The Creative Process of Psychotherapy

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The Creative Process of Psychotherapy

The propositions I shall present derive from findings about psychological processes involved in creativity in the arts and in science. These findings consist primarily of special types of cognitive, motivational, and affective processes operating at all phases of the creative process. Discovered initially through intensive and extensive research interviews with highly creative research subjects, not patients in therapy, they have been further demonstrated through objective psychological and quantitative analyses of creative works in progress, and through experiments involving creative persons and controls.[1] Research subjects have consisted of Nobel Prize laureates in science and literature, awardees of distinctions such as the Pulitzer Prize, National and American Book Awards, Bowdoin Poetry Prize, and other literary prizes, membership in United States and British institutes and academies of arts and sciences, or science alone, as well as neophyte and potentially creative persons from a wide age range.

Initially, this research consisted of a series of intensive interviews with highly outstanding American poets, novelists, and playwrights during a period of their lives when they were actively engaged in some particular creative work. Located throughout the continental United States, these persons were offered pay for participation in the project and they agreed to submit to me their ongoing manuscript work in progress prior to our

sessions. We met regularly on a weekly or biweekly basis for periods of more than two years in many cases (from the inception to the time of publication of the work), and our sessions focused directly on work in progress. Starting with the manuscript material, we discussed the following: nature and source of revisions, themes, fantasies, inspirations; dreams and life experience connected with the work; affects, thought processes, and conflicts occurring during composition and in the interim periods. Although current psychological processes were in the forefront of the research interview, childhood background, previous writings, and other past information also became pertinent. We met regularly, whether or not manuscript material was produced, and I assured the subjects of anonymity and confidentiality.[2] A similar but modified research design was also applied later to creative persons in the visual arts and in science. More than 75 such subjects have been interviewed for a total of more than 1800 hours.

The experimental studies were based on hypotheses developed during the interview studies and involved presentation of specially constructed visual stimuli and the administration of word association tasks. Subjects ranging from highly talented college students to Nobel laureates in science were tested or exposed to experimental manipulations, and intergroup and intragroup control comparisons were made. More than 1,000 persons have been subjects in these experiments, and results have confirmed specific hypotheses and supported interview findings that I shall present.

In applying these findings to the theory and practice of psychotherapy, I shall be directly concerned neither with the therapeutic value of creative activities nor with the psychotherapy of highly creative people, although most of what follows should have some pertinence to both. My purpose is the direct application of specific creativity findings to psychotherapy: How can an understanding of the kinds of thinking involved in the creation of art and literature, and in the attainment of outstanding discoveries in science, apply directly to the treatment of mental illness?

To propose some answers to this question, I shall first adopt the broadest possible perspective on the general issue of mental illness. I do this especially because we are today beset with much pressure from those who insist that we should only be tracing physiological factors in mental illness and only treating such illness to the extent that it is physiological. There is a hue and cry that treatment should "get back" to medicine, and this means to "get back" to the biochemical and the clearly observable. It behooves us, therefore, to consider whether there is a specific common ground between psychological and physiological factors in illness of all kinds.

Let us assess the fundamental issue of normality. As we well know, the definition of psychological normality is very difficult. With so-called physiological normality and illness the definition seems much simpler and more clear-cut. When one contracts pneumonia with cough, sputum, and

fever, neither one's organs nor oneself is functioning. At that point, one is not normal. To be normal, it is necessary to return to the way one was before the pneumonia. The deficiency must be corrected and then one will be "like everyone else"—lungs and person will function like the average or like the majority of persons and organs do. But with mental health and illness we will not accept this notion of the average or the majority as normal. Even in this country, which so strongly emphasizes democracy and equality, I believe that no one —neither patients nor therapists —would say that mental health is equivalent to being average or being the same as everyone else. Furthermore, returning to the average, or even to a previous state, may realistically not be sufficient for ameliorating mental illness. Once one has such an illness, almost invariably there are continued problems.

