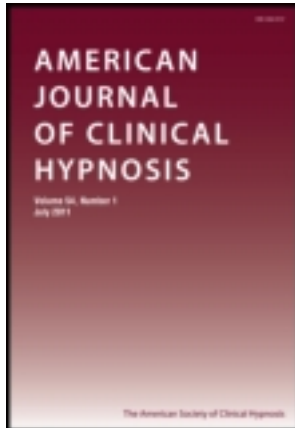


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A Brief Protocol for the Creative Psychosocial Genomic Healing Experience: The 4-Stage Creative Process in Therapeutic Hypnosis and Brief Psychotherapy

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A Brief Protocol for the Creative Psychosocial Genomic Healing Experience: The 4-Stage Creative Process in Therapeutic Hypnosis and Brief Psychotherapy

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The authors present empirical data on therapeutic hypnosis and brief psychotherapy as a 4-Stage Creative Process of focused attention and positive expectancy in professional training workshops of the American Society of Clinical Hypnosis, the National Institute for the Clinical Applications of Behavioral Medicine, and the Milton H. Erickson Foundation. The authors developed a brief protocol for assessing the 4-Stage Creative Process, which is the core dynamic of the Creative Psychosocial Genomic Healing Experience. They report that the 4-Stage Creative Process for resolving many psychological problems and symptomatic behavior in a satisfactory manner can be learned within 3 trials during 2-day professional workshops. The theory, research, and practice of private problem solving, stress reduction, and mind-body symptom resolution in professional and public settings is discussed. Immediate knowledge of results, positive peer support, and the development of new psychosocial skills in learning how to appropriately communicate live here-and-now novel and numinous experiences is an exhilarating exercise in creating new consciousness that facilitates the confidence and maturation of psychotherapists.

Keywords: 4-Stage Creative Process, brain plasticity, ideoplastic, psychosocial learning, psychosocial epigenetics, professional training workshops

The theory, research, and practice of using the 4-Stage Creative Process as a protocol for facilitating personal problem solving and symptom resolution in psychotherapy began with two seminal articles in the *Journal of Humanistic Psychology* by the senior author (Rossi, 1967, 1968). Since that time, the 4-Stage Creative Process has been used to train two generations of students and clinicians in professional training workshops of the American Society of Clinical Hypnosis, the National Institute for the Clinical Applications of Behavioral Medicine, and the Milton H. Erickson Foundation. The 4-Stage Creative Process is the core dynamic of the Creative Psychosocial Genomic Healing Experience, which recently is associated with molecular-genomic signatures consistent with (a) the upregulation of stem cell activity and (b) the downregulation of chronic inflammation, and (c) cellular oxidation (Atkinson et al., 2010; Rossi, 2010; Rossi et al., 2008, 2010, 2011; Rossi & Rossi, 2008, 2009, 2011a).

It has been conjectured that this association between the 4-Stage Creative Process of psychology and the molecular-genomic signatures of biology may be a fundamental mechanism of therapeutic hypnosis and the placebo response as well as healing aspects of meditation, holistic medicine, and psychosocial epigenetics (Rossi, 2007; Rossi & Rossi, 2011b). We propose that psychosocial epigenetics is an emerging science of interactions between social and psychological levels of experience and qualia-dependent activation of gene expression and brain plasticity (Rossi & Rossi, 2011a). The complex psychosocial epigenetics among behavior, gene expression, chronic inflammation, and the environment have been reviewed recently in *Nature* for its far-reaching implications, even in cancer prevention, by Brower (2011):

Researchers are finding that epigenetic changes frequently precede and can induce genetic mutations that cause cancer. If these early epigenetic alterations can be detected and reversed, it might be possible to prevent certain cancers . . . *If the genetic code is the hardware for life, the epigenetic code is software that determines how the hardware behaves—and as such it can be rewritten . . .* The move from a purely genetic to an epigenetic model is crucial for prevention strategies . . . Epigenetics has also provided clues that link environmental factors with cancerous genetic changes . . . *A prime candidate at the interface of environment and genetics is chronic inflammation, which is known to precede the development of numerous types of precancerous lesions—and indeed certain cancers themselves, including esophageal, liver and colon cancers. Inflammation has been linked with increased DNA methylation in otherwise healthy looking tissue . . . chronic inflammation “a truly epigenetic phenomenon . . .* Slowly the importance of the epigenome in cancer development is being appreciated. “Geneticists are hugely more aware of the importance of epigenetics in the development of cancer” . . . When it comes to cancer prevention, the future could lie in arresting the reversible epigenetic changes before irreversible mutations take hold. (pp. s12–s13, italics added)

We propose that this recent acknowledgement of the role of epigenetic interactions between behavior and gene expression in mind–body health and dysfunctions as intractable as cancer has profound implications for developing a new neuroscience mind–body paradigm of brief psychotherapy and therapeutic hypnosis (Rossi, 2002, 2007, 2011). The Creative Psychosocial Genomic Healing Experience, with its core four-stage creative protocol, is explicitly designed for optimizing the ideoplastic

epigenetic modulation of acute and chronic stress reduction via experience-dependent gene expression, brain-plasticity, and mind–body healing.

