give you some advantage. Energy isn’t magic, nor is it the mystical panacea that will cure all problems, nor is it the source of power that gives you the advantage over others, over nature, and over the balance of possibilities in the universe. That may be more to do with the winner/loser world than good science. Even when we do talk diligently about energy, it is important to bear in mind that there are different conceptions of energy²²⁷. Energy can be expressed in various forms including kinetic; electrical; chemical; heat; light; sound; and vibrational. Energy is also a *potential* that is inherent in an element, but that energy is not expressed, or experienced, until there is an external disruption, like being struck by a photon, or an interaction with a point of difference, such as a difference in electrical charge or polarity. Energetic processes are occurring at fundamental particle levels during therapy which are experienced as subjective sensations such as cathartic shifts, aha moments of insight, and phase shifts through the 4 Stages of the creative cycle.

It is an energetic process that drives the molecular activity of brain neurons that underpins consciousness and cognition. The ionic charge across the membrane of an axon in the brain changes to create a difference in the ionic (electrical) charge²²⁸. That triggers a process where positively charged sodium ions enter the axon which then causes slightly differently positively charged potassium ions to leave the axon creating an energetic flow along the axon to the synapse. If there is enough activity energized at the synapse, then particles are released into and across the synaptic cleft to the next neuron. If the energetic activity continues to flow from neuron to neuron, then there is an ongoing *action potential*²²⁹ that produces a neuronal pattern, or system of neurons. This pattern of neuronal firing produces an information set²³⁰ that is translated into a thought that emerges into our conscious awareness. We still do not know how the energetic activity of a set of neurons becomes a conscious thought (Chalmer’s, Hard Problem²³¹), yet, but it does. The activity of the brain is all about flows of energy, and the information that the energy flows represent²³². That process occurs *all by itself* and we only become aware of it when it is translated into

something we can consciously experience. Quantum mechanics is fundamental to parts of that process. We don't know exactly how that works, either, but, as we have described previously, our task, at the very least, as a facilitating therapist, is to be sensitive to the emergent properties, to observe and respond, in the relational improvisation that is the therapeutic experience with your client.

The Quantum Qualia of Health and Well-Being

Our attunement and engagement, through sensitive observation and intuitive awareness, guides us to know when we are experiencing the most beneficial neural patterns, the most beneficial somatic states, and triggering the most beneficial neuro-psycho-biological state of being in which to function, survive, reproduce, and thrive. We may be as naïve to the deeper energetic activity as the European robin is to entangled particles. Philosophers, artists, and poets have been speculating how to recognize these ideal states for millennia. Positivity, kindness, compassion, love, goodness, strength, comfort, peace and well-being are all suggested as indicators we are in the best state of being²³³. These are, potentially, the quantum qualia of energetic attunement to the ideal state for being human. ER published a paper over ten years ago titled, *Art, Beauty, and Truth* in the *Annals of the American Psychotherapy Association*²³⁴, which introduced the concept of engaging in and utilizing the qualia of the therapeutic experience. Murray Gell-Mann, the astrophysicist, knew that one of his equations was correct, even in the face of opposition, because it was too beautiful to be wrong²³⁵. What on Earth is a “beautiful equation”? We might equally ask, how does a bird know that it is flying in an alignment to the magnetic field that will take it home? How do we know that we are connected to our inner self when our hands move all by themselves? We suggest that there is a connection through our *quantum qualia*, our subjective sensation of the quantum world.

Is this why it so beneficial to be sensitive to the 4-Stage Creative Cycle, the ultradian rhythm and the ultradian healing response? Is this how we know we are in love? Is this how we know when we are ok and when we are not? Is the purpose of psychotherapy to facilitate the client's sensitivity to their quantum qualia and open the ideal flow of energy and information at the molecular level to produce problem solving and mind-body healing? Can we be sensitive to the very small movements

and shifts in the quantum space that point the way and give us the subjective awareness that we are “flying in the right direction”? Finally, does understanding Quantum Field Theory help you achieve this sensitivity?

These are the questions we leave you to ponder, just as we continue to do. Perhaps it is not necessary to know all this. Perhaps it is enough to trust the feeling of what is best, without needing to know the details behind it. We leave you with a last word from our conversations:

*RH: It is interesting though, every time I learn something about life and the world around me, it's like a springboard at my growing edge. Understanding something new seems to create a shift inside me that stimulates an attraction or a repulsion... my state of being is energised to flow in some way, some direction. I believe that understanding gives me something wonderful, inspiring, and strengthening... it's different for each of us I expect. It must be strange, Ernie, to hear me going on like this after all your years of amazing thought and exploration... you have created so much that has inspired me...
ER: We should write a book about that...*

Closing Words

The purpose of your training is not to learn every technique, but to expose yourself to every opportunity to draw close those things that have a natural rhythm, resonance and profundity with *you*...

... and these may change over time...

... as new things emerge into your field and alter the way you work, but not change what you are working towards: enabling the client, through your sensitive participation and relationship, rather than your expert manipulation and direction.

Scientific Appendix A

The Nuntius Nuclei: A New Neuroscience for Curiosity

Richard Hill MA, MEd, MBMSc, DPC.

Abstract: This paper proposes that the various nuclei that produce and distribute neurotransmitters throughout the brain are the basis of what has been described as the “chemical balance” of the brain. These nuclei, as an integrated system, are named as the *Nuntius Nuclei*. It can be argued that depression is not a chemical imbalance, but the perfect balance of chemicals to produce depression. The feeling of depression is a biomarker of something else that requires attention. If changing the chemical balance changes affect, then it will be valuable to know how to change the chemical balance in the most favorable way, in the fastest way. It is argued that “curiosity” activates all the *Nuntius Nuclei* and produces the most beneficial brain state for therapeutic change and learning. This brain state, contributes a to a curious state of mind that is beneficial for health and wellbeing.

Basically, I have been compelled by curiosity.
Mary Leakey, paleoanthropologist (1913 – 1996)

Therapists and teachers know that interested, curious clients and students pay attention and learn more (Berlyne, 1954; Engel, 2013). Stimulating their curiosity makes the job of therapy and the task of being a client so much more successful and enjoyable (Borenstein, 2002). New research is establishing some of the neural mechanisms that explain the connection between curiosity and learning. Gruber, Gelman and Ranganath (in press, 2014) show that when the brain is in a state of curiosity, learning is enhanced. They noted that curiosity activated the dopaminergic regions of the *substantia nigra*, *ventral tegmental area* and the *nucleus accumbens* which then showed a functional connectivity with the *hippocampus*. They also found that learning is enhanced not just for the target learning, but for peripheral and non-related learning. The implication is that curiosity creates a brain state that is primed for learning. From an educational, and a therapeutic, perspective, producing a state of curiosity is going to be very beneficial for the client’s learning experience.

To facilitate successful therapy, we need the client to be in a receptive and responsive state of brain and mind. This is beneficial for the therapist, as well. This, of course, is one of the reasons why therapy is difficult. Someone with depression or anxiety or in the throes of painful trauma has a brain and mind that is more often closed, defensive, resistant, avoidant and insecure. An important part of building rapport is to establish trust and safety and a sense of positive regard to allow them to move toward beneficial change (Herman, 1998). Whatever change might be made, it will be something that happens at some point in the future. The difficulties are that people get stuck in the past, they can fear or be fearful of the future, and they can be overwhelmed by the present. This is a fracture in their natural flow of life and can be

described as a *disrupted consciousness*. Changing this state of mind, this state of being, is often not an easy task.

As therapists, we want to enable people to move forward into the future with a curious interest to explore possibilities and determine new frameworks for living. Curiosity will facilitate an exploratory mindset (Berlyne, 1950; Dember & Earl, 1957). This needs to occur not only in their conscious, cognitive state, but also in their non-conscious inner world. To shift into a new state of being throughout the whole complex system that is our biology, there needs to be more than just a cognitive rationale, but a re-organization all the way down to cellular and molecular activity. We are beginning to understand how new experiences are encoded at cellular and microbiological structures in various ways including in the DNA as epigenetics (Jaenisch & Bird, 2003) or the immune system as acquired or adaptive immunity (Holtmeier & Kabelitz, 2005). Learning is a very important component of change.

There is an increasing pressure for science to provide an “evidence base” to validate therapy, which has, unfortunately, led to an emphasis on reductionist, linear, causal perspectives (De Simone, 2006). Research is, very often, limited to single events or single elements of inquiry. There are good reasons for this, but the process of integration back to the whole person can be neglected or considered too speculative. Specific information certainly has its place and is vital to differentiating the elements, but our biology, from limbs to neurons to genes, is a dynamic, complex, integrated system that operates in an interplay of activity. Considering the whole being often takes a back seat in the pursuit of single pieces of information that provide evidence for a single response – to find the “magic pill”.

It is, without doubt, vital to know the specific processes of what happens when neurotransmitters are present in the brain and their specific functions in the neuron and the synapse. This information will inform this paper in many ways. It is interesting, however, how these specific functions engage in a collective, dynamic process that emerges as an emotion or behaviour. The “wholism” I speak of is like a concert performance where it is not just the individual players, or that they are working together, but the emergent symphony from all the members of the orchestra that creates a “state of being” and the qualia of the experience.

Is there a neurobiological system that is at the heart of producing beneficial shifts in mental state? By drawing together a broad selection of single domain research, I propose that there is a set of brain regions that act collectively to create the “brain-state” of curiosity. They inform other areas of the brain, especially the mid-brain and cortex, through the regulation of neurotransmitter production and distribution, to create emergent mental states. It is not unusual for brain areas to be considered to act as collective systems: the limbic area; the basal ganglia; the HPA axis to name a few. On a broader scale, each cortical lobe – frontal, temporal, parietal and occipital - is described as having a different collective function. On a broader level again, the left and right hemispheres.

Curiosity will conquer fear even more that bravery will.

James Stephens, Irish novelist (1880-1950)

These brain areas act together in a dynamic interplay that is essential in creating the neuro-biochemical milieu that is experienced as mental state. Within any dynamic interplay there are always linear, causal and specific functions, but if we can suspend linear, left-hemisphere thinking for a moment, perhaps we can allow ourselves to consider a system where the *state of being* we call *curiosity* emerges from the activity of these brain regions as an integrated, self-organizing, complex system.

A curious mental state (Kidd & Hayden, 2015) is when there is:

- Positive anticipation
- Increased focus and attention
- Increased arousal
- Engaged, 'towards' sense of exploration
- Reduction in negative affect and fearfulness
- A shift from feeling isolated to interpersonal relationship
- A satisfying, euphoric reward at points of resolution, insight or realisation.
- Broader learning and memory capacities

The neurobiology of these states are known to be created by:

- Dopamine – positive anticipation; movement toward; heightens attention in the pre-frontal cortex.
- Serotonin – modulates depression, fear and anxiety; regulates aggression; enables positive mood; promotes other neurotransmitter release.
- Norepinephrin (noradrenaline) – stimulates arousal and alertness; enhances memory formation and retrieval.
- Acetylcholine – stimulates arousal, attention, and vigilance;
- Endomorphins – pleasure, pain reduction, and euphoria
- Oxytocin – promotes positive social interaction; builds trust; modulates inflammation; increases empathy; modulates fear and anxiety; increases calmness.

These neurotransmitters and neuro-peptides originate in specific sub-cortical regions. Neurons extend out into other sub-cortical and cortical locations as delivery systems. This creates the neuro-biochemical milieu that collectively modulates and regulates the neural activity that produces our experiential self.

- Dopamine
 - *Ventral Tegmental Area (VTA)*
 - *Nucleus Accumbens*
 - *Substantia Nigra*
- Serotonin
 - *Raphe Nuclei*
- Norepinephrin (noradrenaline)

- *Locus Coeruleus*
- Acetylcholine
 - *Nucleus Basalis*
 - *Cholinergic Mesopontine Tegmentum*
- Endomorphins
 - *Periaqueductal Gray*
- Oxytocin
 - *Paraventricular Nucleus*

The research relating to these regions, the neurotransmitter they produce, and the effect on our state of being is:

- positive anticipation – dopaminergic activity from the *substantia nigra/ventral tegmental area* and *nucleus accumbens* (Knutson et al., 2001; Gruber et al., 2014)
- focus and attention on issues that interested them - norepinephrine from the *locus coeruleus* (Ashton-Jones & Cohen, 2005) and acetylcholine from the *nucleus basalis* (Buzsaki & Gage, 1989)
- calming of stress and hypersensitivity – serotonergic activity from the *raphe nuclei* (Hornung, 2003)
- shifting from feeling isolated towards trust and social engagement through increased receptivity in oxytocin receptors in the *paraventricular nucleus* (Yee, et al., 2016)
- Pleasure and satisfaction – endogenous endomorphin and endokephalin rewards from the *peri-aqueductal grey* (Blood & Zatorre, 2001).

These various brain regions project neurons out into midbrain and cortex to stimulate. Gruber et al., (2014) have shown the connection between the dopaminergic regions and the *hippocampus*; the *amygdala* is known to be calmed by GABAergic neurons that are stimulated by serotonin; norepinephrine and acetylcholine stimulate focus, arousal and attention in areas such as the *pre-frontal cortex* (PFC) and the *cingulate*; and endomorphins and enkephalins stimulate pleasurable reward in the *caudate*, *striatum* and *PFC*. These brain regions, found in the upper brainstem and lower midbrain, are, collectively, the functional structures of curiosity. Their close proximity can be seen in Figure 1.

