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Creative Process in Psychotherapy: Form and Structure as A Basis of Treatment

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Introduction

The investigation "Studies in the Creative Process" carried out at Yale and Harvard Schools of Medicine and consisting in part of extensive semi-structured interviews with highly creative people in the arts and sciences has yielded extensive findings designated as the janusian, homospatial, and sep-con articulation creative processes and the focus on form and structure. The following report and analysis details the application in psychotherapy of the creative focus on form and structure in psychotherapy.

Expository Analysis

The creative focus on form and structure is important because it derives from the character of all types of psychotherapeutic treatment. Inclusive of factors of interpersonal psychodynamics, stress on the here and now, and attention to process, but more encompassing than any of these, form and structure are foundations from which many psychotherapeutic treatment effects derive. First and foremost, all types of psychotherapy consist of a structural agreement between at least two persons, one of whom is a patient needing help and the other a therapist skilled in helping. These persons mutually agree to spend a designated time together for the purpose of alleviating the difficulties of one of them, the patient. Because the time agreed upon is designated as to duration and periodicity it has specific structure and form. Designation of this structure as the prescribed vehicle for treatment is itself a major factor in the therapeutic effect. That is to say that regular meetings of particular duration and frequency will take place and that the therapist will do nothing else with respect to the patient, i.e., will take no action in the patient's real world, and carrying out this decision to the letter will have far-reaching therapeutic consequences. Setting up such a structure provides the patient with a trial domain in which he or she can reproduce and work out interpersonal difficulties or else, as Arlow states, comes to realize that interpersonal difficulties are intrapsychic [1]. A patient can display to the therapist and to himself the full range of problematic thoughts and actions and both can assess the reality of their effects. When change seems necessary, the patient can try out new ways of thinking and behaving without fear of lasting consequences. The therapist is neither parent nor sibling, nor employer, lover, wife, husband, child, nor anyone else who can effect real consequences in the patient's life. Through the therapist's behavior within the structure the therapist constantly makes clear to the patient that one will have no such effect even

though the patient —because of difficulties, emotional scars, and dependency —may constantly want and try to get the therapist to do so.

A primary feature of the therapist's action is to show the patient this critical paradox of the therapeutic situation. Although patient and therapist have contracted only for a defined structure, with the patient's benefit as the primary goal, the patient repeatedly tries (usually unconsciously) to subvert that very structure. A patient does this by attempting to get love and commitment from the therapist, by trying to get him/her to intervene in the patient's difficulties with other people, and otherwise attempting to get the therapist to solve both mild and serious problems rather than doing that himself. Also, the patient comes late to therapy, misses therapy sessions, calls the therapist outside of designated times, and otherwise challenges the therapist's commitment to the principle and agreement about defined structure. Almost invariably, a patient tests whether a therapist accepts or rejects his explicit and implicit thoughts or behavior on the basis of alterations in structure. Telling interesting and important stories and bringing up disturbing feelings just as a session is about to close are instances of such testing. If a therapist resists and does not extend the length of those sessions, he maintains the therapy as a trial domain where the patient's behavior within a session, whether negative or positive, has no concrete or real consequences. Attempts by the patient to alter the structural agreement are matters to be looked at and understood because the agreement was designed primarily to help the patient. Understanding deviations, therefore, aids in clarifying ubiquitous patient self-defeating tendencies.

When the therapist is responsible for altering the structure by actions ranging from necessary—absence patients properly have feelings about such interruptions and may often experience them, realistically or unrealistically, as produced by their own behavior. There are exceptions and limits to the principle of a structured trial domain. Both soon and late, there are consequences in the real non-therapeutic world, but these are produced by the patient's behavioral changes and not the direct action or intervention on the patient's behalf by the therapist. Also, inflexibility of structure can become so artificial that it has no impact or meaning. Nonetheless, as a result of experiences within the therapeutic structure, the patient alters his perception of him or herself and others and hopefully brings about positive real consequences. As for the nature of the structure decided upon, 50- or 45-minute sessions have, of course, been traditionally used in individual psychotherapy. Although there is nothing magically effective about that duration of time, experience has shown it to be workable for transformative therapy.

