PSI PHENOMENA
PSI FACTORS AND THE CREATIVE PROCESS

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The comparison that I shall try to make between the phenomena of the creative process and what happens in psi phenomena will be necessarily limited to the little that I know of the latter. As we know, psi phenomena occur under our direct observation in psychoanalytical practice, but they are rare and when they happen they are almost always the outcome of an interaction between patient and analyst, as Servadio in 1934 and Hóllós in 1933 were the first to show. The accuracy with which a psi phenomenon occurring thus can be analyzed depends greatly therefore on the degree of objectivity which the analyst can achieve in his own autoanalysis. The more complete this is, the more comprehensible become the concomitant elements of the transference and, together with these, the psychological meanings of the psi phenomenon. We realize, however, that we are more concerned with the mental derivatives of the psi phenomenon than with the phenomenon in itself. In a so-called telepathic dream, for example, such as may occur during treatment, it is seen that the psi elements undergo the same preconscious elaboration as the instinctual elements, so that the dreamer's consciousness continues to remain unaware of either. It is the analyst, in these cases, and not the patient, who is aware of the occurring psi phenomenon.

But dream work has a considerable likeness to creative work, even though it would be an error to consider them identical. The main difference lies in the fact that the creative process involves an inescapable, even though particular, relationship with the external world, in the waking state. In opposition to the dream, the creative process implicitly makes the Ego responsible when confronted with external reality. The particular perceptive sensitivity of the creative personality shows on the other hand, that the relationship with external reality, even though peculiar, is of essential importance for the creative process. The analogy with the dream lies in the making contact with the unconscious mate-

rial and in its elaboration, preconscious (in the dream), preconscious and conscious (in the creative process). The final products, the dream and the work of art, have in common the aims of preserving the repressions weakened by regression and of transforming the regression not only from dangerous to innocuous but also into an operation advantageous to the Ego. In both processes, however, thanks to oneiric and creative elaborations, consciousness continues to be unaware of the unconscious contents, which have drawn more or less dangerously near. Evidently the creative process is not pathological in itself, but it can expose one to psychopathological events, and can in turn be characterized by the individual psychopathology. The higher and more intense the creativity, the greater grows the psychopathological possibility. Eissler arrived at thinking that "psychopathology is indispensable to the highest achievements of certain kinds."

But we know what happens in one of those which Servadio has justly distinguished as telepathic pseudo-dreams. In this case the extrasensory perception seems to avoid the oneiric elaboration, the "creation" of the dream, and impose itself directly on the consciousness of the sleeper, with the evidence of reality.

The fact that this perception magically crosses space and time to present itself directly, sometimes in its more tragic and traumatizing aspects, is impressive, not only because it upsets the dimensions of consciousness, but from the psychoanalytical point of view also because it seems to cross the very structure of the personality. It is difficult to believe that in these cases a perceptive way is activated that, although it apparently passes through the preconscious (the individual is in a state of sleep and the perception presents itself to consciousness translated in pseudo-oneiric images, therefore from within), becomes conscious with very little or even no oneiric type elaboration. For the way in which the ESP arrives at consciousness one could perhaps advance the hypothesis that something like an attempt of oneiric elaboration frustrated at birth takes place. However things may stand, it seems to me that one can admit that this type of phenomenon indicates an almost complete renunciation, or impossibility (the two things may in the end coincide) of any symbolic elaboration, without which, however, there cannot be creativity.

The theme of death, variously expressed, as also that of birth, can be considered as basic in many psi phenomena, as in the creative process. When these themes are not visible at the first glance, they can be revealed through the analysis. Their symbolic meanings take their origin from the first conflicts in the object relationship, and are concerned with phantasies of loss and destruction of the love object and with

compensatory restitutive drives. One often observes that a creative act, or a more creative phase, is preceded by a more or less marked state or phase of depression and by a disturbed sense of identity (loss of the love object). The urge to create (restitutive drive) can then be felt as the way to mental well-being. In *Neue Gedichte* Heine imagines that God himself says "Illness was no doubt the final cause of the whole urge to create. By creating, I could recover; by creating I became healthy." * Unfortunately, in human beings, the more there is a state of effective illness of the mental functioning, the more this therapeutic sensation of their own creative ability is lively and the less it corresponds to reality. The same theme is found expressed in Nietzsche: "Yes, for the game of creation is necessary a holy affirmation, o brothers: . . . he who has lost the world wishes to acquire his own world." †

There are psi phenomena which seem to be part of this same theme, but in these phenomena the magic and omnipotent element seems to need direct and concrete realizations in the external object world so that the latter is implicitly denied and is as though substituted by internal reality. I am referring to the much discussed teleplastic phenomena or to phenomena of the "poltergeist" type. In these psi phenomena one cannot say that the subject tends to create "his own world," following the expression of Nietzsche, but rather that he tends to live his own unconscious phantasy of creation and omnipotent domination of the world in a direct and concrete way. When this is achieved, the external world literally takes the place of the internal one.

But before continuing further, it is necessary to consider other aspects of the creative process.

It is my impression that the sensation of "discovery," to which the creative process leads, should be connected to the same theme of the loss and the restitution of the love object. The "discovery" implies a re-finding. That which is discovered is something that was there, that has always been there, but which one was not certain that there was, until the confirmation of the discovery appears. The references to the lost love object, and to the fear of having destroyed it, the restitutive meaning of the search, and the meaning of success in restitution that is assumed by the discovery, are recognizable in the whole process.

