DYNAMICS OF CREATIVE ACTIVITY.

By F. REITMAN, M.D., D.P.M.,
Netherne Hospital, Coulsdon.

[Received 25 November, 1947.]

" No collection of facts is ever complete because the Universe is without bounds, and no synthesis or interpretation is ever final, because there are always fresh facts to be found after the first collection has been provisionally arranged." A. Toynbee.

I.

UNDERSTANDING of the nature of art has been approached from aesthetic and psychological viewpoints. Below a critical survey is made of the pre-existing standpoints, attempting a synthesis of the diverse aspects. To avoid discursions only the main trends of the various researches are mentioned. All the remarks on art concern paintings, if not mentioned otherwise.

II.

Psychopathological studies into psychotic art inquired into the psychology of creativeness, but their aim of analysing and formulating the nature of creative activity remained unfruitful. These studies, following Mohr's work, at least established the descriptive terminology of " insane art." For instance, the schizophrenic mental manifestations in drawings were not only recognized and described, but they became part of the diagnostic armoury. Such symptomatological products in paintings are condensation of meaning, dominance of symbols, and pictorial agglutination; stereotypy, preservation, and over-elaboration; lack of integration, chaotic organization and inappropriate colour choice. Ultimately the investigators took two different directions. One group limited themselves entirely to descriptive activities, which enriched the diagnostic armoury but had little reference to the psychology of art (e.g. description of motor inco-ordination in drawings of seniles). The second group of investigators lost themselves in theoretical considerations resulting in concepts such as the " universal urge for expression . . . manifested in form tendencies " (Prinzhorn) or " the creative force of the subconscious " (Jung). Such postulates are akin to aesthetic postulates, inasmuch as they are non-biological.

Weygandt, when studying art products in relation to the artists, noted that mental illness may (1) extinguish art, (2) may not affect art, (3) may facilitate a dormant talent, and (4) may cause a change of style. All these classifications were elaborated by yet another group of investigators, who correlated the art products and life-histories of known great artists. The aim of these pathographists was to elucidate the aesthetically incomprehensible in some of the art products (Lange-Eichbaum).

https://doi.org/10.1192/bjp.94.395.314 Published online by Cambridge University Press

Although the concept "sublimation" to explain art activities remained unsatisfactory, psychoanalysis contributed to a deeper understanding of the psychology of art. It did so by analysing the functional significance of art products for the artist himself and by recognizing the function and nature of magic. Kris and Pappenheim emphasized that the psychotic artist creates in order to transform the real world. Thus the work of psychotics is part of the magic itself, in order to readjust to reality. Wulff seems to come to similar conclusions by emphasizing that the pictures of schizophrenics are unsuccessful attempts to restore the personality. If one were to attempt to generalize one would be inclined to state that every art product may be looked upon as subserving a cathartic function in the artist's struggle for readjustment. Analytical interpretations, however, are essentially psychopathological ones, involving controversial questions, such as the basically pathological nature and function of culture (Roheim). Maybe because of the over-emphasis on psychopathology, psychoanalysis succeeded in elucidating the dynamics of totemistic art, but failed to understand the murals of Altamira. However, as previously emphasized, the recognition of the functional significance of art products brought us nearer to the understanding of the nature of art.

Studies of eidetic phenomena revealed the presence of predominantly visual or eidetic imagery till puberty in over 40 per cent. of children, and the altered electrical activity of the brain of eidetic adults was confirmed by EEG. It appears, however, that children's mental phenomena are not so much dominated by eideticism as by perceptual factors. It was said that conceptual thinking proper probably does not fully develop till puberty. In the predominance of visualistic thinking children, primitives and schizophrenics show analogous trends. Schilder analysed drawings of patients with head and brain injuries and described formal elements resembling those of schizophrenic art products (changes of configuration, preservation, "horror vacui," etc.). He concluded that the basic disturbances are those of the figure background relationship, thus approximating to Goldstein's researches and the problems of gestalt formation. Goldstein also showed that patients suffering from receptive aphasia exhibit lack of conceptual thinking as expressed in their descriptive "visualistic" language. The significance of studying artistic products in connection with organic brain lesions directs the problems of artistic creation towards brain pathological analysis. Reitman in connection with bilateral prefrontal leucotomies noticed a transient creative activity in schizophrenics' paintings. He emphasized the presence of thought disturbances in the sense of concreteness.