Other time periods may surely be used, but it is important to note that different forms and structures, as well as different types of sequences, result from 30-, or from 15-minute, sessions and from session frequencies of one, or two, or three, or four times weekly. Development of a meaningful relationship, the appearance of insight, the expression and acceptance of feelings, alteration of self-defeating thoughts and behavior and understanding of the effects of the past on the present all depend on, and in some degree arise from the structural nature of psychotherapy. Patient insight into the effects of the past on the present derives from awareness of the discrepancies between wishes or expectations and the nature of the therapeutic structural contract. Also, acceptance and expression of feelings are promoted by the therapist's essential neutrality. In those therapies in which structure is not specifically contracted or fixed, exploration and working-through are seldom possible or desired because a trial domain of interpersonal behavior is not established. The therapist provides variable lengths of time, gives directives and advice, and otherwise does not delimit the therapeutic structure. However, even in these, there are some implicit limits on time and therapist involvement that constitute variable degrees of structure. Interpretation, insight, and some important working-through frequently occurs.

Because of the structural nature of psychotherapy, the particular unfolding structure or form of each therapy session, including cognitive methodology, requires special focus and attention. The sequence and pattern of communications within the session provide an understanding of the patient's interpersonal responses and intrapsychic meanings. Also, sequences and patterns between therapy sessions, such as when a therapist makes a mistake at the end of one session and the patient begins the next session vaguely angry and complaining, require attention and possible interpretive intervention. Broader patterns involving the beginning, middle, and end phases of therapy are reflective of the patient's characteristic ways of experiencing the phenomena of encounter, growth, and separation, respectively. When the therapist intervenes on the basis of his understanding of such structural factors or, going further, when he or she points out such sequences and patterns to the patient, he or she is focusing on structure or form to generate meaning in a therapeutic making and creative process.

Methods

I will present specific interchanges from actual psychotherapy treatments to illustrate the focus on form and structure. Following these I shall describe findings from investigative interviews with prize-winners authors from the research program "Studies in the Creative Process" that illustrate the focus on form and structure in literary creative work.

A young female patient whose therapist was about to go on vacation, for example, began a therapy session talking about her anger and fury at a florist who had been taking care of her plants. She herself had been away from home and the florist had put her plants in a greenhouse, used a pesticide, and they died. While listening to her continuing vituperation, the therapist thought there might be some connection with angry feelings about his upcoming vacation [desertion] but little she said suggested any direct relationship. Baffled by her furious diatribes but, picking up on the plant care issue, the therapist simply commented that she seemed concerned about caring "today." (i.e. his upcoming vacation). Without a moment's hesitation, the patient then became angry. She said that the therapist was wrong and she was only reporting on the events in her life since the last therapy session.

Then, she shifted to describe a recent discussion she had had with a male friend and reported his comments in detail. At one point in the discussion, she said, she became very annoyed at the friend because he was just "making conversation." Noting that the patient shifted to talk about this young man immediately after his comment, the therapist surmised a connection with the complaint. He commented that she seemed to feel that he too had just been making conversation earlier, but he knew she really was concerned about caring and being cared for. In response, the patient became thoughtful and then began to talk about her angry feelings about the therapist's lack of care, his impending vacation, and desertion. The focus on the sequence of the patient's productions had therefore provided understanding which, when conveyed to the patient, allowed her to talk about her problematic concerns in a mutually collaborative creative process. In another instance, an adolescent male patient spent the early portion of a session on a series of complaints: not being able to sleep; feeling he had to come to therapy that day; having to sit for a time in the therapist's office. Thinking there was something more to what was going on, the therapist said that he understood that the patient felt like complaining but they both didn't know what he was really complaining about that day. At that, the patient became angry at the therapist and denied that he was complaining at all. Moreover, he had all his life been constantly told that he complained too much and he couldn't take any more of that. He shifted to talk about another topic and his anger dissipated by the end of the session. However, he missed the next scheduled appointment.