This also applies in a lesser way to physiological illness. After having pneumonia, one is never—even after having stayed in bed, received penicillin or some other medication, and eventually recovered —the way one was before. The diseased lung area is permanently scarred. Such a scar is rather minuscule, but it is nevertheless a residuum for life. Everyone is permanently affected by every disease he has. With the scar on the lung, of course, there is a deficiency, but it will not lead to recurrence of pneumonia unless there is further direct exposure to an infectious organism.

Psychologically, however, the problem of deficiency is both more

insidious and more extensive, because patients (N.B., all human beings) are continually exposed to psychological dangers or threats comparable to invading organisms. In attempting to help someone return to functioning, much more is involved than for the doctor to administer penicillin. With the scar of mental illness, the person needs to be able to adapt *better* to his environment than before, and often to adapt better to his environment than others who have not been scarred. Growth is necessary for effective improvement.

Even if therapists did not often see things this way, patients would not allow them to think differently. Not only is it difficult with a particular patient to clarify the meaning of the therapeutic goal of helping him "function," but the patient usually rejects such a term or such a goal out of hand. Nor do patients accept the aims of "coping" or "adjusting," or even "adapting," very readily. They want to be better than they were, or better than others, and thereby able to deal with the constantly problematic environment human beings live in. In other words, both patients and therapists are oriented to, and engaged in, facilitating *creation*. Both are focused on the patient's creation of aspects of his personality, and both are engaged in an ongoing mutual creative process that involves the patient's personality attributes and personality structure.[3]

By creation of personality attributes and structure, I mean something

directly analogous to creation in the prototypical areas of the arts and sciences. As in the latter areas, there is also in psychotherapy the production of both the new and the valuable. The patient develops better personality attributes and structure—these are valuable both to the patient and to society at large. Moreover, these personality features are new to the patient because they result in part from a break with the past. Because they are unique to that individual, as all actively developed attributes intrinsically are, they are new to the world as well.

Psychotherapy therefore is intrinsically a mutual process of facilitating creation of aspects of the patient's personality, and the better the therapy the greater the degree of mutual creation. As therapists we focus on the past, or on the present and future, because the past or elements from it have become restrictive for the patient. To the extent that the patient becomes free from the past, he is in a position to make new choices actively and to adopt new alternatives. These choices arise from the patient's conscious and unconscious, cognitive and affective, decisions about what type of person he is and what type of person he wants to be. As clear-cut aspects of the creative process, such choices are based in part on a sense or a knowledge of the effects of the past and thus are free of the restrictions of the past; they are particularly free of the repetition compulsion. But there is also a continuity with the past; the patient makes choices partly on the basis of what he knows or senses to be the determined and fixed aspects of himself. He accepts

factors in his past which cannot, or need not, be changed. When a radically innovative artist such as Paul Cezanne creates a new mode in painting, this is not totally divorced from anything that was ever done before. We appreciate the accomplishment of Cezanne partly because his work has links and continuity with that of past artists, especially the Impressionists.

Often what the patient chooses may not coincide with the therapist's own personal preferences. Nevertheless, at the points when such choices are made, it is incumbent on the therapist to be facilitative or, at least, not to interfere. Such points are not always easy to identify; they are manifest when the patient indicates thoughts and feelings involving freedom from past restrictions and determinants and an active pursuit of self-directed and self-defining goals. When these emerge, the good therapist knows that he must listen in a way that allows them to develop and evolve. In a similar way, creative artists sometimes interact in a facilitative or a non-interfering way with developing forms and structures in their materials.

In order to collaborate in the mutual creative process, the therapist uses a wide variety of technical procedures and approaches. Clarification, interpretation, confrontation, education, exhortation, and non-intervention all play a role. Furthermore, as psychotherapy must be based on science, the therapist must derive his technical approaches from a systematic body of knowledge and theory. He translates his assumptions into hypotheses that he

tests and assesses to some degree in an ongoing way through his work with patients. While a freeing-up from the past is one aspect of psychotherapy that facilitates creation, particular additional factors must be involved.

