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Premorbid personality in patients with uni- and bipolar affective disorders and controls: assessment by the Biographical Personality Interview (BPI)

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Abstract The relationship between premorbid personality and subtypes of affective disorder was investigated by means of the Biographical Personality Interview (BPI) and by a self-rating scale. Interviewer and rater (BPI) were blind to diagnosis. A total of 52 patients with unipolar depression or bipolar II disorder (D/Dm), 32 bipolar-I patients (DM) and 39 control subjects (C) were examined. Expert rating of "typus melancholicus" features (BPI) were found to be more pronounced in D/Dm than in DM and C. "Typus manicus" features were also distinguished between both clinical groups, whereas anxious-insecure features were not significantly different between the groups of patients. In contrast to the expert-rated personality variants, self-rating of personality features did not reveal any significant differences between the two clinical groups. Potential sources of the discrepancies between the questionnaire data and the interview data are discussed. It is concluded that premorbid features of "typus manicus" and "typus melancholicus" predicted, respectively, a predominant manic and a predominant depressive course of an affective disorder.

Key words Premorbid personality · Melancholic type · Manic type · Unipolar depression · Bipolar disorder · Questionnaire · Interview

Introduction

Kraepelin (1913) and Reiss (1910) postulated the existence of certain personality characteristics from which the more psychotic affective states arose. Kraepelin pointed to a relative preponderance of depressive personalities among patients with unipolar depression, a relative preponderance of manic and irritable personalities among patients with mania and of cyclothymic personalities among patients with a combined form. Later, Leonhard (1963) conceived of the relationship between personality and subtypes of affective disorder in a similar way. Kretschmer (1955), however, denied any substantial correlation between the subtypes of manic-depressive disorder and hypomanic, subdepressive or other variants of the cyclothymic temperament.

Recognizing "anal" (anankastic) traits in depressives and bipolar patients, Abraham (1954) also neglected any close resemblance between the affective symptomatology and personality. Apparently, not influenced by Abraham, Shimoda (1941) characterized melancholics as well as manic-depressives in a similar way. Character traits similar to those described by Shimoda as habitual traits of patients with all kinds of affective disorders were also reported by Noyes (1953) and Kinkelin (1954) in involutional melancholics. Tellenbach (1961, 1980) introduced the term "typus melancholicus". He described patients with unipolar endogenous depression as orderly, devoted to duty and to family members, and scrupulous. Stimulated by clinical impressions, von Zerssen (1977) developed a concept of premorbid personality traits of patients with different forms of affective disorders. It was hypothesized that patients with a predisposition of manic episodes have in common a constellation of premorbid personality features ("typus manicus") which are partially opposite to those of the typus melancholicus. Whereas the typus manicus was characterized as unconventional, independent, broadminded and generous, the typus melancholicus was described as conventional, dependent, etc. The term "typus melancholicus" does not refer to any similarity between these traits and the depressive symptomatology, whereas the term "typus manicus" indicates a resemblance between the symptom pattern of mania and personality features (for review see Akiskal et al. 1983; von Zerssen 1977). Kraepelin (1913) and, later, Akiskal et al. (1977), Arieti (1974), Dietrich (1968), Reiss (1910) and Leonhard (1963) described hyperthymic or hypomanic variants of temperament as

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precursors of mania (for review see von Zerssen 1992), indicating the clinical validity of this personality variant.

Stimulated by findings reported by Angst and Perris (e.g. Angst and Perris 1968), hypotheses on the relationship between personality and various forms of affective disorders were formulated and tested by the use of personality inventories and "blind" diagnostic evaluation of case records during the past decades. In general, findings in unipolar depression appeared more consistent than those in bipolar disorder. In questionnaires, unipolar depressives tended to deviate from controls and bipolar patients in the direction of introversion (Hirschfeld and Klerman 1979; Maier et al. 1992a; Richter et al. 1993; von Zerssen 1982) and often exhibited more neurotic traits (Hirschfeld and Klerman 1979; Maier et al. 1992a; von Zerssen 1982; for review see von Zerssen 1996). In high-risk subjects (Hirschfeld et al. 1989; Kendler et al. 1993; Krieg et al. 1990; Maier et al. 1992a) and in a prospective cohort study (Angst and Clayton 1986; Clayton et al. 1994) neuroticism was identified as a risk factor for depression. Compared with controls, depressives and their healthy first-degree relatives displayed a tendency towards rigidity (Krieg et al. 1993; Maier et al. 1992a, b).