This neuroscience perspective is consistent with the Nobel Prize winning research of Eric Kandel (1998) who first described the relationship between activity-dependent gene expression and brain plasticity, memory, learning, counseling, and psychotherapy as follows:

Insofar as psychotherapy or counseling is effective and produces long-term changes in behavior, it presumably does so through learning, by producing changes in gene expression, which alter the strength of synaptic connections and structural changes that alter the anatomical pattern of interconnections between nerve cells of the brain. As the resolution of brain imaging increases, it should eventually permit quantitative evaluation of the outcome of psychotherapy . . . Stated simply, the regulation of gene expression by social factors makes all bodily functions, including all functions of the brain, susceptible to social influences. These social influences will be biologically incorporated in the altered expressions of specific genes in specific nerve cells of specific regions of the brain. These socially influenced alterations are transmitted culturally. They are not incorporated in the sperm and egg and therefore are not transmitted genetically. (p. 460)

The value of combining Kandel’s (1998) concept of activity and experience-dependent gene expression and brain plasticity with therapeutic hypnosis, psychotherapy, and the 4-Stage Creative Process is that it avoids the issues of infinite regress implied in circular definitions of *mind*, *consciousness*, and *brain*. While this neuroscience model of the co-creation and co-evolution of the mind and brain does not entirely solve the hard problem of how physical molecular-genomic mechanisms give rise to subjective experiences of consciousness, it could integrate research data in informational models of the mind–body philosophical conundrum. We propose that many brain neurons respond to novel, salient, and surprising psychological experiences by turning on activity- and experience-dependent gene expression and brain plasticity to construct and reconstruct neural networks that encode the cognitive-behavioral perspective of all forms of creative psychotherapy. We propose that this neuroscience model of therapeutic hypnosis and psychotherapy bridges the Cartesian gap between mind and body, at least in part, by using the concept of biological information to supplement our more typical cognitive-behavioral perspectives (Gleik, 2011; Rossi & Rossi, 2011b).

Method

Our teaching plan for each professional training workshop proceeds in four steps:

1. A 20-minute PowerPoint presentation of six slides illustrating the nature of the 4-Stage Creative Process as experienced in everyday life, therapeutic hypnosis, and brief psychotherapy.¹
2. A 20-minute experience of the 4-Stage Creative Process via the Brief Protocol for the Creative Psychosocial Genomic Healing Experience (see Appendix A).

3. A 15-minute group voluntary sharing of interesting and surprising aspects of problem solving with the 4-Stage Creative Process in the Brief Protocol for the Creative Psychosocial Genomic Healing Experience.
4. Five minutes to fill out the 4-Stage Creative Process Scoring and Assessment Form (see Appendix B).

Assumptions and Results

Assumption 1: The 4-Stage Creative Process Can Be Learned in Professional Training Workshops

Figure 1 illustrates how three trials during a professional training workshop at the National Institute for the Clinical Applications of Behavioral Medicine at Hilton Head in 2010 over 2 days were sufficient to learn the 4-Stage Creative Process in a group presentation. The two-way analysis of variance was significant ($p = .0128$) for trials variable and very significant ($p = .0018$) for the 4-Stage Creative Process variable. Figure 2 illustrates the same data with a focus on the 4-Stage Creative Process on the horizontal axis. Table 1 presents the two-way analysis of variation for Figures 1 and 2.

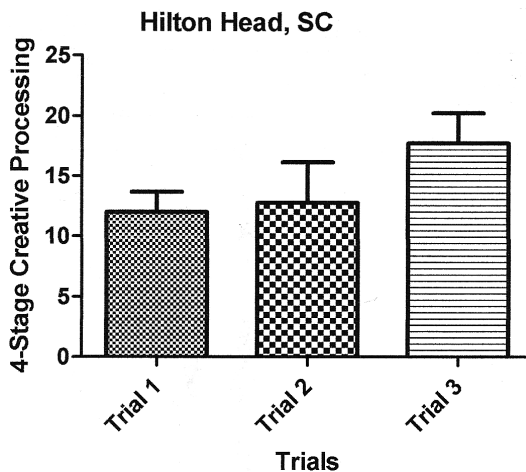


FIGURE 1 Three trials in learning the 4-Stage Creative Process during a professional training workshop at the National Institute for the Clinical Applications of Behavioral Medicine at Hilton Head in 2010.

