THE DISCRIMINATING FUNCTION OF THE EGO

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In his essay, Æsthetic Ambiguity *(3)*, Kris states that the meaning of a concept can rarely be described as a single, rigidly fixed entity. Much more often one will define a concept in terms of a 'cluster' of concepts, that is, in terms of a group of ideas that differ among themselves but which are nevertheless related or linked to each other by some common denominator of meaning. Kris suggests that one can characterize such a cluster by the fact that a definition of any element in the cluster evokes all the other related elements. In varying contexts different elements in the cluster wax or wane in importance. With these changes previous meanings may persist as components or determinants of a present response. One cannot speak therefore of the meaning of a concept but rather of its range of meanings and the clusters into which they tend to be grouped. In other words, there is an element of ambiguity in all concepts. This phenomenon of ambiguity carries over to all levels of communication, verbal and nonverbal. A person will show it, for example, if asked to define a chair, or to describe what he sees when shown a chair, or in trying to draw a chair.

The size of the cluster which is evoked by a stimulus concept is determined by two sets of factors; first by the character of the stimulus itself. Some stimuli are more abstract, more unstructured than others, and elicit correspondingly larger sized clusters. It is possible to visualize a spectrum of stimuli in which a precisely defined mathematical symbol would be found at one extreme and a Rorschach card, for example, at

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the other. The second set of factors is to be found of course in the subject who responds to the stimulus. The size and nature of clusters evoked in him by stimuli are determined by his previous personal experiences, his current emotional state, his level of awareness, his age, his intelligence, his creative ability, artistic or otherwise, his motivation, and other qualities.

When one perceives something therefore, whether that something is a word or an object in the outer world, one perceives in effect a cluster. Because in varying contexts different elements in the cluster vary in importance, the ego has as one of its main functions the task of scanning each cluster in the course of adjusting to reality. It must scrutinize, as it were, each of its elements and bring into the focus of conscious awareness that element of meaning which is most pertinent to the immediate demands of reality.

According to this hypothesis, the ego recognizes a given stimulus in two operations. First, it focuses attention on the appropriate cluster in the psychic apparatus. Second, it scans the cluster, making a series of 'yes-no' decisions for each element until it settles on the appropriate one. What takes place, in effect, is a 'matching-up' process in which the ego compares the presenting stimulus with a series of memories (elements in the cluster) until it arrives at the one which corresponds best to the stimulus. It registers 'yes' only for the 'correct' element. This decision is often associated with a conscious feeling of recognition. Whereas there is no 'no' in the unconscious system of the psychic apparatus, the discriminating function of the fully alert ego provides the 'no' which is necessary in a variety of psychic functions associated, for example, with reality testing and judgment.

In the mature, fully alert ego each cluster is scanned completely (at least relatively) before the definitive element is selected. The resulting mental functioning corresponds to what Freud described as the secondary process *(7)*. Under certain circumstances the ego seems to scan the cluster incompletely or not at all. According to our hypothesis, what emerges under

these circumstances is a manifestation of the primary process *(1)*. The response to a stimulus is then not a definitive element but rather one that is contaminated by qualities derived from other elements in the cluster. One can frequently show that these contaminations are not haphazard or accidental, but tend to follow a specific pattern, in which an attempt at wish fulfilment is the molding force. A few examples taken from observations of patients with disturbances of consciousness from injury to their brains will clarify this point.

One patient called a wheel chair a chaise longue. Here the cluster is about the word 'chair'. The patient does not discriminate this chair from chairs in general; so she selects from the common denominator 'chair' one which helps her deny her illness. It is worth noting that the erroneous or inexact response cannot be described as a 'simpler' response than the correct one; indeed, it sounds more complex; yet it is simpler in that it is a product of the breakdown of the 'discriminating function of the ego'. The patient scans the cluster 'chair' incompletely and reacts only to part of the qualities of the entity to give it its name. The perception is a distorted one; the direction of the distortion is understandable in terms of denial of illness. The same patient called a tongue depressor an 'emery board'. Here the cluster depends on the general shape of the object, but the transformation is still in the direction of the denial of her illness.

Sometimes the wish fulfilment is not as obvious in the transformation as it was when a parsimonious patient called a wallet a 'bankbook'. One patient when asked to give the name of the hospital, Mount Sinai, thought for a while and answered, 'Two words, high place'. Another patient referred to a physician whose name was Joselson as 'Rothchild', commenting that he believed that the last half of the name was correct (son-child), but that the first part was probably wrong. A patient referred to one of his examiners named Ressler as 'the boxer' or 'the prize-fighter'. At other times he would refer to him erroneously as Krieger (German for 'warrior'), the name of one of his physicians. This paraphasic type of perceptual disturbance has been the subject of detailed reports by Weinstein et al. *(9, 10, 11)*.

