I NOTES ON CREATIVITY

The human mind is not easily accessible. Nobody ever comes to know more than one specimen of mind directly—that is, without a go-between; and this one specimen, the person's own mind, tends to shrink when it is watched. Wishing to spy on oneself, one gets into the "critical situation" described by Kant in his *Anthropology*. "When the psychical powers are in action," he says, "one does not observe oneself; and when one observes oneself, those powers stop."

Nor is it easier to observe others. Kant continues to say: "A person noticing that someone is watching him and is trying to explore him will either become embarrassed, in which case he *cannot* show himself as he is; or he will disguise himself, in which case he does not want to be recognized for what he is." This dilemma, inherent in psychology, is all the more serious when the mental processes to be scrutinized rely upon impulses issuing from beyond the realm of awareness. Those impulses are often deranged or entirely blocked when their coming and going are watched. Paul Valéry, addressing a congress of surgeons in 1944, went so far as to suggest that the vital importance of a mental function can be measured by the degree to which that function is intolerant of attentive consciousness. "In other words, there are functions that prefer the shadow to the light, or at least the twilight—that is, that minimum of conscious awareness which is necessary and sufficient to make these acts come about or to bait them. If failure or blocking is to be avoided, the cycle of sensation and motor activity must take its course without observations or interruptions, from its origin to the physiological limit of the performed act. This jealousy, this kind of modesty of our automatisms, is quite remarkable. One could derive a complete philosophy from it, which I would summarize by saying: Sometimes I think, and sometimes I am."

Artists, in particular, have learned to tread cautiously when it comes to reporting the internal events that produce their works. They watch with suspicion all attempts to invade the inner workshop and to systematize its secrets. Surely, creative processes are not the only ones to rely upon impulses from outside the realm of awareness, but they are unique in that their results give the impression of being beyond and above what can be accounted for by the familiar mental mechanisms. To the artist himself, his accomplishment is often a cause of surprise and admiration, a gift from somewhere rather than the traceable outcome of his efforts. It is viewed as a privilege that might be forfeited like the golden treasures of the fairy tales, which vanish when curiosity ignores the warnings and peeps at the miracle-working spirit.

The privilege and the nuisance of relying on helpers who do not take orders require those abnormalities of behavior for which artists have been known: those fears of power failure, those irritations and despairs, the agonies of waiting, the manic delights of success, the elaborate rituals necessary to create propitious conditions. The gift of divination, says Plato in the *Timeus*, is granted by God not to the wisdom but to the foolishness of man. "No man, when in his wits, attains prophetic truth and inspiration; but when he receives the inspired word, either his intelligence is enthralled in sleep, or he is demented by some distemper or possession." In the *Phadrus* he explains that not by accident are prophecy and madness referred to by the same word, maniké; and together with prophecy he mentions "the madness of those who are possessed by the Muses; which taking hold of a delicate and virgin soul, and there inspiring frenzy, awakens lyrical and other numbers; with these adorning the myriad actions of ancient heroes for the instruction of posterity. But he who, having no touch of the Muses' madness in his soul, comes to the door and thinks that he will get into the temple by the help of art—he, I say, and his poetry are not admitted; the sane man disappears . . ."

Since what man calls his self are the functions controlled by him, the creative powers beyond man's control were naturally thought of as originating outside the self. Hence the notion that poetical madness was a gift of the Muses; hence also the practice of invocation by which the poet—from Homer through the ages to Dante—endeavored to assure superhuman assistance. The mortal creator asked for inspiration, a term derived in our Western tradition from the breath of life which God breathed into the first man's nostrils, thus making him become a living soul after forming him of the dust of the ground ("... et inspiravit in faciem ejus spiraculum vitæ, et factus est homo in animam viventem").