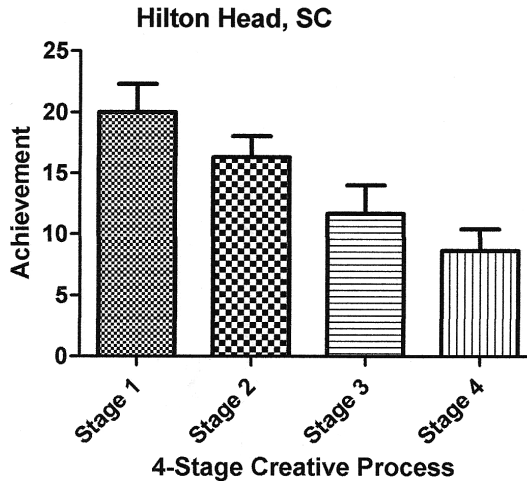


FIGURE 2 Illustrates the same data as Figure 1 with a focus on the 4-Stage Creative Process on the horizontal axis.

TABLE 1
Two-Way Analysis of Variance Results

<i>Table analyzed</i>	<i>Data 1</i>	<i>Significance level</i>		
Two-way analysis of variance				
Source of variation	Total variation (%)	<i>p</i>		
Trials	23.86	.0128		
Stage of creative process	68.87	.0018		
Source of variation	<i>p</i> value summary	Significant?		
Trials	*	Yes		
Stage of creative process	**	Yes		
Source of variation	Df	Sum-of-squares	Mean square	<i>F</i>
Trials	2	78.17	39.08	9.839
Stage of creative process	3	225.7	75.22	18.94
Residual	6	23.83	3.972	
Number of missing values	0			

Assumption 2: There is a Significant Gap in Learning to Bridge Stages 2 and 3 of the 4-Stage Creative Process in Professional Training Workshops

Figure 3 illustrates how combining the data of successful achievement on Stages 1 and 2 and contrasting it with the combined data on the successful experience of Stages 3 and 4 narrowly missed significance ($p = .0544$, for the stages variable; $p = .5888$ on the trials variable), presented in Table 2.

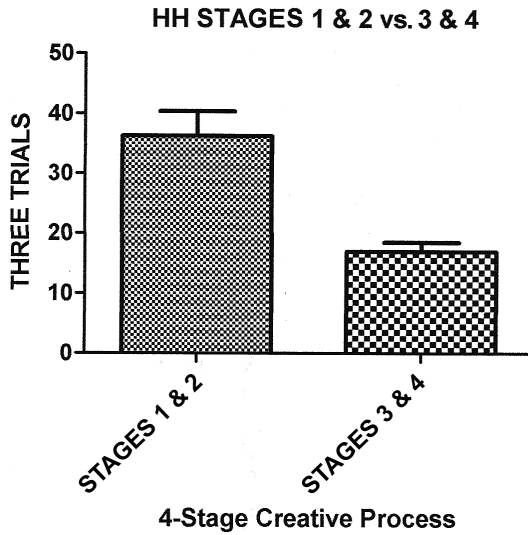


FIGURE 3 The data of successful achievement on Stages 1 and 2 and contrasting it with the combined data on the successful experience of Stages 3 and 4.

TABLE 2
Two-Way Analysis of Variance Results

<i>Stages 1 and 2 vs. Stages 3 and 4</i>	<i>Figure 3 data</i>	<i>Significance level</i>		
Two-way analysis of variance				
Source of variation	Total variation (%)	<i>p</i>		
4-Stage Creative Process	83.27	.0544		
Trials	6.88	.5888		
Source of variation	<i>p</i> value summary	Significant?		
4-Stage Creative Process	ns	No		
Trials	ns	No		
Source of variation	Of	Sum-of-squares	Mean square	<i>F</i>
4-Stage Creative Process	1	560.7	560.7	16.90
Trials	2	46.33	23.17	0.6985
Residual	2	66.33	33.17	
Number of missing values	0			

Assumption 3: More Experienced Subjects Will Achieve Higher Success at Stages 3 and 4 of the 4-Stage Creative Process in Professional Training Workshops

Although a visual comparison of Figure 2 (initially inexperienced subjects) and Figure 4 (highly experienced subjects with more than three trials) suggests that this assumption is

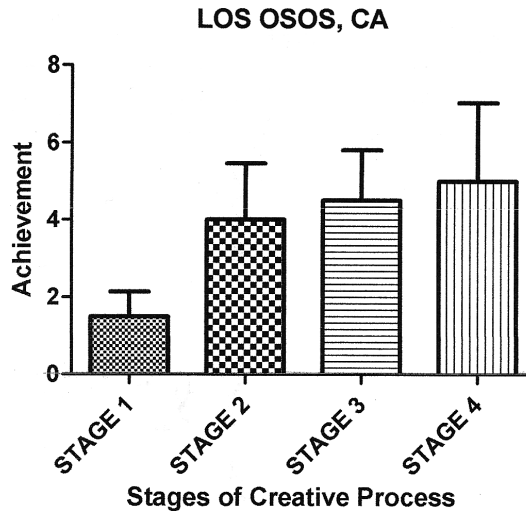


FIGURE 4 Highly experienced subjects with more than three trials have a wider range of variation in the 4-Stage Creative Process.

