

# THE NOETIC-PERCEPTIVE CONFIGURATION TEST AND IMPAIRMENT OF THE ABSTRACT ATTITUDE IN BRAIN-INJURED PATIENTS<sup>1</sup>

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Our purpose is to show that Kurt Goldstein's conception of loss of the abstract attitude and certain related findings in brain-injured patients have been confirmed by results obtained with our Noetic-Perceptive Configuration Test. The test has been described in detail elsewhere (2, 3, 4, 6); a brief description, the first in English, follows here.<sup>3</sup>

*Test material.* This consists of eight photographs of arrangements of pieces of yarn and fine threads which represent in schematic form the following scenes (see Fig. 1): I. Man lying in a hammock under trees; II. Mountain climber scaling a mountain with pick and rope; III. Man diving into water where another is swimming; IV. Man and woman at a table at an outdoor cafe; V. Pair holding hands in the moonlight under a tree; VI. Two tourists near the Eiffel Tower taking a photograph; VII. Pair embracing or dancing beneath tree or street lamp; VIII. Man, woman and child, with sacks and shovel, near staircase or railroad track.

The pictures can be perceived at two levels: one more concrete and direct (solely yarns and threads), the other more abstract and indirect (human scenes). The size of the pictures is 7 by 9 1/4 inches; they are by the German photographer, Peter Dorp.<sup>4</sup>

*Test procedure.* Three stages of presentation are distinguished: (a) The subject is asked, "What do you see here?" If necessary, he is encouraged by repetition of the question in a different form, e.g., "Tell me simply what you see in the picture." The questions do not suggest to the subject that there is anything for him to interpret or that he has to discover what the picture signifies. (b) If he has not done so in the first stage, it is suggested to the patient that he must attempt to interpret the picture. He is asked, "What does this picture represent?" "What does this look like?" (c) If the patient fails to find the meaning in stage 2 also, each represented scene is described to him to determine if he can then recognize it.

*Normative sample and responses.* The sample consists of over 300 subjects, ranging in age up to 70 years, and of diverse culture, intelligence, and occupation. Of these, 90 per cent gave configurative responses spontaneously (stage 1) from the first picture on, and all, from the fourth picture on. All gave such responses to all pictures, including the first four, when allowed to see them a second time.

<sup>1</sup>Paper read at an extraordinary session of the Sociedad de Neuro-Psiquiatria de Lima, September 17, 1958 in homage to Kurt Goldstein.

<sup>2</sup>Edited and translated by Ricardo B. Morant, Brandeis University.

<sup>3</sup>Recently two Italian studies based on this test have appeared (8, 9).

<sup>4</sup>This material together with the test manual in Spanish is available at \$20.00 through the author, at Instituto de Filosofia y Psicologia, Universidad Nacional Mayor de San Marcos, Lima, Peru.

The most frequent spontaneous configurative response time is 5 to 10 seconds; up to 30 seconds is still considered normal. Subjects who are timid, insecure, poorly educated, or afraid of failure, may take one minute or more. Subjects of high intelligence and spontaneity almost always respond within  $3/10$  of a second. Although the test is not an intelligence test, 5- to 7-year old bright children often respond more quickly and with greater certainty than 10- to 12-year old dull children (intelligence level determined by the Raven test).

#### ABNORMAL RESPONSES

The pathological group consists of over 100 patients with various organic brain conditions. The abnormal responses described below were obtained from patients with brain lesions in the dominant cerebral hemisphere and include cases of cortical atrophy.

The following classification of responses is not mutually exclusive, for a given response may have two or more characteristics. A given patient may give responses of various characteristics. A detailed description of the test behavior of some individual cases has been given in our paper on aphasics (2).

*Delayed response time.* Whereas patients with lesions in the minor hemisphere show only slight delay, in all cases of lesion in the dominant hemisphere configurative response time is delayed from 2 to 3 minutes, occasionally 20 minutes, beyond the normal. There is, of course, abnormal delay when the subject does not find the meaning of a picture until the second stage, when he is prompted.

*Concrete elemental apprehension.* This occurs when the subject can distinguish at first only the basic sensory elements, white and black; he sees only a white figure on a black background and cannot determine any meaning. Only slowly and with difficulty does he discover that the pictures deal with pieces of yarn and fine threads. Then his face lights up and he says: "I know, they are yarns." This is the most primitive level of perceptual apprehension; all patients who displayed it showed a grave deficit in abstraction in the Goldstein-Scheerer tests (15). In cases of amnesic aphasia, we must be certain that the patient's initial inability to report the presence even of yarns and threads is not due simply to his inability to find the correct words.