This is valid in the field of scientific creativity, as it is in that of artistic creativity. The sensation of discovery is in fact very close to the consciousness of the artist. "I do not create, I find," Picasso has said, and many artists speak of their creative activity as of a "research." The

* These lines were quoted by Freud (1914) in a different context and in a metaphorical way, with reference to the necessity of loving.

† *Thus Spoke Zarathustra,* Discourses: Of the three Metamorphoses.

aesthetic discovery, however, in contrast to the scientific one, is not intended to adhere to the laws of objective reality (external), but rather to constitute an intermediate reality, halfway between the psychic (internal) reality and the objective one. This justifies the fact that the aesthetic discovery is not characterized so much by logical thought as by a thought that I would define as coherent. The relationship between these two qualities of thought is that the coherence in some way precedes the logic. The most illogical of dreams can prove, in the light of analysis, to be full of coherence. A logical thought, on the contrary, must be also coherent.

It is precisely this intermediate area between internal and external reality which seems to be lacking in the psi phenomena. It is probable that among the causal factors of such an area is the necessity of keeping the relationship with the real world as far as possible in terms of phantasy. A great part of the creative process travels on the wings of phantasy. In the fear that objective reality might give a confirmation of the anxious expectations of destruction of the object and of the self, the preservation of the intermediate area—in which the world is a product of the creative process—permits the Ego to turn the infantile situation upside-down, and to possess magically its own world of which only it is master.

Consequently, while the objectivity of scientific discovery permits the scientist a firm foothold on external reality, and with this has placed at a decisive distance the internal (unconscious) factors of the creative process, this does not seem to be allowed in the same way by the aesthetic discovery, which instead obliges the artist to have a more constant and a closer (and therefore a more pathogenous) contact with the issuing elements of his creativity. The more or less evident attempt at reaching, like the scientist, the objectivity of the real world, is a defense of creative anxiety, and can be met with in a great number of artists, in different forms: from a progressive scientificism, which can reduce little by little the creative urgence (as happened to Leonardo) to the development of theorizations of their own artistic expressions (Miró, Kandinski, Mondrian), and to the necessity of describing these expressions in realistic and almost literal terms (Van Gogh, and others) in the attempt to reduce the emotional charge contained in them. In every case it is a question of attempts, in which the relationship with reality, despite appearances, continues to be of a creative and not a cognitive order.

On the other hand, notwithstanding his more defended position, the creative scientist is not free from the same sort of anxiety. In the same way as occurs for other events which accompany anxiety, the

factor of chance, for example, has often been invoked in the history of important discoveries. Today however it is admitted by those very scientists that chance is much less probable than has been thought up to now, and that much of what has till now been attributed to chance is rather the product of individual psychological factors. A phenomenon of scientific research which could refer to chance and which is sometimes to be understood as a mechanism of defense from creative anxiety, is perhaps that which has been defined with the term "serendipity." This refers to the fact that the planned course of a scientific research may unexpectedly deviate in an unplanned direction, which leads to an unawaited for discovery. In this way, while Freud held that he was inventing a new therapeutic technique of neuroses, different from the hypnotic one, it happened that he discovered the unconscious and the laws which rule it and thus opened human mental activity to scientific understanding for the first time.

We may now bring the discussion back to psi phenomena. We were at a rather discouraging point. Taken in isolation, psi phenomena testify to a relationship with reality which is profoundly different from the creative one. In a certain sense it can be said, paraphrasing the incisive image used by Freud, that in these cases the creative relationship with reality is the negative of the psi relationship. Preconscious activity, decidedly increased by the creative process, seems constricted by the psi phenomena, almost crushed by a sort of direct collusion between internal world (unconscious) and external world. One can put itself in the place of the other, and vice versa. This also seems valid if referred to the "discovery," which—for example in the telepathic pseudo-dream—certainly is not the fruit of an interpretation of reality consequent to a creative process, but rather the effect of such a collusion between external and internal reality, a collusion which leaves no space for any elaboration, not even oneiric, of the perceived contents. In this sense the psi discovery is a pseudo-discovery. Following this line of thought, we must conclude that psi phenomena exclude, by their very nature, what has been indicated as "intermediate area" between internal and external reality, and which is both product and aliment of the creative process.

It seems to me, furthermore, that psi phenomena have something in common with the phenomena which we call psychosomatic. If one tries supposing that, in those who produce psi phenomena, the external reality stands for the physical, perhaps what I mean can be better understood. What is verified in this primitive relationship with one's own body is of psychobiological rather than psychological order. Certain modifications of bodily functioning which a child in its first in-

fancy manages to obtain to cope with states of grave frustration, have something of the marvelous about them, even though they are pathological and they are no longer repeatable in the same way when the psychological development is more advanced. From the psychological point of view we call the child's relationship with physical reality omnipotent and magical. The fact is, however, that the magically induced physical modifications (of his own body) *are effective and real,* and not only lived in phantasy. The hallucinatory image, which tries to satisfy in phantasy a frustrated desire is a different thing, compared with the bodily modifications which, based on phantasy and mnemonic traces, try to satisfy the desire through a self-induced renewal of the physical sensations of gratification. Perhaps the true point of the "mysterious leap," as Freud defined it, between psyche and soma, is here.