true, it fails to achieve statistical significance. A careful inspection, however, reveals that there is a wider range of variation in the achievement of Stages 2, 3, and 4 in the more experienced group. These highly experienced subjects appeared to spend less time in Stage 1 (selecting a problem) and immediately jumped to Stages 2, 3, and 4 with gusto. They appeared to be less methodical and orderly in progressing from one stage to the next. They often shifted rapidly back and forth among Stages 2, 3, and 4 while working on several related problems and their implications. The subjective reports of these more experienced subjects suggested that their growing expertise led them to take many intuitive, nonrational shortcuts leading to more efficient multiple and simultaneous problem solving, which, however, was unexpected and difficult to quantify at this early stage of research on the 4-Stage Creative Process. This means that further research with a larger number of subjects and a more detailed analysis of the subject's performance strategies could clarify what contributes to advanced achievement on the 4-Stage Creative Process for therapeutic purposes. These unexpected findings suggests that future research may use Bayesian inference, which combines experience of the prior probability of an assumption with new observed evidence (Bolstad, 2010).

Assumption 4: Teaching the 4-Stage Creative Process Can Be Effective Throughout the Typical Circadian Day (Morning and Afternoon) of Professional Training Workshops in Therapeutic Hypnosis and Psychotherapy

Aldrich and Bernstein (1987) reported that hypnotic susceptibility is bimodal with peaks occurring in the morning (11 am–12 pm) and afternoon (4 pm–6 pm). This circadian

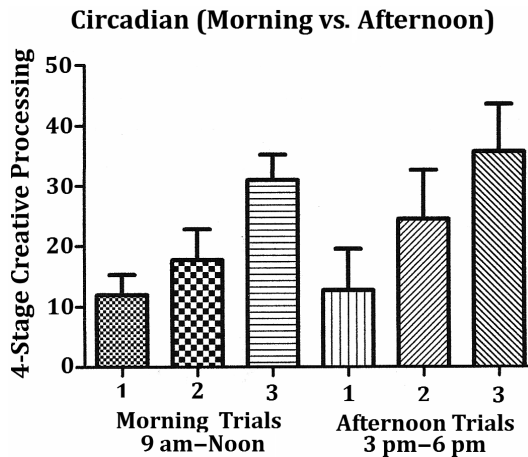


FIGURE 5 The combined data of all the subjects participating at two major national 2010 workshops offering training in therapeutic hypnosis and psychotherapy (i.e., The National Institute for the Clinical Applications of Behavioral Medicine at Hilton Head, South Carolina and the Milton H. Erickson Foundation in Orlando, Florida).

TABLE 3
Two-Way Analysis of Variance Results

<i>Circadian factor</i>	<i>Figure 5 data</i>	<i>Significance level</i>		
Two-way analysis of variance				
Source of variation	Total variation (%)	<i>p</i>		
Trials	73.56	<.0001		
4-Stage Creative Process	21.49	<.0001		
Source of variation	<i>p</i> value summary	Significant?		
Trials	****	Yes		
4-Stage Creative Process	****	Yes		
Source of variation	Of	Sum-of-squares	Mean square	<i>F</i>
Trials	5	1918	383.5	44.55
4-Stage Creative Process	3	560.1	186.7	21.69
Residual	15	129.1	8.608	
Number of missing values	0			

factor was closely approximated in Figure 5, which illustrates how the trials and 4-stage variables were both very highly significant ($p = .0001$), as presented in Table 3.

These very highly significant p values were partly attributable to Figure 5 representing the combined data of all the subjects participating at two major national 2010 workshops offering training in therapeutic hypnosis and psychotherapy (i.e., The National Institute for the Clinical Applications of Behavioral Medicine at Hilton Head, South Carolina; and the Milton H. Erickson Foundation in Orlando, Florida). The three columns on the left side of Figure 5 represent data for the combined groups in the morning (9 am–12 pm), which were almost identical with the data of the combined groups in the afternoon

(3 pm–6 pm). This means that teaching and learning the 4-Stage Creative Process can be equally effective throughout the typical circadian day of professional workshops sponsored by two different national organizations offering beginner and advanced training in therapeutic hypnosis and psychotherapy. This implies that our model of training professionals in learning to experience the 4-Stage Creative Process is robust and worthy of scientific replication with other populations representing the various interests of the general public, different age and educational levels, and the many clinical dysfunctions that may be treated more economically in group settings.