An understanding of particular psychological factors involved in the creative process enables the therapist to apply and assess hypotheses about creativity directly in his therapeutic work. Also, it is desirable for the therapist himself to function creatively in order to initiate and facilitate the patient's engagement in the creative work. Beyond direct creative effects, modeling is necessary. Although therapists correctly discourage a patient's attempt to become just like, or a carbon copy, of themselves, some degree of modeling seems to be an inevitable and positive component of the therapeutic process.[4] Given such inevitable modeling, could a therapist expect the patient to undergo the enormous risk of changing himself and of actually engaging in creation if the therapist himself is unwilling to take any risks? To move with the patient toward the valuable and the new, the therapist should take risks, think flexibly, and engage in the highest degree of creativity of which he is capable. I specifically propose that he become familiar with, or enlarge on, and employ particular psychological modes and approaches used in creative processes.

HOMOSPATIAL PROCESS

One of these modes, discovered in the art and science researches, is the homospatial process (Greek: *homoios* = same). This process consists of *actively conceiving two or more discrete entities occupying the same space, a conception leading to the articulation of new identities.*[5] In the course of creating literary characters, metaphors, complete works of art, or scientific theories, creative persons actively conceive images and representations of multiple entities as superimposed within the same spatial location. These sharply distinct and independent elements may be represented as discrete colors, sounds, etc., organized objects such as knives and human faces, or more complex organizations such as entire landscape scenes, or else a series of sensory patterns or written words together with their concrete or abstract meanings. This conception is a figurative and abstract one in the sense that it represents nothing that has ever existed in reality; it is one of the bases for constructive and creative imagination. One of the tenets known from universal sensory experience is that two objects or two discrete entities can *never* occupy the same space. Nor can more than two. The creative person, however, brings *multiple* entities together in a mental conception for the purpose of producing new and valuable ideas, images, sound patterns, and metaphors.

Because of the difficulty in maintaining multiple elements in the same spatial location, the homospatial conception is frequently a rapid, fleeting, and transitory mental experience. Although this form of cognition often

involves the visual sensory modality, and like all constructive imagination is probably easiest to describe in visual terms, the superimposed entities may be derived from any one of the sensory modalities. There may be entities and sensations of the gustatory, olfactory, auditory, kinesthetic, or tactile type.

The homospatial process is a special type of secondary process cognition; it is neither primary process thinking or a form of "regression in the service of the ego."[6] Nor is it a form of condensation or displacement, despite the sharing of superficial similarities such as the breaking of spatial restrictions. It is a specific ego function that serves to produce creative and adaptive results.

Unlike primary process condensation, the homospatial process involves no spatial substitutions or compromise formations, but sensory entities are consciously and intentionally conceived as occupying an identical spatial location. This produces a hazy and unstable mental percept rather than the vivid images characteristically due to primary process, because consciously superimposed discrete spatial elements cannot be held in exactly the same place. From this unstable image, a new identity then is articulated in the form of a metaphor or other type of aesthetic or scientific unity. Also, whereas in primary process condensation aspects of various entities are *combined* in the same spatial area in order to represent all of those entities at once, the homospatial process involves no combinations but rather whole images

interacting and competing for the same location. For example, a patient's dream about a man named Lipstein is reported by Grinstein[7] and shown to be a clear-cut instance of a condensation of the names Grinstein and Lipschutz. Rather than such a compromise formation in a mental image which necessarily involves change or transformation of one or both of the elements entering into the compromise, the homospatial process operating with these same name elements would instead involve mental images of the full names Grinstein and Lipschutz as neither combined nor modified nor adjusted but visualized unchanged within exactly the same mentally depicted space.

Although the homospatial process involves sensory images and the alteration of ordinary perceptual experience, it is a conscious, deliberate, and reality-oriented mode of cognition. Ordinary perceptual experience is consciously manipulated and mentally transcended in order to create new and valuable entities. The homospatial process is a type of logic-transcending operation that I have called a "translogical process."[8] Such a process deals with reality by improving upon it. As reality-oriented, reality-transcending, and deliberate, it is a part of the secondary process mode.