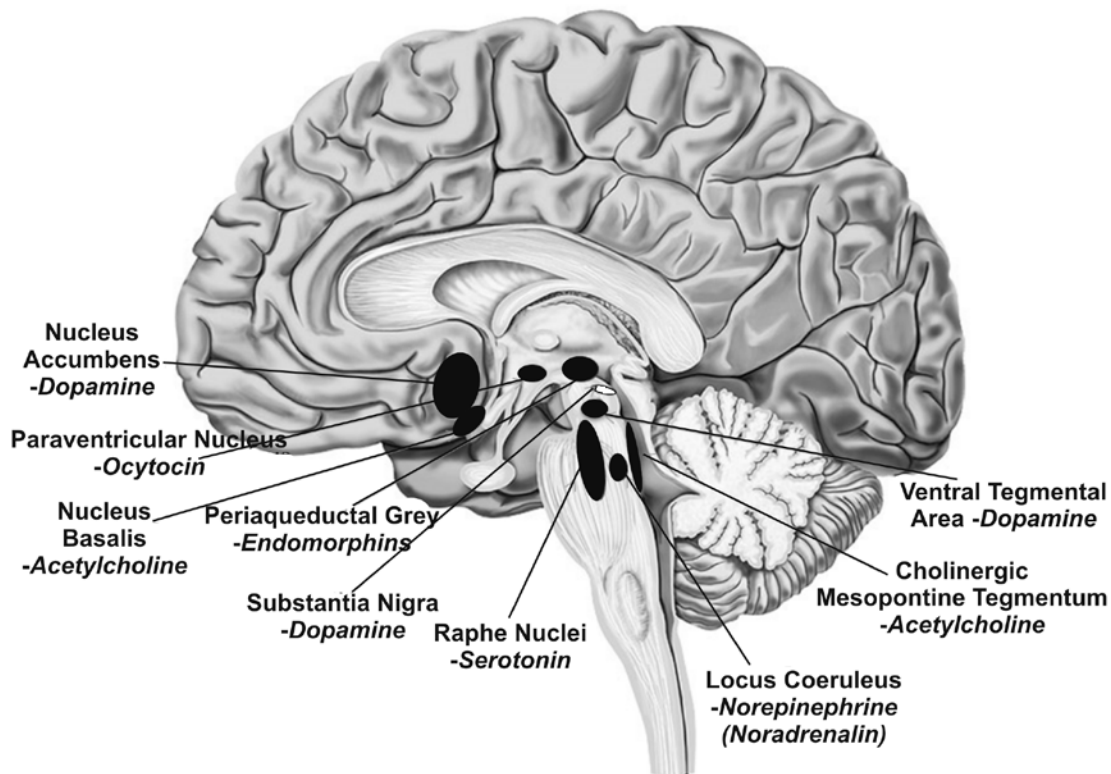


Figure 14 - The Nuntius Nuclei

In determining a name, I was attracted by the word *nuntius* which is Latin for “messenger” or “announcer”. The collective name is, therefore, the *Nuntius Nuclei*. This seems fitting for the nuclei and brain regions that produce neurotransmitters that are the messengers that regulate and modulate the biochemical milieu. The biochemical milieu is a fundamental, contributing factor in how various areas of brain function at any given time, not just in curiosity, so the *Nuntius Nuclei* will be relevant when considering a number of mental states where the biochemical milieu is involved. In the context of curiosity, the *Nuntius Nuclei* produce what I propose is the most advantageous biochemical milieu for beneficial therapeutic change, for learning, and for transformational growth.

We have heard the term “chemical imbalance” used extensively in relation to negative mental states (Deacon & Baird, 2009). It is certainly true that any mental state will have a neuro-biochemical milieu and that some mental states are not preferred or desired. It is logical to try and change the biochemical milieu in order to change mental state. It is important to remember, however, that it may be argued that the biochemical milieu for depression is the perfectly balanced milieu to produce depression. We have been shown that there is, among other things, low dopamine, serotonin and norepinephrine. Even though these conditions are not what most people would consider a “good” chemical balance, the first thing to investigate is what message is being conveyed by the *Nuntius Nuclei* in relation to the whole biological system. What is this state of “depression” telling us about what is happening within the deeper psycho-neuro-biology of this person? That is the first

question as a therapist. We also seek to change that mental state and to do so, we utilize various interventions ranging from psychopharmacology, to cognitive therapy, to mindfulness, to yoga, to embodied relational presence and so many more. The difficulty of therapy is that it is very difficult to change a negative mental state from within that negative mental state. In many ways, that is the intention of psychopharmacology – to change the mental state by shifting the biochemical milieu. Curiosity can change the biochemical milieu rapidly and consistently, and I propose that it does so by directly altering the activities of the Nuntius Nuclei as a mind-to-body effect.

In the light of that, it seems clear that when someone is curious, then there will be expressions of that state throughout their system. Their neuro-biochemical milieu will be of a certain “balance” that is a shift from their presenting milieu. Barbara Fredrickson (2004) opened the move toward understanding the benefits of positive emotions with her Broaden and Build Theory. Her work, and with others, showed that positive emotions are linked with thinking that is unusual, flexible, integrative, creative, open to information and efficient, facilitating approach behaviors and broadening a person’s sense of possibility in the future. These effects were linked with increases in dopamine levels and positive affect enhancement of attention and arousal, which is linked to norepinephrine and acetylcholine. Negative affect does exactly the opposite by closing down broader attention and focus on the cause or experience of the negative affect. In her paper, Fredrickson describes the effects of a variety of positive emotions:

Joy, for instance, creates the urge to play, push the limits and be creative; urges evident not only in social and physical behaviour, but also in intellectual and artistic behaviour. Interest, a phenomenologically distinct positive emotion, creates the urge to explore, take in new information and experiences, and expand the self in the process (Fredrickson, 2004, p.1369)

Fredrickson considered positive emotions whereas Jaak Panksepp has been developing detailed work on our fundamental emotions over several decades. He determined 7 fundamental emotions: four “toward” emotions – seeking, play, care and lust; and three “away” emotions – fear, rage, and panic/grief. His work sheds more light on the neurotransmitters that regulate and modulate these emotional states. He recognized the “... interaction of multiple neural circuits localized in extended brain regions, from the lower brainstem to the forebrain” (Alcaro & Panksepp, 2004, p.1806). He also considers that “...SEEKING energizes activity, and, with the aid of norepinephrine, may increase concentration and effort to achieve one’s goals” (p. 1808). He suggests that anhedonia and helplessness rise when there is a deficiency of the SEEKING emotional disposition and that depression is a “... state of reduced engagement with all aspects of the world, due to an endogenous hypo-functionality of the SEEKING network...”

This makes sense to me as a therapist, but the question is: How do we reinvigorate SEEKING in a person who has no sense of need to find anything? The answer is not

to promote an emotional response – that is counterproductive for someone in depression or overwhelmed by anxiety – but to shift their state of consciousness to being curious *about* their emotional state. Curiosity, as I describe it, has a broad scope that embraces not only the “toward” emotions that Panksepp describes, but also the positive emotions like interest and play, that Fredrickson describes. Eliciting the three facets of curiosity in the client will allow positive emotions and the fundamental emotions to emerge in a way that is therapeutically beneficial. Emotions are emergent qualities from the process of an investigation, an interest in alternative meaning and with the intention of discovering possibilities, all supported by a favourable biochemical milieu. In the state of curiosity the client is experiencing whatever emerges in the framework of possibility that leads to beneficial change. In curiosity everything that emerges is utilized in an objectively positive, creative way. That is why the curiosity approach is both productive and safe.

Conclusion

In conclusion, I suggest that curiosity is a state of mind and a state of brain. Curiosity creates a unique mental state where exploration and discovery are desirable, even when the exploration might be of difficulties and traumas in life. I further suggest that curiosity emboldens a person to look both within and to their growing edge for meaning and purpose. Such speculation requires research and verification, but I believe there is enough evidence available now, albeit disparate, to make these conceptual propositions. If we prime our mental state with a sense of interest and wonder; seek out something that is beneath the obvious and superficially apparent; and finally look to create something new, meaningful and self-relevant from this, we can have a positive effect on not only learning, but also personal growth and all the subsidiary growth that occurs on an interpersonal and inter-environmental level.

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Science Appendix B

An Integrated Quantum Field Theory of Physics, Math, Biology & Psychology.

Ernest Rossi, Ph.D.

Part One: A 100 Year Perspective of the Evolution of Psychotherapy

Abstract

We use the new quantum magnetic resonance microscope to review and update the foundations of the Evolution of Psychotherapy with an integrated quantum field theory of physics, math, biology and psychology. We review the top-down psychosocial genomic and cultural perspectives that integrate consciousness, cognition and the 4-Stage Creative Cycle with its molecular-genomic RNA-DNA building blocks. Heisenberg's Uncertainty Principle is used to re-conceptualize activity-dependent gene expression, brain plasticity, consciousness, cognition, and dreaming as the new foundation for an integrated quantum field theory of the evolution of psychotherapy. We update Dirac's transformational equation set integrating early quantum dynamics with the new zx-calculus that is more appropriate for visualizing and computing the cycles characteristic of life, consciousness and cognition. We generalize the observer-operators of quantum physics to the molecular biology of the 90-120-minute Basic Rest-Activity Cycle and the 4-Stage Creative Cycle of psychology. We report clinical case studies illustrating how the quantum qualia of these observer-operators are evident in everyday human consciousness and cognition during a wide range of experiences from negative stress and psychopathology to positive life transformations. We propose innovative quantum field theory research to document how the observer/operator in subjective experience can be a causal agent in facilitating health and problem solving on the objective molecular/genomic level in everyday life as well as psychotherapy with the zx-quantum calculus.

Key Words: Biology, Bra-Ket notation, conflict, cognition, consciousness, creative, Dirac, expectancy, experimental, mathematics, neuroscience, observer-operators, physics, psychology, Qbism, quantum field theory, quantum microscope, quantum qualia, uncertainty, zx-calculus.

Introduction

We propose an integrated quantum field theory (QFT) of physics, math, biology and psychology for optimizing human health and wellness in the current evolution of psychotherapy. Our integrated quantum field theory brings together a variety of interdisciplinary fields ranging from stress reduction, psychosomatics, psychoneuroimmunology, meditation and mind-body medicine to the psychobiology of optimizing human performance, problem solving and creativity. *We update Paul Dirac's transformational equation set of early quantum dynamics with the new zx-calculus as an experimental mathematical bridge between physics, math, biology and psychology.* In Box 1 we illustrate how the quantum qualia of human experience

during activity-dependent gene expression, brain plasticity, and the creation of new consciousness and cognition may be conceptualized. Students of psychotherapy will learn how the new zx-calculus can facilitate their practical daily work in bridging the mysteries of Descartes's mind-body gap at quantum level visually in all the figures of this chapter together with many clinical case examples.

**Box 1. Dirac's Transformational Equation Set from Quantum to Classical Calculus:
The Quantum Qualia of Brain Plasticity, Behavior, Consciousness and Cognition**

We carefully follow Dirac's own concise mathematical reasoning (Dirac, 1978, p. 40-41) in this review. Dirac begins with the idea of Schrödinger's wave function in 3-dimensional space. The wave function is designated as ψ , a function of the three coordinates x_1, x_2, x_3 that can vary with time:

$$\psi(x_1, x_2, x_3; t). \tag{1}$$

Dirac notes that the usual interpretation of this wave function when normalized is that the square of its modulus $|\psi|^2$ providing the probability of the particle being localized in a particular place. This wave function ψ is a complex number so it can be multiplied it by its phase factor $e^{i\gamma}$, where γ is a real number and $e^{i\gamma}$ has a modulus of unity. Dirac then multiplies ψ by $e^{i\gamma}$ to get another wave function designated as Ψ :

$$e^{i\gamma}\psi \equiv \Psi \tag{2}$$

Which now has its modulus squared just as ψ :

$$|\Psi|^2 = |\psi|^2. \tag{3}$$

This allows Ψ and ψ to have the same probability distribution.

Dirac then notes that γ in equation (2) could be a function of position as well as time so that the new Ψ has the same probability distribution as ψ in equation (4):

$$\Psi(x_1, x_2, x_3; t) = e^{i\gamma(x_1, x_2, x_3; t)} \psi(x_1, x_2, x_3; t). \tag{4}$$

However, the new Ψ and the original ψ do not satisfy the same wave equation! This is becomes evident when Dirac forms $\partial \Psi / \partial x_r$ with r taking on the values of 1, 2 or 3 so that he obtains equation 5:

$$\partial \Psi / \partial x_r = e^{i\gamma} (\partial / \partial x_r + iK_r) \psi \tag{5}$$

Where K_r is a function of position in equation 6:

$$K_r \equiv \partial \gamma / \partial x_r. \tag{6}$$

Dirac then states "We would have to consider K_r as something more general, something such that when we take $K_r dx_r$ and integrate around a closed loop, the result need not be zero:

$$\oint K_r dx_r \text{ need not be equal to } 0. \tag{7}$$

Dirac then concludes "If we do that, we get a physical theory which is definitely more general than what we had before" (p. 41). We now interpret Dirac's comment that the contour integration of equation 7 "need not be equal to 0" has profoundly new implications for integrating current day scientific perspectives of physicists, biologists, neuroscientists and psychologists. This integration illustrates how new awareness could arise from a cycle of activity-dependent gene expression brain plasticity and emergent quantum qualia of consciousness and cognition (Rossi & Rossi, 2011, 2013, 2014 a & b, 2015).

