

Interview with

ERNEST LAWRENCE ROSSI

The Psychosocial Genomics of Art, Beauty, Truth, and Psychotherapy:
The evolution of Ernest Lawrence Rossi's thought and practice

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The evolution of Ernest Rossi's thought and practice is many folded, and multidimensional. (See: www.ErnestRossi.com). His scientific and therapeutic interests, particularly therapeutic hypnosis, led to his personal encounter and eventual prolific collaboration with Milton H. Erickson in the last decade of Erickson's life, in the 1970s. Currently he is hard at work, as editor, with co-editors Roxanna Erickson Klein and Kathryn Rossi, in retrieving unpublished materials, restoring, and expanding the "Collected Works of Milton H. Erickson" into 16 historical volumes (The MHE Foundation Press).

The following interview invites the reader's curiosity to three main ideas Rossi describes as basic to his evolution. It also explains what he means by "the science of psychosocial and cultural genomics", still in the process of creation and maturation. Rossi defines psychosocial and cultural genomics as "a new philosophy of life through the exploration of deep meaning, and a revolutionary science in preventive and therapeutic approaches to the human condition." He believes that it – the science of psychosocial and cultural genomics – "may become the scientific and philosophical foundation for all future studies of religion, spiritual experiences and mind-body healing."

Our conversation around Rossi's three current evolutionary ideas focus on: (1) Milton H. Erickson's "general waking trance" as a bridge between traditional hypnosis and modern neuroscience-oriented psychotherapy; (2) the evolutionary role of gene expression and brain plasticity being activated by the culture of Art, Beauty, and Truth and, (3) the mirror neurons concept and activation while experiencing (empathizing with) novelty, enrichment, and exercise. The "general waking trance" according to Rossi is one of Erickson's fundamental concepts which Erickson himself never wrote about but which Rossi considers as a breakthrough in the evolution of his own thought and practice. Rossi presents a commentary and a full version of his last meeting with Erickson in an Editors' Preface and the last chapter of Vol. 3 of the new, revised, and expanded "Collected Works of MHE" (2008-2010).

Marilia Baker (MB): The Milton H. Erickson Foundation is organizing another *Evolution of Psychotherapy* Conference this year, celebrating important contributions to the field. Please tell our worldwide readers about the evolution of your own thoughts about mind-body healing, spirit, and soul.

Ernest Rossi (ER): The evolution of my thoughts about mind-body healing, what I now call “psychosocial genomics,” had its origin in my last psychotherapy training session mentored by Milton H. Erickson, a few months before he passed on in 1980. I had asked Milton if he “could use hypnosis to *open my mind to learning everything I needed to learn to become a good practitioner of therapeutic hypnosis?*” The series of three pictures presented here are from a video recording of that session (with Marion Moore, MD in attendance). It illustrates how Milton used a touch-facilitated hand levitation approach to inducing therapeutic hypnosis to help me answer my own question.



ER: In this video Milton explains his concept of “the general waking trance” that I now believe is the natural bridge between therapeutic hypnosis and psychotherapy as we practice it today.

MB: What did he mean by “the general waking trance”?

ER: That’s exactly the question I asked Milton in this video! He had never described this concept before in any of his publications. Yet it is a fundamental insight into his thinking about the naturalistic approach to therapeutic hypnosis and psychotherapy. Erickson described a clinical case where he utilized his “general waking trance” when he “didn’t dare” use an obvious hypnotic induction. Here is exactly how our recorded dialogue went (Erickson, 1980/2008):

Milton H. Erickson: I *didn’t dare* to use anything except my “*General Waking Trance.*”

Ernest Rossi: General Waking Trance? What do you mean by that?

MHE: By holding her attention so rigidly that her eyes never left my face.

ER: in other words, your story had such an attention grabbing impact on her - you call that “The General Waking Trance.” When a person is looking at you with that intense, what you call, “*Response Attentiveness*” you feel they are in a trance even though they are apparently awake?