Examples of this process that I have previously described are a poet research subject's superimposition of the mental image of a horse together with the mental image of a man. This complex concatenation of images led to a central creation in a poem concerning the alienation of modern man.

Constructed as a metaphorical description and poetic "image," this central creation presented the horse and rider as virtually fused, as follows:

> Meadows received us, heady with unseen lilac.
> Brief, polyphonic lives abounded everywhere.
> With one accord we circled the small lake.[9]

Also, playwright Arthur Miller told me, in the course of a research interview, that his initial conception of the play "Death of a Salesman" consisted of superimposed mental images of a man occupying the same space as the inside of his own head. Novelist Robert Penn Warren indicated that he created the character Jack Burden in his famous novel *All the King's Men* from a mental superimposition of his self-image or self-representation upon the mental images or representations of a young man he had known. A Nobel laureate microbiologist reported that he visualized himself superimposed upon an atom in an enzyme molecule in the process of constructing a new scientific theory. From another source than my own researches, Pyle has reported that the scientist Fuller Albright developed innovative and useful formulations of cellular mechanisms "by thinking of himself as a cell"[10]

Experimental assessment of the creative effect of the homospatial process has been carried out by means of an externalized concrete representation of the mental conception consisting of transilluminated superimposed slide images.[11] In one experiment the function of the process in literary creativity was assessed. Ten pairs of slide images, specially

constructed to represent literary themes of love, animals, war, aging, etc., were projected superimposed and side-by-side respectively to an experimental and matched control group of creative writers. An example of superimposition of one of the image pairs, consisting of nuns in front of St. Peter's and racing jockeys, is shown in Figure 1. Subjects in both groups were instructed to produce short literary metaphors inspired by each of the projected images. Results were that metaphors produced in response to the superimposed images, representing externalizations of the homospatial conception, were "blindly" rated significantly more highly creative by independent writer judges than the metaphors produced in response to the side-by-side images. By shortening time of exposure of the projected images and encouraging mental imaging in another identically designed experiment with other creative writer groups, results were produced that supported the conclusion that creative effects were due to *mental superimposition* of imagery.

Figure 1: An example of a superimposed (homospatial) stimulus. The slide photograph of the nuns at bottom left is projected on a screen together with the slide photograph of the jockeys at bottom right to produce the superimposed effect at the top [originals in color].

In order to trace connections between the visually stimulated homospatial conception and a visual creative result, and to replicate the findings in artistic creativity, another experiment was carried out with visual artists. Subjects were asked to create pastel drawings in response to either superimposed or side-by-side slide images under the same experimental conditions as in the literary experiment. Independent artist and art critic judges rated the products and the superimposed image presentation resulted in significantly more highly creative drawings. Also, specific features of line,

color, etc., of the drawings themselves gave evidence that they were produced from superimposed mental representations.

Another experiment was carried out with highly talented, award-winning artists to assess whether the results of all the previous experiments could have been due to stimulus presentation effects. Single images were constructed to represent composite foreground-background displays of the same slide pairs used in transilluminated superimposition. This experiment also showed significantly higher rated created products in response to the superimposed images. All the experiments together indicate a distinct connection between consciously constructed superimposed images representing the homospatial conception and the production of creative effects.

JANUSIAN PROCESS

The term I have used for another creative function derives from the qualities of the Roman god, Janus. This god, a very important one in the Roman list, had faces that looked in diametrically opposite directions simultaneously. As the god of entryways and doorways, he was able to look both inside and outside at once. Very likely this function became symbolically elaborated because he was also the god of beginnings who looked both backwards and forwards —commemorated by the calendar use of his name

in the month January —and in several myths he was considered the creator of the world. Although he is often depicted as having two faces *(Janus bifrons)*, Roman doorways were multifaceted, having four or even six entryways, and in Roman literature he is described variously as having two, four, or six faces, all looking in opposite directions.[12] On the basis of this feature, and his mythological importance, I have used his name for another empirical finding, the janusian process.

