

UNIPOLAR AND BIPOLAR DEPRESSIONS—A REVIEW

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SUMMARY

The paper discusses the emergence of the concept of polarity out of the rubric of manic depressive illness. The polar types are defined and changes in polarity, frequency and similarities and the differences between them are discussed. The author ventures to suggest that a change in the polarity viz., occurrence of mania in depressives or of depressive episodes in mania to be designated "LAP Phenomenon" after Leonhard, Angst and Perris who have been mainly responsible for the concept.

Around the middle of the nineteenth century, excellent descriptions of manic depressive psychosis were written by the French psychiatrists Falret and Bailarger. The discovery of this clinical entity is to their credit. Later, Emil Kraepelin, the German nosologist par excellence, made the greatest contribution by separating dementia praecox (schizophrenia) and the mood disorders. Under the title of MDP, Kraepelin (1913) included 'on the one hand, the whole domain of the so-called periodic or circular insanities and on the other, the simple mania, a greater part of the morbid states termed melancholia, and also a not inconsiderable number of cases of amentia.' However, doubts were expressed over the wide concept of MDP of Kraepelin by Adolf Meyer (1905) and Jaspers (1913). Leonhard, dissatisfied with the prevailing Kraepelinian typology evolved a four fold classification of 'endogenous psychoses'—namely: affective psychoses, cycloid psychosis, unsystematic schizophrenia and systematic schizophrenia. Within the affective psychosis, he observed two different courses of the illness: first the occurrence of both manic and depressive forms and the second the occurrence of either the manic or the depressive forms without the episodes of the opposite

variety. The former have been termed bipolar (true manic depressive psychosis) and the latter, monopolar forms (Leonhard, 1957). Subsequently, Leonhard's ideas were taken up and worked upon independently by Angst (1966) in Switzerland and by Perris (1966) in Sweden. These observations (Angst and Perris (1968) supported and furthered the concepts advanced by Leonhard and earlier by Kleist (1953). Angst & Perris suggested 'Unipolar' to replace the term monopolar. Arieti (1978) suggested the terms monophasic and biphasic as more appropriate. However, unipolar and bipolar have proved most popular.

The bipolar type has further been subclassified into: Bipolar I (depression preceded by episode of mania), Bipolar II (depression preceded by hypomania) by Fieve and Dunner (1975) and Dunner *et al.* (1970). Winokur *et al.* (1971) have included the third type characterised by episodes of depression in a person with a family history of bipolar in the first degree relatives. Fieve and Dunner (1975) described a putative subtype of bipolars as "Bipolar other" with the history of manic and depressive episodes receiving outpatient treatment and not inpatient treatment with a minimal duration of

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depression of 2 weeks and mania of 3 days or more.

Winokur *et al.* (1971) taking into consideration the family history and the clinical picture subdivided the Unipolar depression into three subtypes: Familial pure depressive disease (FPDD), Depression spectrum diseases (DSD) and Sporadic depressive disease (SDD). One can see a systematic progress in the understanding of the mood disorders first from the description by Falret and Baillarger, and which were clearly separated from schizophrenic group of psychosis and subsequently split up into monopolar and bipolar types by Leonhard, Angst, Perris and further subtyped by others.

DEFINITION OF BIPOLAR AND UNIPOLAR AFFECTIVE DISORDER :

To be included under the category of bipolar affective disorder, there are to be both depressive and manic forms of the illness in the person. The individual should have received treatment for atleast one of the episodes. To be categorized as unipolar, there are to be three clear episodes of depression separated by periods of remission. While Perris insists on three episodes others recommend two episodes. Unipolar mania is characterised by recurrent episodes of manic illness with no depressive ones. To, Perris (1982) this type is rare, having occurred in seventeen cases in a total of 1539 patients.