I cannot here retrace the steps of the development by which *enthousiasmos*, the state of being possessed by divine power, was gradually redefined as a possession by inside forces, they too independent of the controlling self and operating below the level of awareness. Dante, while invoking the muses, was already calling also upon his own "high genius" (*alto ingegno*) and upon his "mind" (*mente*), which recorded what the poet saw, as though they were allies rather than his own capacities. But only the romantic movement formally introduced the decisive shift that so profoundly affected our modern thinking and according to which inspiration no longer comes from the outside but from the inside, not from above but from below.

There is another aspect of the creative process, less fashionable today but equally fundamental and equally rooted in the history of our culture. The madness of which

Plato spoke seems to have been reserved by him for the poets, who moved in the exalted company of the philosophers and the musicians. We do not find it attributed to the painters and sculptors, of whom he thought as craftsmen. What was the task of the craftsman, the *technites*? If we may rely on Martin Heidegger, *téchne* was considered a form of cognition—that is, of perceiving what exists. Thus, the craftsman had to make existence visible. He did this by giving shape to the functions of life, by shaping pots and tables and shoes and also by painting, carving, or modeling images.

The rules of how to fashion correct images were derived from mathematics, which formulated the secrets of the cosmos. Thus in Greece as well as, for example, in Egypt, artists formed the human figure according to traditional canons of measurable proportion—a practice that prevailed through the ages and survives even in our day. As far as painters and sculptors were concerned, the creative process was expected to take place in the full sunlight of reason. In order to avoid misunderstandings, we must here remember that the poets too received eventually their full share of rationality, which first entered their field via the mathematical canons of musical composition. However, by the time of the romantic movement, the painters and sculptors had parted company with the craftsmen, and the musicians had abandoned the mathematicians; and both art and music had joined poetry in claiming the privilege of being created by irrational procedures—procedures which not only can do without the help of the intellect and its prescriptions but are threatened by it. Around the middle of the nineteenth century Balzac, in his story "The Unknown Masterpiece," symbolized the irrationality of art by inventing the character of the mad painter Frenhofer, whose supreme effort produces a picture in which others see nothing but "confusedly amassed colors, contained by a multitude of bizarre lines, which amount to a wall of paint." At about the same time, in his opera Die Meistersinger von Nürnberg, Richard Wagner repudiated the traditional rules of musical composition in the figure of the pedantic Beckmesser.

Curiously, the advent of depth psychology led to a continuation of both traditions. Romantic thinkers welcomed it as the scientific confirmation of their belief that creativity originates in unfathomable profundities, which no explorer should attempt to probe. To a psychologist of Freud's cast of mind, however, the alleged irrationality of the creative process was a challenge rather than a deterrent. In fact, his great distinction was that he took the axiom of psychological determinism seriously and assumed therefore that any mental process, submerged, erratic, and incalculable though it may seem, must be subject to general laws of functioning. It was this trust in the ultimate rationality of the apparently irrational that led him to describe concretely some of the mechanisms of creativity for the first time.

The extension of deterministic thinking from the physical sciences to psychology derived some of its courage from what may be called the democratization or secularization of the human mind: the notion that just as every citizen, even the genius, is subject to the laws of the state, there can be no exceptions to the laws governing the

activities of the mind. Thus the unusual had to be understood as a special instance of the usual, and the accomplishment of the genius was different only in degree from what slept or simmered or vegetated in the mind of the common man. Creativity came to be thought of as the possession and privilege of every human being, and modern education became a technique for developing this most precious common property.

Thus creativity entered the domain of academic psychology. It was dealt with mostly by common-sense speculation when the psychologist, or his untrained equivalent, was called upon to supply a more scientific foundation for the understanding of the most distinguished human capacity. The creative process was also subjected to experiment, and it is fair to admit that until now common sense and experiment have yielded the same kind of result. For example, an experimental psychologist, Catharine Patrick, confirmed the assertion of an earlier writer, Graham Wallas, according to which the creative process is made up of four orderly stages; preparation, incubation, illumination, and verification. She arrived at her conclusions by asking a number of poets and laymen to write a poem about the picture of a landscape she showed them and to talk aloud while they were working. The poet Cecil Day Lewis, in his book The Poetic Image, speaks of three such stages: images or ideas, flow of association, and critical judgment. Similar sensible schemes are given in studies by other authors. In addition, the psychological equipment to be found in creative persons has been investigated by means of tests. J. P. Guilford, for example, reports that the creative individual possesses fluency, flexibility, and originality—that is, much material must be readily accessible to him, he must be flexible in his procedures, and he must avoid the conventional.