Findings regarding bipolar patients are more divergent. Young et al. (1995) found that novelty seeking was more pronounced in bipolar subjects than in unipolar depressives and nonpatient subjects. Bipolar patients with a preponderance of manic episodes showed higher scores for Esoteric Tendencies and were found to be more extraverted than physically ill controls and psychiatric patients with other diagnoses (von Zerssen 1988). In comparison with controls, the personality of bipolar patients has been described as more extraverted (Abou-Saleh and Coppen 1984), more introverted (females only; Hirschfeld et al. 1986) or as not different at all (Richter et al. 1993; von Zerssen 1982; for review see Goodwin and Jamison 1990; Möller 1992; von Zerssen 1996). Benjaminsen (1981), Bech et al. (1980) and Hirschfeld et al. (1986) claimed that the similarities of the personality patterns of unipolars and bipolars were much more pronounced than the differences. Clayton et al. (1994) showed that personality features of male bipolar subjects, assessed before the onset of the disorder, were comparable to those of never-ill subjects.

On the other hand, healthy relatives of bipolar patients appear not to differ from those of unipolar patients. Maier et al. (1993) found that healthy relatives of bipolar patients exhibited higher scores on rigidity, neuroticism (males only) and frustration intolerance (females only) than controls, a personality pattern similar to that of relatives of unipolar depressives. This similarity in personality patterns in relatives of both unipolar and bipolar patients might be due to the higher risk for unipolar depression than for bipolar disorder in family members of bipolar-I patients (Heun and Maier 1993).

Personality traits, such as neuroticism and introversion, are described not only in depressives, but also in schizophrenics, neurotics and in patients with various forms of personality disorders (for review see von Zerssen 1982, 1996). Such traits may therefore constitute non-specific risk factors. Thus, the empirical evaluation of typus melancholicus and typus manicus features which seem to be more specific for patients with affective disorders deserves particular attention. Based on detailed case history data covering exclusively the premorbid development of subjects without any reference to clinical data, Pössl and von Zerssen (1988) operationalized traits representing the melancholic type and the manic type of personality. Von Zerssen and co-workers confirmed their assumption of an association between these two personality variants and the particular course of affective disorders in several studies. The manic type of personality was found to be associated with "unipolar" mania, whereas the melancholic type of personality was connected with a unipolar depressive course of the illness (Pössl and von Zerssen 1990b). Typical bipolar-I patients showed a tendency towards the manic type and bipolar II subjects a tendency towards the melancholic type (von Zerssen and Pössl 1990). These findings could be replicated by means of a new operationalized procedure in an enlarged sample (von Zerssen et al. 1994a, b). Comparable results were reported by Marneros et al. (1990). In order to optimize the biographical approach, von Zerssen and co-workers developed the Biographical Personality Interview (BPI) for assessing retrospectively the premorbid personality of psychiatric patients (von Zerssen 1994a, b; von Zerssen et al. 1996). Using the BPI only minor differences could be found between bipolar and healthy controls. The typus melancholicus was significantly more frequent in unipolar depressives than in bipolar patients. Although more depressives than controls were classified as typus melancholicus (2 of 3 vs 1 of 3), this difference was – probably due to small sample sizes (n = 15 per group) – statistically not significant (von Zerssen et al., submitted).

Provided that typus melancholicus and typus manicus features discriminate not only between different subgroups of patients, but also between healthy control subjects and the clinical groups, these "affective" personality variants may represent vulnerability factors for a depressive or a mainly manic course of an affective disorder (von Zerssen 1977, 1994a, b). Therefore, the aim of this study was to evaluate the clinical validity of the melancholic type and manic type of personality by including a healthy control group.

Based on the current state of research, the following hypotheses are tested statistically:

1. Premorbid features of the melancholic type and anxious-insecure (neurotic) traits are more pronounced in patients without severe manic episodes than in bipolar patients with manic episodes and healthy controls.
2. Premorbid features of the manic type are more pronounced in patients with manic episodes than in patients without severe mania.
3. Premorbid features of the manic type are associated with an increase in the manic component of the disorder, whereas typus melancholicus features decrease from the unipolar depressive group over the bipolar II group to the predominantly depressive and predominantly manic bipolar-I groups.

4. Self-rated typus melancholicus traits (rigidity, introversion) and neurotic personality traits (neuroticism, frustration intolerance) are more pronounced in patients without severe mania than in bipolar patients with manic episodes and controls.
5. Self-rated typus manicus traits (esoteric tendencies, extraversion) are more pronounced in bipolar patients with severe mania than in patients without severe mania and controls.

To our knowledge, this is the first published report on premorbid personality features of patients with different courses of affective disorders and controls by means of self- and expert ratings of these "affective" personality variants.