In the same way, in the psi relationship, the physical modifications and perceptions (of the external world) are induced magically, from the psychological point of view, but they can show themselves to be *effective and real,* and not only lived in phantasy. They strike us greatly because they concern external reality. But if we keep in mind the fact that for the child in early infancy external reality does not exist, unless as an extension of the self, the link—magic, but with real effects—between psyche and external world can become not too different nor more mysterious than the one—magic, but with real effects—between psyche and soma.* The problem lies perhaps in our difficulty in conceptualizing the psychological link existing between *psyche and physical world* (corporeal and extra-corporeal). At this level the phenomena relative to the relationship with the external world seem to constitute only one aspect of the psyche-soma relationship, that is to say, of that internal reality which is for the moment the only one possible.

A research along these lines would in my opinion be very welcome. Here I can only report in brief an observation, which has made me think a good deal, and which in any case may give an idea of what I mean by the concept "psyche-physical world relationship."

A patient of mine, towards the end of a session, said that he had the impression of feeling on his left side (that presented towards me) the pressure of a gigantic body, so strong as to feel himself curving under

* Obviously, it can be objected that between mind and body there is the intermediary of the central and peripheral nervous systems. But one of the aspects of the "mysterious leap" is precisely that somatic symptoms are not the consequence of visible alterations of the CNS and may be independent of the laws which govern the PNS. It seems, however, that the latter, in the same way as the autonomous nervous system, may, more or less independently of their governing laws, be placed at the service of mental needs.

the force. In those same moments, as I learned at the next session, the car driven by his mother was crushed by a large bus which had drawn too close on its left side. When I pointed out to the patient the physical sensations which he had told me about in the preceding session, he, to my surprise, was not able to remember them. The reason for this suppression of the memory was linked to the necessity of keeping repressed the infantile phantasy, which had re-emerged in concomitance with the ESP of *being* the mother sexually attacked by the father. This phantasy had been unconsciously lived in the analytic situation with the analyst (= father = bus). Since the patient had serious problems of passivity and feminine identifications, we cannot exclude that he had put into work and utilized the ESP to gratify in a "real" way his unconscious phantasy. What I would in any case like to point out is that the ESP had been lived by this patient quite simultaneously with a perceptive experience of a primitive type, according to the psychobiological scheme "imitating in order to perceive." In this imitative perception a modification of the body occurs in the function of the object-stimulus. What one perceives is not the object but the modification occurring in one's own body. Consciously, in fact, the patient had only noticed the physical sensation of modification of his own body. This modification, which revealed itself as an imitative perception, included, however, a perception of the object-stimulus of extrasensory order, and the whole seemed to be the repetition of analogous infantile perceptive experiences, relative to the primary scene, an occurrence which was experienced as separation from mother. Neither the real object-stimulus nor the unconscious infantile contents were consciously perceived. But the analytical observation could demonstrate how the relationship between the internal psychic world and physical reality, corporeal and extra-corporeal, developed; it could further show how the extra-corporeal reality was concretely an extension of the corporeal one, and how these two aspects of the physical world were interchangeable, with real and concrete effects.

I would like finally to point out that the psi event which I have just related, perhaps like other psi phenomena, implies types and degrees of regression of pathological character, and an object relationship characterized, at the source, by a high degree of frustration. Like psychosomatic phenomena they seem to wish to elude all psychological (pre-conscious) elaboration or to discharge the surplus psychological tension.

The psychobiological roots of the creative process are evidently also part of the same context. "The breast," says Winnicott, "is created by the infant over and over again out of the infant's capacity to love or

(one can say) out of a need. A subjective phenomena develops in the baby which we call the mother's breast. The mother places the actual breast just there where the infant is ready to create, and at the right moment." In these paradigmatic and optimal conditions, "the mother . . . affords the infant the opportunity for the *illusion* that her breast is part of the infant. . . . *Omnipotence is clearly a fact of experience*" (italics are mine). To the degree in which the need is gratified, therefore, the omnipotence is also confirmed and the baby can experience the breast (external reality) as a part of itself. In these conditions I would say that the baby does *not* need to resort to ESP. But if things at this point changed and the baby's need was no longer satisfied to the same degree, the baby would use his omnipotence to obtain modifications in the bodily self, reminiscent of those experienced in correspondence with the gratification. Through these "imitative" mechanisms he would tend to re-establish the fusion of the corporeal self with the lost breast (that is to say, of the physical corporeal world with the extra-corporeal one) in order to be able to continue to live his omnipotence "as a fact of experience." All this would be translated, on the clinical plane, in somatic phenomena of a pathological nature, *probably associated with perceptions of an extrasensory order of the extra-corporeal physical world.*

The psychobiological foundations of creativity are therefore also linked to the problems of the primitive psyche-physical reality (corporeal and extra-corporeal) relationship and contribute by laying the base of the psychosomatic pathological phenomena, compared with which some psi phenomena appear to us like parallel aspects of them. Obviously the magic psychobiological "creation" is very far from the complexity of the creative process of the adult state, but what happens then, in terms of frustrations and gratifications, contributes in a fundamental way to the later development of creative activity, and to its individual characteristics. Furthermore, I am convinced that the type of relationship that the creative Ego, when adult, maintains with the surrounding reality on the one hand and with the psychic (unconscious) reality on the other, and the ways in which these two relationships interact, represent factors of essential importance in the determinism of the creative expression.

The fact that psi phenomena are of a different nature from those of the creative process does not exclude evidently that they may become *factors* of such a process. As I mentioned at the beginning, the real telepathic dream is distinguished from the telepathic pseudo-dream by the fact that the psi-phenomena are part of the former as factors, on the same plane as unconscious elements of a different na-

ture, and undergo the same preconscious elaboration as these elements. The dreams are not identical with the creative process, but they have many things in common with it. "The dream has its poetic moments as poetry has its dreamlike aspects" (Sachs, 1942). Furthermore, the creative process may at times use the work of dreams for its aims.