MHE: Yes. But actually, you realize that when you are looking at a person, the patient, and they are doing that [Erickson mimics the patient's intense *Response Attentiveness* when the patient stares into the therapist's eyes]. You know that they are not seeing anything else in the room. They are seeing you! *You see their fixed stare. You will also see the little dilation of their pupils. They will blink their eyes but they will blink more slowly than they would normally blink when you are looking at them.* [page 271]

ER: If you study this video and implications of Erickson's words carefully you will realize that he is describing states of *focused attention, intense expectancy, mental absorption,* and *response attentiveness* that he calls "the general waking trance." Erickson believed that the general waking trance is evoked by challenging life situations. This *response attentiveness* is a so-called "naturalistic trance" because it engages the person's intense interest, motivation, and "fixed attention" without the use of any formal hypnotic induction technique. I now believe this is the essence of Erickson's "naturalistic" and "utilization" approach to therapeutic hypnosis, which many excellent psychotherapists actually use without labeling it as such. I have proposed that Erickson's intense state of *response attentiveness* during *the general waking trance* evokes the three psychological experiences of *novelty, enrichment, and exercise* (both mental and physical), which neuroscientists now use to turn on activity-dependent gene expression and brain plasticity that are the molecular-genomic basis of memory, learning, consciousness, and behavior change.

MB: Could you expand further, conceptually, the parallels you trace between *intense state of response attentiveness* during the 'general waking trance' and the three psychological experiences of *novelty, enrichment and exercise* now used by neuroscientists to turn on activity-dependent gene expression and brain plasticity?

ER: You will have to judge whether I am over-generalizing a bit when I tend to see these same three psychological experiences activated during the most significant and stressful transitional events in everyday life. Rudolph Otto, for example, was a German theologian who wrote in his 1923 book "*The Idea of the Holy*" that the source of all spiritual experience was in numinous states of mind characterized by a sense of *fascination, tremendousness, and mysteriousness*. These three facets of numinous experience seem to me to be very similar to what neuroscientists call *novelty, enrichment, and mental exercise*, which turn on gene expression and brain plasticity. Research is now needed to determine if this could account for so-called "spiritual healing" and "energy healing," which I describe as the "novelty-numinosum-neurogenesis effect." From this deep psychobiological perspective the basic task of the psychotherapist in general and therapeutic hypnosis, in particular, is to facilitate the natural novelty-numinosum-neurogenesis effect in mediating mind-body healing and creative problem solving via gene expression and brain plasticity.

MB: This is indeed *fascinating!*

ER: James Braid, the Scottish physician, called this “*The Physiology of Fascination*” in the title of his classic volume on therapeutic hypnosis published in 1855. More recently a French psychiatrist, Philippe Carrer, writes in his introduction to my little French book, “*Cinq Essais de Génomique Psychosociale*” (Five Essays on Psychosocial Genomics, 2005), that some visitors to famous artistic or ancient historical sites are so enchanted that they fall into *Stendhal’s Syndrome* (Named after the French writer who was overwhelmed by the aesthetic experience upon visiting Florence, Italy in 1817) wherein they experience a state of psychological intoxication about the awe, fascination, and wonder of it all.

MB: Ernest, could this phenomenon also be an aspect of an over intense response attentiveness, the general waking trance, and its attendant gene expression and brain plasticity?

ER: I certainly know that when I had a mild stroke (left internal capsule lacuna, ischemic cerebrovascular infarction) six years ago I certainly felt stunned for about a year when, for the first time in my life, I had intense experiences of music and art that led me to what seemed like a *numinous* insight at the time. In his *Ode on a Grecian Urn* the poet John Keats came up with a conundrum that has since befuddled students of Literature 101: “Beauty is truth, truth beauty - that is all ye know on earth, and all ye need to know.” What could that possibly mean? To me in my stunned state of stroke it seemed obvious that it could only mean that what *the intense states of beauty and truth had in common is that they both turn on gene expression and brain plasticity*. It is now known

that dead and injured brain cells during a stroke do, in fact, send out emergency messenger molecules that evoke gene expression and brain plasticity in an effort to stimulate synaptogenesis (new connections between brain cells) and neurogenesis (stem cells maturing into new neurons) of the surrounding brain tissue to facilitate recovery. This is what inspires me to say that *there is more* to Art, Beauty, and Truth than current aesthetic theory recognizes. *We do not have art simply for the sake of art; we have art for the sake of building a better mind and brain in the daily construction and re-construction of our lives* (Rossi, 2004, page 36).

MB: These may be very far reaching scientific speculations, indeed, but I deeply believe that you have touched a profound truth with both concepts enunciated above. In my view, they are like a *Rosetta stone*: a probable key for further decipherment of gene expression and brain plasticity. Nevertheless, what do they actually mean for the daily work of the typical psychotherapist? Is this somehow related to your concept of a “creative dialogue with our genes?”