Integrating the Subjective Quantum Qualia of Mind with Objective Molecular/Genomic Dynamics

This new application of Dirac's (1930) original quantum formulations (Rossi & Rossi, 2011, 2013, 2014a & b) is consistent with Penrose (2004), Wilczek (2002, 2015) and Carroll's (2016) insights into "The essence of The Core Theory – The Laws of Physics Underlying Everyday Life." We show how the highly sensitive quantum qualia of problematic dissociations during Stage Two of the 4-Stage Creative Basic Rest and Activity Cycle (BRAC) are the source of quantum level cognitions and conflicts that can lead to war, discord, corruption, hate crimes, terrorism, and other stress related psychosocial pathologies that can be resolved in Stages Three and Four of the creative cycle. We propose how Quantum Bayesian concepts of the novel observer/operator have insightful applications in counselling, psychotherapy, translational medicine and virtually all the mind/body therapies. We conclude with clinical case illustrations of how innovative applications of the zx-quantum calculus updating Dirac's Bra-Ket notation could conceptualize adaptation and problem solving on the objective molecular/genomic level to facilitate the evolution of psychotherapy. (Heunen, Sadrzadeh & Grefenstette, 2013; Coecke & Kissinger, 2017).

Why have many cultures developed practices of rest, relaxation and the inner focusing of attention typical of therapeutic meditation and hypnosis to facilitate health and well-being? Recent research on sleep has uncovered a surprising, yet sensible answer to this question. Sleep clears the mind by permitting 60% more cerebral spinal fluid to wash through the brain to remove the toxic by-products of normal molecular metabolism (Xie *et al.*, 2013). This unexpected finding integrates what we now believe we know about associations between the quantum qualia of the subjective experiences of mind and the objective molecular/genomic dynamics of consciousness and cognition, as well as their utilization in the holistic healing arts such as meditation, mindfulness and therapeutic hypnosis. Controversial concepts originally formulated in quantum physics (Dirac, 1930; Greene, 2011; Susskind & Friedman, 2014), biology (Baggott, 2011; McFadden, 2000; McFadden & Al-khalili, 2014) and psychology (Rossi, 1972/1985/2000, 2007, 2012; Rossi & Rossi, 2014a & b, 2015) over the last century are reviewed and utilized for developing a new mind/body concept of the observer/operator to optimize self-care and health via psychosocial and epigenomic RNA/DNA molecular mechanisms. We propose and illustrate a new quantum Bayesian mathematical notation for conceptualizing a causal role for consciousness and cognition in the theory, research and practice of psychotherapy on many levels from mind to genes.

Bayesian probability, named after 18th century English clergyman, Thomas Bayes, deals with *subjective probability – the degree of belief that an event will occur*. This is in striking contrast with the statistics most of us are taught today, which is about *objective probability – based on counting how frequently something occurs in the outside world*. It is now striking to realize how Bayesian or *subjective probability – the degree of belief that an event will occur* – is very like the emerging concepts of psychosocial genomics and *expectancy in therapeutic consciousness (meditation,*

counselling, psychotherapy expectancy theory in therapeutic hypnosis) which is also concerned with subjective belief.

In a clear and concise paper the physicist Hans von Baeyer (2013) recently outlined a new Bayesian interpretation of quantum information, which we now apply to brain research on consciousness, cognition (Dehaene, 2014) and behaviour (Rossi, 2002a, 2007, 2012).

A new version of quantum theory sweeps away the bizarre paradoxes of the microscopic world. The cost? *Quantum information exists only in your imagination.* In 2001, a team of researchers began to develop a model that either eliminates the quantum paradoxes or puts them in a less troubling form. The model, known as Quantum Bayesianism, or QBism for short, re-imagines the entity that lies at the heart of quantum weirdness—the wave function.

In the conventional view of quantum theory, an object such as an electron is represented by its wave function, a mathematical expression that describes the object's properties. If you want to predict how the electron will behave, you calculate how its' wave function evolves in time. The result of the calculation gives you the probability that the electron will have a certain property (like being in one place and not another). But problems arise when physicists assume that a wave function is real.

QBism, which combines quantum theory with probability theory, maintains that the wave function has no objective reality. Instead QBism portrays the wave function as a user's manual, a mathematical tool that an observer uses to make wiser decisions about the surrounding world—the quantum world. Specifically, the observer employs the wave function to assign his or her personal belief that a quantum system will have a specific property, realizing that the individual's own choices and actions affect the system in an inherently uncertain way.

Another observer, using a wave function that describes the world as the person sees it, may come to a completely different conclusion about the same quantum system. *One system—one event—can have as many different wave functions as there are observers.* After observers have communicated with one another and modified their private wave functions to account for the newly acquired knowledge, a coherent worldview emerges. *By interpreting the wave function as a subjective belief and subject to revision by the rules of Bayesian statistics, the mysterious paradoxes of quantum mechanics vanish...* (p. 47-48, italics added here).

These realizations motivate us to propose and illustrate how quantum field theory could optimize the quantum Bayesian dynamics of expectancy in most schools of therapeutic consciousness and psychotherapy (Rossi, 1988a, b, c, d; Rossi & Rossi, 1996). We begin by outlining a new quantum Bayesian version of the RNA/DNA field

theory of life and consciousness (Rossi, 2002a, 2004, 2007, 2012; Rossi & Rossi, 2011, 2013, 2014a & b).

An Integrated Quantum Field Theory (QFT) of the RNA/DNA Dynamics of Life and Consciousness

Our proposal for a very broad functional definition of the role of genes in the *complex adaptive systems* of life (Gell-Mann, 1994; Holland, 2012) is now applied to the integrated quantum field theory of therapeutic consciousness, cognition, behavior, psychology and health in general in figure one.

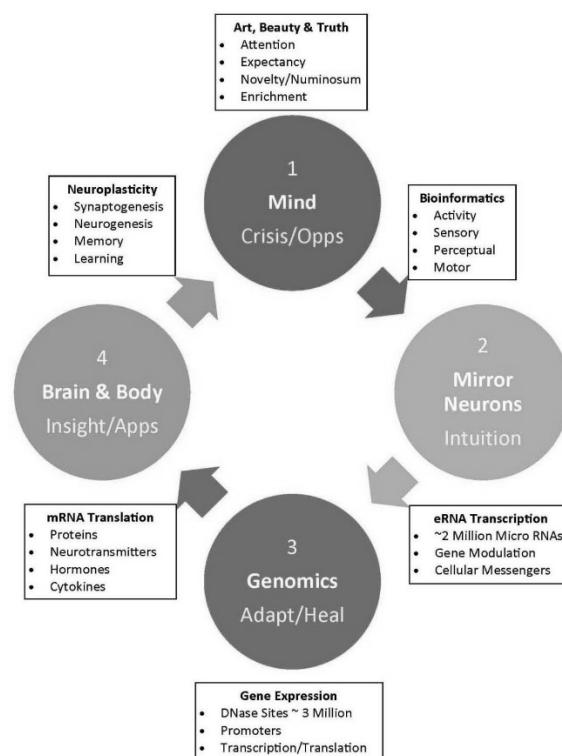


Figure 1. An Integrated Quantum Field Theory (QFT) of the Observer-Operator and the Novelty-Numinosum-Neurogenesis-Effect in the RNA/DNA Dynamics of Psychosocial Genomics and Psychotherapy.

We have documented how the fundamental systems of life and consciousness are characterized by the wave nature of circadian (daily) and ultradian (hourly) rhythms on all levels from the mind to genes (Lloyd & Rossi, 1992, 2008). We now outline how neuroscience research illustrated in Figure One underpins a general quantum field theory of consciousness, cognition and creativity (Rossi, 1986/1993, 2002a; Rossi & Rossi, 2011, 2013, 2014a).

The Classical Mind/Gene Cycle of Molecular Biology, Consciousness and Cognition

The top circle of Figure One updates the classical research on Just Noticeable Differences (JNDs) that was the original foundation of the psychophysics of sensations and perceptions that defined experimental psychology in the 1890's (Boring, 1950) with the most recent consciousness studies of art, beauty, truth in the coming age of quantum biology and psychology (Al-Khaiai, 2014; McFadden, 2000; McFadden & Al-Khaiai, 2014). We now propose how research on the qualia of Novelty-Numinosum-Neurogenesis-Expectancy Effect (NNNE) operates on the quantum level of molecules that makes life possible (Rossi, 2002a, 2005, 2007, 2012). The subjective experience of *Novelty* evokes highly motivating experiences of the *Numinosum* (*fascination, mysteriousness, and tremendousness*), (Otto 1923/1950) that turn on gene expression and the growth of the brain that gives rise to new levels of consciousness and cognition (Rossi, 1986/1993 to 2012). *Research by the ENCODE project* integrated activity and experience-dependent gene expression and brain plasticity. Key research is now exploring complex adaptive systems of information transduction in the *transcription process* arising from ~2 million eRNAs carrying signals from the physical environment and psychosocial milieus (termed "epigenomics") to genes bearing ~3 million docking sites recently summarized by the ENCODE Consortium (2012).

Current research documents the use of DNA microarray technology to measure the expression levels of many thousands of genes simultaneously (Bar-Joseph *et al.*, 2012). This evidence-based research in molecular biology has become a new standard in for validating personalized medicine. We now propose that this DNA microarray research also can be used to assess the psychosocial genomic validity and reliability of many diverse cultural, historical and holistic traditions of mind-body healing.

The primary research literature of psychosocial genomics today brings together a variety of top-down psychotherapeutic processes. They include the *relaxation response* (Dusek *et al.*, 2008); *therapeutic hypnosis* (Cozzolino, *et al.*, 2014; Rossi, *et al.*, 2008; Lichtenberg *et al.*, 2000, 2004; Rossi, 2012; Rossi & Rossi, 2013); *meditation* (Creswell *et al.*, 2012); the *therapeutic placebo* (Sliwinski & Elkins, 2013); *social psychology* (Cole, 2009, Cole *et al.*, 2005, 2007, 2010, 2011), and *yoga* (Lavretsky *et al.*, 2013). The motivation all psychosocial genomic research to facilitate the resolution of *stress related dysfunctions* (Unternaehrer *et al.*, 2012; Yount & Rachlin, 2014). We mentored the use of DNA microarrays, for example, to explore the hypothesis that such top-down therapeutic protocols, epitomized by *The Psychosocial Genomic Healing Experience (CPGHE)* and the *Mind-Body Transformations Therapy (MBT-T)*, as a scientific foundation of a more general theory of mind-body communication and healing with therapeutic hypnosis (Cozzolino *et al.*, 2014). A full description of the administration, scoring and clinical application of the top-down creative protocol for facilitating therapeutic cognition is freely available (Rossi, 2012).

Some of the most recent research that has reached the popular press is how mindful meditation can modulate gene expression in cancer patients that has been reported as follows (Stekra, 2014).

Lead investigator Dr. Linda E. Carlson (2015) and her colleagues found that in breast cancer patients, support group involvement and mindfulness meditation – an adapted form of Buddhist meditation in which practitioners focus on present thoughts and actions in a non-judgmental way, ignoring past grudges and future concerns – are associated with preserved telomere length. Telomeres are stretches of DNA that cap our chromosomes and help prevent chromosomal deterioration – biology professors often liken them to the plastic tips on shoelaces. Shortened telomeres aren't known to cause a specific disease per se, but they do whither with age and are shorter in people with cancer, diabetes, heart disease and high stress levels. We want our telomeres to stay intact.

In Carlson's study, distressed breast cancer survivors were divided into three groups. The first group was randomly assigned to an 8-week cancer recovery program consisting of mindfulness meditation and yoga; the second to 12-weeks of group therapy in which they shared difficult emotions and fostered social support; and the third was a control group, receiving just a 6-hour stress management course. A total of 88 women completed the study and had their blood analyzed for telomere length before and after the interventions. Telomeres were maintained in both treatment groups but shortened in controls. Previous work hinted at this association. Studies led by diet and lifestyle guru Dr. Dean Ornish (2008, 2013) reported that the combination of a vegan diet, stress management, aerobic exercise and participation in a support group for 3 months resulted in increased telomerase activity in men with prostate cancer, telomerase being the enzyme that maintains telomeres by adding DNA to the ends of our chromosomes (Stetka, 2014).

We now propose that further research with these protocols could replicate these findings in a more standardized form to update the mind/molecular/genomic efficacy of translational medicine recommended as a standard of clinical excellence by Insel (2009, 2010, 2012), Director of National Institute of Mental Health.