The analytical experience enables one to note that dreams, outside the analytical context, can be used as a means of psi relationship between people linked by relationship which go back to infancy. For example, a patient may, in analysis, tell a dream which he had during the night and then, in the associations, relate the dream which his mother or another significant person had told him that they had had the same night. It is not rare to find reciprocal perceptive elements in the two dreams, of an ESP type.

Psi factors occur furthermore, in interpersonal relationships to a degree which it is difficult to measure, but, it seems, more often than is thought. It has happened to all of us to observe some cases of it. It is necessary to keep in mind that, except in particular cases, consciousness remains unaware of the psi phenomena which have occurred. It is probable that this is due to the fact—noticeable in the case of the patient just mentioned—that the external physical world is completely assimilated and fused with the internal psychic world (unconscious), and it is only in function of the latter that the former seems to be experienced.

The fact that, in psi phenomena of the type of the telepathic pseudo-dream, the contents of the ESP may become conscious would leave one to suppose, however, that there is the possibility of impeding, in case of necessity, the fusion of the psi contents (relative to the physical external world) with the corresponding unconscious contents of the internal psychic reality. The access of the psi contents to consciousness would in this way find an explanation as an emergency measure, intended to preserve the self from a situation of imminent danger, and would be the equivalent, in practice, of driving out of the self the perceived contents, before they become fused with the internal ones. Apart from these special cases, however, it can be said that the extrasensory perceptions tend to remain unconscious. This implies the fact that a great part of the psi phenomena which occur in adult life—and which therefore enter as factors of the mental activity of adult life—may pass unobserved.

If this is true, there is nothing to make one think that in the case of the creatively gifted personality things should go differently. As happens to other people, not equally gifted, we are justified in supposing that the creative person can maintain active, at levels not noticeable

by consciousness and for specific occasions, a sort of primitive perception which involves the occurrence of psi phenomena. A thing which we do not know is to what extent this may interfere as a disturbance with the creative process, or whether, on the contrary, the creative process may, elaborating the internal effects involved by the psi regression, put them at the service of its own purposes. As far as I know there is no study in the psychoanalytical literature relative to the creative process which has carried the investigation of the "regression at the service of the Ego" (Kris, 1953) as far as the level of psi phenomena. In the attempt which I am going to make in this direction, rather than fulfilling this aim, I propose to find out whether, and to what extent, such an investigation is possible.

I have chosen, for this purpose, the unusually abundant data which we have at our disposal, relative to the life of Heinrich Schliemann, the father of modern scientific archeology. There are some good reasons for this choice: one is the well-known fact that Schliemann was not a professional archeologist, and another, that his great discoveries, particularly that of the remains of Troy, are strongly linked to the vicissitudes of his inner life. Apropos of what I have mentioned above about the meaning of "discovery," both artistic and scientific, we can say that Schliemann's discoveries have very little scientific character as far as the type of the determining creative process is concerned, but an enormous scientific value in terms of reality. Secondly, the very great amount of biographical and autobiographical material that is available has allowed scholars to reconstruct his life in detail. In particular Niederland, drawing on still unpublished material, has published an exceptional psychoanalytical biographical study of Schliemann, which allows us a deep understanding of the infantile motivation which drove him to make the fabulous discoveries of his adult life. This study is important, as far as we are concerned, not only because of all that it has succeeded in clarifying of Schliemann's long creative process, but also because of what, despite the accuracy of Niederland's psychoanalytical investigation, still remains inexplicable in that process.

At the age of eight, Schliemann declared to his father that in his opinion the Homeric story of Troy was not a legend at all; Troy must still exist, buried in some place, and when he was grown up he would go and discover it. This really happened, nearly forty years later. In this long interval Schliemann had an extraordinary life and became one of the richest businessmen of his time. When, making an apparently unexpected decision, he went personally to the Homeric area of Asia Minor, he made a rapid exploration of the sites and with incredible certainty decided that Troy was not, as ancient historians had

indicated and archeologists still believed, on the mountains of Bounarbashi, but underneath the hill of Hissarlik. The excavations fully confirmed his previsions.

There are naturally many other things in the life of Schliemann, but I would like to focus attention on these few points, which seem to me significant for our purpose, referring you for the rest to Niederland's work. The problem posed by these events is to understand to what extent the infantile "certainty" of Schliemann had only the character of a phantasy, or whether it was already the result of a primitive perception through the self, furnished with psi elements. This doubt, following what we have discussed above, seems to be legitimate every time that what could be a phantasy based on magical elements transmutes itself instead into a precise reality. In the case of Schliemann there is the fact that, as one learns from his famous autobiographical chapter (1881), there were many other phantasies similar to that of Troy already very vivid in the preceding years of his childhood, encouraged by a surrounding reality which lent itself well to feeding them (an ancient tomb on a hill, a medieval castle with ghosts, legends of hidden treasures, a cemetery in front of the house, etc.). The phantasy of the Homeric truth could therefore have been one of the many and Niederland's study, although very accurate, does not help us to clarify the problem, whether in the phantasy of Troy there were circumstances such as would make it different from the others. Naturally there are, already dominant in the infantile phantasies, and then in later life, the elements relative to loss by destruction of the object, to depression, and to restitutive urges. That such elements constituted an important factor in the inner life of Schliemann seems indubitable, but even they do not help on their own to clarify why the phantasy of Troy should have acquired for him such a determining importance compared to others of the same type.