The most influential speculations on this subject are of course those by Freud and Jung. For the present purpose, it suffices to remember that for Freud creativity was a refinement of biological productivity, not only in the sense that art and science were to have developed from the desire to satisfy basic instincts, but also, and more radically, in that the ultimate motive of any artistic or scientific effort continued to be that same desire. There was also an implication that those ultimate motives were something to be ashamed of, since the orientations and procedures that distinguished the work of creative man from the straight consummations of biological man were supposed not only to replace these consummations when they were unavailable but also to hide or adorn the ultimate purpose. This meant that any endeavor to represent and interpret human existence was thought of as being at the service of sex and aggressiveness and therefore necessarily distorted by the particular interests of these drives. It also meant that the devices of artistic form were not intended "to make visible what exists" but to conceal what they were being used for.

Whereas according to Freud the original impulse of creativity was motivational, it was cognitive for Jung; that is, Freud believed that art and science came into being because basic instincts needed to be satisfied, either directly or indirectly, but Jung

saw the beginning of man's symbolic activity in dispositions for certain basic images, given to every human being by heredity and embodying the quintessence of the wisdom of the ages. It was from these archetypes that the more particular forms created by the thinker and the artist were to have derived. Regardless of whether or not the theory of the archetypes will ever be substantiated, it served to draw renewed attention to certain universal concepts of thought and imagery. It also helped to reestablish the conviction that man's concern with his existence is not reducible to the biology of procreation or attack. At the same time, however, the doctrine of the archetypes threatened to standardize the basic contents of the human imagination; and the letdown experienced when, for example, the inventions of a Leonardo da Vinci or a Henry Moore were reduced to representations of the primordial mother or earth goddess was hardly less painful than being left with nothing but the Freudian instincts.

Indubitably, powerful personal impulses must have contributed to Picasso's concept of Guernica. A psychologically oriented biography of the painter would profit from any well-supported inferences derivable from his work. Also, some aspects of the mural itself might be clarified if we knew more certainly their personal connotations in the mind of the artist. This, it will be seen, is especially true for the figure of the bull. But I hope to be able to show that even a thorough acquaintance with the artist's intimate strivings would not help us to understand what is essential about Guernica, since the picture is not a statement about Picasso but about the condition of the world; just as Dante's biography will not make us appreciate Beatrice's role and function in the Commedia. Similarly, it is true that if we knew a great deal about the meaning which such images as the bull or the horse may have in the minds of men throughout the ages, we could place Picasso's work into a larger context. However, it remains doubtful whether by enlarging our investigation to the extent of giving it the scope of a mythological case study we would learn more about Guernica in particular than we would by narrowing it to an exploration of the painter's private motives.

All depth psychology of whatever school or shade insists on the importance of unconscious processes in creativity, and there is no question that most of the decisive impulses of the artist—and, indeed, of the scientist—issue, as I mentioned earlier, from below the threshold of awareness. This is true, however, for most human activities. In weighty as well as in small matters we commonly judge and decide on the basis of criteria which we identify only *post factum* and on request, if at all, and which, more often than not, can be formulated in sensible speech only with difficulty. At the same time we feel quite sure that we did not act arbitrarily or blindly but for good reasons. Even for the execution of our decisions we tend to dispense with awareness when taking care of routine matters. We "tune in" only when an uncommon turn of events requires special attention. So smoothly do we oscillate between witting and unwitting behavior that much of the time we do not remember

whether or not an action was accompanied with awareness. This is possible because for many practical purposes we function at least as well without the help of awareness as we do with it and because all the mental capacities of perceiving, remembering, reacting, and reasoning operate regardless of whether or not we watch their doings. In a certain sense, then, it is true that in the creative process conscious behavior and unconscious behavior are no more different from each other than the flowing of a river in full daylight is different from its flowing in the darkness of night.