The janusian process consists of *actively conceiving two or more opposites or antitheses simultaneously*. During the course of the creative process, opposite or antithetical ideas, concepts, or propositions are deliberately and consciously conceptualized side-by-side and/or as coexisting *simultaneously*. Although seemingly illogical and self-contradictory, these formulations are constructed in clearly logical and rational states of mind in order to produce creative effects. They occur as early conceptions in the development of artworks and scientific theories and at critical junctures at middle and later stages as well. Because they serve generative functions during both formative and critical stages of the creative process, these conceptions usually undergo transformation and modification and are seldom directly discernible in final created products. They are formulated by the creative thinker as central ideas for a plot, character, artistic composition, or as solutions in working out practical and scientific tasks.

Simultaneity of the multiple opposites or antitheses is a cardinal feature. Opposite or antithetical ideas, beliefs, concepts, or propositions are formulated as simultaneously operating, valid, or true. Firmly held propositions, for example, about the laws of nature, the functioning of individuals and groups, and the aesthetic properties of visual and sound patterns are conceived as simultaneously true and not-true. Or, opposite or antithetical propositions are entertained as concomitantly operative. A person running is both in motion and not in motion at the same time, a chemical is both boiling and freezing, or kindness and sadism operate simultaneously. Previously held beliefs or laws are still considered valid but opposite or antithetical beliefs and laws are formulated as equally operative or valid as well.

These formulations within the janusian process are waystations to creative effects and outcomes. They interact and join with other cognitive and affective developments to produce new and valuable products. One of these developments may be a later interaction with unifying homospatial process effects. Others may be the use of analogic, dialectic, inductive, and deductive reasoning to develop theories, inventions, and artworks. The janusian process usually begins with the recognition and choice of salient opposites and antitheses in a scientific, cultural, or aesthetic field, progresses to the formulation of these factors operating simultaneously, and then to elaborated creations. For example, in an interview with one of my poet research subjects

carried out shortly after he had begun the earlier mentioned poem concerning the alienation of modern man, he described a germinating idea involving the formulation that a horse was simultaneously both a beast and not-a-beast, and also both human and not-human. This formulation developed from his chance encounter some time earlier with a horse in Arizona's Monument Valley which evoked thoughts regarding separation and opposition between human and animal species. Over the following several weeks, he engaged in various types of thinking—including the construction of other homospatial and janusian formulations —and constructed a five stanza poem in which the initial idea was transformed and elaborated. The final lines of the poem referred to that initial idea in the following way:

> About the ancient bond between her [the horse] kind and mine
> Little more to speak of can be done.[13]

Numerous other research subjects have also described central formulations and breakthroughs for novels, plays, and scientific discoveries that manifested simultaneous antithesis or opposition. Playwright Arthur Miller told me that his initial idea for the play "Incident at Vichy" consisted of conceiving both the beauty and growth of modern Germany and Hitler's destructiveness simultaneously. In science, Nobel laureate Edwin McMillan's formulation of "critical phase stability" leading to his development of the synchrocyclotron (later called the synchrotron) was derived from a sudden realization involving simultaneous opposition. The synchrotron is a high

energy particle accelerator that has allowed for the discovery of a number of new particles and other nuclear effects. McMillan described the sequence of events to me in the following verbatim transcription:

> It was in the month of July. I think it was the month of July. I didn't put down the date—I should record these things. It was night. I was lying awake in bed and thinking of a way of getting high energy and I was thinking of the cyclotron and the particle going around and encountering the accelerator field —the right phase each time around. And I thought of what will happen if the resonance is wrong, if the period is wrong, what will happen? And I sort of analyzed in my mind that it's going around and it's being accelerated, and it's getting heavier; therefore, it's taking more time to get around, and it will fall out of step. *Then it gets behind and it gets the opposite sense. It gets pushed back again, so it will oscillate. It's going to oscillate back and forth, be going at too high and too low energy.* Once I realized that, then the rest was easy.[14]
>
> If the timing is wrong, it's not going to fall completely out of step but it will overshoot and come back. Phase stability, I call it phase stability. The very next day I called it phase stability. Phase is the relation —time relation —of what you're worried about. Stability implies that it clings to a certain value. It may oscillate about, but it clings to a certain fixed value.