ER: Yes, exactly! Much of what you read in the popular press and even some of the scientific literature suggests that genes determine our experiences of mind and behavior. But this is a crude misconception. Nature (genes) and nurture (environment) are always complex interactions on the molecular-genomic level. Molecular communication between mind and genes is usually a two-way street. *This is what I mean by having a creative dialogue with our genes* (Rossi, 2004): *How do we facilitate*

the molecular messenger dialogue between mind and gene to re-construct the neural networks of mind/brain with numinous creative experiences in psychotherapy?

Many genes are called “activity-dependent” because they are only “active” when they are turned on by important sensory-perceptual signals from the outside such as light, smell, taste, touch, hearing, warmth, nutrition, nurturance, psychosocial stress, etc. I have proposed that the fascinating questions, metaphors and teaching tales we utilize in psychotherapy evoke the same three psychological conditions of *novelty, enrichment, and exercise* that neuroscientists now use to turn on activity-dependent gene expression and brain plasticity (Rossi, 2007).

MB: How much of this is scientifically proven?

ER: That’s an important question because new scientific data and ideas are usually controversial in the beginning. Psychotherapy has been cautious in exploring the *full implications* of neuroscience research on the psychosocial genomics of mind, memory and behavior change over the past decade. Researchers in the neuroscience of meditation and the relaxation response have been ahead of us in this regard (Dusek et al., 2008). But that may be changing now. A recent issue of *Monitor on Psychology*, for example, has cited Elissa Epel (2008) for “Distinguished Scientific Early Career Contributions to Psychology (Health)” in linking psychosocial stress to accelerated ageing in key cells in the immune system. She found that many of the stressors that promote disease and psychological problems also diminish the functions of telomeres

(in genetics either of the ends of a chromosome) in holding together the chromosomes and genes in the nucleus of the cells in our brain and body. *This is an example of the complex gene/environmental interactions that are now called, “epigenetics:” the science of how the activities of genes are modulated by their environment.* Very little is known about the psychodynamics of activity-dependent gene expression and brain plasticity at this time, however.

These are the growing edges of the current *Evolution of Psychotherapy* that we explore, facilitate, and teach in workshops of our recently founded *Milton H. Erickson Institute of the Central California Coast* (MHE-CCC). Please visit us at www.ErnestRossi.com

MB: I have recently visited Dr. Salvatore Iannotti in San Lorenzo Maggiore, Italy who described some of your recent research in the psychosocial genomics of therapeutic hypnosis. This charming town nested in the hills of the Benevento region, houses the *Iannotti-Rossi Foundation* for “consciousness research via psychosocial genomics”, and *Istituto Mente-Corpo* (Mind-Body Institute), directed by Dr. Iannotti, of which you are a co-founder and Director of Research, (www.istitutomentecorpo.it). San Lorenzo Maggiore is also the birthplace of your ancestors.

ER: Yes, besides Salvatore Iannotti, our research team consisted of Mauro Cozzolino and Stefano Castiglione of the University of Salerno and Angela Cicatelli of the University of Naples as well as Kathryn Rossi from California. We did a pilot study to assess our hypothesis that a creatively oriented positive human experience of therapeutic hypnosis could modulate gene expression on the molecular level as assessed by DNA microarrays. We documented changes in the expression of 15 early response genes within one hour that apparently initiated a further cascade of 77 genes

24 hours later in the white blood cells of our subjects. This proof-of-principle pilot study now requires cross validation with more subjects to document the validity and reliability of using DNA microarrays to assess our protocol, *The Creative Psychosocial Genomic Healing Experience*, as a new approach for facilitating therapeutic hypnosis, psychotherapy, rehabilitation, meditation, pastoral counseling and creative work in general (Rossi et al., 2008 In Press).

MB: In his introduction to your book, *A Creative Dialogue with Our Genes* (2004), Dr. Iannotti compares Leonardo da Vinci's original seven stages of the creative process with your four stage creative process as you describe and verify in therapeutic hypnosis: 1. Preparation, gathering information; 2. Incubation; 3. Illumination or Insight, and 4. Verification or Applications to everyday life. Iannotti went further in describing similarities between Leonardo's creative genius and yours, as well as stating that both were way way far in advance of their times with their theories, investigations, experiments, and findings.