When he returned for the following time, he began by stating that he had missed the previous session

because he had slept late. Listening for some moments to the patient's elaborations of the excuse, the therapist then asked if he had continued to be bothered about the topic of complaining in the earlier session. At first denying any connection between the previous session and his sleeping late, he later returned to the topic and spoke of his basic feeling that he should never complain at all. Also, he talked of all the difficulties that complaining had brought him in his life. At one point in the account, he made a fleeting reference to his mother, and the therapist asked whether the feeling about complaining was connected with her. For a brief moment, the patient hesitated and then said that he guessed he could have said "yes" to that question right away. Noting the hesitation in reply to his question, the therapist asked whether the reason the patient paused was that he was afraid that saying "yes" would be a complaint against his mother. To this, the patient immediately replied "maybe" but in later sessions he returned to this intervention and acknowledged its validity and importance.

In this example, the therapist focused on the meaning of sequences both between sessions and within the session itself. Although his exploratory focus on the intersession sequence of missing an appointment after being angry at the therapist may seem somewhat routine to an experienced practitioner, it nevertheless is one of the regularly creative type actions of everyday psychotherapy. More complex intersession sequences, such as when a patient comes into a session sad or anxious or angry because of something touched on but not discussed in the session immediately previous, are a greater therapeutic and creative challenge.

With regard to the sequence within the particular session, the therapist realized that the patient's hesitation in response to his question had a specific meaning for the topic itself. The patient could not at first answer the therapist's question about the connection between fear of complaining and his mother because the answer itself would comprise a forbidden complaint. In this way, the therapist's focus on the form and structure revealed a deeper concern, generated further content, and helped the patient experience both his feelings and his anxiety about them in the here and-now trial domain of therapy.

Focus On Form and Structure in Creative Processes

In the carrying out of psychotherapy, the focus on form and structure is, of course, continuous and far more extensive than provided by the foregoing short examples. In other creative activities, this focus is also extensive and serves to generate meaning and content throughout the creative process. The focus operates in a wide range of creative activities and therefore has numerous types of manifestations.

Pulitzer Prize novelist John Hersey told me, in a research interview, that there came a point in the writing of every novel when he had "a distinct sense of its shape." When I asked him then whether he could draw the shape of the particular novel in progress we were talking about, he said that he thought that he could do so—with a pencil, he traced a series of vertical lines producing an undulating shape. I thought right away that these lines described an emotional pattern, and suggested that. Agreeing, he said he thought the shape corresponded to a flow of tension and release but also there was a matter of expansion and contraction of scope and significance. In some portions of the novel, wide geographical areas were included, more people appeared, and events were built on and compounded. Alternately, there was restriction of locales, of people, and of plot. His sense of the shape guided the production of content. Noticing that the separated lines in the overall shape he drew also looked like rhythmic beats, I asked him whether there was also an auditory quality to the shape he described. He thought that this definitely might be so because he often found himself mouthing sentences as he worked. There would be a cumulative sound effect.

Pulitzer Prize playwright Arthur Miller spoke in an interview of visualizing a specific geometric pattern in the early phase of writing a play. This conception gave him what he himself specifically called the "structure" of the play. Elaborating on this, he told me that structure was the first problem he always had to solve in the writing of plays. Other playwright research subjects spoke of similar types of general patterns as critical guiding factors at both early and continuing phases of the writing of a play.

To return to poetry, classical "Beat" poet Michael McClure told me he deliberately used a rhyming sequence in order to help him to recapture forgotten childhood memories. A final poem he wrote, in clearcut "Beat" style, became, he said, a series of childhood memories framed by rhyme. On the other end of the stylistic spectrum, poet and Pulitzer Prize winning novelist Robert Penn Warren described a focus on the sounds of words and phrases as a key generative factor in composing poetry. Pointing to the back of his throat as the locus of the sound he made and heard, he over-enunciated various possibilities of poetic lines. As I clarified this process with him, he told me that it was the muscular play of his mouth and throat that had a good deal to do with his feeling for the sound. There was a sense of movement in the sound that represented an emotion to be conveyed. Words and phrases suggested by the movement were coordinated with meaning and used in a particular poem. So important and generative was this focus on sound and formal properties of words and phrases that Warren practiced it by reading poems of other poets and trying different types of locutions for particular lines. With trial word changes, he altered rhythms and sounds and thereby studied how another admired poet had achieved particular effects.