Here, McMillan described the sudden formulation of a critical concept that led to the construction of the synchrotron. He conceived the simultaneously opposite states of too high and too low energy. Realizing that out- of-step particles would fall back in the accelerator field, he grasped the idea that these particles would be forced to accelerate. Consequently, they would oscillate and be both too high and too low in energy with respect to the overall accelerator field. They would be lower in energy because they were

heavier and out of phase and would be also higher in energy because they would overshoot. Consequently, they would be stable overall with respect to the field. As McMillan told me in further elaboration: "Once you have an oscillation, you have the element of stability. The things will stay put. They will wiggle around but they won't get away from you. Then all you have to do is to vary your frequency, or vary the magnetic field, either one or both, slowly, and you can push this thing anywhere you want. That all happened one night and the next day I started to write down the equations for that and proved that it would work."

Other research subjects in both art and science have also described such janusian formulations. Outside of data from my direct investigations with living creative persons, I have in addition presented detailed documentary evidence indicating that both Albert Einstein and Niels Bohr used a janusian process in the development of the general theory of relativity and the theory of complementarity, respectively.[15] For Einstein, the key formulation providing the "physical basis" of the general theory —what he called "the happiest thought of my life" —consisted of the idea that a person falling from the roof of a house was both in motion and in rest at the same time. For Niels Bohr, his initial formulation of complementarity —the theoretical construct on which quantum physics is based —was that light and electrons possessed antithetical wave and particle features simultaneously.

A tendency or capacity for the use of the janusian process, manifested by rapid opposite responding on word association tasks, has also been identified experimentally. Standard Kent-Rosanoff word association tests were individually administered to rated-as-creative[16] college students and business executives and to Nobel laureates in science. Control groups consisted of matched but rated-less-creative students and business executives, and high IQ psychiatric patients. Test instructions were to give the first word that came to mind in response to a standardized list of word stimuli; both speed and content of response were electronically recorded. The experimenters made special attempts to reduce any anxiety related to testing in order to ensure spontaneous and valid associational responses. After factoring out any tendency to give common and popular types of responses, results indicated a significantly higher number of rapid opposite responses given by creative subjects than by subjects in any of the control groups.[17] Speed of opposite responding among creative subjects in these experiments was extremely rapid, averaging 1.1 to 1.2 seconds from the time the experimenter spoke the stimulus word, suggesting the formulation of simultaneous, or virtually simultaneous, opposite associations.

In the chapters to follow, I shall discuss the specific ways these two processes, homospatial and janusian, are used to facilitate the mutual creative process of psychotherapy. To some degree, they are part of every creative therapist's function and skill, and to some degree, they must be further

developed. I shall explore metaphor as therapeutic intervention, empathy, grasp of conflict, paradoxical and ironic interventions, and error in the overall context of treatment, and describe the ongoing and overall creative function of the process of articulation. In the final chapter I shall discuss the patient's active creative role and the reasons for the therapeutic effect.

Before embarking on this detailed exposition of the creative process of psychotherapy, I shall turn to a broader aspect of the therapist's creative functioning and one that serves as a background for some of the specific operations. In describing this next factor, the focus on form in creative activities, I shall take an opportunity to set up a slight mystery at the start.