From the experimental viewpoint stimulation of visual hallucinations by mescalin was attempted. It was found that the induced visual hallucinations were individualistic and dependent on the subject's personality, but that the common experience of the mescalin-intoxicated subjects was a disturbed time-space relationship.

III.

The simplest way of attaining a synthetic approach appears to be the application of the results of the enumerated studies to aesthetic definitions.

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Read's definition of painting is that it gives pictorial expression to ideas. Similarly, but in a more elaborated way, Newton defined art as being an original human conception made manifest by the skilful use of a medium. An artist, e.g. a painter, has to have original imaginations, or ideas in form of visual conceptions, and he has got to possess an urge, a desire to communicate them. He must have craftsmanship, which enables him to make "skilful use of a medium"—that is to say canvas, paint, brush, etc.

Of this definition the last point, namely craftsmanship, may not need analysis, as it is a commonplace that craftsmanship can be acquired by everybody to a certain extent. The problems of reproduction of form and shape are well defined and can be equally well taught and learned.

The requirement "original imagination of ideas in form of visual conceptions" can be analysed in connection with the aforesaid researches. Cassirer showed that the "situational" or concrete experiences of children, primitives, schizophrenics and of patients with organic brain injury are replaced by the "abstracted" attitudes of thinking in normal adults; he showed that this development of abstraction led to building up or rebuilding the world again. Goldstein expanded the concepts of "concrete" or "situational" and "abstract" or "categorical" attitudes as the basic modes of psychological existence. Thus he denied the pathological nature of the concrete attitude. Now to have "ideas in form of visual conceptions" involves the loosening of abstract concepts which in turn alters the world again, this being re-experienced from another "basic mode of psychological existence." The loss of conceptual thinking is replaced by visualistic thinking—that is to say, all experiences have an immediate visual quality. In this connection it may be recalled that the fundamental disturbance of the mescalin intoxication was an altered time-space relation, which was also noticed by Schilder in patients with head injury. Such experiences necessarily disturb the categorical abstract thinking opening, the way to visualistic thought processes. One of Guttmann's mescalin subjects complained: "Each word I thought was connected with a picture. This hindered my thinking, as the concrete pictures held me." Such observations suggest that the visualistic experiences of mescalin-intoxicated subjects run parallel with altered thought-processes. Furthermore these parallelisms seem well in accordance with the outlined grouping of observations, namely, that patients' artistic activity (painting) involves a disturbance of thought processes.

Schilder, Goldstein, Bychowsky and others observed that disturbed time-space relations are interconnected with body image disturbances, with magic experiences and with concrete attitudes. They observed that the perceptual functions of patients with concrete attitudes are accompanied by altered figure background experiences. In other words, in disturbances of conceptual thinking not only does the perceptual factor become dominant, but its elaboration altered as well; hence the quality of it becomes changed.

From the point of view of style, art products of painters can be subdivided into representational and ornamental paintings. The representational artist interests himself in problems of form, shape and craftsmanship. The ornamentalist's interest is focused on devitalization and on pattern. The representational artist is active, vital and romantic; the ornamentalist is passive

https://doi.org/10.1192/bjp.94.395.314 Published online by Cambridge University Press

and mystic. Thus the stylization is partly determined by typological motives. The representationalist brings in subjective elements by demonstrating his individualistic perception of the world, and by altering the actual reality. The ornamentalist modifies reality by affective selection of essentials, by geometrical simplification, by form repetition and multiplication and by bilateral symmetry (Kretschmer). Furthermore, Schilder and Levine emphasized that the appearance of geometrical forms suggests particularly primitive drives.