The Classical to Quantum Transition of Observer-Operators via Mirror Neurons

The original research on mirror neurons initiated by Rizzolatti and *Sinigaglia* (2008) Iacoboni (2007, 2008) and others (Grodzinsky & Nelken, 2014) has been greatly expanded in current neuroscience to include epigenomic processes (the integration of nature and nurture) that modulate mind/gene communication. Research on bird

song courtship dynamics, for example, documented how eRNAs (“enhancer RNAs” enhance gene expression) respond to thought by modulating the transcription/translation cycle of activity and experience-dependent epigenomic expression. Clayton, a specialist in songbird neurogenomics, made the salient comment, “*This is the first time a microRNA has been shown to respond to a particular thought process*” (Saey, 2010; Warren, Clayton *et al.*, 2010; Clayton, 2013; Drnevich *et al.*, 2012; Gunaratne *et al.*, 2011). *How could this be possible?* Presumably the wave nature of the sound spectra of the bird song is encoded by the wave nature of molecular eRNAs resonance in mirror neurons. We now propose that an analogous cycle of informational transformation occurs in human consciousness and cognition as illustrated in Figure 2. *This is the fundamental insight that integrates the top-down paths of mind, consciousness, and the expectancies of so-called “free will” with the bottoms-up molecular-genomic paths of communication. We now propose that this is a manifestation of the quantum Bayesian observer-operator bridging the so-called “Cartesian gap” between mind and body in psychosocial genomics, meditation and therapeutic hypnosis.*

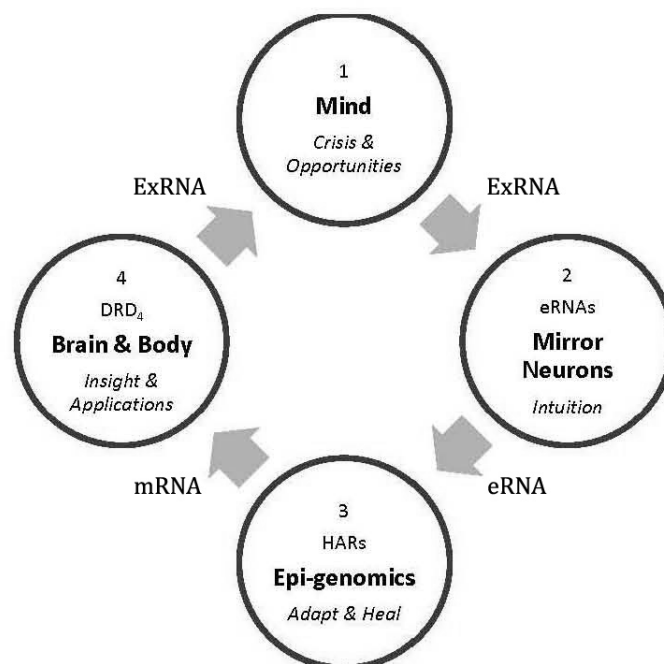


Figure 2. Conscious thoughts dialogue with our genes via the biinformatic epi-genomic loop of communication between nature and nurture. Cognitions are converted into eRNAs (enhancer RNAs) to enhance DNA (gene expression), which codes for mRNAs (messenger RNAs) that generate the proteins (hormones, neurotransmitters, cytokines, etc.) and brain plasticity that generates mind/body communication and problem solving with therapeutic cognition (Rossi, 2002a, 2004, 2007, 2012; Vedral, 2012). In this context, we propose that Ebstein’s (1997) saga of the adventure gene, novelty seeking, and substance abuse associated with the dopamine DRD₄ receptor gene could be one example of the psychosocial genomic basis of what we call the Novelty-Numinosum-Neurogenesis-Expectancy effect in via

the quantum observer-operator. A multimodal mathematical model of the therapeutic quantum observer-operator in the healing arts has been outlined (Leslie, 2013; Rossi, 2002a, pp. 203-251).

More recent research on the social communication of bats confirms and extends this earlier research on bird songs. Since bats are mammals their songs provide greater detail about their appropriateness as a model of human cognition. A recent issue of *Science* (Morell, 2014) details how the FOXP2 gene, which is associated with cognition and vocal learning in humans, birds and bats, may be a closer model for human speech. The trills, chirps and buzzes of bats, for example, can communicate a series of expectancies such as announcing (1) I am species *P. Nathusii*, (2) a male, (3) specifically I am the only male with this song (4) so land here next to me. (5) We share a common social identity and communication pool. (6) The soft tones of the male lure ladies while (7) harsh tone compete with other males and warn them away. Although these songs typically last only ~1.6 seconds they may contain ~20 syllables combined in specific ways with individual rhythmic patterns of communication that are appropriate for current life conditions.

Such research on bird and bat song syntax and semantics illustrates how behavior encoded in the RNA/DNA transcription/translation cycle could mediate the vastly more complex cycle of information transduction that occurs in human consciousness, cognition, expectancy and health illustrated in Figures One, Two and Three (Gell-Mann, 1994; Sczepanski & Joyce, 2014; Shelka & Piccirilli 2014). *We propose this is the fundamental insight of bioinformatics that integrates the top-down path of consciousness, cognition and expectancy in quantum field theory with the bottoms-up molecular-genomic paths of communication within and between individuals.*

Free public data bases are being updated daily by the National Institute of General Medical Sciences, which offers information on these advances of the new genetics by Francis Collins, Director of the National Institutes of Health (NIH) and are now funding research on their new Extracellular RNA (ExRNA) Communications Program. The NIH Common Fund provides research grants to catalogue all types of ExRNA that flow between mind and body “in blood, tears, saliva and every other body fluid” to provide a baseline that can be compared with ExRNA profiles associated with Alzheimer’s, ageing, autism, development, diabetes, obesity, psychiatry, Parkinson’s, stress, trauma, etc. (Leslie, 2013).

Figure Two gives precise bioinformatic meaning to the commonly used terms of the 4-Stage creative cycle such as “Crisis/Opportunity” (Stage One), “Intuition” (Stage Two), “Adaption/Healing” (Stage Three) and “Insight/Applications” (Stage Four). The integration of such psychological terms with brain/body research is the psychogenomic foundation in the RNA/DNA transcription/translation cycle of coding for mRNAs, proteins at the molecular-genomic level of therapeutic hypnosis. Key research explores how these proteins, often called “mother molecules,” are cleaved into the neurotransmitters, hormones, and cytokines of the complex adaptive system of psychoneuroimmunology (Irwin & Vedhara, 2005), which integrate cells of the

mind, brain and body that ultimately facilitate the dynamics of memory, learning, behavior, and the qualia of consciousness itself in therapeutic cognition (Rossi & Rossi, 2013). *Research illustrated in Figure Two lead us to propose how the quantum field theory of ExRNAs signaling between nature and nurture are the molecular/genomic underpinning of the complex adaptive dynamics of normal everyday life as well as meditation psychotherapy, and other therapeutic approaches to psychosocial and cultural health* (Gell-Mann, 1994: Holland, 2012).

Brain/Mind Plasticity and the Classical/Quantum Transitions

Psychosocial genomic transitions between classical-to-quantum dynamics of Stage Two and quantum-to-classical dynamics of Stage Four are experienced psychologically as illustrated in Figure Three. Genomics Research via the ENCODE project that includes qualia and experience-dependent gene expression is currently manifesting a profound breakout on the epigenomic level in Figure Three. As was stated earlier key research is now exploring complex adaptive systems of information transduction in the transcription process arising from ~2 million eRNAs carrying signals from the physical environment and psychosocial milieus to genes bearing ~3 million docking sites recently summarized by the ENCODE Consortium (2012). Pollard (2006, 2012) has recently pioneered research into the Human Accelerator Regions (HARs) that are now recognized as groups of genes that are undergoing very rapid adaptation distinctively different from our nearest primate relatives.

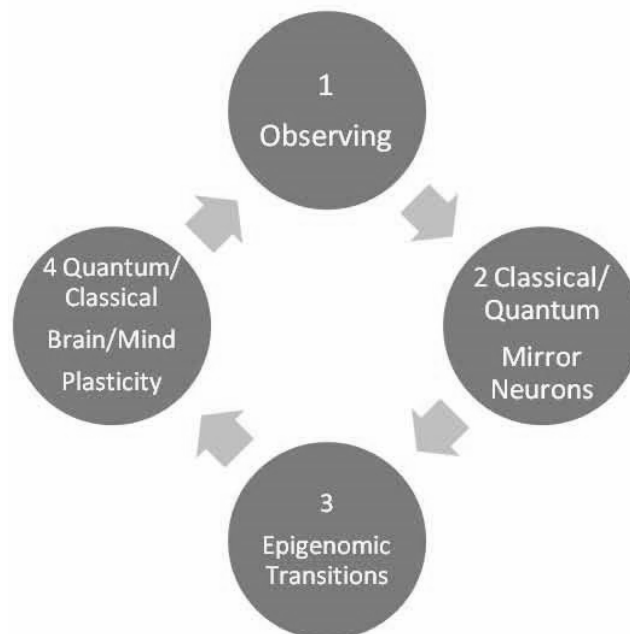


Figure 3. The Communication Cycle between (1) Observing Consciousness, (2) The Classical to Quantum Transitions of Mirror Neurons, (3) The RNA to DNA Epigenomic Transitions, and (4) The Quantum to Classical Transitions on the “The Road to Reality” (Penrose, 2004) in therapeutic consciousness and health (Rossi, 1986/1993, 2002a, 2012).

Brain/Mind Plasticity and the Quantum to Classical Transition

Figure 3 illustrates how the transitions between classical-to-quantum dynamics in Stage Two, and quantum-to-classical dynamics in Stage Four, are experienced in the nonlinear dynamics of therapeutic consciousness and cognition (Chiarucci *et al.* 2014). It is interesting to ask, for example, whether the *intuitions of Stage Two* are psychologically sensed, or felt, to be the same or different in comparison with the experience of *insights during Stage Four*. This is important because Stage Four of the creative cycle is the quantum-to-classical transition that purportedly takes place in the Penrose/Hameroff "[Orch OR](#)" model of consciousness entangled with microtubules within the cells of brain (Hameroff & Penrose, 1996;). Jeong, Lim & Kim (2014) recently investigated the classical/quantum and quantum/classical transitions in a manner that we believe are consistent with the deep psychosocial genomic dynamics of therapeutic consciousness and cognition. In two pioneering books, the highly-esteemed neurobiologist Lowenstein (1999, 2013) presents detailed overviews of how quantum level dynamics underpin the molecular biology of the body, brain and mind. Such research supports some little known but startling research at Carleton University, in Canada, that implies how the quantum Bayesian dynamics are manifest in the wave nature of sleep, dreams and therapeutic quantum observer/operators (Rossi, 1972/1985/ 2000).

The Quantum Wave Nature of Mindfulness: Consciousness, Cognition, Sleep and Dreams: The 4-Stage Creative Cycle and the Psychosocial Genomics of Therapeutic Hypnosis

The wave nature of psychosocial genomics, meditation, mindfulness, and indeed, all holistic forms of mind/body psychotherapy is mapped onto the Biological 90-120 minute 4-Stage Basic Rest-Activity Cycle (Lloyd & Rossi, 1992, 2008), and the Psychological 4-Stage Creative Cycle (Rossi, 1967, 2007, 2012) illustrated in the upper curve of Figure Four. The proteomics (protein) profile in middle curve depicts the energy landscape for protein folding within neurons of the brain into the correct structures needed for adaptive brain plasticity (Cheung *et al.*, 2004). This proteomic profile arises from the functional concordance of co-expressed genes illustrated by the genomics profile below it (Figure 4) (Levsky *et al.*, 2002). This psychosocial genomic curve represents the actual gene expression profiles of the immediate-early gene *c-fos*, and 10 other genes (alleles), over the typical Basic Rest-Activity Cycle of 90-120 minutes. The lower diagram of Figure Four illustrates how the quantum qualia of consciousness cognition and behavior are typically experienced within the normal circadian cycle of waking, as well as REM dreams while sleeping (Rossi, 2002b, 2004; Rossi & Nimmons, 1991).

Our most recent addition to figure 4 is to map the quantum equations of Heisenberg's (1927) Uncertainty Principle and Dirac's (1978) quantum notation (introduced above in Box 1) onto the Biological 4-Stage Basic Rest-Activity Cycle, and the Psychological 4-Stage Creative Cycle, illustrated in the top part of figure 4. In a remarkable book, *The Great Equations*, Robert Crease, chairman of the

philosophy department at Stony Brook University tells the engaging story of Heisenberg's emotional journey as he experienced the ups and downs of the 4-Stage creative cycle during his discovery of the uncertainty principle and the equations that formulated it. In the following quote from Crease (2010, pp 242-245), we intersperse in square brackets [our comments on the 4-Stage creative cycle] that Heisenberg is apparently experiencing when he writes his epoch-making uncertainty paper.

The paper showed how to *compile tables of amplitudes and frequencies associated with transitions between states – he called such tables “quantum-theoretical quantities”* – and how the tables could be related by a new kind of calculus, which he called “quantum-mechanical relations.” [This is Stage One of the 4-Stage Creative Cycle integrating *quantum quantities and relations* – this may ring a bell for students of psychotherapy who may have struggled to understand the what, why and how of Dirac's integration of math and relationships in Box 1 above.] ...

Heisenberg then hit a snag. [snag means stuck, which is the defining characteristic of Stage Two of the 4-Stage Creative Cycle.] The tables and the multiplication rule he invented for them obeyed a new kind of algebra that mathematicians had discovered long before, but was unfamiliar to most physicists, himself included. Most strikingly, the rule did not follow the “commutative law,” the mathematical principle according to which the order in which one multiplies two numbers does not affect the result: $ab = ba$. When Heisenberg used his new calculus to multiply one quantum-theoretical table (let's call it A) by another (B), the result depended on the order: $AB \neq BA$. The feature “was very disagreeable to me,” he said later, and try as he might he could not rid his theory of it. “I felt this was the only point of difficulty in the whole scheme, otherwise I would be perfectly happy.” Heisenberg then did what many people do when a nuisance threatens to spoil an invention: he swept it under the rug ... Heisenberg concluded his paper with a disclaimer of the sort that is often seen in early papers in a field ... The answer, he declared, would have to await “*a more penetrating mathematical investigation.*” (Crease (2010, 243, Italics added here.)