Notes

1. Albert Rothenberg, "The Iceman Changeth: Toward an Empirical Approach to Creativity," *Journal of the American Psychoanalytic Association,* 17(1969): 549-607; "The Process of Janusian Thinking in Creativity," *Archives of General Psychiatry,* 24(1971): 195-205; "Poetic Process and Psychotherapy," *Psychiatry,* 3(1972):238-254; "Word Association and Creativity," *Psychological Reports,* 3 3(1973):3-12; "Opposite Responding as a Measure of Creativity," *Psychological Reports,* 3 3(1973): 15-18; "Homospatial Thinking in Creativity," *Archives of General Psychiatry,* 3 3(1979): 17-26; *The Emerging Goddess. The Creative Process in Art, Science and Other Fields,* Chicago: University of Chicago Press, 1979; "Psychopathology and Creative Cognition. A Comparison of Hospitalized Patients, Nobel Laureates, and Controls," *Archives of General Psychiatry,* 40(198 3):9 3 7—942; "Janusian Process and Scientific Creativity: The Case of Niels Bohr," *Contemporary Psychoanalysis,* 19(1983): 101-119; "Artistic Creation as Stimulated by Superimposed Versus Combined-Composite Visual Images," *Journal of Personality and Social Psychology,* 50(1986):370— 381. Albert Rothenberg and Robert S. Sobel, "Creation of Literary Metaphors as Stimulated by Superimposed Versus Separated Visual Images," *Journal of Mental Imagery*, 4(1980):77—91; "Effects of Shortened Exposure Time on the Creation of Literary Metaphors as Stimulated by Superimposed Versus Separated Visual Images," *Perceptual and Motor Skills*, 5 3(1981): 1007-1009. Robert S. Sobel and Albert Rothenberg, "Artistic Creation as Stimulated by Superimposed Versus Separated Visual Images," *Journal of Personality and Social Psychology*, 39(1980) 953-961.

2. Subsequent to participating in the research project, some subjects granted me permission to disclose their names in connection with *specific* material and reports. Those names appear throughout this book. In other instances, disclosure permission has not been granted and anonymity is maintained.

3. See Calvin S. Hall and Gardner Lindzey, *Theories of Personality,* New York: John Wiley and Sons, 1978, pp. 6-8, for a discussion of the difficulty in providing a general substantive definition of personality. The definition I shall follow here is that personality consists of the organization of an individual's patterns of action and behavior as well as all intrapsychic and interpersonal functions. In referring to personality attributes and structure, I mean to include both particular features and overall organization.

4. It is generally acknowledged that some degree of residual identification with the therapist persists

and cannot be analyzed or worked through.

5. Rothenberg, "Homospatial Thinking"; *The Emerging Goddess*.

6. Ernst Kris, *Psychoanalytic Studies of Art,* New York: International Universities Press, 1952.

7. Alexander Grinstein, *Freud's Rules of Dream Interpretation,* New York: International Universities Press, 1983, p. 187.

8. Albert Rothenberg, "Translogical Secondary Process Cognition in Creativity," *Journal of Altered States of Consciousness*, 4<1978—9): 171 — 187; *The Emerging Goddess*.

9. Author's name and citation withheld upon request.

10. Eleanor B. Pyle, "Fuller Albright's Inimitable Style," *Harvard Medical Alumni Bulletin,* 56(1982) 46-51

11. Rothenberg, "Superimposed versus Combined-Composite Visual Images"; and Sobel, *op. cit.,* 1980, 1981; Sobel and Rothenberg, 1980.

12.. L. A. Holland, *Janus and the Bridge,* Rome: American Academy, 1961.

13. Rothenberg, *The Emerging Goddess*.

14. Emphasis added.

15. Albert Rothenberg, "Einstein, Bohr, and Creative Thinking in Science," *History of Science,* 25 (1987): 147-166.

16. Creativity ratings were based on questionnaire responses regarding strength of creative interests and previous awards and achievements. This questionnaire had been cross-validated with independent creativity ratings by teachers and peers in a separate study.

17. Rothenberg, "Word Association"; "Opposite Responding"; "Psychopathology and Creative Cognition" Results of comparisons of high creative and low creative business executives' responses by means of t-test as indicated here were not reported in the "Opposite

Responding" article concerning those groups because these subjects were used only to devise a standardized method for scoring creative responding at that time.