Discussion

With regard to primacy of form in other creative fields, Mies's landmark study of Beethoven's creative process, based on a careful and extensive analysis of the composer's notebooks, indicates the generative function of Beethoven's focus on pattern and sequence. Mies proposed the following: "I consider that in the work of the great masters nothing short of the right form will release the desired content."[2] Analysis of musical composition by other musicologists such as Meyer and Epperson [3] and by composer Leonard Bernstein [4] support this conclusion, although they would substitute the terms "meaning" or "musical symbol" for Mies's term "content." Together with sequence, formal factors of repetition, inversion, transformation, symmetry, and asymmetry are generative foci throughout the musical composition process.

In visual art, a long time focus on pattern and form has become overtly emphasized and evident in the artworks of the twentieth century. In abstract art particularly, forms are presented or manipulated in geometric and "pure" shapes and relationships in order to generate content and meaning. Prior to this modern emphasis, artists have always looked at shapes and tones projected onto imaginary planes in order to develop subject matter. For example, Leonardo da Vinci described the process as follows: "When you look at a wall spotted with stains, or with a mixture of stones, if you have to devise some scene, you may discover a resemblance to various landscapes beautified with mountains, rivers, rocks, trees, plains, wide valleys, and hills in varied arrangement; or again you may see battles and figures in action; or strange faces and costumes, and an endless variety of objects." [5]

In science, form and structure also are generative in creative thinking. Scientists engaged in theory building and construction speak constantly of the guiding principle of elegance. This principle is not important simply for aesthetic pleasure but because of its usefulness in producing empirically appropriate formulations. For these scientists, elegance or formal simplicity is used as a major criterion

for acceptance or rejection of various types of explanations and formulations. Allan Cormack, Nobel Prize discoverer of the CAT scan X-ray procedure, described the operation of this factor to me in the following verbatim comment: “Once you start being abstract and removing all kinds of things from reality —that is to say, if you do in the abstract what I do in mathematics— the abstractions are just as beautiful [as in art] and I find more satisfactory.... It’s this business of economy of means....” There’s a great deal of satisfaction for creative persons in seeing ideas put together or related. The highly creative mathematician Poincare documented the guiding function of this factor in the following way: “Now, what are the mathematical entities to which we attribute this character of beauty and elegance, which are capable of developing in us a kind of esthetic emotion? Those whose elements are harmoniously arranged so that the mind can, without effort, take in the whole without neglecting the details. This harmony is at once a satisfaction to our aesthetic requirements, and assistance to the mind which it supports and guides.

At the same time, by setting before our eyes a well-ordered whole, it gives a presentiment of mathematical law [9]. As physicist Holton [6] and others have shown, the formal factor of symmetry also plays an important role in creative theorizing and the construction of experiments. Albert Einstein, for instance, criticized the theoretical “asymmetry” of the Maxwell theory he was supplanting in the very first line of his first (1905) paper on relativity theory, and relativity has been characterized as a theory of symmetry. [7] Pierre Curie, scientific theorist and co-discoverer of radium, asserted that: “When certain causes produce certain effects, the elements of symmetry of causes must be found in effects produced.” [8]

Such thinking has, in fact, proved dramatically useful in modern particle physics. For example, physicist McMorris has stated, “It is striking that in particle physics the aesthetic element of symmetry was employed to predict some as yet unobserved member, the Ω- (omega hyperon, negatively charged) and meson, neutrally charged], which were subsequently discovered. The whole exercise involved an appeal, not only to the elaborate SU(3) symmetry theory, but to unsophisticated symmetry of actual, regular geometrical arrangements.”[9]

Detailed and specific structural patterns also guide and generate ongoing substance of creative scientific thought. Gruber has carefully documented the important function of the image of the “tree of nature” in Charles Darwin’s development of the theory of evolution. Throughout his notebooks, Darwin over and over drew a picture of a branching tree, making extensive notes and affixing labels to its various parts. Many points in the theory of evolution grew out of this structure, as Gruber enumerates in the following: “the fortuitousness of life, the irregularity of the panorama of nature, the explosiveness of growth and the necessity to bridle it so as to keep the number of species constant.