One of our patients insisted that he was in 'the Fulton Fish Market'. When his brain function improved, he was able to explain to us that the doctors in their white coats reminded him of the costume of the men who sold him fish in his favorite fish market. This time a cluster was formed about the concept 'men in white coats'. The patient saw what the doctors and fish peddlers had in common but did not analyze the cluster to the point of seeing where their paths parted. It became possible by this maneuver to indulge in a wish fulfilment: 'I am not sick in a hospital. I am purchasing fish for a delicious meal.'

Allied to paraphasia is another phenomenon which has been called reduplication *(5, 10)*. The patient may see in a person certain qualities which remind him of someone else. A cluster is formed which is then scanned incompletely. The patient does not discriminate between the two individuals but will combine both sets of qualities in responding to one of them. For example, one patient found a physical resemblance between her physician and her insurance agent. While she was denying completely that she was sick, she insisted that the physician was indeed her insurance agent. As her sensorium cleared she acknowledged that her physician was a doctor but continued to refer to him by the name of her insurance agent. In the midst of a discussion of her illness she would suddenly ask him about his insurance business.

Connected with this difficulty in discriminating the ego of one individual from that of a related individual is the difficulty some patients showed in discriminating their own egos from other egos in their environment. For example, if we addressed someone in the vicinity of the patient, the patient responded as if he himself had been addressed. Also, perceptual disorders have been observed in which the patient seemed to have difficulty discriminating between tactile stimuli applied to his own body and those applied to other people or inanimate objects

in his field of vision (exosomaesthesia [8]). In all these instances it is our conception that the patient forms a cluster which contains various egos: his own, those of other persons, and, in a regressive animistic way, those of objects in the environment. In the disturbed awareness of his brain-injured state he does not scan this cluster completely, and therefore does not separate with normal precision the various egos which constitute the cluster. The result is condensation and displacement, phenomena which characterize the primary process. At times a patient will condense into a single cluster all the hospitals in which he was treated. There seems an element of wishful thinking in this contamination as if the patient is trying to reassure himself that he will survive this hospitalization as he did the previous ones. In the incompletely scanned cluster, the element of time is disregarded. Past and present merge in the contaminated responses. This is the 'timelessness' which is characteristic of the primary process.

One could multiply these examples by referring to the analysis of dreams or to the speech of the young child, who refers to men indiscriminately as 'daddy', to pictures of women as 'mommy', or to a leopard in the zoo as 'pussycat'. In each instance the child forms a cluster but is unable to scan it like a normal adult. One could cull many examples from the productions of patients with schizophrenia or other psychopathologic states. Where xenophobic attitudes exist people will say that all Negroes or all Orientals look alike; here again, clusters are perceived but not adequately scanned. As a corollary one may suggest the generalization that in a manner of speaking the ultimate measure of emotional and intellectual maturity is to be found in the capacity of the ego to scan all clusters completely.

So far the topographic aspect of the problem has scarcely been considered. Where are the elements in the cluster situated in the psychic apparatus? It was stated that the ego in adjusting to reality scans each cluster and brings into the focus of conscious awareness that element of meaning which is most pertinent to

the immediate demands of reality. In this sense the cluster is a dynamic, constantly altering entity, presenting to consciousness now one element, now another. To the extent that the scanning process deals with elements that are available to the ego for conscious awareness, this process takes place in the preconscious. However, each element in the cluster is linked associatively to other elements which derive from successively older layers in the individual's memories. When the scanning process brings a preconscious element or memory in the cluster into consciousness, it simultaneously brings into consciousness feeling tones which can be understood completely only if one learns the unconscious cluster elements or memories from which these feeling tones are derived (4). For example, some adult intellectual activity may be charged with a special intensity of pleasure because it is linked associatively to certain pleasurable experiences from early childhood, the unconscious memory of which contributes pleasurable affect to the adult activity. On the other hand, certain adult activities which in themselves seem innocent enough are capable of evoking considerable anxiety because they are linked to disagreeable memories which are not accessible to consciousness. Although the scanning process seems to operate in the preconscious, the affective reverberations of the process involve the unconscious as well.