Originally, the term "unconscious" designated nothing more than an attribute applicable to any mental act, indicating simply that the act takes place without awareness. Under the influence of psychoanalysis, however, the term came to mean a particular place in what might be called a metaphorical geography of the mind. "Unconscious" was promoted from adjective to noun, and ended as the name of a special mental power, which behaved according to the tenets of one or another school of thought. On a sliding scale ranging from the most unconscious to the most conscious level, mental processes were distinguished by the degree to which they were deep or shallow, available or unavailable, strong or weak, free or rigid, rational or irrational, beastly or wise, ancient or late.

Some kinds of process seem to change character when they become conscious. Some are unconscious by their very nature, and show up in awareness only through their effects. Interest has centered in particular on the primitive quality of certain ways of functioning which prosper below the level of awareness and which are variously described as beastly or wise. There is actually no contradiction in what these two contradictory terms are meant to describe. They point to the animal-like freedom from moral restrictions, granted subterraneously to man's most elementary strivings—a freedom that, although presocial, may give the artist access to the unadulterated springs of human motivation. These terms also point to the crudity of the concepts on which the primitive view of the world is based and which can keep the artist in touch with the foundations of human experience. Furthermore, reference is made to the primitive form of reasoning in images rather than by intellectual concepts—that concreteness of thought which is at the basis of all artistic representation. Such primordial qualities are preserved more freshly in the cellars of the mind, and they are indispensable. To maintain, however, that these elementary stirrings and notions are the true content of art leads to a primitivistic aesthetics, which fails to do justice to the refinement of the human mind and its products. Art cannot be reduced to the simplicity of the undeveloped mind, because art, a reflection of mature man, is never simple. The apparent simplicity of some truly substantial art is as deceptive as the apparent substance of some truly simple art.

The cult of the "unconscious" in creativity is an aspect of the danger of confusing the elementary with the profound. Cultures in their late stages develop an appetite for primitivism, and to satisfy it they endeavor to see in works of art the crudity of instincts or archetypes dressed up with the trimmings of civilization. But there is no reason to believe that the areas of the mind farthest from consciousness harbor the deepest wisdom. Wisdom can result only from the concerted effort of all the layers and capacities of the mind, and the prototype of art is not the stone colossus of the Easter Islands but the union of elementarity and subtlety found on the walls of the caves of Lascaux, through the ages, and in the canvases of Cézanne or the figures of Henry Moore. Although Picasso's *Guernica*—like every human product—has primitive roots, the picture is not a manifestation of primitivity.

The present state of the problem is illustrated by Lawrence S. Kubie's book on the "neurotic distortions of the creative process." Kubie objects to the psychoanalytic belief that the source of creative inspiration is the Freudian unconscious. He says that the inaccessible and unacceptable "conflicts, objects, aims, and impulses" produce in the unconscious a "rigid anchorage" and that, on the other end of the psychic spectrum, conscious mental life is made almost equally rigid by "precise and literal relationships to specific conceptual and perceptual units." According to Kubie, the Freudian preconscious, situated between the two petrified extremities, is the creative department of the mind because it is free to gather, assemble, compare, and reshuffle ideas. Eager to overcome the Freudian approach, Kubie describes the motivational forces of the unconscious as entirely negative. In fact, he identifies them with neurotic crippling. Consequently he reduces creativity to a manipulatory device for the "uncovering of new facts and of new relationships among both new and old data" a mechanism to which he intends to pay a compliment when he compares it with electronic computers. In a chapter entitled "The Neurotogenic Universals" he refers to common human experience as the "banal universals which are the overlooked building blocks of man's creativity and of his neurotic illnesses." It is not clear whether he suggests that banalities should or should not be overlooked, but his own treatment of creativity does indeed underplay these or any other universal experiences, and leaves us with the distressing notion of creativity as the ability for "shaking things up," a mere antidote to routine thinking and mechanization, and a capacity for free association and striking analogy. It is easy to agree with Kubie that freedom from stifling obsession and convention is a prerequisite of creativity; and in the analysis of Picasso's preparations for Guernica we shall find many examples of precisely such manipulations. The point is, however, that it would be difficult to make reshuffling operations account for the essentials in the creation of Guernica or any other work of art.