The alteration of style towards the ornamental, the dominance of pattern, are well known symptoms of psychotic art products. Pattern as an aesthetic concept means the subdivision of shape, or in broader sense, of space; its dominance may well be an expression of altered gestalt formation, the "horror vacui" and of primitive drives. But whereas the non-psychotic artist preserves the capability of retaining unity in elaboration, the psychotic is lacking in synthesis of the patterns. Hilderbrand emphasized this by stating that "what holds art together is its assertion of an ideal spatial unity in contrast to the surrounding space." Thus the organization of the figure-background relations is a significant character of non-psychotic paintings.

The "urge," "the desire to communicate visual experiences" was well analysed by the recognition of the principles of magic. It may be recalled that magic experiences are inseparably involved with projection of affects, with loosening of the ego demarcations. Contrariwise, the detachment of the ego from the outside world is one of the characteristics of abstract thinking. The only controversial point at this juncture is the question whether the magic is directed outwardly or whether it involves entirely the internal environment. From what has been said above this question would appear to be superfluous. With unacquired ego demarcations (animism) or loss of them (schizophrenia) no delineation can be made between external and internal reality, as they became identical. It is still the expanded or dissolved ego which is influenced by the magic. It should be noted that only 2–5 per cent. of the schizophrenic patients and about 8 per cent. of brain injured cases (of my own material) did show spontaneous creative activity. As magic experiences are found in far greater numbers in schizophrenics than creative activities, magic experience alone cannot be the only impetus to artistic activity.

Some synthesis is already apparent. Paintings, as creative activity of patients, depend on the discussed factors. The patient's thinking process as emphasized has to undergo alteration in the sense of loosening of abstractions replaced by visualistic thinking. Only if his experiences are of visualistic character, that is to say, the altered perceptual elaboration is dominant, will he become a painter. The altered perceptual elaboration denotes disturbed gestalt formation based on altered time-space experiences. Head emphasized the importance of the equipotency of all cortical integrative impulses. It appears that in artistic activity, which can be looked upon as one of the highest integrative functions, this equipotency is altered in favour of visualistic elaboration. But the artist has to possess magic experiences as well, in the form of altered affects, to have sufficient urge to give pictorial expression to his experiences. The coincidence of all those factors together with technical possibilities offers the basis of creative activity of the patients. As this co-

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incidence is irregular it may explain the relatively low incidence of artistic activity in hospitalized patients.

IV.

In the foregoing, criteria of creativeness in patients have been outlined; now the applicability of these criteria to artists in general should briefly be examined. The difference between creative artists and non-artists is not determined by the artist's craftsmanship, but by his qualitatively different experiences. Because the artist thinks in visual terms his conceptions are of the concrete type. This, of course, does not imply that artists are lacking in true conceptual thinking, but that in them the basic modes of psychological experiences are mixed. The altered elaboration of the perceptions is present in the non-psychotic artist to a degree. Seeing things in the fire, or in the clouds, Leonardo's advice on inspiration, etc., are some random instances of this.

In support of this hypothesis a group of painters and a group of non-artists were matched for chronological age and vocabulary age (on the Shipley scale). Both groups were tested for conceptual thinking with (1) a modified version of the Vigotsky test and (2) a verbal card-classification test, where only an abstract grouping would yield the required number of groups, but in which an alternative situational classification was strongly suggested. The sample as yet is small for the results to be statistically significant, but the differences in the meantime taken, together with the accompanying remarks of the subjects, were indicative that the artists found greater difficulty in breaking away from a suggested perceptual or situational grouping to a more abstract one. Further psychometric investigations are still continuing.

Magic experiences of non-psychotic artists have been evaluated analytically, and the revitalization of the environment in creating a picture is a magic action itself, strongly motivated by subconscious factors. On the other hand, in psychotic art the subconscious appears directly, and not merely as a motivating force.