*Primary concrete apprehension.* The patient sees only the concrete and realistic detail of the picture: "yarns," "ropes," "knots," "cords," "entangled threads," "balls of threads," "little lines," etc. The scene represented completely escapes him: where there are trees he sees

solely "twisted threads." Some patients remain at this level in spite of all prompting and help given them. In other cases a transformation may ultimately occur. The picture is then suddenly seen in a new light, the noetic light of interpretation: the scenes make themselves visible. The satisfaction which the brain-injured patient experiences when this occurs is obvious to the observer.

*Fragmentary apprehension.* Frequently, some parts of the situation, generally the accessory ones, are apprehended, leaving the rest unconfigured. The patient is only able to see "a peak," "the hills," "the stairway of a ship," "a shovel," etc. Such responses are frequently accompanied by a feeling of helplessness and vexation. The patient realizes that there is something which he failed to interpret, but he is unable to discover the overall meaning of the scene.

*Concrete disconfiguration.* We use this term when a configurative whole attained does not correspond to the intended meaning of the representation. Such disconfigurations are, for example, "tablecloth," "embroidery," "the number 2 reclining" (Picture I); "the letter M" (Picture V); etc. Many of these responses are in terms of relatively undemanding and inexact decorative patterns. This seems to be the same level of concrete reaction as found in the Weigl-Goldstein-Scheerer color-form sorting test (15), when the subject constructs decorative models.

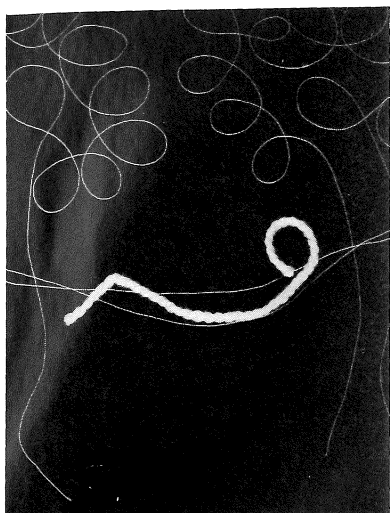
#### THE ABSTRACT ATTITUDE AND ITS ALTERATION

Overall, the above abnormal responses obtained from organic patients indicate a reduced comprehension of the situation. This is dependent on reduction of the integrative and configurative noetic activity regarding sensorial data, principally of that aspect of the noetic activity which Goldstein calls the "abstract attitude."<sup>5</sup> In the following we shall summarize the essential features of the abstract attitude and relate our test findings to them.

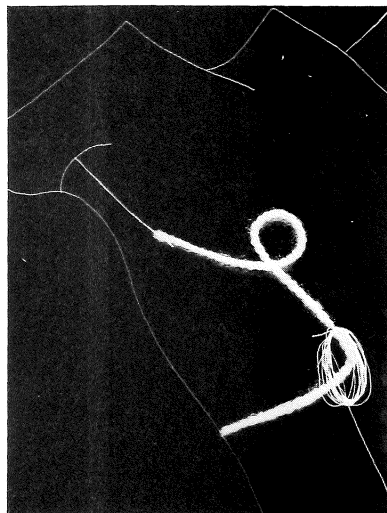
1. *Capacity to stand aside from the concrete and immediate sensory stimulus.* The responses classified as elemental, primary, fragmentary and disconfigurative, all manifest that the brain-injured patients adhere to the concrete.

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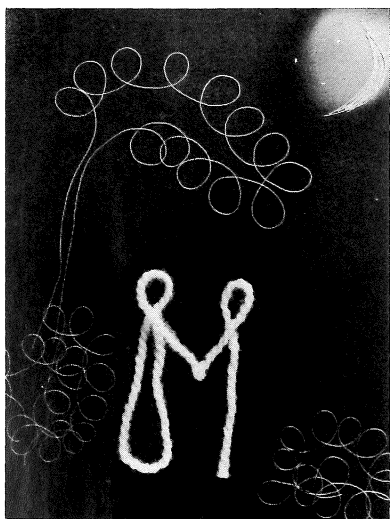
<sup>5</sup>In certain types of schizophrenia, mainly the catatonic and hebephrenic, we encounter responses similar to those of organic patients. Yet such responses, as those from psychotics in general and neurotics, require a system of interpretation which goes beyond Goldstein's concept of loss of abstract attitude (3, 4).