Some of the events of his early life could perhaps help us to understand this point better. Niederland underlines in particular the death of a brother of the same name, Heinrich, which happened two or three months after Schliemann's birth, and the fact that, precisely for that reason, the name had been repeated in him, which had always given him an unstable sense of his own identity. Besides the death of the brother Heinrich, two other things, both traumatic, happened in the first year and a half of his life: the birth of a brother, and the move of the family from Neubukow to Ankershagen. Apropos of these early experiences, it should be kept in mind that destructive and restitutive phantasies are part, as far as we know, of the early stages of object relationship.

Other events to be noted: at three years, the birth of another brother; at four years, the death of this brother, who was, therefore, just a year old; at five years, he meets Minna, a little girl of the same age, his relationship with whom grows ever more intense and which, at about eight years of age, becomes a real secret engagement, with exchange of vows. With this child, between the ages of 8 and 9 years, a real "mutual daydream" is established, in the sense that they live together all the phantasies relative to the mysteries, to the legends, to the exploration of the castle, not to speak of the phantasy of Troy and of the plans to go and discover it when grown-up. Among other things, the two children went together every now and again to visit an old woman of 84, the daughter of the minister who had preceded Heinrich's father in the parish "to ask her about the past of the village or to look at the portraits of her family; that of her mother, Olgartha Christine von Schröder, who had died in 1795, attracted us more than the others, both because it seemed to us an artistic masterpiece and because it had a certain resemblance to Minna." Note the association between the idealized "deceased mother" and Minna. In that period, when Heinrich was 9, his mother died.

Two serious occurrences followed on this event. The father was publicly accused of licentiousness and evil moral conduct, for which he was repudiated and isolated by his parishioners. In consequence the village children were forbidden to associate with the minister's sons; in a brutal way Heinrich thus found that he had lost besides his mother, also Minna. He reacted concentrating all his grief on the loss of Minna: "The unhappiness . . . of being completely cut off from Minna, of not being allowed to see her any more, was a pain a thousand times greater than the death of my mother, which I ended by forgetting, so overcome was I by the affliction for the loss of Minna. I stood for hours and hours every day alone in front of the portrait of Olgartha von Schröder, deep in tears and, full of sadness, thought of the happy days that I had passed in the company of Minna." Note, at this point, the association between "deceased mother" and lost Minna.

These data seem to indicate that the original loss-restitution conflict must have been particularly intensified by the pregnancy of the mother, in his first months of life, by the birth of a brother at a year, by the move of the family to Ankershagen when he was 14 months old, and not less by the death of his homonymic brother a few months after his birth. Phantasies of being able to open his mother's body to appropriate to himself her treasures (babies) hidden there, and the relative conflicts of guilt, seem to have contributed to the meaning of this first phase. The birth of another brother at three years, and his

death a year later, acquire the meaning of a traumatic confirmation by reality (in full phallic-oedipal phase) of his guilty phantasies. Later Heinrich will accuse the father of having killed the mother with ill-treatment and continued pregnancies (Niederland). His infantile oedipal relationship with his mother seems to have undergone an ever intenser displacement to Minna, with a crescendo which reaches its culmination at the age of eight and continues up to nine. Minna stood for the mother lost in phantasy; she was the mother regained exclusively for him, and who would have helped him to realize his conscious phantasies of being able one day, with her and for her, to discover Troy.

In the first place, therefore, this conscious phantasy would be divided in two: the phantasy that Troy was real and was buried in some place, and the phantasy, looked on as future, of going and discovering it. The need of reassurance concerning the idealized "deceased mother" seems to be satisfied by the first, provided that the thesis put forward in it is fulfilled when the time should come. This is the meaning of the second conscious phantasy, which sees to the stabilization for an indeterminate length of time of the reassurance achieved by the first and which appears as the condensed result of a compromise between the drives to get hold of the mother's treasures for himself and the restitutive drives. Certainly not by chance, before going to discover Troy Schliemann became a multi-millionaire. Niederland himself has acutely noted, concerning this, that, "he did so by immersing himself in products gained mostly from the earth and soil."

This world of creative phantasy, having reached the phase of maximum elaboration, and, thanks to the relationship with Minna, of maximum gratification, collapsed all at once the day Heinrich's mother actually died, and Minna, the only possibility of salvation, was also lost for ever. Concerning this, in the serious depression which followed, the weeping of Heinrich over his Minna (oedipal mother) in front of the picture of Olgartha von Schröder (the pregenital mother, destroyed and idealized) seems very significant. At that point an inexorably punitive external reality put him, alone, face to face with his destructiveness and his original guilts, making the entire creative and defensive elaboration that he had constructed in his nine years of life, the entire world of phantasy lived as real, collapse on him like a house of cards. Reality seemed to confirm that Troy should be considered as destroyed for ever.

It is difficult to think that the phantasy of Troy should simply have survived this crucial depression, with nothing changed. At this point the little Heinrich no longer had the possibility of using the external

world for the aims of his creative phantasy, nor of transferring his internal world into the external one—that is, of living it as real—a thing which the "mutual daydream" with Minna had allowed him to do. The needs of his unconscious psychic reality not only remained unaltered but were suddenly and acutely further intensified by the severe deprivation and the consequent defensive regression.