And, most important, the fundamental duality that at any time some must live, and others die.”[10] Focus on form and structure, though ubiquitous in creative processes, is an approach to producing creative effects but is not a sufficient cause. Form and content must be made to interrelate with, and complement, each other and an exclusive preoccupation with form would not accomplish that goal. Furthermore, none of the analysis here should be construed to suggest that content is of little importance in creative work or that creative persons are not vitally concerned with conveying substance. The substance or statement of a work of art is a critical feature of its value and the substance of a scientific creation is vital to its meaning and effective use. In psychotherapy, the content both of inner experience — including fantasies, cognition, affects, motivations —and of interpersonal relationships must be understood, accepted, or modified to produce a therapeutic effect. In all types of

creative activities, however, a focus on form and structure serves to reveal unseen and often previously unknown connections between elements of content. At the same time, this focus serves to produce connections where none were apparent before. Excessive focus on form and structure can, however, occur. Sometimes, in psychotherapy, an excessive focus on form and structure can produce premature connecting and enhance patient defensiveness. It can serve defensive purposes for the therapist as well. By and large, however, the psychotherapist can focus on form and sequence in order to understand underlying meanings and facilitate the creative process, just as other creative persons do.

Most types of psychotherapy consist of a structural agreement between at least two persons, one of whom is a patient needing help and the other a therapist skilled in helping. These persons mutually agree to spend a designated time together for the purpose of alleviating the difficulties of one of them, the patient. Because the time agreed upon is designated as to duration and periodicity it has specific structure and form. Designation of this structure (I shall drop the term "form" for the moment because it tends to suggest "formal psychotherapy") as the sole vehicle for treatment is itself a major factor in the therapeutic effect. That is to say that deciding that regular meetings of particular duration and frequency will take place and that the therapist will do nothing else with respect to the patient, i.e., will take no action in the patient's real world, and carrying out this decision to the letter, will have far-reaching therapeutic consequences. Setting up such a structure provides the patient with a trial domain in which he or she can reproduce and work out interpersonal difficulties or else, as Arlow states it, come to realize that Interpersonal difficulties are intrapsychic.[13] A patient can display to the therapist and to himself the full range of problematic thoughts and actions and both can assess the reality of their effects.

When change seems necessary, the patient can try out new ways of thinking and behaving without fear of lasting consequences. The therapist is neither parent nor sibling, nor employer, lover, wife, husband, child, nor anyone else who can affect real consequences in the patient's life. Through the therapist's behavior within the structure he or she constantly makes clear that the patient will have no such effect even though the patient — because of difficulties, emotional scars, and dependency —may constantly want and try to get the therapist to do so.

A primary feature of the therapist's action is to show the patient this critical paradox of the therapeutic situation. Although patient and therapist have contracted only for a defined structure, with the patient's benefit as the primary goal, the patient repeatedly tries (usually unconsciously) to subvert that very structure. A patient does this by attempting to get love and commitment from the therapist, by trying to get him to intervene in the patient's difficulties with other people, and by otherwise attempting to get him to solve his problems rather than doing that himself. Also, the patient comes late to therapy, misses therapy sessions, calls the therapist outside of designated times, and otherwise tests the therapist's commitment to the principle and agreement about structure. Almost invariably, a patient tests whether a therapist accepts or rejects his explicit and implicit thoughts or behavior on the basis of alterations in structure. Telling interesting and important stories and bringing up disturbing feelings just as a session is about to close are instances of such testing. If a therapist resists and does not extend the length of those sessions, he maintains the therapy as a trial domain where the patient's behavior, whether negative or positive, has no concrete or real consequences.

Attempts by the patient to alter the structural agreement are matters to be looked at and understood because the agreement was designed primarily to help the patient. Understanding deviations, therefore, aids in clarifying ubiquitous self-defeating tendencies. When the therapist is responsible for altering the structure by actions ranging from necessary ones, such as going on vacation or falling ill, to

problematic ones, such as coming late for appointments, falling asleep in sessions, or actively intervening in a patient's life, he influences the experience of a trial domain. Although it is best for the therapist to introduce as little alteration as possible, when necessary, interruptions occur, it is important for the therapist and patient together to consider their impact on the therapy.