Heisenberg, still a very young student, wisely recognized he was stuck at this point and gave his paper to his academic supervisor, Max Born, to determine if it was worth publishing. Born in due time finally recognized that “Heisenberg's funny quantum-mechanical relations were actually the most natural way that mathematicians had discovered to “multiply” matrices.

Born was overjoyed. [Overjoyed is characteristic of Stage Three – the Aha! Of the 4-Stage Creative Cycle] ... He knew that matrices can be noncommutative – the order in which one multiplied them mattered. This explained Heisenberg's embarrassing difficulty that, for instance, the matrix \mathbf{p} associated with momentum and \mathbf{q} with position did not commute; the matrix \mathbf{pq} was not the same as \mathbf{qp} (by convention, physicists often indicate

matrices with bold symbols). But there was more. This pair of variables – known as canonically conjugate variables – was not commutative, but in a special way. Though Born could not prove it, the difference between \mathbf{pq} and \mathbf{qp} seemed to be a specific matrix proportional to Planck’s constant: $\mathbf{pq} - \mathbf{qp} = \mathbf{I}h / 2\pi i$, where \mathbf{I} is the unit matrix – “ones” along the diagonal entries and zeros everywhere else ... Its central feature is what they called the “fundamental quantum-mechanical relation,” the strange equation $\mathbf{pq} - \mathbf{qp} = \mathbf{I}h / 2\pi i$. The paper is a landmark in the History of physics, for it is the first map of the quantum domain. (Crease, 2010, pp. 242-245).

In QBism, the subjective inner world of personal experience, the so-called mysterious and weird physical paradoxes of the objective outer world quantum mechanics vanish (von Baeyer, 2013). This motivates us to propose that the physicist’s problem of paradoxical quantum observations (measurements) over the past century may be transformed into an opportunity for the psychologist today in our Integrated Quantum Field Theory of Physics, Biology and Psychology: we call this the “**Observer/Operator ($\mathbf{O}_b / \mathbf{O}_p$)**” and illustrate where takes place at the peak of the 4-Stage Creative Cycle in Figure Four. The quantum wave nature of the Observer/Operator is often experienced psychologically as The Novelty-Numinosum-Neurogenesis Effect (NNNE) – whereby the wondrous, Novel and Numinous **Observations (\mathbf{O}_b)** experienced during “peak experiences” (Maslow (1968) in the arts, humanities, sciences and positive empathic psychosocial relationships – automatically **Operate (\mathbf{O}_p)** to turn on adaptive activity-dependent epigenetic gene expression and brain plasticity to underpin the new Quantum Qualia of Creative Consciousness, Cognition and Behavior (Rossi, 2002 a & b, 2007, 2012). Our New Quantum Microscope of the Creative Mind reveals that the ultimate microdynamics of Freud’s so-called “unconscious” now could be expressed in the “fundamental quantum-mechanical relations,” of the strange equation $\mathbf{pq} - \mathbf{qp} = \mathbf{I}h / 2\pi i$ of Heisenberg, Born, Jordan and others. Fedaka and Prentisb (2009) describe the profound implications of this quantum equation as the commutation law.

Indeed, the commutation law is one of the most fundamental relations in quantum mechanics. This equation introduces Planck’s constant and the imaginary number “ i ” into the theory in the most basic way possible. It is the golden rule of quantum algebra and makes quantum calculations unique. The way in which all dynamical properties of a system depend on “ h ” can be traced back to the simple way in which $\mathbf{pq} - \mathbf{qp}$ depend on h . In short, the commutation law stores information on the discontinuity, the non-commutativity, the uncertainty, and the complexity of the quantum world (Fedaka & Prentisb, 2009, p. 133).

CRISIS/OPPORTUNITY

$$\Delta x \Delta p \geq \hbar/2$$

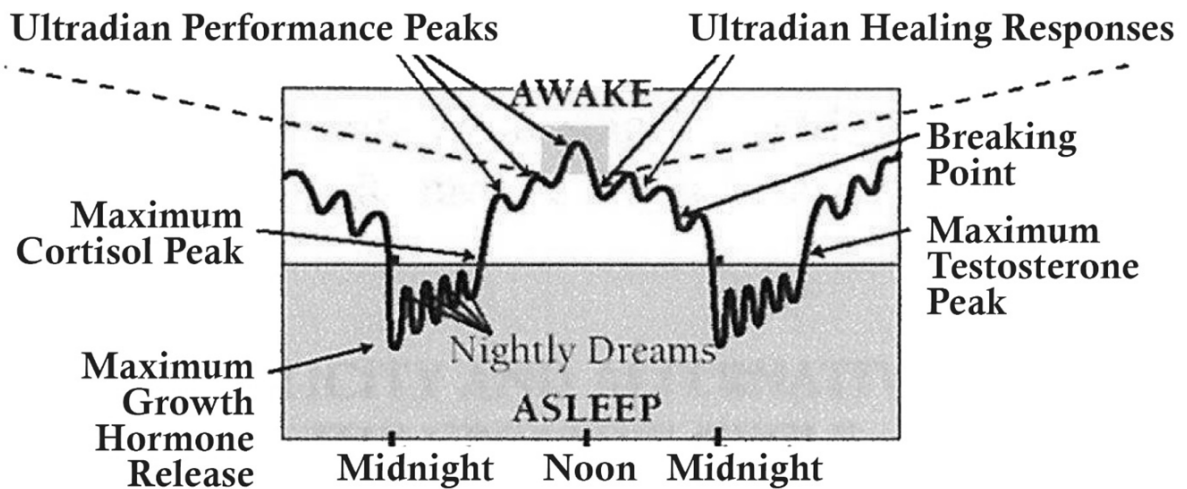
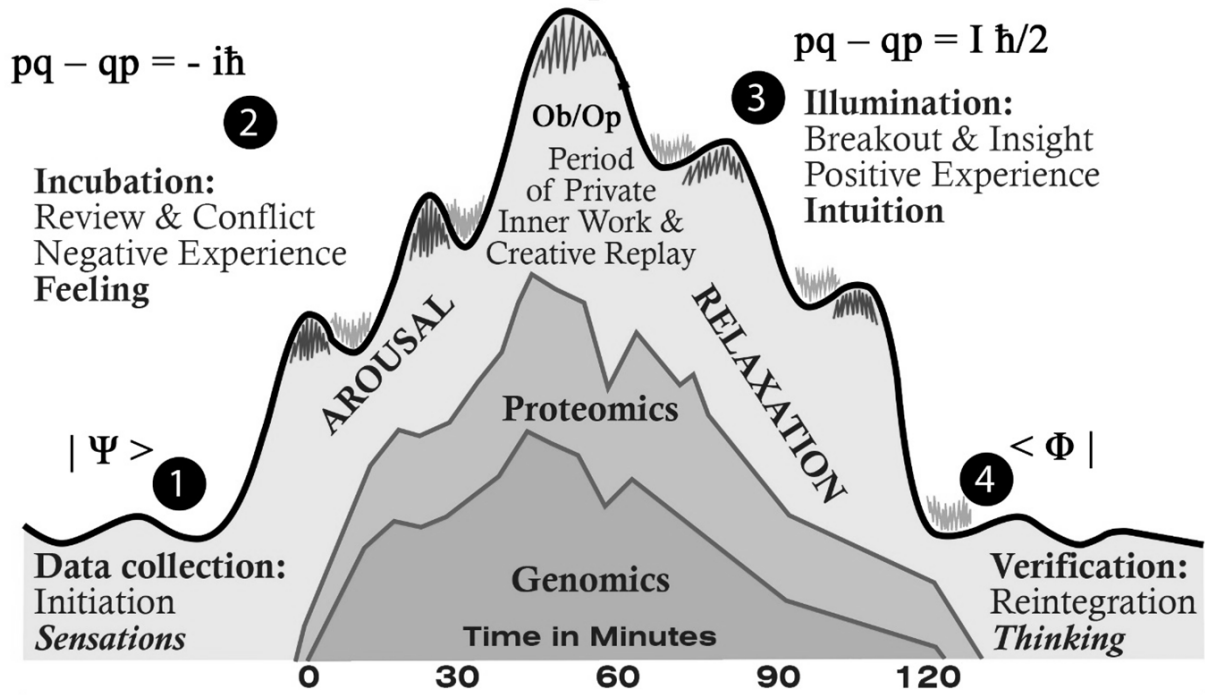


Figure 4. The quantum wave nature of the **Observer/Operator** (O_b / O_p in the top tip of the **Crisis/Opportunity** at the peak of uncertainty) in our *Integrated Quantum Field Theory of Physics, Biology and Psychology* maps the psychosocial genomics, consciousness and therapeutic cognition onto the biological profile of the 90-120- Minute Basic Rest-Activity Cycle (Lloyd & Rossi, 1992, 2008) and the psychological 4-Stage Creative Cycle (Rossi, 1967, 2007, 2012).

Figure 4 illustrates Stage One of the 4-Stage Creative Cycle, which is often described as data collection in science, or the initial recognition of a problem or issue that needs to be resolved in everyday life. Stage 2 is often accompanied by

experiences of turning inward, incubation and/or conflict, cognitive dissonance (Festinger, 1957), emotional negativity (Bilalić & McLeod, 2014), stress, emotional regression and/or uncertainty as one searches for a solution (Rossi, 2007, 2012). In poetry, myth and saga Stage Two is often called “the storm before the light” or “the dark night of the soul” or some other such metaphor. Stage Three is the Aha! or Eureka flash experience of a new insight or solution of the problem. In neuroscience and psychosocial genomics, we cite research documenting how experience-dependent gene expression, brain plasticity and new consciousness develop during Stage Three. Stage Four completes the cycle with the growth integrated into new networks of cognitions for formulating a more adaptive reality and self-identity.

In figure 4 we underpin these 4-Stage Cycles of Biology and Psychology with the quantum mathematical formulation of Heisenberg’s (1927) **Uncertainty Principle: $\Delta x \Delta p \geq \hbar/2$** ; Born & Jordan’s (1925) **Fundamental Quantum-Mechanical Relation: $pq - qp = \hbar / 2\pi i$** and Dirac’s (1928) **Quantum Notation: Bra $\langle \Psi_+$ | Ket $|\Psi_- \rangle$** , which will be illustrated with clinical case studies later.

Pioneering electronic monitoring of catalepsy during hypnosis by Milton H. Erickson and his early student, Leonard Ravitz (1950, 1962), motivated the formulation of a new two-factor theory of therapeutic hypnosis by Ernest Rossi. These compiled graphs and *tables of amplitudes and frequencies associated with transitions between states* – [that Heisenberg] called “*quantum-theoretical quantities*” (Erickson & Rossi, 1981; Rossi, Erickson-Klein & Rossi, 2008-2016) that are now being investigated with more advanced EEG methods (Chiarucci, *et al.*, 2014; Jamieson & Burgess, 2014). Such research documents how the overall domain of hypnotherapeutic work is a wave function of high and low phase hypnosis in chaotobiological time of mathematical chaos theory illustrated in Figure Five (Rossi, 2002a & b), which is consistent with the recent calls for reorienting the education, theory and practice of therapeutic hypnosis (Alter & Sugarman, 2017; Hope & Sugarman, 2015).

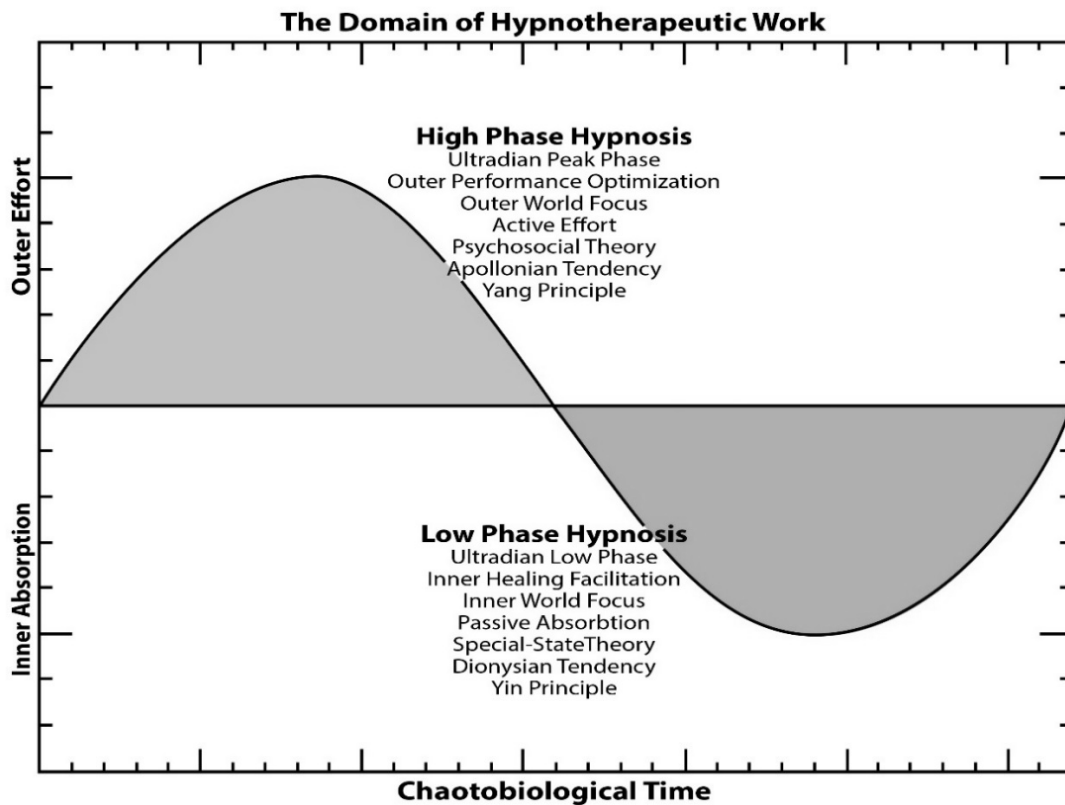


Figure 5. The wave nature of the observer/operator quantum qualia of subjective experiencing during the high and low phases of therapeutic hypnosis are conceptualized as the 4-Stage Creative Cycle mapped onto the 90-120-Minute Basic Rest-Activity Cycle of everyday life (Rossi, 1997a, b, 1982, 1998, 1999; Lloyd & Rossi, 1992, 2008; Rossi, 2002a, b, c, 2005; Mazzoni, Venneri, McGeown, Kirsch, 2013; Pekala, Kumar, Maurer et al., 2011; Rossi, Erickson-Klein & Rossi, 2008-2016; Wagstaff, 2010).