Discussion

Data Limitations of Our Clinical-Research Workshop Model

The data collected in the clinical-research workshop model of this study comprised uncontrolled and unreliable situational factors typical of such professional training workshops. The number of subjects participating was sometimes uncertain, for example, because subjects occasionally walked in and out of the workshops. Most groups, however, comprised about 30 subjects (± 5) in a wide age range between the twenties to the sixties with about 70% women and 30% men in each group.

Not everyone present in the workshops participated; about 10% of the subjects preferred to simply observe rather than actively engage in the 4-Stage Creative Process exercise. We found that to secure optimal participation in this clinical-research teaching workshop, it is important for potential participants be advised ahead of time (in the workshop brochure) that they agree to participate as research subjects in a novel approach to learning how to experience the 4-Stage Creative Process in therapeutic hypnosis and psychotherapy.

Psychobiological Dynamics From Mind to the Molecular-Genomic

Why do subjects need more practice time to bridge the gap between Stage 2 and Stage 3? We assume that in any truly creative process, more time is needed for experience-dependent gene expression and brain plasticity to bridge the performance gap between Stages 2 and 3. This assumption achieved some experimental support with murine (mice) subjects that require about four weeks for brain stem cell to develop into young neurons and four months to reach their mature size and functions (Rossi, 2002, 2007).

Enhancing Psychosocial Skills via Positive Transformations of the 4-Stage Creative Process in Professional Training Workshops

A noteworthy feature of the empirical data of this study is how quickly psychotherapists are able to learn how to enhance their personal experiences of the 4-Stage Creative Process privately in a public setting. A remarkable aspect of the 4-Stage Creative Process

is its facilitation of positive psychosocial transformations. Our creative psychological genomic healing experience model of the 4-Stage Creative Process implies people are temporally stuck in Stage 2 of a creative process that simply requires a little more time, focused concentration, and conscious self-care for a satisfactory resolution. This perspective shift could account for the positive attitudes and rapid transformations many of our subjects experienced.

It has long been assumed that psychotherapy is a private affair with many secrets that must be hidden from public scrutiny. We have demonstrated, however, that our professional training workshops can be robust psychosocial venues for doing private inner work rapidly in public. The instructions given throughout our approach to the 4-Stage Creative Process is that “it is private but appropriate aspects of the experience can be shared publically” to help others in the workshop. This appropriate psychosocial sharing could account for the richness, rapidity, and satisfaction of learning in professional training workshops. Future research will be required to evaluate the extent to which such private psychosocial genomic creative work in public settings can be extended to other groups.

Summary

We formulated a brief protocol for the Creative Psychosocial Genomic Healing Experience and the 4-Stage Creative Process in therapeutic hypnosis and brief psychotherapy suitable for administration to groups as well as individuals. This robust protocol of the 4-Stage Creative Process for resolving psychological problems and symptomatic behavior in a satisfactory manner can be learned within three trials during 2-day professional workshops. The theory, research, and practice of private problem solving, stress reduction, and mind-body symptom resolution on all levels from mind to gene in professional workshops is discussed. Immediate knowledge of results, positive peer support, and the development of new psychosocial skills in learning how to appropriately communicate live here-and-now novel and therapeutic experiences is an exhilarating exercise in creating new consciousness that facilitates the confidence and maturation of psychotherapists.

Note

1. These slides and their scientific rational in six languages are available at <http://www.ernestrossi.com/ebook/index.html>.

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Appendix A: The Creative Psychosocial Genomic Healing Experience: A Brief Protocol for the 4-Stage Creative Process

Introduction

The therapist begins with the following: “It is wonderful to know how our best thoughts and positive feelings can improve health and well-being. Here are a few exercises that will inspire you to explore some interesting questions that can help you solve your creative problems in your own way.”

[Optional facilitation of Stage 1: If needed, the therapist may add a few empathetic statements to individualize this brief protocol to clarify whatever concerns and questions some people and groups may have.]

[Introduce the 4-Stage Creative Process Scoring & Assessment Form.]

The therapist begins with the following: “An important aspect of creative problem solving is to realize how you can explore new life possibilities by looking at things from many points of view at the same time. These creativity exercises will ask you to carefully observe yourself and carefully remember what you are experiencing. Later you will be asked to remember your experiences so you can fill out the 4-Stage Creative Process Scoring & Assessment Form. You can begin by filling out the first line of this form right now. [Pause for a moment.] Notice the last item on the first line asks you to record what level you are experiencing right now on a scale of 0% to 100%, where 0% is no stress or discomfort and 100% would be the worst stress or discomfort you have ever experienced in your whole life. 50% would be your average level of stress in everyday life. Go ahead and circle or write in your initial stress level right now on the dotted line.” [Pause for a moment.]