Kubie's presentation reflects the inclination among some psychologists to describe productive thinking as a machinelike operation. Speedy mechanical feats are attributed to the brain machine. In a recent paper published in a psychological journal under the title "On Thought: The Extrinsic Theory," there occurs the following terrifying sentence: "Imaginal thinking is neither more nor less than constructing an image or model of the environment, running the model faster than the environment, and predicting that the environment will behave as the model does." Around

the beginning of the twentieth century, American psychologists such as Thorndike described thinking as exactly the kind of mechanism that proved to be the behavior of the modern computers—a turn of events that, curiously enough, has reinforced the belief in the theory rather than discouraged it. The brain machine is said to run mechanically through the entire set of specimens available in a given area in order to pick out the ones that obey certain specifications. It also can find data that fit each other according to some preëstablished criterion.

The mathematician Hadamard's speculations on the psychology of invention in his field show the influence of such theorizing together with the need to overcome it. It is obvious, he says, that invention or discovery, in mathematics or anywhere else, takes place by combining ideas. "Now, there is an extremely great number of such combinations, most of which are devoid of interest. . . . Which ones does our mind—I mean our conscious mind—perceive? Only the fruitful ones. . . . However, to find these, it has been necessary to construct the very numerous possible combinations, among which the useful ones are to be found. It cannot be avoided that this first operation takes place, to a certain extent, at random, so that the role of chance is hardly doubtful in this first step of the mental process. But we see that that intervention of chance occurs inside the unconscious: for most of these combinations—more exactly, all those which are useless—remain unknown to us." Hadamard realizes that nothing in our experience points to the existence of such a mental sorting machine; but since he cannot imagine invention without it, he relegates it to the unconscious. And the emphasis is on "combining ideas."

Gestalt psychologists have described productive thinking as a restructuring of the problem situation. Again the question arises: What determines the direction the restructuring takes? The answer is that the image of the goal situation—that is, a temporary or definitive notion of what needs to be achieved—provides the tension between what is and what should be and, aroused by this tension, the energy necessary for the effort of thinking; it also provides the direction in which the restructuring presses forward. In sum, the various operations of shaping the thought material can be understood only as being controlled by an underlying target concept. Without this concept, creativity presents itself as mere child's play with the building blocks of experience.

Hadamard as well as the Gestalt psychologists refer to the sudden flashes of discovery, so often described by inventors, thinkers, artists. These observations have tended to reinforce the conviction that the truly creative powers are located below the level of consciousness. However, the evidence seems to indicate that these happy solutions do not appear unless intensive conscious wrestling with the problem precedes them. Rather than assume that special creative powers dwell below the threshold of consciousness, we may point to the premature freezing of orientations and connections that may occur in conscious thought and to the greater flexibility, typical—according to Kubie—of what he calls preconscious processes. The constella-

tions of factors, hampered in their mobility by the fixations of the conscious mind, may reacquire some of their freedom when released from conscious supervision, and have a chance to rearrange their mutual relations on the basis of inherent affinities, disparities, and other organizing pushes and pulls. Such a view does not, however, require us to reserve the benefit of the escape from consciousness for the preconscious processes alone, nor does it imply that conscious efforts in creative work are generally harmful or dispensable.