Subjects and methods

Two groups of patients treated at the Department of Psychiatry and Psychotherapy, University of Freiburg (Germany), and 39 control subjects were recruited. One clinical group of 52 patients (D/Dm) consisted of 34 patients fulfilling the DSM-III-R criteria for major depression with melancholic features and 18 bipolar-II subjects (bipolar disorder not otherwise specified according to DSM-III-R), and the other group (DM) included 33 patients with DSM-III-R bipolar disorder (bipolar I). Due to the comparatively small sample size of bipolar-II patients, this group and unipolar depressives were combined into one group. Assessment of personality was undertaken when the patient's manifest symptomatology had largely abated (near the time of hospital discharge or, if possible, after discharge). In fact, approximately 75% of patients had inconspicuous values regarding self-rated depressive symptoms. The control sample was selected in the general population with the help of a city board. Only healthy probands (without any DSM-III-R diagnosis according to the Structured Clinical Interview for DSM-III-R) and without a history of psychiatric disorder of their first-degree relatives were included. Control subjects (C) were matched for age, gender and educational level with a subsample of patients. D/Dm includes significantly more women than the bipolar I group (see Table 1). Average age (years) at assessment was significantly higher for the D/Dm than for the bipolar-I patients and controls; therefore, controlling for age and gender was relevant in comparing these groups. Verbal IQs of the study groups were comparable (raw scores; D/Dm: $\bar{x} = 14.4 \pm 5.2$; DM: $\bar{x} = 14.6 \pm 5.4$; C: $\bar{x} = 15.1. \pm 3.7$).

Self-rated and expert-rated depressive symptoms were comparable between the clinical groups. Of D/Dm, 72%, and 79% of DM, were asymptomatic (values ≤ 10 according to self-rating of depressive symptoms [Depression-Scale (D-S); von Zerssen 1976, 1986]. Expert rated manic symptoms of the clinical groups are comparable with those shown by control subjects.

Instruments

Psychiatric diagnoses were based on the German version of the Structured Clinical Interview for DSM-III-R (Wittchen et al. 1990). Three experienced clinicians, two psychiatrists (D. v. Calker, H.-J. Wark) and one psychologist (H. Hecht) trained in the use of the SCID conducted the interviews.

Type and severity of symptoms were ascertained with self-rating and observer rating scales. Observer rating was performed by means of the Inpatient Multidimensional Psychiatric Rating Scale (IMPS; Lorr and Klett 1967; Hiller et al. 1986) after the SCID. The 12 primary factors of the IMPS correspond well to known clinical syndromes. For our analysis we used two factors only (Depressive Syndrome and Manic Syndrome).

For the self-rating of depressive symptoms, we used the D-S (von Zerssen 1976, 1986). The D-S was administered at the time of personality assessment.

Premorbid personality was assessed by using the BPI (von Zerssen 1994b, c; von Zerssen et al. 1996). Details regarding reliability and validity of this novel personality interview are reported elsewhere (von Zerssen et al. 1996, submitted). Briefly, by means of the BPI four dimensions of personality (melancholic type, manic type, anxious-insecure type, nervous-tense type) can be ascertained. The BPI is conducted by trained interviewers who have no knowledge of the patient's disorder. The interview is restricted to the life span before the onset of the disorder. In order to optimize the com-

Table 1 Sociodemographic and clinical characteristics of study groups. D major depression (melancholic subtype); Dm bipolar II; DM bipolar I; C control subjects

	D/Dm ($n = 52$)	DM ($n = 33$)	C ($n = 39$)
	$\bar{x} \pm S$	$\bar{x} \pm S$	$\bar{x} \pm S$
Gender (n, %)			
Female	39 (75%)	17 (52%)	24 (62%)
Age (years)	51.3 ± 13.0	41.1 ± 13.0	40.7 ± 16.8
Education			
Academic degree	11 (21%)	9 (27%)	13 (33%)
Onset (years)			
Depression	31.8 ± 10.1	28.7 ± 11.1	
(Hypo) Mania	38.6 ± 12.1	29.9 ± 10.1	
Episodes (n):			
Depression	7.9 ± 15.0	5.0 ± 8.7	
(median; range)	(3; 1–92)	(3; 0–50)	
(Hypo) Mania	2.9 ± 12.9	4.6 ± 8.7	
(median; range)	(0; 0–92)	(2; 1–50)	
Depressive symptoms			
Clinicians' rating	7.0 ± 9.7	8.3 ± 12.5	1.4 ± 1.6
Self-rating	8.0 ± 6.8	8.0 ± 7.2	2.8 ± 2.7
(Hypo) Manic symptoms			
Clinicians' rating	3.0 ± 5.3	3.7 ± 5.9	2.3 ± 4.3