The high-performance phases of activity are indicated in dark shading in the top part of figure 6. These high performance peaks alternate with low phases of healing and recovery shown in the lighter shading during the 90-120-minute basic rest-activity cycle. The bottom part of Figure Six illustrates the recent research of Xie *et al.*, (2013) documenting the cleaning up of toxic metabolic waste products of daily conscious work during sleep and dreaming.

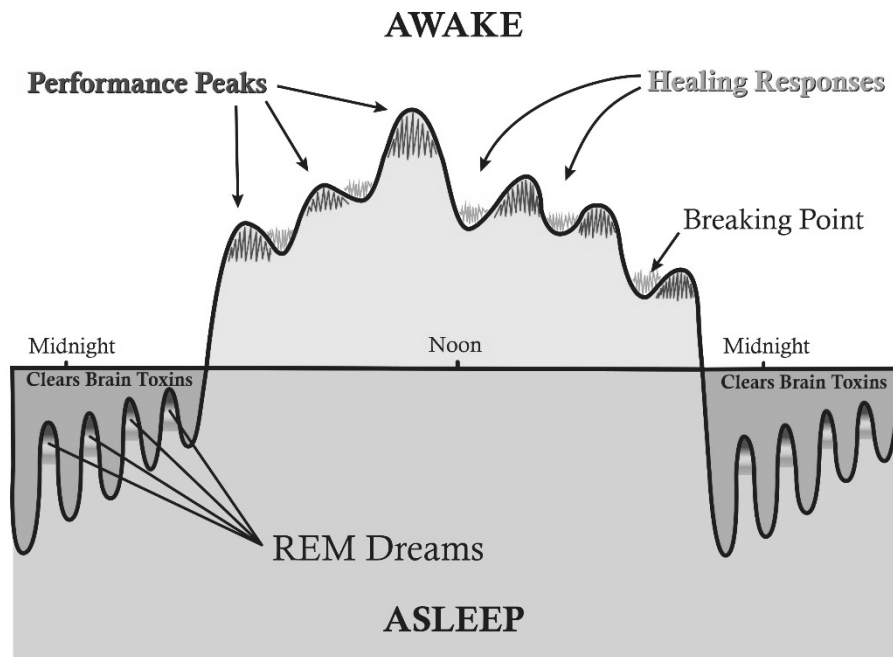


Figure 6. Top: A 2-Dimensional Pyramid Profile of the quantum wave nature of the 4-Stage creative process as a basic paradigm of the epigenomic RNA/DNA quantum field theory in the mind/body healing of stress and PTSD during the 90-120-minute basic rest-activity cycle in everyday life, sleep, dreams as well as meditation and therapeutic hypnosis. Bottom: Notice the shaded band periods (usually about 20 minutes) of symmetry between waking consciousness (top part) and dreaming (bottom part) that implies how Emmy Noether's Theorem covers all types of conserved transformations in the integrated quantum field theory of physics, math, biology and psychology (Klauber, 2015; Lancaster & Blundell, 2014) to all applications of the therapeutic psychology of consciousness, cognition and behavior (Rossi & Rossi, 2014).

The small shaded areas marked REM Dreams, in the lower half of figure 6, and the shaded areas on the right hand side of the lower area, imply how many such alternating phases of RNA/DNA activity during REM dreaming as well as waking consciousness, which clean up toxic waste products of brain/mind metabolism during sleep could be the molecular/genomic foundation of many therapeutic practices that emphasize rest and relaxation (therapeutic hypnosis, prayer, meditation, yoga, etc.) developed independently over the ages by many cultures. In Part 2 we will outline how recent developments in the zx-quantum calculus could become the new scientific picture language for documenting our Integrated Quantum Field Theory of the Creative Mind. Part 2 illustrates how the quantum dynamics figures 7a through 7e and the zx-quantum calculus in Box 2 are apparently isomorphic with the gentle curves of the changing states and phases of the 4-stage basic rest-activity and creativity cycles in figures 4, 5 and 6 of Part 1. These isomorphisms (similar structures) imply how the classical psychobiological dynamics of Part 1 are underpinned by the quantum

dynamics of Part 2. In Part 2 we will learn that the classical calculus with numbers and equations invented 3 centuries ago by Newton and Leibniz is only a special case of the more general and easier-to-learn picture zx-quantum calculus that makes an integration of the arts, humanities and sciences that bridges the so-called “mind/body gap” of Descartes possible.

Part 2: The Quantum Magnetic Resonance Microscope and the Quantum Qualia of Consciousness:

How the ZX-Calculus May Document a Quantum Field Theory of the Creative Mind

The alternating wave phases of consciousness, cognition and creativity, as well as rest, sleep and therapeutic hypnosis in figures 4, 5 and 6 derived from research on the *classical level of our usual perspectives of everyday life* are like the *independently derived images on the quantum level produced by the wave equations in various perspectives* in figures 7a, 7b,7c. More recent research with the innovative quantum magnetic resonance microscope illustrated in figures 7d and 7e (Simpson *et al.*, 2017). What could these apparently isomorphic correspondences between the classical and quantum levels mean? Could they all be:

- 1) A simple coincidence?
- 2) An artifact explained by Qbism and the subjective nature of all human sensation, perception and cognition, as measured by the early psychophysics of Just Noticeable Differences (JNDs)?
- 3) The quantum reality of nature on the ultra-small scale of Planck’s Constant ($\sim h = 6.626 \times 10^{-34}$ J·s) revealed by images of the quantum magnetic resonance microscope?

If you believe in either or both 1 & 2 you are implying your understanding of Descartes’ Mind/Body philosophical gap and the Hard Part of Consciousness Research remains controversial and unresolved (Chalmers, 1996; Rossi 2007, 2012; Rossi & Rossi, 2015). If you believe in 3 the convincing reality of the quantum magnetic resonance microscope, then you join those researchers in physics, biology and psychology who believe that the Second Creation of Quantum Reality (Crease & Mann, 1996) is, indeed, as real as all the modern quantum level technology that makes your iPhone, GPS and smart TV possible. You may now be ready to explore the enlightening possibilities of the quantum qualia of your own personal experience, as well as the therapeutic possibilities of modern mind/body psychology, medicine, and the zx-calculus that may become the wave of the future. In figures 7a through 7e, we present a series of images of the fundamentally wave nature of the quantum domain in *physics*. We hypothesize that they are consistent with the fundamental wave nature of all the molecular genomic cycles of *biology* and *psychology* discovered earlier in figures 1-6 originally documented (Lloyd & Rossi, 1992, 2008) and Rossi (1967, 2007, 2012).

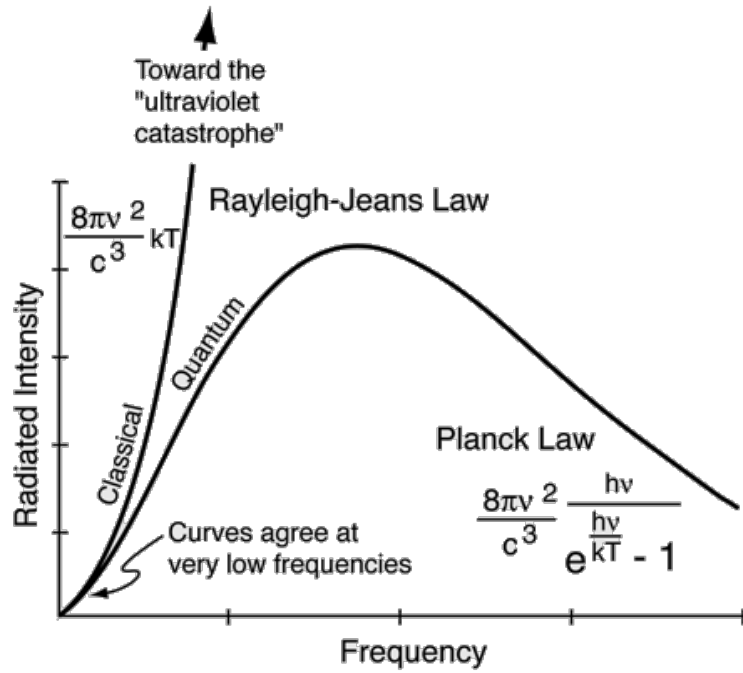


Figure 7a. A quantum fingerprint that helps us visualize the difference between Newton's classical dynamics that fails in its Rayleigh-Jeans Law (which implies an impossible infinity called the "ultraviolet catastrophe") versus the quantum curved signature of Plank's Law (with permission, Nave 2016). We now propose that this gently curved quantum signature of Planck's equations and Law is consistent with the cyclic wave-nature patterns of life, consciousness and cognition on most levels from mind to molecules (Rossi & Lippincott, 1992; Rossi, 2012; Rossi & Rossi, 2008, 2013, 2014 a, b).

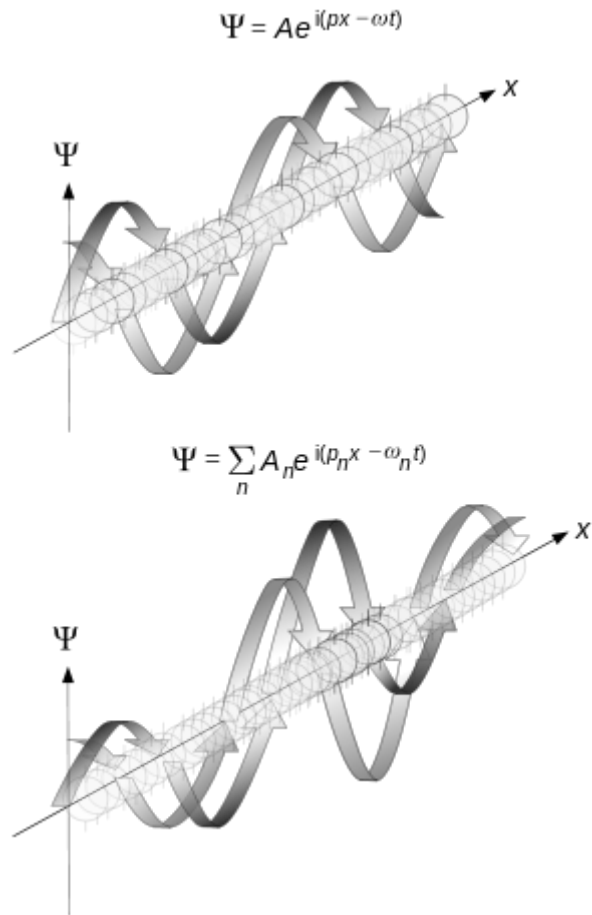


Figure 7b. De Broglie Matter Waves and their accompanying quantum wave equations that now await “a more penetrating mathematical investigation” for the unification of our Integrated Quantum Field Theory of Physics, Math, Biology and Psychology (Creative Commons Wikipedia, 2017).

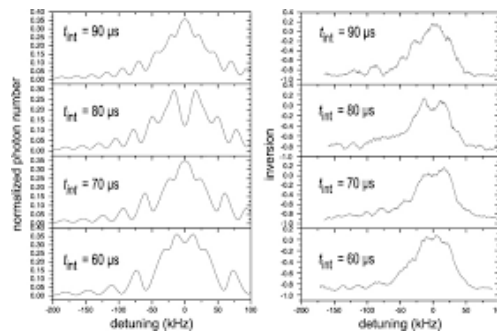


Figure 7c. The wave nature of the normalized quantum photon numbers of light often found in the fundamental experiments of quantum physics are strikingly similar to those found in biology and psychology (see figures 1 through 6 above in part one).