Patients properly have feelings about such interruptions and may often experience them, realistically or unrealistically, as produced by their own behavior. There are exceptions and limits to the principle of a structured trial domain. Both soon and late, there are consequences in the real world, but these are produced by the patient's behavioral changes and not the direct action or intervention on the patient's behalf by the therapist. Also, inflexibility of structure can become so artificial that it has no impact or meaning. Nonetheless, as a result of experiences within the therapeutic structure, the patient alters his perception of himself and others and hopefully brings about positive real consequences. As for the nature of the structure decided upon, 50- or 45 minute sessions have, of course, been traditionally used in individual psychotherapy. Although there is nothing magical about that duration of time, experience has shown it to be workable for exploratory therapy. Other time periods may surely be used, but it is important to note that different forms and structures, as well as different types of sequences, result from 30-, or from 15-minute, sessions and from session frequencies of one, or two, or three, or four times weekly. Development of therapeutic relationship with the appearance of insight, the expression and acceptance of feelings, and understanding of the effects of the past on the present, all depend on and to some degree arise from the structural nature of psychotherapy. Problematic effects of the past on the present are recognized from awareness of the discrepancies between wishes or expectations and the nature of the structure occurs.

Because of the structural nature of psychotherapy, the unfolding structure or form of each therapy session requires special focus and attention. The sequence and pattern of communications within the session provide an understanding of the patient's interpersonal responses and intrapsychic preconscious and unconscious meanings. Also, sequences and patterns between therapy sessions, such as when a therapist makes a mistake at the end of one session and the patient begins the next session vaguely angry and complaining, require attention and possible interpretive intervention. Broader patterns involving the beginning, middle, and end phases of therapy are reflective of the patient's characteristic ways of experiencing the phenomena of encounter, growth, and separation, respectively. When the therapist intervenes on the basis of his understanding of such structural factors or, going further, when he points out such sequences and patterns to the patient together with an interpretation, he is focusing on structure or form to generate meaning in a therapeutic creative process.

A young female patient whose therapist was about to go on vacation, for example, began a therapy session talking about her anger and fury at a florist who had been taking care of her plants. She herself had been away from home and the florist had put her plants in a greenhouse, used a pesticide, and they died. While listening to her continuing vituperation, the therapist thought there might be some connection with angry feelings about his upcoming vacation but little she said suggested any direct relationship. He felt somewhat baffled by her furious diatribes but, picking up on the plant care issue, he simply commented that she seemed concerned about caring "today." Without a moment's hesitation, the patient then became angry at him. She said that he was wrong, and she was only reporting on the events in her life since the last therapy session.

Then, she shifted to describe a recent discussion she had had with a male friend and reported his comments in detail. At one point in the discussion, she said, she became very annoyed at him because

he was just "making conversation." Noting that the patient shifted to talk about this young man immediately after his own comment, the therapist surmised a connection with this complaint. He stated that she seemed to feel that he too had just been making conversation earlier, but he knew she really was concerned about caring and being cared for. In response, the patient became thoughtful and then began to talk about her angry feelings about the therapist's lack of care and his impending vacation plan.

The focus on the sequence of the patient's productions had therefore provided understanding which, when conveyed to the patient, allowed her to talk about her problematic concerns in a mutually collaborative creative process. In another instance, an adolescent male patient spent the early portion of a session on a series of complaints: not being able to sleep; feeling he was required to come to therapy that day; having to sit in the therapist's office. Thinking there was something more to what was going on, the therapist said that he understood that the patient felt like strongly complaining but he wasn't clear about what he was really complaining about that day. At that, the patient became very angry at the therapist and denied that he was complaining at all. He was told that he complained too much all his life and he couldn't take any more of that. He shifted to talk about another topic and his anger dissipated by the end of the session. He however missed the next appointment.