CHANGE IN POLARITY

The occurrence of three successive depressive episodes does not preclude the occurrence of manic episodes thereby effecting the conversion into bipolar type. This was commented upon by many workers (Lehman, 1971). Such cross overs were taken into account and estimates have been arrived at by Perris (1968) and Angst (1973) who report

that 16% of unipolar changed over to bipolar after three depressive episodes while the figure fell to 4% after four depressive episodes. They suggest that the risk of diagnosing the bipolar as unipolar is small after three or four depressive episodes. Venkoba Rao and Nammalvar (1977) while studying the change of polarity in their series of 122 endogenous depressives cases, observed that out of thirty-six bipolars, 23 (64%) had passed over to mania after the first episode of depression, 12 after two episodes and one after the third attack of depression. This agrees with the findings of Perris and Angst on the subject that after the third attack, the change in Polarity is infrequent Venkoba Rao and Nammalvar (1977) also observed that the polarity change occurred in 75% within the three years after the first occurrence of depression and in 25% between three and ten years In Winokur and Morrison's series the risk of mania was about 5%. The findings of Venkoba Rao and Nammalvar (1977) while supporting the greatest period of risk for developing mania, differed over the figure for those that run the risk of mania (25% against 5% in Winokur and Morrison's series).

FREQUENCY OF BIPOLAR AND UNIPOLAR DEPRESSION :

Little information is available over the prevalence and incidence of Bipolar and Unipolar types of affective disorders. This is understandable since the earlier epidemiological studies were conducted based upon the Kraepelinaean concept of MDP when polarity was not yet recognised. However, an indirect estimate of the frequency of these types has been made by studying the quantum of cases that were divisible into each of the categories in major comprehensive documentations on MDP. Such a survey has been carried out and repor-

ted by Perris (1982). Perris observed that frequency of bipolar manic depressive psychosis ranged from 10 to 40 per cent of the whole MDP cases. In a series reported by Venkoba Rao and Nammalvar referred to already (1977), the bipolars constituted thirty-eight per cent in the series of endogenous affective disorders. This is higher than in many other reports. Table I offers the proportion of bipolar patients in the available series of MDP from the literature (adapted from Perris, 1982).

TABLE I

Reference	Patients N=	Bipolar %
Stenstedt (1952)	216	9
Kinkelin (1954)	146	35
Kielholz (1959)	232	28
Svendsen (1961)	2057	10
Alberti (1963)	317	39
Angst (1966)	254	18
Perris (1966)	797	18
Venkoba Rao & Nammalvar (1977)	122	38

Venkoba Rao and Madhavan (1983) have reported on depression in those above the age of 60. Taking episodes of both depression and mania, fifty three patients had a total of 103 episodes—67 of depression, 36 mania; a ratio of approximately 2 : 1. Of 67 depressive attacks 20 occurred prior to 60th year and 47 after this age. Of 36 manic episodes 28 occurred before 60. The depressive episodes far outnumbered the manic.

It is not uncommon for manic episodes to occur after the age of 60. Unipolar mania occurred in 7 out of 58 cases (12%) after the 60th year.

Among single episodes (first episodes) depression (30) outnumbered manic (10) after 60th year.

Similarities and differences between the Bipolar and Unipolar

DEPRESSION

The division of endogenous affective disorders into bipolar and unipolar varieties has been justified on many grounds. Some of them are: genetic basis, personality characteristics, age of onset, sex distribution, biochemical alterations, response to a particular type of treatment and so on. Klerman (1973) has hailed that the distinction between bipolar and unipolar registers a major advance in the nosological history of depression which hitherto suffered a standstill too long.

GENETIC STUDIES

Excellent review on the genetic studies of the polar types are available and the reader is referred to them (Perris, 1982; Winokur, 1981). They have been directed to family studies, twin studies, studies of the adoptees and association and linkage. A higher genetic predisposition among the bipolars was observed by Leonhard himself. He referred to the cyclothymic temperament of the patients among their relations in the case of bipolars, and a 'subdepressive' temperament in the case of unipolars. Winokur *et al.* record the occurrence of depressive illness in the family of pure depressive disease, alcoholism and/or antisocial personality in the cases of depressive spectrum disease. Absence of such history or a positive history of depression may be present in sporadic depressive disease. Notwithstanding the extensive work on the genetic aspects to differentiate the two types, no unequivocal results are yet available. All that can be said about the genetic

aspects of the affective disorders is: Kraepelinian MDP has genetic basis and they are classifiable into two polar types. These are genetically heterogeneous entities but the mode of inheritance is not yet definitely known. There is however a sub-type of bipolar MDP which is transmitted in sex-linked dominant way.