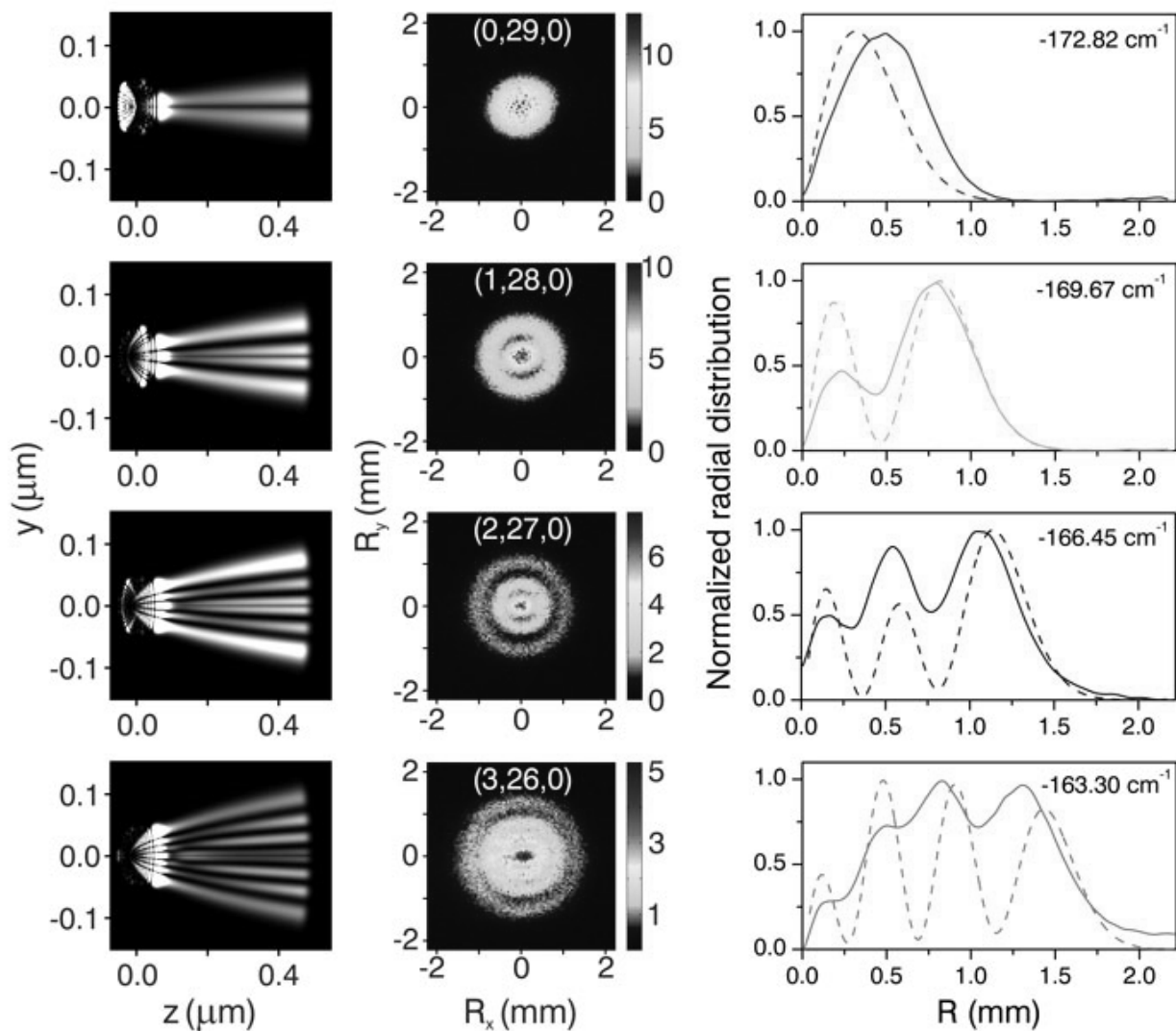


Figure 7d. The first direct observation of the orbital structure of an excited hydrogen atom has been made with the quantum microscope by an international team of researchers. The observation was made using a newly developed quantum microscope, which uses photoionization microscopy to visualize the structure directly. The team's demonstration proves that "photoionization microscopy", which was first proposed more than 30 years ago, can be experimentally realized and can serve as a tool to explore the subtleties of quantum mechanics (Commissariat, 2013).

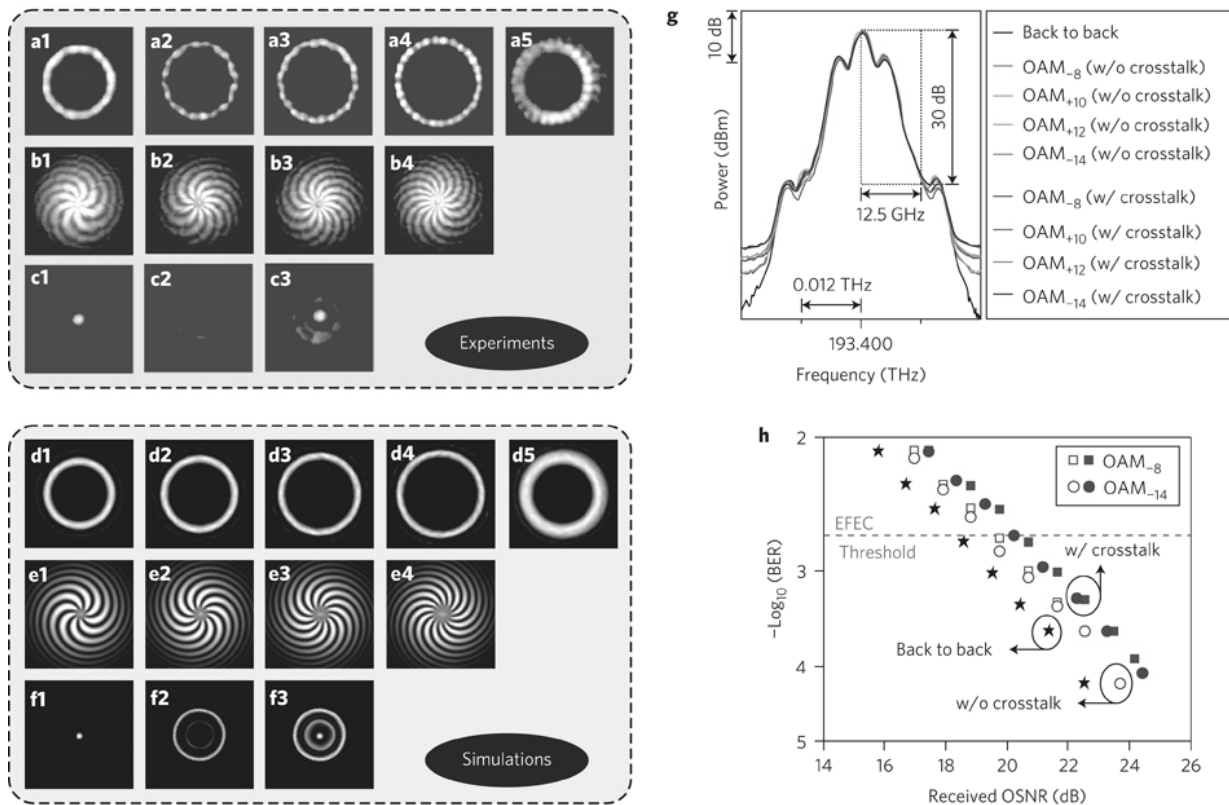


Figure 7e: Experimental and theoretical results of measuring the wave function of angular momentum beams of the quantum microscope (Wang et al., 2012). The wavefunction is a central tenet of information flow in our integrated quantum field theory of physics, biology the psychology of consciousness and cognition. Mathematically the wavefunction is the solution to the Schrödinger equation. Notice the similarity between the pyramidal profile in the upper right of this quantum level construction and the pyramidal profiles of biology and psychology in Figures 4 and 6.

This apparent isomorphism between data on the classical Newtonian macroscopic level (in figures 4, 5 and 6) with microscopic data from the new quantum microscope (figures 7a through 7b) leads us to propose how the basic quantum Bayesian wave nature of many natural epigenomic processes could enhance psychotherapy and all schools of therapeutic consciousness. We now need to assess how such wave patterns are consistent with a more general quantum RNA/DNA psychosocial genomic theory of consciousness, cognition, creativity and positive expectancy. To do this we introduce some fundamentals about quantum Bayesianism dynamics, which are consistent with the zx-quantum calculus as a fundamental language for an integrated quantum field theory of physics, math, biology and psychology as well as the arts, humanities and therapeutic consciousness, cognition and creativity in general.

Quantum Bayesian Notation 101 for the ZX-Calculus of Therapeutic Consciousness and Cognition

The original publication that began the current quantum Bayesian revolution emphasized how the extreme accuracy of the calculations of *quantum physics probability replaces the determinism of classical Newtonian physics* (Caves, Fuchs & Schack (2001). What could Bayesian dynamics really mean for the quantum field theory of mindfulness, psychotherapy and therapeutic consciousness?

The first fundamental insight for physics, biology and psychology is that the quantum qualia of subjective experience are probabilistic in the normal consciousness and behavior of everyday life (Crease and Mann, 1996; Rossi, 1972/1985/2000, 2012; Rossi & Rossi 2014a &b, 2015).

The second fundamental insight is that the highly sensitive quantum qualia of subjective experience are discrete; this means they are quantized into tiny, separate, natural Planck units of sensation and/or perception (Fuchs, 2001, 2010; Schiller, 2015). The qualia of the redness of red and the blueness of blue, for example, can be experienced as continuous blends in the rainbow, but also, we can distinguish about 7 separate or discrete colors depending on how we humans choose to interpret them. Mathematicians have formulated an *axiom of choice* in logical systems (Doxiadis & Mazur, 2012) and physicists have had a century of struggle formulating the mathematical notation of light itself having a *dual nature as either discrete particles or smooth continuous waves* depending on how experimental situations are arranged to observe photons (Baggott, 2011, 2015). We now note that letters, words, emotions and states of consciousness as well as cognition, mathematics, music and the 4-Stage creative cycle also have a dual nature depending on how we choose to arrange our observations of them. The observer/operator qualia of humans highly sensitive subjective experience manifest an infinite axiom of choice in creating and organizing its own world. The vast possibilities of human choice can be confusing and stressful in the transitions between Stage Two (conflict/incubation) and Stage Three (insight) of the 4-Stage creative cycle (Rossi, 2002a, 2004, 2007; Rossi & Rossi, 2012, 2013).

The third fundamental insight is that quantum Bayesian dynamics are manifest (observable) on all levels from mind to genes in living systems (Fuchs, 2011, 2012). Although quantum physics began with the need to resolve the paradoxes that emerged from atomic and subatomic levels, early theorists like Bohr, Dirac, Heisenberg and Schrödinger realized that the quantum level underpinned the entire universe as well as the molecular chemistry of life and consciousness (Baggott, 2011, 2015; Suskind & Friedman, 2014; Wilber, 1993; von Baeyer).

The fourth fundamental insight is the central role of quantum Bayesian expectancy in an uncertain world (Fuchs, Mermin & Schank, 2013; Fuchs & Schank, 2013). Heisenberg's fundamental uncertainty relationships are the basis for understanding the broad scope of how modern Quantum Field Theory (Klauber, 2015; Lancaster & Blundell, 2014) is challenging our conceptions about creating new consciousness, cognition and our sense of free will and reality itself (Rossi & Rossi, 2014 a, b; Rossi & Rossi, 2015). In figures 7a-e we illustrated how the core concepts and equations of the Born, Heisenberg, Jordan matrix mechanics and uncertainty (Crease and Mann,

1996) play a fundamental role in the 4-Stage basic rest-activity cycle of biology, which is isomorphic with the 4-stage creative cycle of new consciousness and cognition.

Dirac Notation Illustrating the Psychosocial and Cultural Genomics of the Quantum Observer/Operator in Consciousness, Dreaming and Psychotherapy

In classical psychology, *episodic memory*, originally discovered and defined by Endel Turving (2002, 2005) can now be assessed by neuroscience imaging of the mind/brain (Kellogg, 2013). Memory and its transformations during learning, REM dreaming and cognition (Rossi, 1972/1986/2000; Rossi & Rossi 1996; Rossi & Rossi, 2015) can be easily evaluated with our new quantum Bayesian notation. We illustrate this with the dream and therapeutic intervention in a 78-year-old male patient still recovering from a childhood post traumatic syndrome disorder (PTSD) perpetuated by his abusive father.

My father is a young man as he was when he used to beat me badly that I would scream so loudly that our neighbors would knock on our windows yelling, ‘Stop beating that child!’ Anyway, in my dream he is now a nice guy who is building a new home and I am a little boy helping him! The house is now almost finished but there is still fresh dirt piled up roughly around in piles. This dirt is clean but it needs nutrients. So, we scatter organic fertilizer on it so that green grass and flowers and trees will grow real pretty in our new yard.

I can hardly believe I’m now having such a nice dream about my long ago terrible father who abused me sexually! All my life I have hated him and struggled to get away from my family vowing never to forgive any of them! I left home as a young man and never went back! But somehow, I now seem to actually like my father and we are doing nice things together in my dream. Can this really be happening to me, doctor? Is this what you call, ‘brain plasticity?’

Brain plasticity, indeed! We summarize the therapeutic reframing of this life story with the observer/operator [O] in positively transformative bra-ket notation like this.

$$\langle \Psi_{+FUTURE} | O_{Psy+} | \Psi_{-PAST} \rangle$$

Consciousness can function as a Janus-faced positive *quantum operator/observer* [O] in the intense focus of the dream work; to *observe is to operate simultaneously on the past as well as the future!* The patient still has an urgent question. He needs the help from the psychotherapist [O_{Psy+}] to convert the *quantum probability amplitude* of a possible therapeutic reframing of his life story with his father into *the qualia of new quantum Bayesian psychological reality in Hilbert space* (math notation for infinite possibilities). The patient urgently needs the therapist to witness and validate the patient’s own newly created and nascent reality by answering, “Yes, *this*

is the result of gene expression and brain plasticity operating successfully within you!” Suppose the psychotherapist had responded with the common but cynical, destructive and false public opinion: “Too bad it was only a dream.”