This concomitance of factors is extremely similar to the one which we have seen able to foster imitative perceptions in early infancy, which include the extra-corporeal world in the self, probably using extrasensorial mechanisms. The aim of such imitative perceptions, as I have already had occasion to mention, is to magically re-establish the fusion of the self with the lacking love object. Naturally we do not have direct proofs that this happened. We only know that the phantasy which up till then had been externalized had now to be internalized, and Heinrich had to make himself capable of re-establishing, within himself and for himself only—that is to say, in terms of a new "certainty," capable of opposing itself to the definitive verdict of reality—that Troy was not destroyed forever, and that one day he would find it. The insistence with which Schliemann wished to date the beginning of his certainty of the existence of Troy from the age of eight, that is at the moment at which it first appeared, and the connection which he made between the appearance of this certainty and the memory of the illustration in the book given him by his father (Aeneas abandoning Troy in flames with his father on his back and holding his son by the hand) acquire in this way a defensive meaning intended to keep separated on the conscious level the phantasy of risen Troy from the unconscious destructive conflict and from the memory of the real painful childhood losses, lived by him as a threat of annihilation. Saying that his certainty began before the latter is a way of keeping such a certainty, and with it his sense of identity, beyond every threat of disintegration.

Furthermore we know that, in adult life, the actual discovery of Troy occurred following a series of events which were almost an exact repetition of those which had occurred when he was nine years old. His cousin Sophie, who had in some way substituted for Minna—she also was almost of the same age, and had the same name as his dead mother—unexpectedly died. A deep depression followed which lasted for several weeks, at the end of which Schliemann in fact left for the discovery of Troy. His first halting-place, however, was Ithaca, where he made his first excavations, and in a psychical state which was nearly manic, felt himself as Ulysses. After having impersonated the man who was responsible for the destruction of Troy, he went to Asia Minor.

Here he wandered around for a little among the mountains which surround the plain of the river Mendere (the ancient Scamandro), and with stupefying sureness established that Troy was not to be found under the mountains of Bounarbashi but rather under the hill of Hissarlik.

This choice was not based on any logical or scientific reason. Niederland has related it to the fact that "as can easily be demonstrated, the Hill of Hissarlik bears a resemblance to the hill of Ankershagen with the *Hühnengrab* (the giant's tomb) of his childhood." That this resemblance exists does not explain the fact that Troy was *actually* hidden under the hill of Hissarlik. If we accept this resemblance as an explanation, we would have to admit that at the last moment the discovery of Troy was due to chance.

If, however, we maintain that the discovery of Troy was due to the genius of Schliemann, and if we admit, as Niederland himself admits, that it was the outcome of a long creative process, whose phases of elaboration are distinguishable throughout the life of Schliemann, then the choice of the Hill of Hissarlik and the finding of Troy appear to us as a single and indivisible fact, strictly determined by what had preceded it. In this sense, the actual discovery of Troy seems to be interpretable as the translation in act of a perceptual "certainty" gained by Schliemann previously and which could probably be located in the period immediately following on the death of his mother and the separation from Minna. In that first serious depression, the symbolic theme of the phantasy of Troy—which had been cultivated with Minna for a long time, and was the only symbolic elaboration left of his link with her and, more profoundly, with the lost mother—was in turn threatened by destruction, with great danger of disintegration of the personality. The perceptual "certainty" of the reality of Troy, gained then by using psi mechanisms, may appear as the outcome of a severe defensive regression and as the re-activation of primitive mechanisms intended to safeguard the survival of the self by re-establishing magically the fusion with the lost mother.

Starting from this "internal re-finding" of the object at primary levels, the actual discovery of Troy becomes an event which can be again delayed; the psi mechanism may have had an essential role in the resumption on a new base of Heinrich's creative process, and consequently in the recovery of his mental health. When, at the age of forty-six, the traumatic situation of loss repeats itself, again taking him by surprise, the regressive defense mechanisms used earlier emerge again, and Schliemann comes out of the depression to leave for the actual discovery of Troy in a state of elation equal to his feeling of omnipotence.

It may be interesting in conclusion just to mention the "scientific errors" committed by Schliemann. In his excavating ardor he dug beyond the Homeric Troy and mistook for this findings which actually concerned levels more ancient than the Homeric one. This lapse, which Schliemann repeated at Mycenae, and which made him make additional involuntary discoveries, becomes perhaps more comprehensible if we substitute for the Homeric level of Troy the level of the oedipal mother, and for the deeper levels, that of the pre-oedipal mother, to whom the psi factors of his creative process referred.

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CREATIVITY AND COMMUNICATION

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The two key words in the title of this paper, *creativity* and *communication,* are probably the most ambiguous words in the English language. They signify a wide variety of meanings to nearly every person who uses them. While it is not the purpose of this paper to alter perceptions of the terms, it is imperative to define the words as a context for the ideas which follow.

Creativity and communication can be perceived as processes or products. For this paper, the emphasis will be on *products*. The outcome of the creative process is an event which can be observed. The means for the communication process is the *medium* which is used. A creative action is an original response or idea which solves a problem. A communication medium is a material or device (or combination) which transmits information to human sense receptors. Communication media may be classified as follows:

Visual Stimuli
Pictorial
Print
Audio Stimuli
Verbal
Non-verbal

Information is defined as the bits or items which an organism can discriminate and which serve communicative functions.

It is my position that conditions must be established in which creativity can take place. Further, these conditions are predicated on a rich sensory environment. And if we move to a concern for unconscious or psychic forces in creativity, these forces will depend upon earlier sensory stimulation which is within the repertoire of a person no matter how latent it might be.

The conditions for creativity are not the same for all individuals. One obvious condition is the physical facility with which individuals

* Read by Allan Angoff.

write, invent, paint, photograph or engage in any creative activity. The facilities must provide the essential tools, and space in which to use them. A sculptor needs stone, chisels, and adequate light before he can even begin his activity. A film maker requires cameras, film, lights, tape recorders and many accessories before any idea is recorded on film.