ER: All my new activity-dependent hand mirroring approaches for facilitating a *Creative Psychosocial Genomic Healing Experience* evoke novel creative states that I hope will facilitate the *novelty-numinosum-neurogenesis* effect. Actually, I believe this may be what happens naturally in lucid dreaming and particularly in our big visionary dreams that may inspire adaptive behaviour in challenging life transitions. Our natural rhythms of slow wave sleep and REM dreaming, which occur every 90 to 120 minutes, has its own pattern of gene expression. When we are awake, aspects of this 90 to 120 minute cycle are experienced as our natural ultradian Basic Rest-Activity Cycle, also called an "ultradian rhythm" (Lloyd & Rossi, 2008). Every 90 to 120 minutes throughout the day

we need to take a break wherein we typically feel a natural state of comfort and rest for about 20 minutes wherein we experience recovery and healing that I call “*the ultradian healing response*.” If we do not heed nature’s call to rest we may fall into “*the ultradian stress response*,” which leads to chronic stress that is the mind-gene source of psychosomatic problems.

MB: You have mentioned in your books and emphasized in your teachings about Dr. Erickson’s consistently long hypnotherapeutic sessions. Most recently you refer to these sessions in your commentary of his 1964 article: *Burden of Responsibility in Effective Psychotherapy* (1964/2008).

ER: I believe that an intuitive recognition of such mind-body rhythms was a significant source of Erickson’s success with psychosomatic dysfunctions. His typical sessions of therapeutic hypnosis lasted about 90-120 minutes. During that time he had ample opportunity to facilitate whatever aspect of the natural basic rest-activity cycle (BRAC) was most appropriate for coping with the patient’s symptoms and problems. He could facilitate the *active high phase of the BRAC* to help people optimize their *active performance skills* in sports, academic examinations, and etcetera. He also taught me to recognize the *minimal behavioral cues of “trance readiness,”* which, I now believe, corresponds to the *comfortable rest phase of the BRAC* to facilitate a client’s natural ultradian healing response, which turns on the appropriate patterns of gene expression for health and well being.

MB: Ernest, we must end for now this entrancing interview, which I called in my notes “my journey into Ernest Lawrence Rossi’s vision and evolution.” Two thoughts come to mind as we wrap-up: my fascinating experiences in San Lorenzo Maggiore, the land of your father, your grandparents, and your ancestors. There is so much earthly beauty in the land and in the visceral, ancient knowledge and wisdom of its inhabitants. I sense that *you* have come full circle in expressing scientifically and in clinical practice, *the best of both worlds*, for the benefit of Humanity. The other overwhelming feeling right now is to express gratitude and wonder for it all, after the Navajo prayer: *The world before me is restored in Beauty, the world behind me is restored in Beauty... all things around me are restored in Beauty... My voice is restored in Beauty... All is finished in Beauty.*

ER: Marilia, I sincerely want to thank you for helping me understand the evolution of my own world of psychotherapy. I know it is controversial and far from typical. Sometimes I secretly have delicious feelings of strangeness, introversion, and otherness – being very different from most of my psychologist colleagues. This may be due to my eclectic background in biology, philosophy, math, molecules, and mystical wonderment before I came into the field of psychotherapy. Even today, after 40 years of working as a psychotherapist, my daily work is filled with fumbling questing about how this evolving bag of molecules becomes you and me communicating with consciousness. How do we make sense of it all – mind, body, science, spirit, and soul? My personal delusion may be that I actually feel and I do intuit some of it quite clearly – or, at least I have a research program for exploring a wonderful world of hypotheses about therapeutic mind/gene communication. The *Newsletter* readers can read all about it and figure out

where I probably go wrong by clicking on the “Free Book” at our Milton H. Erickson Institute of the Central California Coast (MHE-CCC) web site at www.mhe-ccc or at www.ErnestRossi.com.

MB: Ernest, I am the one to thank *you* in behalf of our worldwide readership for your extraordinary lifework and for your passionate *visionquest*. I also thank you for a lifetime of indefatigable pursuit of *Beauty* (as expressed in your writings and exquisite therapeutic interventions), *Truth* (healing in therapeutic hypnosis), and the *Art of Living* (showing patients and students how to have a “happy day”, *moment to moment to moment*).

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