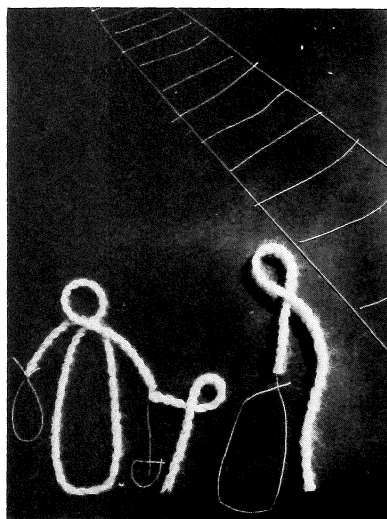
I



II



V



VIII

FIG. 1. Pictures I, II, V and VIII of the Noetic-Perceptive Configuration Test.

tional language of Hughlings Jackson), but not introjective emotional language. Our test requires a transcendence of the immediate stimuli to grasp their symbolic meaning. The patients are unable to grasp the schematically represented situation in its symbolic sense, and remain bound to the stimuli which underlie the symbol.<sup>6</sup>

5. *Capacity to shift reflectively from one aspect of a situation to another.* In the Weigl-Goldstein-Scheerer color-form sorting test (15) one can observe the patient's difficulty in conceptually shifting from form to color as a criterion for grouping, and vice versa. This simple test, according to our experience, is useful in the most serious cases, but not sensitive enough in less serious cases. Our test may be used to illustrate inability to shift: Many patients will adhere to their original perception of yarns and threads even when we try to persuade them that the pictures deal with representative situations. Such "mental rigidity" (15) can also be demonstrated with reversible figures, first introduced by Rubin.

6. *Capacity of active synthesis.* Since the situations in our pictures are schematically represented, their perception requires the confluence of at least two factors: (a) the active, noetic factor; and (b) the receptive, sensory factor. We have found that organic patients lack the first, the directive noetic tendency which spontaneously elaborates and organizes behavior and sensory data. The reduction of this aspect of the abstract attitude is manifested in loss of initiative and greater dependence on passive receptive stereotyped aspects of behavior. It is this difficulty to which Goldstein and Scheerer refer as the inability to assume an attitude toward the "mere possible," to think and act symbolically, to organize a project or plan spontaneously, "to plan ahead ideationally" (15). Through reduction of this directive noetic tendency the patient attains only elemental or primary perceptual configurations which are less elaborated noetically and more primitive.

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<sup>6</sup>Goldstein and Gelb have illustrated this deficit with their color sorting test using the Holmgren woolen skeins (15). Here, matchings are sometimes made in terms of the immediate sensory impressions of the color, rather than in terms of representatives of a category, or as examples related to a particular mental frame of reference. To notice any representative deficit, the manner in which the patient matches the skeins must be closely observed. In our test, loss of the representative function and frame of reference are clearly apparent from the concrete quality of the patient's responses. We believe that our test also has some advantages over those of Gelb and Goldstein in the study of the loss of the categorical attitude.

## GLOBAL FUNCTIONING OF THE BRAIN

The loss of the abstract or categorical attitude manifests itself in diverse areas of the brain-injured patient's activity. Goldstein and Gelb observed, for example, in one case of psychic blindness (the famous case of Schneider) that the fundamental nature of the disturbance affected also such areas of behavior as tactual space, sexual behavior, thought, and language (10, 14). The same is true in the aphasic who, as Goldstein says, is not solely a man with a modified language—but a modified man.

Our results clearly illustrate this overall modification in functioning, for example, in visual agnosia. According to Honorio Delgado, "The patient with agnosia retains the aptitude of distinguishing what is sensorially present but . . . does not get its significance. He has the sensorial data, but does not attain their meaning" (7). Although the greater part of our patients did not have clinically demonstrable symptoms of visual agnosia, they, nevertheless, manifested with our test the same kind of disturbances described by Delgado. Unquestionably, we are dealing with what might be called "experimental optical agnosia," i.e., such slight cases that they can only be detected with the use of schematic pictures such as ours. Such cases are probably due to a global functional alteration of the brain (12, 13), induced by lesions whose foci are in areas of the brain other than the occipital cortical region. In these cases the peripheral organs function adequately. It is the central, cortical processes which elaborate and integrate the sensory data, that are affected by the global resonance of the brain to functional and structural alterations of some of its parts.

One can distinguish, then, symptoms due directly to damage of a more or less circumscribed region, and background symptoms of a second order which depend on functional repercussion in structurally undamaged cortical areas. It is precisely this to which Goldstein refers when he says that the "organism always functions as a whole;" that all excitations which impinge produce a change in the whole organism (11, 12); that we must discern in the patient's symptomatic clinical picture both the symptoms of the dominant process—those most salient and of greatest importance—which are in the foreground, and the background symptoms of the secondary process. Without going into neurological considerations (2) which are not the object of this essentially psychological contribution, we believe that our investigation offers experimental support and a clear foundation for this organismic conceptualization of Goldstein.

## SUMMARY

We have attempted to demonstrate the relationships between Goldstein's descriptions of what occurs when the abstract attitude is impaired in brain-injured patients, and results obtained through our Noetic-Perceptive Configuration Test with such patients. We have described the test and related the abnormal responses obtained to six characteristics of the disturbance of the abstract attitude. Finally, we have indicated how symptoms of slight visual agnosia, attributable to fundamental alterations in the global functional activity of the brain, can be experimentally demonstrated by means of our test. We have concluded that our test provides experimental data which support the holistic conception.

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