An electrical engineer who has spent a lifetime studying the creative process in science, A. D. Moore, maintains that when a person is trying to be creative, he will get his hands on something. A considerable amount of learning is through the use of the hands! Concerning the manipulative aspect of creativity, Torrance, in *Scientific Creativity,* says, ". . . many writers have maintained that this is important in invention and scientific discovery."

Children are usually creative and learn rapidly. They are grabbers and handlers and feelers. They use their hands freely and constantly.

The area in the brain devoted to sense impressions which come *from* the hands and to motor control *of* the hands is very large compared with other areas of the brain. One might hypothesize that the evolution of the hands preceded and made possible the development of those parts of the brain with which man thinks.

Conditions which permit the use of hands may be necessary during the preliminary phase of the creative process. It also may be necessary for the young, inexperienced creative person who must familiarize himself with every part or substance with which he is working. There is no substitute for this kind of experience, no matter how brilliant the individual may be. Even an experienced creative person when confronted with a new situation may have to move to a new setting to learn new elements firsthand.

A sensory environment enhances the creative effort. Creative people have a high degree of visual imagery. Walkup found that highly creative inventors he studied are highly competent visualizers. The ability to visualize, however, varies from person to person. A mathematician might visualize symbols, numbers and equations with extreme clarity, but not be able to comprehend mechanical systems. A landscape architect might possess a highly developed sense of balance and spatial relationships but not be able to multiply correctly.

A second environmental condition for creativity is the quality of the relationship among people—the social and emotional milieu which is completely unrelated to the physical facility. If a creative person is working with others, he needs non-evaluative acceptance and freedom to explore, support of ideas regardless of where they appear to be leading, and recognition when a product is clearly creative.

We live in a media-saturated world. We depend upon media for

information and diversion while often abhorring their pervasiveness. We can embrace or erase media; we can caress them or curse them; we can support or suffuse them, but communication media will not go away. McLuhan says, "The medium, or process, of our time-electric technology is reshaping and restructuring patterns of social interdependence and every aspect of our personal life. It is forcing us to reconsider and reevaluate practically every thought, every action, every institution formerly taken for granted. . . . Societies have always been shaped more by the nature of media by which men communicate than by the content of the communication. . . . Electric technology fosters and encourages unification and involvement. It is impossible to understand social and cultural changes without a knowledge of the workings of media." The purpose of this paper is to point out how we might channel media toward creative purposes.

Media transmit both information and noise. In the sense of education and training, media transmit items of factual information for human processing (recall, translation, synthesis, evaluation, etc.). Media can also impart a vast array of stimuli which might lead us to creative thought and action. Creativity begins with a multitude of sensory and perceptual events. Conditions which foster creativity require a repertoire of information within the individual who is attempting to be creative. The more information a person has available from both internal and external storage, the more likely it is that he will be able to do something creative with the information. The process of creating is associating and juxtaposing new and original combinations of information which an individual has previously acquired.

Media can provide access to a person's storehouse of information, which in turn can contribute significantly to nurturing the creative potential, provided the media are designed and used in an appropriate fashion to accomplish this purpose. Providing a rich array of stimuli through media and arranging the conditions to use these stimuli may be one avenue for fostering creativity. However, saturation of an individual with stimuli may have to be combined with cues for creative actions, opportunities to be creative and guided use of the mental processes which will fuse past knowledge with new information to produce original insights or unusual responses.

Media help to extend a person's range of experience in areas of knowledge which might not otherwise be open to him. Media dramatize the significance of events so that real events become vicarious experiences which are virtually unavailable in any other fashion. McLuhan summarizes the sensory qualities of media:

All media work us over completely. They are so pervasive in their personal, political, economic, aesthetic, psychological, moral, ethical, and social consequences that they leave no part of us untouched, unaffected, unaltered. The medium is the massage. Any understanding of social and cultural change is impossible without a knowledge of the way media work as environments. *All media are extensions of some human faculty—psychic or physical.*

In this section we will be concerned with the use of media which already exist, e.g., recordings, slides, films, television programs, filmstrips and combinations of these. These media vary greatly with respect to their quality, originality and scholarship. There is no evidence to show that media which experts consider to be creative will insure creative responses from those who receive it. Likewise, media evaluated as pedestrian may not necessarily evoke a pedestrian response. It is clear that the burden is on the user to provide an environment that releases creative responses. Whether the user is a teacher showing a film to a group of children or an individual using a recording by himself, the interaction of the person with the medium will determine the extent of creativity.

There are techniques which users have followed to elicit creative responses. Stopping a film at the denouement for the purpose of discussing possible outcomes offers opportunities for personal perceptions. Using a film without sound and asking individuals to narrate is still another useful technique. Viewing a series of slides of apparently unrelated objects requires that the individual draws upon his experiences to provide closure or order. What we are striving for in these examples is a type of projective technique whereby the individual is engaged in actually doing things which have the potential for creative participation. If a person is passive in the use of any medium, or is not led to it by a self-generated seeking and active response, the medium will not be useful in inducing or extending creativity.

Communications media provide the concrete referents from which knowledge, ideas and feelings are attained. These surrogates for life experiences come as close to reality as one can come without actually living the event. They possess fixative properties, that is, the ability to record an event for later replication. They allow manipulation of time and sequence through editing of the events recorded. They can be distributed to one or to many, in one or several locations, and as often as may be required. They can control time, control size, and provide access to events too dangerous for man to observe.