The striking similarities between the so-called modern and the psychotic art gain in significance as the former is increasingly appreciated. Art appreciation is a cathartic experience, accompanied by a factor of distance (Bullough, 1912). But art appreciation depends on ideational and perceptual conditioning of the social environment. As long as the artist employs appreciable patterns, his work may induce response, hence it fulfils a social function. Modern art, as a result of individual and social interaction, re-conditioned our perceptual appreciation. Later on, however, modern art not only broke away from habitual patterns, but the choice of content altered as well; the surrealists choice for instance is the direct representation of the subconscious itself. Dali's definition of surrealism is that it is the art of a "critical paranoiac," in other words, surrealism is a conscious mobilization and utilization of schizophrenic mechanisms. If Dali did suffer from a schizophrenic episode, his paintings depict true experiences. The surrealists, however, attempt artificially what Dali might have done with spontaneity. Their art products

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are only significant because these pictures represent contemporary personality trends; they reflect on strong destructive tendencies in our present-day attitude.

V.

Finally, the other creative arts should be briefly examined in connection with the problems discussed. Prinzhorn and several other workers were able to extend their observations on painters to psychotic sculptors as well. The rarity of psychotic sculptors can be explained partly by the technical differences between painting and modelling. Although both arts are visualistic and concerned with problems of space, the sculptors' experiences are restricted to shape and mass. It is probable that as sculpture involves more craftsmanship, the pleasure value of handling the material itself is greater than the use of brush and paint. In general, however, all that has been said about psychotic painters is also applicable to psychotic sculptors, and the parallelism between the psychotic and normal holds just as it does for painters.

Composing is less hampered by technical difficulties in hospitals and institutions, yet the number of observations on musical compositions is not extensive. This is to be expected, since composing denotes the organization of musical ideas by musical symbols which are of the most involved conceptual or abstract quality, and it may be added that their configurational value is higher than those of the mathematical symbols. The symptomatological points in composition, such as oddities, musical verbigeration, poverty of melody, or flight of melodies, etc., have been described. Felber, Rentsch and others noted the hypertrophy of tempo and rhythm at expense of melody in compositions of the mentally ill. Clinical investigations into amusia showed that the propositional value of music is negligible and that amusia is greatly determined by affective factors, and cerebral localizatory attempts have been refuted (Feuchtwanger).

Cognitive changes, such as disturbed time relations, altered gestalt functions, hypertrophy of affective elements may well be found in psychotic music. In drawings of psychotic artists the dominance of pattern was demonstrated, and it was shown that this is partly determined by primitive drives. The " horror vacui " as one of these drives was mentioned, whilst altered gestalt formation was considered in the perceptual sphere. Now music is a temporal and not a spatial art. The dominance of tempo and rhythm in psychotic music (*vide supra*) represents a regressive phenomenon towards more primitive drives. The filling in the space as an expression of the " horror vacui " finds its counter part in filling in the time as an expression of " horror temporis." The loss of sense of melody may well be an expression of altered gestalt formation as melody is an organized unit. Furthermore, an opus as such has a configurational property, and this completeness of music is also lost in the psychotic compositions. The dominance of the affective elements does not need special emphasis; music is fundamentally affective, and the magic component of it was known before it was formulated.

Finally literary art was the subject easiest to approach psychopathologically. Pathological phenomena, such as described in connection with paintings,

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found innumerable expressions in the literary art activities of patients. But they have merely symptomatological significance. Pathographies are numerous, and those of known authors have been written and re-written by members of various psychological schools of thought.

Literary art operates with abstract concepts; if those are lost the work becomes merely of symptomatic significance. If the conceptual element is merely loosened the pattern of words becomes dominant over content, and nonsense poetry develops. This is the only literary manifestation of the shift of conceptual thinking towards perceptual thinking. When analysing the nonsense poetry of Edward Lear, Reitman drew attention to the manifestation of body-image disturbance, and Schilder emphasized the expression of distorted time and space relations in Lewis Carroll's nonsense. Thus the same mechanisms are at work as were mentioned in connection with head injuries and mescalin intoxication. Although one can look upon poetry as a hypertrophied gestalt formation of verbal nature, the art of words does involve perceptual factors only to a lesser degree and demands abstracted thinking. Verbal magic, too, has been analysed and described. Literature, however, is essentially propositional, that is to say subserves a conscious appeal to the outside world, and because of the appeal to the outside world the importance of external influences (the appeal of ideologies) is evident. Magical expression as well as perceptual dominance are isolated instances.

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