Guimeet Singh and Agarwal (1980) offer support for the polar types from their studies on the genetics of the primary affective illness. They observe the bipolar illness as common and polygenic in inheritance with an equal morbidity risk in the male and female relatives. According to them, there exists a modified expression of the primary manic depressive predisposition due to a dominant x-linked factor, whose manifestation is sex-linked and whose manifestation is depression in 50% of the males and the other 50% in the females as alcoholism or socio-pathology. The genetic studies have definitely proved one important thing. Mood disorders are distinct from schizophrenia—this has been supported by twin studies. The identical twins may have had different types of depression but they never showed schizophrenia in one member and MDP in the co-twin. Here is the proof of clinical soundness of Kraepelin's separation of the two major groups of psychoses.

Clinical features and course :

Attempts to differentiate the bipolar from unipolar depression based on the presenting clinical features have not proved helpful. At the moment the main clinical feature that distinguishes them is the occurrence of manic episode which puts aside the illness as bipolar. However, some (Biegel and Murphy, 1971) have noticed the unipolar patients to be more restless, given to overt expression of

anger and displaying more somatic symptoms. The bipolar patients on the other hand were found to be socially withdrawn and tended to be less active. The unipolar tended to be hyposomniac, whereas the bipolars more commonly hypersomniac, Leonhard (1971) observed a persisting symptom pattern in the successive episodes in the unipolar depression while the pattern tended to alter in the depressive episodes of bipolar type. This may be partly due to the occurrence of admixture of manic and hypomanic features in the bipolar type. Suicidal thoughts occurred with equal frequency in both the types. Suicide rate also has been high among both the unipolar and bipolar cases (Angst and Perris, 1968) without sex differences although there are reports on higher suicide rate in the bipolar than in the unipolar patients (Mayo, 1970). The duration of the episode is on an average three months in bipolar and four months in unipolar. A shorter life expectancy marked the bipolar patients from the unipolar ones (Rorsman, 1968; Jaaskalainen, 1976). However, in an individual case, there are difficulties in assigning the case to different polar types.

The recurrence rate of episodes was higher in the bipolars than in the unipolars in the series reported by Venkoba Rao and Nammalvar (1977). Out of sixty three that experienced recurrences, twenty one experienced only depressions (Unipolar) while forty two experienced both manic and depressive episodes. Thirty six bipolar cases had a total of 208 recurrences comprising 123 manic and 85 depressive. The average number of both types of recurrence in the bipolar was 5.7 while for manic only it was 3.4 and for depressive episodes it was 2.3. Carlson *et al.* (1974) found an average of five episodes in their series of 47 bipolars. In the Indian report there

were more manic episodes than depressives among the bipolars. In their twenty one unipolar depressives, Venkoba Rao and Nammalvar (1977) observed the total recurrences to be 74 yielding the mean of 3.5 which is considerably less than the recurrences of both types in the bipolars. Their findings indicated that manic episodes were frequent in the bipolar while the depressive episodes were almost the same in both types.

OTHER DIFFERENCES

Personality characteristics of bipolar and unipolar depressives have been studied and certain differences made out. The use of MMPI revealed that the bipolar group had a higher score on the Ma scale and significantly lower scores on Pt scale than the unipolar ones. A greater tendency to endorse socially desirable response sets in bipolar than in unipolar patients has been recorded (Donnelly *et al.*, 1975). Rorschach studies revealed that the bipolar patients responded with selective attention to the more objective aspect of the cards, while the unipolar style of response was a more subjective type. Primary response to colour was noticed only in the bipolar subjects (Donnelly *et al.*, 1975).