There is a vast array of media resources already available. The major function of each medium is to provide stimuli which lead to specific sets of responses. Much less is known about the use of media to elicit

non-specific or subconscious responses. There is a rich research area in the use of media as stimuli for releasing psi responses.

There are two aspects to the production of media which relate to creativity. One is to communicate ideas about creativity. The subject of creativity is the content. Media in this category might delineate the ways in which inventiveness, discovery and creativity could help to find solutions to problems. The conditions under which creative activities have occurred in the past, and other behaviors and conditions which have contributed to creative behavior could be shown.

A second aspect is concerned with the media as creative products themselves. The medium is the message. A creative film, for example, can demonstrate the process regardless of the content. It should stimulate a proneness to creativity on the part of those who view it. This stimulation occurs today when young people, in all parts of the world, are picking up motion picture cameras, still cameras and tape recorders to express themselves. Young people who might have been painting or sculpting in an earlier generation are making films and multi-media presentations.

Occasionally these two elements are consciously blended into one. The 1969 Academy Award film in the short subject category was *Why Man Creates,* an excellent example of creative film making on the subject of creativity.

The French mathematician Henri Poincaré, in relating his experiences in inquiry, points out that discovery does not occur consciously by making all possible combinations of the information in the mind. The number of combinations is too vast; the task of separating the promising data from the nonsensical would require more than a lifetime, even for solving simple problems. Once the brain has confronted a problem and has sensed the extent of possible combinations, most of them are discarded unconsciously. The process continues during sleeping and waking, even simultaneously with the individual's conscious activities. The discovery, when it is found, may become conscious at any time. It may happen in the midst of some completely unrelated activity.

McLuhan argued that "All media are extensions of some human faculty—psychic or physical. . . . Electric circuitry," is "an extension of the central nervous system. Media, by altering the environment, evoke in us unique ratios of sense perceptions. The extension of any one sense alters the way we think and act—the way in which we perceive the world. When these ratios change, men change." Thus, if media are extensions of human faculties, they stimulate both conscious and sub-

conscious actions and permit responses which are conscious and subconscious.

Donald W. MacKinnon, Director of the Institute of Personality Assessment and Research at the University of California at Berkeley reports a fascinating series of experiments with an unusual medium, the Ouija board, which demands sensory response to subconscious stimuli. MacKinnon's hypothesis was that creative individuals would not be afraid of the Ouija board or reject it as a fantastic or crazy thing but rather would be willing to see if the hands placed on the table could elicit the recall of some forgotten experience. MacKinnon reports as follows:

> The instruction to the subjects was to try to think of something which they knew they had once known but could not now recall, for example, the name of a girl they might have had a crush on in some early school grade, or an address that they had frequently gone to, or a telephone number they had frequently called, etc. It was suggested that the item of information which they would seek to recall should be one that originally had some emotional content or affective tone and that further the item to be recalled should be one which, if obtained by means of the Ouija board, could be checked. The purpose of this was to determine whether the recall by means of the Ouija board was a veridical one or not.
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> After a subject had thought of such a possible item, provided he could not recall it no matter how hard he tried, he was asked to place his hands upon the little table of the Ouija board. It was suggested that he relax as much as possible, putting himself in a state of abstraction and seeking insofar as he could to reinstate the mood and feeling of the time when the sought-for item of information had been well known to him. In this way, some fascinating and even amazing recall of earlier events and experiences were obtained by our creative subjects.
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> One of the most fascinating cases was that of a well-known writer who tried to think of the name of a girl on whom he had a crush in the eighth grade. He tried very hard to recall her name, but without success, so he turned to the Ouija board. Almost immediately the little table began to move very rapidly from letter to letter. As was my practice, I stood by watching the letters over which the point of the little heart-shaped table stopped, recording the letters in the sequence in which they were indicated. In this instance the table moved rapidly from letter to letter, at times pausing longer over given letters. Other letters were pointed to between those over which the little table rested longer; and reading the whole list of letters to which the table moved, one could find no sequence spelling out a girl's name. But when one read the letters over which the little table had paused longer, they spelled "Thelma."
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> After some time the subject broke off the experiment saying that it had not been successful. I then asked him if the name "Thelma" meant anything to

him. His response was that it sounded vaguely familiar but he could not say that this was the name of the girl in question. Later he was able to check with his sister, who recalled the girl, and he reported back that according to his sister the girl's name was indeed "Thelma."

In another instance, an architect tried to recall the telephone number which had been his wife's number before he married her. He reported that he could not recall it although he kept thinking that the exchange was "Washington." Failing to recall the number, he put his hands upon the little table on the Ouija board which, moving almost at once, spelled out the word "Federal," followed by a series of numbers. The architect was subsequently able to check the veridicality of this recall and reported back that it was indeed his wife's number which "the Ouija board spelled out for him!" I think both of these cases beautifully illustrate that it is possible in certain periods of relaxation and abstraction to experience what one cannot experience when striving hard for it in the conscious, waking state.

This is one example of the way in which sensory stimuli may evoke unconscious responses. It leads to questions regarding the use of media as extensions of human faculties which may probe subconscious thoughts. We can observe body responses to contemporary rock and roll music; hallucinatory perceptions are reported while viewing sequences of *Space Odyssey: 2001* and the Beatles' *Yellow Submarine*; and the light, sound, and image bombardment of the Electric Circus disorients the observer and makes him a participant. Media open up new areas for research on the psychic factors in creativity.

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