When he returned for the scheduled time following, he began by stating that he had missed the previous session because he slept late. Listening for some moments to the patient's elaborations of the excuse, the therapist then asked if he continued to be bothered about the topic of complaining in the earlier session. At first denying any connection between that previous session and his sleeping late, the patient later returned to the topic and spoke of a feeling that he should never complain at all. Also, he talked of all the difficulties that complaining had brought him in his life. At one point in the account, he made a fleeting reference to his mother, and the therapist asked whether the feeling about complaining was connected with her.

For a brief moment, the patient hesitated and then said that he guessed he could have said "yes" to that question right away. Noting the initial hesitation in reply to his question, the therapist next asked whether the reason the patient paused was that he was afraid that saying "yes" would be a serious complaint against his mother. To this, the patient immediately replied "maybe," but in later sessions he returned to this intervention and acknowledged its validity and importance. In this example, the therapist focused on the meaning of sequences both between sessions and within the session itself. Although his exploratory focus on the intersession sequence of missing an appointment after being angry at the therapist may seem somewhat routine to an experienced practitioner, it nevertheless is one of the effectively creative actions of everyday psychotherapy.

More complex intersession sequences, such as when a patient comes into a session sad or anxious or angry because of something touched on but not discussed in the session immediately previous, are a greater therapeutic and creative challenge. With regard to the sequence within the session, the therapist realized that the patient's hesitation in response to his question had a specific meaning for the topic itself. The patient could not at first answer the therapist's question about the connection between fear of complaining and his mother because the answer itself would comprise a forbidden complaint. In this way, the therapist's focus on the form and structure revealed an underlying concern, generated further content, and helped the patient experience both his feelings and his anxiety about them in the here-and-now trial domain of therapy.

Focus on Form and Structure in Creative Processes

In the carrying out of psychotherapy, the focus on form and structure is, of course, continuous and far more extensive than provided by the foregoing short examples. In other creative activities, such a focus is also extensive and serves to generate meaning and content throughout the creative process. As I stated earlier, a focus on form and structure operates in a wide range of creative activities and therefore has numerous types of manifestations. With respect to other types of literature beside poetry, prizewinning novelist John Hersey told me in an investigative interview that there came a point in the writing of every novel when he "had a distinct sense of its shape." When I asked him then whether he could draw the shape of the particular novel in progress we were talking about, he said that he thought that he could do so. With a pencil, he traced a series of vertical lines producing an undulating shape. I thought right away that these lines described an emotional pattern, and I suggested that.

Agreeing, he said he thought the shape corresponded to a flow of tension and release but also there was a matter of expansion and contraction of scope and significance. In some portions of the novel, wide geographical areas were included, more people appeared, and events were built on and compounded. Alternately, there was restriction of locales, of people, and of plot. His sense of shape guided the production of content. Noticing that the separated lines in the overall shape he drew also looked like rhythmic beats, I asked him whether there was also an auditory quality to the shape he described. He definitely thought that this might be so, because he often found himself mouthing sentences as he worked.

There might be a cumulative sound effect. Prize winning playwright Arthur Miller spoke in a research interview of visualizing a specific geometric pattern in the early phase of writing a play. This conception gave him what he specifically called the "structure" of the play. Elaborating on this, he told me that structure was the first problem he always had to solve in the writing of plays. Other playwright research subjects spoke in research interviews of similar types of general patterns as critical guiding factors at both early and continuing phases of the writing of a play. Leading "Beat" poet Michael

McClure told me he deliberately used a rhyming sequence in order to help him to recapture forgotten childhood memories. A final poem, in clearcut "Beat" style, became a series of childhood memories framed by rhyme. On the other end of the stylistic spectrum, poet and Pulitzer Prize novelist Robert Penn Warren described a focus on the sounds of words and phrases as a key generative factor in composing poetry. Pointing to the back of his throat as the locus of the sound he made and heard, he overenunciated various possibilities of poetic lines.