The occurrence of sudden illuminations, which reward the searching mind for its struggle, does not justify an unlimited trust in spontaneity. There is no reason to assume that whatever presents itself "out of the blue" is therefore sent by the gods. Before an artist decides passively to surrender to the spontaneous impulses that come to him from below the threshold, he may wish to remember that such utterances tend to be chaotic. This is known from dreams, which are entangled compounds of many disparate mental processes; it is known from the doodles we draw on notepaper when our attention is blocked or absorbed elsewhere; it is in the word-salad produced by the automatic writings of the surrealists. One is reminded of the cryptic wave patterns written by the recording pen of the physiologist when he explores the electrical activities of the brain by means of electrodes applied to a person's skull. What manifests itself on the surface of the skull is the sum total of many different and not necessarily related processes, which can be differentiated only by expert interpretation. What appears spontaneously at the surface of the mind is equally interesting, equally entangled, equally in need of being teased apart, and illegible to the naked eye. Such spontaneity is valuable as a source of raw material for invention, but different in kind from those sudden happy solutions that are the fruit of much selective observing, sifting, and molding, both conscious and unconscious.

The mere shuffling and reconnecting of items of experience leads, as I suggested earlier, to nothing more than a clever game unless it is steered by an underlying vision of what is to be attained. Such primary visions seem to derive from a way of looking at things which Wordsworth may have had in mind when he wrote that no valuable poems were ever produced "but by a man who, being possessed of more than usual organic sensibility, had also thought long and deeply." The attitude I have in mind here cannot be described simply as "openness to experience." It involves more than passive reception. Wordsworth mentions the two essential components; yet it is not enough to be sensitive and "also" to have thought long and deeply. Rather does the creative person think deeply *through* what he observes so sensitively; and his observation consists in seeing the appearances of our world as embodiments of the significant facts and forces of existence. This perceptual wisdom of the artist could be called the symbolic attitude if the word "symbol" had not been deformed beyond recognition. I prefer to call it the visionary attitude, since artistic vision occurs indeed within the visible world and not outside it. In fact, the nonartistic varieties of creativity are likely to be based on this same visionary attitude, although

for many purposes the principles discerned in the appearance of things by the scientist will be of a more limited nature than they are in the arts. Picasso did not simply deposit in *Guernica* what he had thought about the world; rather did he further his understanding of the world through the making of *Guernica*.

The visionary attitude of the creative person consists, then, in what—for the purposes of the painter and the sculptor—can be called "visual thinking." Intellectual abstractions are in no way excluded. Without them the artist would be deprived of one of the most powerful tools of thought. But in order to enter the artistic concept, they are metabolized into visual qualities, so that, for example, the artist's knowledge of the world's being threatened by atomic destruction may reflect itself in his way of conceiving a human figure or a landscape.

Traditionally, "visual thinking" would have been considered a contradiction in terms, since seeing was believed to exclude thinking and thinking to be necessarily removed from concrete perceiving. But it turns out that much of the most creative thinking is done in images and that visual perception involves the sort of operation which was formerly considered the privilege of abstract reasoning.

In visual thinking everything perceived tends to be taken literally. The origin of this attitude has been studied in infants, who, for example, treat an object as though it had vanished out of existence when it disappears from sight. What is hidden is not there. Such is visual thinking in the artist also. What is only partly visible exists only as a part. Locations in space are not accidental: what is placed together belongs together and must be seen in relation. What is close to the eyes is more directly related to the viewer than what is far. When something is placed high, aboveness constitutes a part of its character. A face darkened by shadow or of dark color has darkness as one of its traits.