A young woman dreams:

I am an apprentice to a baker making a sandwich several yards long! An inspector comes by and asks the baker if he is responsible for making the sandwich. But with a cynical attitude the baker ignores the inspector. I am *puzzled* in the dream about why the baker is ignoring the nice inspector.

Upon awakening the young woman’s first sleepy early morning thoughts spontaneously replays her dream: she would have told the nice inspector the truth about how the baker was indeed responsible for making the huge sandwich. She intuits the inspector needed this information so someone could be *rewarded* for such excellent work.

In this dream the observer/operator (O_{\pm} BAKER) was her ambivalent identification the baker. In bra-ket notation there was no complete positive transformation in her dream. She is still suck in an ambivalent and puzzled Stage Two at the end of her dream.

$$\langle \Psi_{\pm} \text{PUZZLED} | O_{\pm} \text{BAKER} | \Psi_{\text{-CYNICAL}} \rangle$$

Fortunately, this young woman has the wit to utilize the *axiom of choice* in her early morning thoughts to give her identity a wonderful makeover that generated a positive transformative to Stage Four of the creative cycle. This is expressed in bra-ket notation:

$$\langle \Psi_{+} \text{REWARDED} | O_{+} \text{CHOICE} | \Psi_{\text{-CYNICAL}} \rangle$$

During her nighttime of sleep her brain was cleared of metabolic toxins (she had been stressfully overworked lately) so she could more objectively re-consider the cynical side of her personality that requires therapeutic reframing to empower her to tell the world (the inspector in the dream) the truth about her growing abilities (symbolized by making fantastic sandwiches) so she can be appropriately recognized and *rewarded*.

A depressed middle age man reports a spontaneous daydream during psychotherapy.

I am down deep in a bomb shelter with a small group of cowering fearful people. A strong muscular fellow is guarding the exit door so we cannot run out in panic when the bombs start to fall. This guard has a long pole with a soft cushion on the end so he can safely push people back in if they foolishly

try to exit when the bomb begins exploding above. In quantum Bayesian bra-ket notation:

$$\langle \Psi_+ \text{ INCUBATION} | \mathbf{O}_+ \text{ GUARD} | \Psi_- \text{ WAR} \rangle$$

Together the depressed man and therapist intuited a helpful and hopeful therapeutic interpretation of this dream. The man's depressing dream is a Stage Two expression of the 4-Stage creative cycle wherein he needs to recognize the realities of his currently dangerous but temporary life situation. The guard is an emergent manifestation of the positive observer/operator in his dream protecting him and others so they can safely incubate about their condition. The need to incubate in Stage Two until appropriate *quantum Bayesian probability amplitudes* of the adaptive RNA/DNA transition/translation dynamics of experience-dependent gene expression and brain plasticity evolve new Stage Three therapeutic possibilities. This hopeful *expectancy* will optimize his ability to recognize the fruits of a good night's sleep in clearing his brain to facilitate gene expression and brain plasticity for creating new quantum qualia of consciousness.

We propose that these clinical vignettes of Dirac's brief Bra-Ket notation document how an initially dysfunctional quantum qualia of consciousness and cognition have a state identified with a negative subscript such as Ket $|\Psi_-\rangle$, that could be a medical or psychological symptom, which is then therapeutically transformed by the observer/operator into a positive final state identified with a positive subscript such as a Bra $\langle \Psi_+ |$. This concise Dirac notation characterizes the typical human condition as problematic – needing a 4-Stage Creative 90-120-minute Basic Rest-Activity Cycle (BRAC) on all levels from mind to activity-dependent gene expression and brain plasticity 12 times a day to evolve life, consciousness and cognition in an optimal manner.

But why all this negativity in the first place? Why after 4.5 billion years of Darwinian evolution has life and mind not achieved a state of permanent positive bliss and nirvana? Our psychologically oriented quantum field theory of cosmos and consciousness suggests an obvious hypothesis about these questions in the following statement about “*That little minus sign makes a huge difference?*” between real and quantum numbers by Wilczek (2015).

We map ordinary dimensions onto ordinary, so-called “real” numbers. We pick a reference point, usually called the origin, and label any point by a (real) number that describes how far you must go to get there from the origin. Real numbers, in a word, are suitable for measuring distances, and labeling continua. They satisfy the multiplication rule

$$xy = yx$$

Quantum dimensions use a different kind of numbers, called Grassmann numbers. They satisfy a different multiplication law,

$$xy = -yx$$

That little minus sign makes a huge difference? Notably, if we put $x = x$ we get $x^2 = -x^2$, and so we conclude $x^2 = 0$. That strange rule encodes, in the physical interpretation of quantum dimensions, Pauli's exclusion principle: you can't put two things in the same (quantum) place.

After those preparations, we're ready to meet SUSY. Supersymmetry is the claim that our world has quantum dimensions, and that transformations exist which interchange ordinary with quantum dimension (change), without changing the laws of physics (without change).

Supersymmetry, if correct, will be a profound new embodiment of beauty in the world. Because the transformations of supersymmetry turn substance particles into force particles, and vice versa, supersymmetry can explain, based on symmetry, why neither of those things can exist without the other: Both are the same thing, seen from different perspectives. Supersymmetry reconciles apparent opposites, in the spirit of yin-yang. (Wilczek, 2015, p. 311, Italics added here.).

It will require a great deal of the further research on our psychologically oriented quantum field theory to confirm "*That little minus sign makes a huge difference*" in the therapeutic transitions from negative stress to positive states of creativity. As we have seen above "*That little minus sign makes a huge difference*" because it is the sign of *non-commutation* in "fundamental quantum-mechanical relations," evident in that strange equation $\mathbf{pq} - \mathbf{qp} = \mathbf{lh} / 2\pi i$, which is a landmark in the history of physics. It is the first map of the quantum domain that underpins all life, biology, psychology and the profoundly sensitive quantum qualia of human experience. Consciousness, cognition and creativity as we experience them in daily life, as well as meditation and therapeutic consciousness could not exist without it.

The ZX-Calculus Integrates the Quantum Field Theory of Math, Physics, Biology and Psychology

In this chapter, we have introduced the new concept of the observer/operator ($\mathbf{O}_b / \mathbf{O}_p$) as a pair of mind/body conjugate variables to replace the $\mathbf{pq} - \mathbf{qp}$ in the non-commutation relation in the fundamental quantum-mechanical equation so that it becomes: $\mathbf{O}_b\mathbf{O}_p - \mathbf{O}_p\mathbf{O}_b = \mathbf{lh} / 2\pi i$. At present however, this remains an open problem requiring proofs for our proposed Integrated Quantum Field Theory. The major speculation of this chapter is that the new zx-quantum calculus that has been developed over the past decade will prove to be a fertile field for investigating the quantum foundations of an integrated quantum field theory of all the sciences, humanities and healing arts. Coecke & Kissinger (2017), two leaders in current quantum theory, outline their introduction to the zx-calculus in this way.

The unique features of the quantum world are explained in this book through the language of diagrams, setting out an innovative visual method for presenting complex theories. Requiring only basic mathematical literacy this book employs a unique formalism that builds an intuitive understanding of quantum features while eliminating the need for complex calculations. This entirely diagrammatic presentation of quantum theory represents the culmination of 10 years of research, uniting classical techniques in linear algebra and Hilbert spaces with cutting-edge developments in quantum computation and foundations.

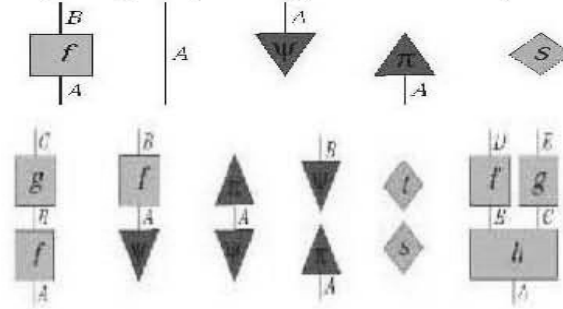
Written in an entertaining and user-friendly style and including more than 100 exercises, *this book is an ideal first course in quantum theory, foundations, and computation for students from undergraduate to PhD level, as well as an opportunity for researchers from a broad range of fields, from physics to biology, linguistics, and cognitive science to discover a new set of tools for studying processes and interactions.*

Quantum picturalism refers to the use of diagrams to capture and reason about the essential features of interacting quantum processes, in a manner that these diagrammatic equations become the very foundation of quantum theory (2017, p, 2-7, Italics added here).

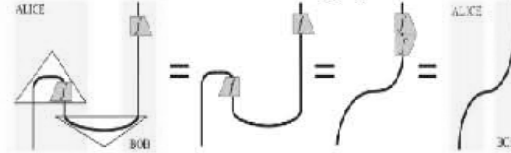
Box 2 introduces a few of the axioms, theorems and dynamics of the kindergarten picture approach to the zx-calculus (Coecke 2005, 2009; Coecke & Duncan, 2011; Backus, 2015; Coecke & Kissinger 2017), which we propose as a new language for expressing concepts, dynamics and relationships that are consistent with our integrated quantum field theory of math, physics, biology and psychology.

Box 2: A Few Axioms & Proposed Psychodynamics of the ZX-Quantum Calculus

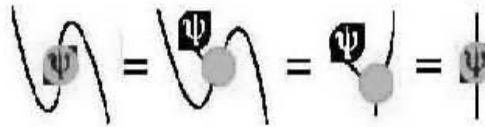
The primitive data of our formalism consists of (i) boxes with an input and an output which we call ‘operation’ or ‘channel’, (ii) triangles with only an output which we call ‘state’ or ‘preparation procedure’ or ‘ket’, (iii) triangles with only an input which we call ‘co-state’ or ‘measurement branch’ or ‘bra’, (iv) diamonds without inputs or outputs which we call ‘values’ or ‘probabilities’ or ‘weights’, (v) lines which might carry a symbol to which we refer as the ‘type’ or the ‘kind of system’, and the A -labeled line itself will be conceived as ‘doing nothing to a system of type A ’ or the ‘identity on A ’ (Coecke, 2005).



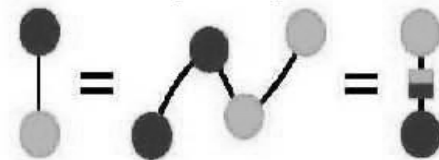
The caps and cups of quantum communication, which we propose as the transference in psychotherapy.



A basic cups and caps picture of the 4-stage basic rest-activity cycle, cognition and creativity.



An initial effort to picture the ultradian cups and caps of addictions (red) and recovery (green).



The major practical implication for our integrated quantum field theory of physics, math, biology and psychology for the current evolution of psychotherapy is to help people learn to value and tune in appropriately to the most highly sensitive and ineffable quantum qualia of their observer/operator to help them navigate the perils of everyday acute and chronic stress that generate the most common forms of psychopathology and the addictions. We need to do away with the common disparagement of “merely subjective experience of intuition and imagination” that favors the pursuit of the so-called “virtues of objective thinking and rational,” which can so easily become corrupted by narcissism, ego power, advertising, avarice and war in cultures that over-value competition and personal excellence whatever the cost. We need to transcend the rather stale reductive ideologies and manipulative models of psychotherapy as stimulus/response

conditioning, gaming, programming, suggestion and rather dry cognitive-behavioral transactions by returning to the living, experiencing, and primacy of the vivid Novelty-Numinosum-Neurogenesis-Effect (NNNE) to realize our best creative selves in the quantum evolution of psychotherapy.

Summary

The integrated quantum field theory of physics, math, biology and the psychology of consciousness, cognition, creativity and health is proposed for a new conception of the quantum evolution of psychotherapy that is made possible with the innovative quantum magnetic resonance microscope. Research in the integrated quantum field theory is updated with an adaptive RNA/DNA theory of the quantum Bayesian transformations of consciousness, creative cognition, meditation and therapeutic hypnosis. Alternating classical-to-quantum and quantum-to-classical transitions on all levels from mind to genes, the natural 90-120 minute 4-Stage Basic Rest-Activity Cycle of biology and the 4-Stage Creative Cycle of psychology, are integrated with the wave nature of the zx-calculus of quantum physics. Surprising tendencies toward cognitive dissonance, conflict, negativity and psychological regression during Stage Two (incubation/conflict) of the 4-Stage creative cycle were uncovered during dreams when parsed with Dirac's bra-ket quantum notation. We propose how the highly sensitive quantum qualia of problematic dissociations during Stage Two of the 4-Stage creative cycle have their source at quantum level uncertainty. We propose that such psychosocial conflicts have their source in non-commutation pathologies, which could be resolved in Stages Three and Four of therapeutic consciousness and cognition. Quantum Bayesian concepts of the novel observer/operator are documented with insightful applications for counseling, psychotherapy, medicine and all the mind/body therapies. Freud's concept of the so-called "unconscious" is no longer entirely unconscious; it can be updated with new explorations of the basic quantum non-commutation equation $\mathbf{pq} - \mathbf{qp} = \mathbf{lh} / 2\pi i$ and the new zx-calculus. Integrated quantum field theory research on how *the quantum qualia of the human observer/operator during subjective experience* can be a causal agent in facilitating health and problem solving *on the objective molecular/genomic level* now needs to be replicated for facilitating the living experience of the quantum evolution of psychotherapy, health, and well-being.

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