Inappropriate Mood and Schizophrenia

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E. Bleuler's dictated that affect is inappropriate in schizophrenia has become a hallowed concept in modern psychiatry. It has, in fact, become circular since many use inappropriate affect as one of the main diagnostic criterion. Affect, in general, refers to feeling or mood, and covers a range of mood from euphoria to depression. There is in it no place for anxiety which is a feeling tone, but can be associated with either depression or euphoria. We do not wish to discuss the epistemology of affect or mood, but to question in what manner is schizophrenic affect inappropriate.

Most psychiatrists mean (at least we think so) that the mood is not congruent with one's thoughts, or less commonly, with one's activity. Affect is then said to be inappropriate if a patient's thinking (more accurately talking) about episodes which we would consider sad, does not appear to be sad, or appears happy. If a patient smiles too often while relating very unhappy events, or during conversation not calling for smiles, this is recorded as inappropriate. This might be an example of inappropriate-ness relative to activity.

These two definitions would be adequate if one had a way of judging whether thought (or words or events) call for depression or euphoria, or whether activity can be similarly rated. Unfortunately both thought and activity as commonly judged are just as vague or imprecise as mood and it seems absurd to try to relate one vague variable to another. It is to the credit of so many psychiatrists that they manage to do so well.

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But there is another way of judging mood. So far no one has tried to compare mood to perception and operationally define the appropriateness of the mood or affect. This is very odd because perceptual changes have always been so important in the diagnosis of schizophrenia. Perceptual changes or disturbances can be measured. One test used to measure these disturbances is the Hoffer-Osmond Diagnostic test (HOD) which has been found useful in establishing psychiatric diagnosis and prognosis, and in monitoring clinical improvement.[1] It has also been shown to correlate significantly with an established laboratory test of perceptual distortion.[2]

Thus one could compare mood against the degree of perceptual disturbance and this would provide one measure of the appropriateness of the mood. But there are schizophrenics who suffer little disturbances in perception and a good deal of thought disturbance. The mood might, therefore, be compared to the degree of thought disorder and this would give a second measure of the appropriateness of mood.

Rather than have two measures, however, it seems more feasible to use one overall index of perceptual and thought disturbance. The Total Score of the HOD is regarded as a measure of both perceptual and thought disturbance.[3] It is also highly correlated with the HOD's Perceptual Score.[4] Such a score may, therefore, be used to compare with the degree of depression. Since the HOD contains a depression score (DS), the TS may be divided by the DS to provide such a comparison. The appropriateness of affect or mood may thus be operationally defined in terms of these two HOD scores.

When TS and DS were used in this manner it was reported that such a measure (called the Ratio Score or RS) made a sharper discrimination between schizophrenic and non-schizophrenic patients, especially depressions, than TS and DS used alone.[5,6] It has also been found that young normal subjects (13 years of age, for example) obtain a relatively high TS and DS both of which decrease with age.[7] This suggests that the RS remains constant as a function of age.

The purpose of the present study was to examine affect, as measured by DS, in relation to the degree of perceptual and thought disturbance (TS) in a group of normal subjects, ages 13 years and over, and in a group of psychiatric patients.

Method

The HOD was administered in the usual manner[3] to public and high school students ranging in age from 13 to 20 years, hospital staff members ages 18 and over, and a group of psychiatric patients all 22 years of age and over. (Some of these data were reported earlier in different form.[6-7,8]) Mental defectives, organics, alcoholics intoxicated on admission and drug addicts under the influence of drugs were excluded from the psychiatric group.

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Table I shows the number of subjects in each of the normal and psychiatric cate-

TABLE I

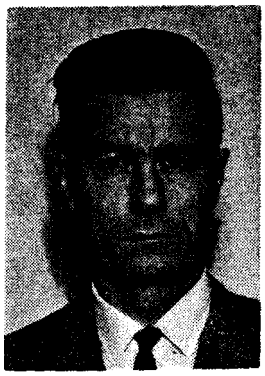
NUMBER OF SUBJECTS IN THE NORMAL AND PSYCHIATRIC GROUPS

Normals		*Patients*	
Ages	*No.*	*(22 years and over)*	*No.*
13-14	266	Schizophrenic	290
15-16	256	Other psychotic	143
17-18	351	Psychoneurotic	259
19-21	229	Character-behavior disorder	131
22 & over	150		

Results

The results of analyses of variance of the normal group ages 13-14, 15-16, 17-18 and 19-21 years for TS (a) and RS (b) are shown in Table II. This analysis shows that there is a highly significant difference in the degree of perceptual and thought disturbance (TS) between these age groups, but when TS is divided by depression (DS), they have similar scores (RS).

Cut-off points of 30 on the TS and 4.99 on RS have been found useful in classifying patients.[4,6.7] The majority of schizophrenic patients score above these points, while most non-schizophrenic patients obtain scores at or below these values. Using these cut-off levels, normal subjects age 22 and over obtain lower TS scores than the schiz-



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ophrenic group (X^2 = 133.8, 1 df, p<.001), but do *not differ* on RS (X^2 = 1.63, 1 df, p<.30>.20). The schizophrenic group scores significantly higher than each of the non-schizophrenic patient groups on both TS and RS (p values are all beyond, the .001 level). This finding has also been reported earlier.[5,6,7]

TABLE II

SUMMARY OF ANALYSES OF VARIANCE FOR THE NORMAL GROUP

Ages 13-14, 15-16, 17-18 and 19-21 Years for TS (a) and RS (b)

Source *of variation*	*Sum of squares*	*df*	*Mean square*	*F*
Between groups	89,353	3	29,784	60.78*
Within groups	538,255	1098	490	
Total	627,608	1101		
	(b)			
Between groups	149	3	49.67	0.64
Within groups	85,178	1098	77.36	
Total	85,327	1101		

* p<.01

Discussion

Although normal young subjects show considerable perceptual and thought disturbance (as measured by TS) which decreases with age, the present data show that their RS remains constant during the age 13 to 21 year period. In terms of the above cut-off score, the majority of these subjects obtain scores over 4.99 at each age level. The majority of normal and schizophrenic subjects, age 22 years and over, also score above 4.99.

If one regards normal subjects (showing varying degrees of perceptual and thought disturbance) as having appropriate mood (affect), as measured by RS, then schizophrenic patients also have appropriate affect, since they have similar Ratio Scores. Non-schizophrenic patients, especially depressions, on the other hand, may be regarded as showing inappropriate affect since the majority of them obtain Ratio Scores of 4.99 and less, and are significantly lower than schizophrenics on RS.

The Ratio Score may thus be used to operationally define the appropriateness of mood or affect: high RS indicating that affect is appropriate, low RS indicating that it is inappropriate.

It is, therefore, suggested that comparing depression against perceptual and thought disturbances as measured by the HOD may be a more precise and useful measure of appropriateness of mood, than comparing it against thought or activity as defined earlier. When this measure (RS) is used, normal subjects and schizophrenic patients have similar scores, and thus, appropriate affect, while the affect of depressions and anxiety states (lower RS) is inappropriate.

This provides evidence that schizophrenics are basically different from other diagnostic groups, and supports the contention that depressions, etc., are indeed affect or mood diseases. Schizophrenia, on the other hand, may be regarded as a perceptual and thought disease with mood being appropriate to the degree of perceptual and thought disturbance.

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