In unipolar patients, a personality type characterized by orderliness, meticulousness, conventional thinking and dependency on close personal relationship was repeatedly demonstrated (Perris and Strandman, 1980; Tellenbach, 1961; Frey, 1977). Strandman (1978) and Perris and Strandman (1980) found in the features like dominance, exhibition and autonomy, the autonomy needs associated with bipolar patients, while defense of status and guilt feelings were more in the unipolar patients. Beech and Rafelsen (1979) reported on the difference in the auto-

nomy between the bipolar and unipolar cases. Psychological studies have lent support to the fact that the unipolar patients throughout retain certain type of personality make-up, and that the bipolar patients in remission do not markedly differ from the cases.

There have not been any differences in the biochemical profile of the unipolar and bipolar patients. Investigations have centered on the levels of activity of MAO, GOMT and DBH enzymes. There have not been well designed studies to demonstrate any differences in response to antidepressant measures in the unipolar when compared to bipolars. Perris and d'Elia (1966) found that the unipolar cases required more number of ECTs compared to the bipolars. The response to antidepressant is identical in both the groups but a shift to manic or a hypomanic phase occurred only in the bipolar individuals (Angst and Perris, 1968). A hypomanic response to L-dopa has been suggested as a diagnostic test to differentiate the bipolar from unipolar cases by Goodwin *et al.* (1971). Lithium prophylaxis is said to be as effective in bipolar as in unipolar. Imipramine prophylaxis is as efficient in unipolar as lithium but inferior to lithium in the bipolar cases (Prien, 1973). The prophylactic efficiency of 5 HTP is comparable to that of lithium in unipolar group (Van Praag and de Haan, 1981). An abnormal TSH response to TRH is known to be commoner in unipolar depression (Sachar *et al.* 1980; Gold *et al.* 1980), though Linkowski *et al.* (1981) report its occurrence in bipolars also.

The bipolar illness occurs at a younger age than the unipolar cases. In the bipolars the mean age of onset is 25-29 and in the unipolars 40-44 (Angst and Perris, 1982). In Winokur's series the mean age of onset

bipolars was 24 years. In bipolars the onset was early if it started with mania and later if depression inaugurates it. In series of Loranger and Levine (1978) in case of bipolar ever started prior to the age of 13 or after 60. Beyond the age of sixty the onset of unipolar is more common than bipolar. In a study of depression in a geriatric group, above sixty in a community, Venkoba Rao and Madhavan (1982) observed all the forty one cases of depression in the community were unipolar there being no case of bipolar. Kraepelin observed that the earliest onset of manic depressive illness could be under 10 years. Sex distribution is about the same in the bipolars, whereas women are known to outnumber men in the unipolar cases.

Reporting on one hundred and one endogenous affective disorders, comprising, unipolar depression, bipolar and first attack depression, Venkoba Rao (1974) did not find any differences between them on the parameters like occurrence of affective disorder in first degree relations, parental loss before their twelfth birthday and the pattern of family jointness.

Though there is evidence suggesting the distinctness of Bipolar from Unipolar depression, there are features that fail to establish the differences. For example, familial unipolar and bipolar melancholics display common features like early age of onset, recurrent course and a good response to lithium prophylaxis (Schlesmer *et al.*, 1980). Besides, many genetic studies have shown that the most common type of affective disorder in the families of bipolar probands is unipolar depression (James and Chapman, 1975; Gershon *et al.*, 1975). Taylor and Abrams (1980) while withholding support for the separateness of the unipolar and bipolar

types, have suggested a re-evaluation of the subject.

A SUGGESTION :

LAP Phenomenon :

The author ventures to suggest that the change of the unipolar course to bipolar pattern with the occurrence of the first manic episode in depressions. or depressive episode in mania be designated LAP (Leonhard, Angst, Perris) sign. This does justice to the pioneering efforts of Falret & Baillarger who gave the earliest scientific clinical description of the illness and to Kraepelin who master minded the separateness of MDP from schizophrenia. LAP sign would then be an embellishment to the clinical entity of MD illness.

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