The scanning process does not deal with the elements in the cluster as equal entities. If a visual stimulus is very briefly presented by means of a tachistoscope it will be recognized more rapidly if it coincides with the wishes and interests of the patient. Stimuli which do not have this positive meaning for the subject require significantly longer exposures for recognition (7). It is not unreasonable to infer from this that wished-for elements in the cluster are scanned first. It is part of our hypothesis about the scanning process that it turns first to those elements in the cluster capable of evoking the greatest pleasure, then to those elements associated with less pleasure, and finally to those which evoke anxiety. Indeed, if an element is capable of arousing a quantity of anxiety intolerable to the individual,

it may be skipped completely by the scanning process. In that case we say that the element in question has been repressed.[1] This hypothesis helps us to understand why pleasurable elements, for the most part, are preserved for reproduction in consciousness while dysphoric elements tend to be repressed in those conditions where scanning takes place incompletely. The tendency to 'wishful thinking' of the brain-injured patient is the same tendency, but in an exaggerated and inflexible form, that exists in the normal and in a variety of so-called functional psychopathologic states.

We can apply these ideas to an understanding of the Gestalt psychology principle of 'closure' or *prägnanz*. If one looks at a square, for example, one corner of which has been left open, the primary tendency is to perceive this ambiguously, as a generalized 'cluster-square'. The ego must scan the cluster and separate this open-cornered square from squares in general. If the cluster is scanned incompletely, then the ego selects from the cluster square that element in the cluster which it wishes to see. It is our conjecture that the wish on such occasions is a product of the conflict-free sphere of the ego *(2)*. It is a wish primarily to see that which is easiest for the ego to see, in this case a closed square, one which is most familiar. The wish of the ego in this instance is to expend as little energy as possible in making the perception *(12)*. Other more complicated factors are probably also involved. However, this view of *prägnanz* allies it to the primary process. Both become a product of interference with the discriminating function of the ego. One could predict, for example, that conditions which tend to elicit the primary process will tend to facilitate *prägnanz*. Here is a field for research.

The question arises whether any neurophysiological system might conceivably correspond to the ego activity we have described. Electroencephalographic observations in brain-injured

[1] In psychoanalytic terminology, we may speak of the pleasure potentially evocable from each element in the cluster as a measure of the cathexis of that element.

patients show that disturbances in what we have called the 'discriminating function of the ego' occur primarily where abnormal slowing of the electrical rhythm is diffusely present over the cortex *(9, 11)*. Pitts and McCulloch *(6)* have suggested the theory that this rhythmic electrical activity corresponds to a scanning circuit of neuronal impulses in the cerebral cortex; that these neuronal impulses serve the function of augmenting the effect of volleys of impulses arriving in specific afferent pathways; and that such afferent impulses may be able to pass a critical synapse only during the time that this specific area is facilitated by simultaneous impulses from the scanning circuit. A summation of impulses must take place and must exceed a certain minimal value during a given time interval in order for that synapse to be traversed. In other words, whether a volley of afferent impulses can pass a critical synapse depends upon two sets of factors, first, the intensity of the elements in the afferent volley, and second, the frequency with which the critical synapse is fired by simultaneous impulses from the scanning circuit.

If we hypothesize that the intensity of the elements of a volley is a function of the cathexis associated with the ideas behind these elements (see footnote 1), it becomes possible to visualize how the most highly cathected ideas will be the ones most likely to pass critical synapses, and how with pathological slowing of the scanning rhythm this tendency will become exaggerated. For example, ten impulses per second from the scanning circuit may suffice to augment most of the elements in a volley above the critical firing level of the synapse, whereas four impulses per second from the scanning circuit may permit passage of only the most intensely discharging elements in the volley. In terms of our previous discussion, each afferent volley corresponds to an element of the cluster presented to the ego, and the electrical scanning activity is the agent of scrutiny of these elements by the ego. In cases of brain injury, the discriminating function of the ego is impaired because the scanning circuit functions improperly and the scrutiny by the

ego is incomplete. Such a hypothesis may help us to visualize what takes place when the discriminating function of the ego breaks down in brain-injured patients. Unfortunately it does not help in those instances in which impairment of the discriminating function is 'functional'. In any event, the current primitive state of our knowledge does not justify more elaborate hypothetical formulations.

SUMMARY

The 'discriminating function of the ego' is described and its probable psychological mechanism discussed. Breakdown of the function leads to errors in evaluation of reality characterized by wish fulfilments, condensations, displacements, and other mechanisms suggestive of the primary process. Both the preconscious and the unconscious seem to be involved in this function. A partial theory of how the function operates in terms of neurophysiology is presented.

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