As I clarified this process with him, he told me that it was the muscular play of his mouth and throat that had a good deal to do with his feeling for the sound. There was a sense of movement in the sound that represented an emotion to be conveyed. Words and phrases suggested by the movement were coordinated with meaning and directly used in a particular poem. So important and generative was this focus on sound and formal properties of words and phrases that Warren practiced it by reading poems of other poets and trying different types of locutions for particular lines. With trial word changes, he changed rhythms and sounds and thereby studied how the successfully creative other poet had achieved his effects.

Discussion And Conclusion

With regard to primacy of form in other creative fields, Mies's landmark study of Beethoven's creative process, based on a careful and extensive analysis of composition notebooks, indicates the generative function of Beethoven's focus on pattern and sequence. Mies concluded: "I consider that in the work of

the great masters. . . nothing short of the right form will release the desired content."[5] Analysis of musical composition by other musicologists such as Meyer and Epperson and by composer Leonard Bernstein support this conclusion, although they would substitute the terms "meaning" or "musical symbol" for Mies's term "content." Together with sequence, formal factors of repetition, inversion, transformation, symmetry, and asymmetry are generative foci throughout the musical composition process. In visual art, focus on pattern and form is clearly evident in the artworks of the twentieth century. In abstract art particularly, forms are presented or manipulated in geometric and "pure" shapes and relationships in order to generate content and meaning. Prior to the modern emphasis, however, artists have looked at shapes and tones projected onto imaginary planes in order to develop subject matter. For example, Leonardo da Vinci described the process as follows:

"When you look at a wall spotted with stains, or with a mixture of stones, if you have to devise some scene, you may discover a resemblance to various landscapes, beautified with mountains, rivers, rocks, trees, plains, wide valleys, and hills in varied arrangement: or again you may see battles and figures in action; or strange faces and costumes, and an endless variety of objects." [11]

In science, form and structure also are generative in creative thinking. Scientists engaged in theory building and construction speak constantly of the guiding principle of elegance. This principle is not important simply for aesthetic pleasure but because of its usefulness in producing empirically appropriate formulations. For these scientists, elegance or formal simplicity is used as a major criterion for acceptance or rejection of various types of explanations and formulations. Allan Cormack, Nobel Prize discoverer of the CAT scan X-ray procedure, described to me the operation of this factor in a research interview with the following verbatim comment: "Once you start being abstract and removing all kinds of things from reality —that is to say, if you do in the abstract what I do in mathematics—the abstractions are just as beautiful [as in art) and I find them more satisfactory... It's this business of economy of means.

I think there's a great deal of satisfaction in seeing ideas put together or related. And there is a structural thing there just as much as in sculpture or painting or anything of that sort—form and economy of means. Very often in biology you say, 'If such and such went that way, will this go that way?'

Very often the reason you ask why is because you found the previous thing to be attractive somehow." The creative mathematician Poincare has documented the guiding function of this factor in the following way:

Now, what are the mathematical entities to which we attribute this character of beauty and elegance, which are capable of developing in us a kind of aesthetic emotion? Those whose elements are harmoniously arranged so that the mind can, without effort, take in the whole without neglecting the details. "This harmony is at once a satisfaction to our esthetic requirements, and assistance to the mind which it supports and guides. At the same time, by setting before our eyes a well ordered whole, it gives a presentiment of a mathematical law. [12]

Conclusion

None of the analyses here should be construed to suggest that content is of little importance in creative work or that creative persons are not vitally concerned with conveying substance. The substance or statement of a work of art is a critical feature of its value and the substance of a scientific creation is vital to its meaning and effective use. In psychotherapy, the content both of inner experience —

including fantasies, thoughts, affects, motivations —and of interpersonal relationships must be understood, accepted, or modified to produce a therapeutic effect. In all types of creative activities, however, a focus on form and structure serves to reveal unseen and often previously unknown connections between elements of content. At the same time, this focus serves to produce connections where none were immediately apparent.

Excessive focus on form and structure can occur and thereby produce sterile and uncreative effects in any endeavor. Sometimes, in psychotherapy, an excessive focus on form and structure can produce premature connecting and even enhance patient defensiveness. It can serve defensive purposes for the therapist as well. By and large, however, the psychotherapist focuses on form in order to understand important and underlying meanings and facilitate the creative process, just as other creatively operating persons do.

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