Naturally, in the course of a person's development the properties of the direct image are supplemented by the memory of earlier experiences, so that a screen is "seen" as hiding an object behind it, a part is "seen" as a piece of a hidden whole, spatial locations are "seen" as being momentary, passing, accidental; and we learn better to distinguish between color that is of the essence and color that is arbitrary or might change. These supplements of direct perception modify what is seen, not only in nature but also in a painting. But since even the most realistic painting must preserve its character as a two-dimensional, timeless object, the image must continue to stress the validity of what is immediately visible in the plane as distinguished from the nature and relations of the objects in three-dimensional space and in the past or future. Needless to say, three-dimensional space and action in time are visual universes in their own right. In them, visual thinking takes shapes, sizes, spatial relations, and displacements equally literally, but leads to different results. This can be seen in sculpture or in the dance.

The second condition of visual thinking is that every perceived property or object be taken to be symbolic. This means that when an object, or part of it, is hidden

from sight, absence is not only one of its optical or physical properties but also an aspect of its state of existence in the broader sense: When only the head of a figure is visible in a picture created by an artist—as distinguished, for example, from a news photograph which may make use of the sense of sight merely for the purpose of informing us of what went on in a certain place—that figure is always to be seen as being incomplete or "merely head" or "devoid of body" symbolically. The ragged shape of a mountain in a work of art always endows that mountain with the character of roughness and sharpness, and, in fact, makes of the mountain an embodiment of its own character—compare, for example, the imminence of disaster embodied in the dark, huge mountain which blocks the path of Dante's Ulysses after he dared to force his boat beyond the columns of Hercules. And when objects are related to each other by location, shape, or color, that relationship is never merely optical or physical, but is always to be understood as an existential tie in the deeper sense. The darkness of Guernica, for example, has to be interpreted symbolically. Also, the analysis of Picasso's sketches will show that he experimented with variations of meaning by trying out different relationships among his characters.

Visual thinking treats its material by operations familiar to us from abstract reasoning. It applies some of the logical relationships used also in language. An ingenious description of these mechanisms is available at an unexpected place: in the sixth chapter of Freud's *Interpretation of Dreams*. Freud was not then concerned with artistic activity. He was describing the methods of the "dream work": that is, the transformation of the latent content, or "dream thoughts," into the manifest content actually experienced by the dreamer. For several reasons, not all of Freud's descriptions are directly applicable to the creative process in painting. There are differences of nature and purpose between a dream and a work of art. Also, a dream is an action occurring in time whereas a painting is outside time. Finally, Freud assumed that the devices of the dream work served to conceal the true content of the dream thoughts. On the contrary, we are concerned with the artist's endeavor "to make visible what exists"—that is, we are dealing with means of revelation. Apart from these discrepancies, however, Freud's presentation is remarkably apt. I therefore summarize it briefly, paraphrased to suit our particular purpose.

"The dream is laconic," according to Freud—that is, it condenses a great deal of material in a brief statement. If, for example, a number of persons are pertinent to the dream because of common properties or functions, they may be represented by one person; and if certain themes or objects carry the same meaning or effect, they may appear combined or fused. At the same time, the presentation in the dream is not incomplete, but rather concise and concentrated. There is, then, no one-to-one relationship between the raw material and the representation. One personality or one theme may be split up into its components, which are shown as different entities.

When the whole mass of the dream thoughts "is brought under the pressure of the dream work, and its elements are turned about, broken into fragments and jammed together—almost like pack ice—the question arises of what happens to the logical connections which have hitherto formed its framework. What representation do dreams provide for 'if,' 'because,' 'just as,' 'although,' 'either-or,' and all the other conjunctions without which we cannot understand sentences or speeches?" At this point Freud refers explicitly to the arts of painting and sculpture, which face a similar problem. By no means can all the logical connections be expressed through visual images, but some can. The dream language is visual and concrete, and it acts out figures of speech. What belongs together is shown together—that is, simultaneity must be understood as a relationship of meaning rather than a mere coincidence in time and space. Freud refers here to the groups of philosophers and artists combined in Raphael's murals *The School of Athens* and *Parnassus*. A tower or a pedestal may be used in the dream to describe the greatness of a man, and so on. In other words, Freud presents the elements of a grammar for visual thinking. Applications of the devices he describes will be found in the preparatory sketches for Picasso's painting.