[Optional research: A protocol for research on the molecular-genomics of the 4-Stage Creative Process and the Creative Psychosocial Genomic Healing Experience has been presented (Atkinson et al., 2010; Rossi et al., 2008). The first step in collecting samples for DNA microarray and bioinformatic analysis of the molecular-genomic analysis of each stage of the 4-Stage Creative Process is conducted at this time.]

Stage 1: Focusing Consciousness

The therapist models the first stage of the creative process with the palms of the hands about 6 to 8 inches apart facing each other at about chest level. [Presenting Figure A illustrating this initial hand position in Stage 1 of the 4-Stage Creative Process is optional.]

“You can begin by looking at your hands like this . . .”

1. Warmer or Cooler?

The therapist asks, “Which hand feels a bit warmer or cooler?” Subjects may sometimes seem puzzled about what this question means. The therapist simply responds with,



FIGURE A The initial hand mirroring position for Stage 1 of the 4-Stage Creative Process.

“Most people don’t realize how their hands or other parts of their body usually feel slightly warmer or cooler when they really pay attention to it. This is a good exercise to help you become more aware of yourself. It helps to focus your attention and positive feeling about your natural abilities. The simple idea of one hand being warmer or cooler could heighten your real feeling of warmth and coolness.”

After a minute, the therapist adds support and states emphatically, “Notice and remember how warm or cool your hands seem to be.” [Allow another minute for the subject’s inner focus.]

2. Stronger–Weaker?

The therapist now asks, “Now notice which hand feels stronger or weaker?” After 1 minute the therapist adds support by stating emphatically, “Notice and remember how strong or weaker your hands seems to be!” [Allow another minute for the subject’s inner focus.]

3. Lighter–Heavier?

The therapist asks, “Now notice which hand feels lighter or heavier?” After 1 minute the therapist adds support by stating emphatically, “Notice and remember how light or heavy your hands seems to be!” [Allow another minute for the subject’s inner focus.]

[Facilitating Stage 1 for the uniqueness of groups and individuals: If needed the therapist may add a few empathetic statements to individualize this Brief Protocol to clarify whatever concerns and questions that some subjects and special groups may have.]

Stage 2: Incubation, Problem Review

4. Child–Adult?

The therapist asks, “Now let’s explore your imagination . . . Which hand seems to be you today—and which hand feels more like you as a child?” After 1 minute the therapist adds support by stating emphatically, “Notice and remember which hand seems to be you at your present age and which hand seems to be more like you as a child!” [Allow another minute for the subject’s inner focus.]

5. Problem–Opposite

The therapist now asks, “Which hand represents some problem you would like to solve right now—today in this exercise? . . . [Therapist pauses for 1 minute.] And which hand seems to be the opposite . . . perhaps holds an answer to your problem?” After 1 minute the therapist adds support by stating emphatically, “Remember which hand represents your problem and which hand seems to hold the opposite—perhaps an answer even if you do not know what it is yet!” [Allow another minute for the subject’s inner focus.]

6. Problem History

The therapist states emphatically, “Now let the hand that represents your problem begin to drift down very slowly . . . as you privately review the history, memories, and feelings of your problem from the beginning to the present moment.”

The therapist’s models by very slowly lowering one hand as illustrated in Figure B. (Presenting Figure B is optional.)

The therapist offers motivational support with these remarks administered 1 minute apart:

- “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?”
- “Allowing yourself feel only as much of that as you need to . . . and then move on to the next memory that comes up more or less by itself.”
- “That’s right . . . let yourself have the courage to continue . . . only as long as you need to . . . to feel everything as fully as you need to . . . privately.”



FIGURE B Stage 2 of the 4-Stage Creative Process in the hand-mirroring protocol.

- “That’s right . . . while another part of you observes wisely . . . you learn how to take care of yourself . . . to imagine and create the best possible outcome for yourself.”

This therapeutic review is safe because people are not encouraged to fully recall any difficult situations or traumatic memories of the past. In this safe context memories and emotions are carefully circumscribed and limited because they are externalized by being projected into one hand only. In this brief protocol negative memories are always balanced by encouraging people to simultaneously experience the opposite or solution in their other hand that holds solutions to problems even if they remain unknown at this point.

When the problem hand finally touches down in the person’s lap, the therapist adds support and offers empathetically, “That’s right! Allowing your problem hand drift down to your lap and come to a comfortable rest . . . wonderful . . . appreciating your job well done! Remember as much of this Stage 2 of your creative process as you need to build a better future! . . . and now getting ready to move on to the solution of your problem

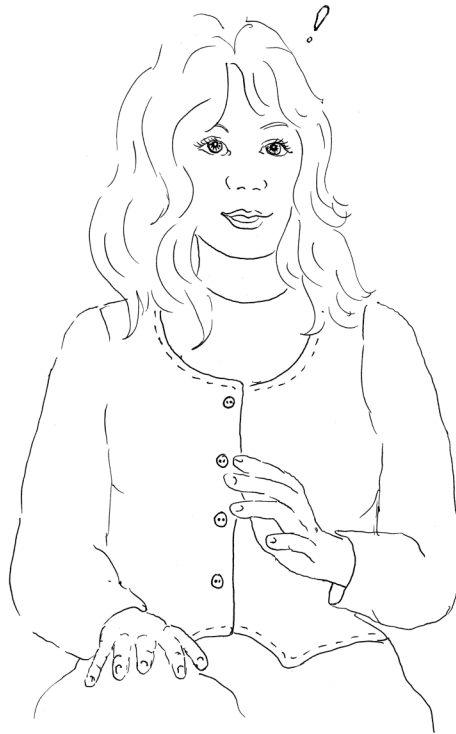


FIGURE C Stage 3 of the 4-Stage Creative Process in the hand-mirroring protocol.

with your other hand. Let your other hand holding the solutions to your problem remain up for a moment so you can now turn your full attention to it!”

Stage 3: Aha! Problem Solving

The therapist now facilitates problem solving via the famous “Aha” or “Eureka” experience of insight celebrated in ancient and modern literature as illustrated in Figure C. Creative insight, problem solving, and healing often seem to happen spontaneously. Subjects are usually surprised and delighted when they receive a creative thought. Many people automatically dismiss their own originality as worthless since it has never been reinforced in their early life experience. The therapist’s main job at this third stage of the creative process is to help people recognize and appreciate the value of the new and creative that usually emerges spontaneously and unheralded. Often people may have already thought of the options that come up for problem solving at this stage but dismissed them since they were never validated. Here the therapist strongly supports exploring them for their real-life possibilities!

7. Problem Solving

The therapist continues to model by slowly lowering the other hand as illustrated in Figure C:

“Now allow your other hand to drift down slowly as you explore new possibilities about how to solve your problem today . . . Allow that hand to begin drifting down slowly as you begin to explore something new . . . Explore your best hopes and imagination for today and the future . . . what could be some interesting and wonderful possibilities of problem solving, 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!”

This fragile and tenuous transition from the difficulties of the previous Stage 2 reviews of past problems to the new joyous possibilities of Stage 3 that now emerge often can be seen in the delicate shifts of people’s facial expressions. Notice the shifts from negativity, stress, sadness, and conflict (of Stage 2) to the more searching expressions of positive expectation in Stage 3 of the creative process that are often punctuated with a slight smile and even a short laugh. The therapist supports these positive shifts with a few warm implicit processing heuristics such as these administered at 1-minute intervals:

- “Something pleasantly surprising you can look forward to? . . . What you really need that is most interesting and important to you?”
- “Simply receiving and continuing to explore the sources of your strength for dealing successfully with that issue.”
- “Yes, appreciating the value of that as fully as you need to while taking good care of yourself as that hand finally comes to rest in your lap.”
- When the hand finally touches down in the subject’s lap, the therapist states in supportive manner, “Remember this Stage 3 of your creative process! Remember how real and strong these new positive possibilities and feelings for changing your life for the better are!”
- The therapist now facilitates the transition from Stage 3 of the creative process to Stage 4 with the following: “Wonderful . . . really appreciating yourself for a job well done! . . . And now get ready to move on to the resolution of this issue (concern, problem, or symptom)!”

Stage 4: Reality Testing and Self-Care

The therapist optimizes Stage 4 by (a) facilitating group sharing and positive discussion to validate the value of their experiences, (b) helping them reframe symptoms into signals and psychological problems into inner resources, (c) reality testing, and (d) self-prescriptions for self-care. Here is a four-part implicit processing heuristic to mediate these creative transitions.

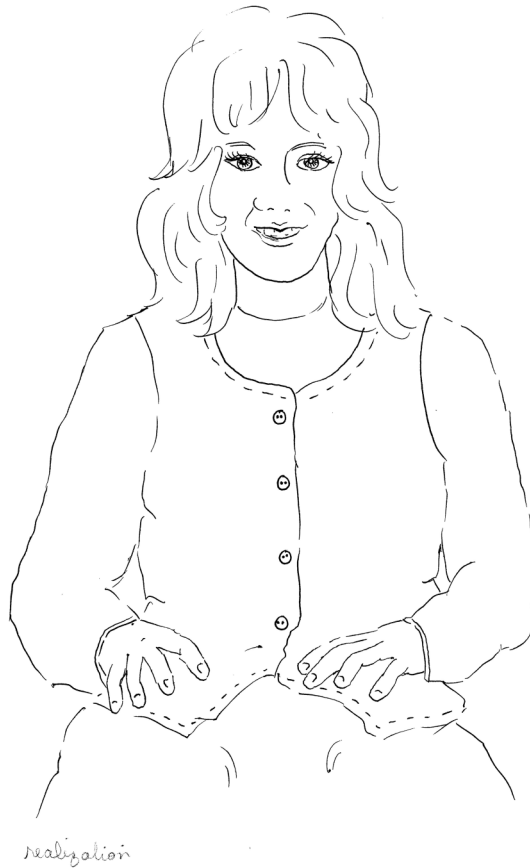


FIGURE D Stage 4 of the 4-Stage Creative Process in the activity-dependent hand-mirroring protocol.

8. Reality Testing & Self-Prescription for Self-Care

The therapist brings this brief protocol to its creative conclusion with this four-part implicit processing heuristic, each part administered at 30-second intervals (Figure D):

1. “When . . . [brief pause for emphasis] A part of you knows it can continue this creative work entirely on your own at appropriate times throughout the day . . . [30-second pause]”
2. “And when . . . [brief pause for emphasis] your conscious mind knows it can simply cooperate in helping you recognize when is the right time to tune in and continue this creative work privately on your own . . . [30-second pause]”
3. “Learning how you can explore and practice your new ideas in the real world and give yourself positive prescriptions for taking good care of yourself . . . [30-second pause]”

4. “You will bring this creative exercise to an end for now so you can stretch and come fully alert. Some of you may wish to share how you can help yourself in your real everyday life.”

While the group is evidently completing their inner work, the therapist can provide support by stating:

“All this creative work can remain private within you . . . although some of you may wish to share a few of your insights with the group . . . some appropriate ideas that may help others learn how to continue this creative work.”

9. Reinforcing the Psychosocial Learning of the 4-Stage Creative Process via Group Sharing of Appropriate, Interesting, and Surprising Aspects of this Creative Exercise

The therapist now encourages group sharing with supportive remarks such as these:

- “Something interesting some of you would like to share about your creative inner work?”
- “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 interesting possibilities are opening up for you to now?”
- “How will this experience contribute to a positive change your life?”
- “What new attitudes and ideas will you now explore in your life?”

The therapist carefully monitors a positive sharing of experiences. People are encouraged to “learn how to appropriately share a few their private experiences that support psychosocial learning.” People are discouraged from negative evaluation of these share experiences. Compassionate, empathetic, and supportive listening to each other is the most important creative psychosocial process to be learned.

[Optional facilitation of Stage 4: If needed the therapist may add a few empathetic statements to individualize this Brief Protocol to clarify whatever concerns and questions some people and groups may have.]

10. Finish the 4-Stage Creative Process Form

The therapist completes the protocol: “Please complete the 4-Stage Creative Process form by filling in what your stress level is now at the end of your creative exercise.”

[Optional research: Research on the molecular-genomics of this 4-Stage Creative Process is the same as the pilot studies of the Creative Psychosocial Genomic Healing Experience (Atkinson et al., 2010; Rossi et al., 2008). The second step in collecting samples for DNA microarray and bioinformatic analysis of the molecular-genomic analysis of each stage of the 4-Stage Creative Process is conducted at this time. Further follow up collections of samples for DNA microarray and bioinformatic analysis of the molecular-genomic analysis then may be carried out to determine how long the psychosocial genomic changes last.]

Appendix B: The 4-Stage Creative Process Scoring & Assessment Form

Initial Time _____ am pm Age ____ Sex: M F Initial Stress: 0% 50% 100%

Stage 1: Focusing Consciousness (Circle your response: Yes or No)

- | | | |
|---------------------|-----|----|
| 1. Warmer–Cooler? | Yes | No |
| 2. Stronger–Weaker? | Yes | No |
| 3. Lighter–Heavier? | Yes | No |

Stage 2: Incubation, Problem Review

- | | | |
|----------------------|-----|----|
| 4. Child–Adult? | Yes | No |
| 5. Problem–Opposite? | Yes | No |
| 6. Problem History? | Yes | No |

Stage 3: Aha! Problem Solving

- | | | |
|---------------------|-----|----|
| 7. Problem Solving? | Yes | No |
|---------------------|-----|----|

Stage 4: Reality Testing and Self-Care

- | | | |
|---------------------|---------------------------------|----|
| 8. Reality Testing? | Yes | No |
| 9. Self-Care? | Yes | No |
| 10. End Stress: | 0% 50% 100% | |
| 11. Confidence: | 0% 50% 100% | |
| 12. Time Estimate: | _____ minutes | |

Education: High School College Master Doctorate

Comments:

Do Not Fill in This Box: Staff Only

Real Time (Min.):	0–5	6–10	11–15	16–20	21–25	26–30	31–40	41–50	51–60	61+
Estimated Time (Min.):	0–5	6–10	11–15	16–20	21–25	26–30	31–40	41–50	51–60	61+
Mental Engagement:	(Real Time / Estimated Time) × 100 = _____%									
Stress Reduction:	(Initial Stress / Final Stress) × 100 = _____%									