parability between patients and controls, the information about the biographies of the latter is reduced to a time span equal to that of a patient of the same gender and similar age. The interviewer uses a data sheet for sociodemographic and family data (with the exception of mental disorders of relatives). Using a checklist, life events and long-standing external circumstances from birth until the time of onset are recorded on a "life chart". With the aid of checklists inner experiences and outward behaviour in connection with these life events/circumstances are explored. After the interview (which takes 2–4 h), a report of usually four to six pages is written. This report is then assessed by means of a questionnaire by an investigator blind with respect to the diagnosis and not involved in the interview of the patient under study. The items of this questionnaire represent the operationalized features of the four personality concepts (for details see von Zerssen et al. 1994b). The data presented herein were used as percentages of the theoretically maximal scores. In order to limit the number of hypotheses to be tested, data regarding the nervous-tense type of personality are not evaluated. The inter-rater reliability of the two raters of this study was determined separately and found to be excellent for melancholic and manic features [$r = 0.84$ ($\bar{x}_1 = 12.6$; $\bar{x}_2 = 14.2$); $r = 0.91$ ($\bar{x}_1 = 15.8$; $\bar{x}_2 = 14.7$)] for anxious-insecure traits the coefficients are lower [$r = 0.67$ ($\bar{x}_1 = 19.3$; $\bar{x}_2 = 23.0$)]. Residual psychopathology at time of interview, as well as intellectual functioning, does not seem to affect the rating of the BPI scales (von Zerssen et al., submitted).

Self-rating of personality features are based on the Munich Personality Test (MPT; von Zerssen et al. 1988), which consists of 51 items, representing six personality dimensions proper (Extraversion, Neuroticism, Frustration Tolerance, Rigidity, Isolation Tendency and Esoteric Tendencies). The dimension of Isolation Tendency is not considered in this study. In addition, the MPT contains two control scales (Orientation Towards Social Norms and Motivation). The first scale may indicate either a tendency towards a socially positive self-description or a tendency towards behaving according to social norms in real-life situations more than others ("hypernomia" according to Kraus 1991). The last scale merely reflects the subject's motivation to fulfill the test instruction adequately. In the instruction for the MPT, subjects are asked to describe themselves in a state of physical and mental health. The average re-test reliability over a time span of approximately one year is 0.69 (von Zerssen et al. 1988).

In order to control subjects' verbal IQ, the subscale "Information" of the HAWIE (Wechsler 1981) was given.

Statistical procedures

For testing our hypotheses, Student's *t*-tests were used (Bortz 1985). The α-level of 5% was accepted as indicating significance. The Bonferroni-Holm procedure (Holm 1979) was used in order to ensure an α-level of 5% for each test. Furthermore, effects due to age (at onset), gender and residual depressive symptoms on each personality feature were controlled by calculating partial correlation coefficients (Stelzl 1982). For group comparisons, sample effect sizes are expressed as point biserial *r*. When applying conventional operational definitions for effect sizes as suggested by Cohen (1977), a medium effect size of $r_{pbis} = 0.24$ can be detected for the given α-error of 5% with the following probabilities: (D/Dm vs DM: 0.72; D/Dm vs C: = 0.75; DM vs C: = 0.68). Rank-ordered correlation coefficients were calculated using Spearman's formula (Kerlinger 1973), whereas correlation coefficients between interval scales were based on Pearson's formula (Bortz 1985).

Results

Clinicians' rating of premorbid personality

Because personality features of bipolar-II patients resemble those of depressives more strongly than those of bipolar-I subjects (von Zerssen and Pössl 1990), this small group and unipolar depressives were combined into one group. Features of the typus melancholicus (see Table 2) are significantly more pronounced in patients with unipolar depression/bipolar-II disorder than in bipolar-I subjects or controls. Typus manicus features discriminate between the patient groups, but not between bipolar-I and control subjects. Anxious-insecure traits differ significantly between unipolar/bipolar-II patients and controls, but not between both patient groups ($p < 0.01$ for each of the significant comparisons using the three BPI subscales). With the exception of anxious-insecure traits, all group differences could be confirmed by controlling effects of age at onset, depressive symptoms and gender. The detected effect sizes are moderate or large.

In a second step the association of typus melancholicus and typus manicus features and affective symptomatology was examined in more detail by ranking all patients according to the manic component of the disorder. (Unipolar depressives were coded as 1, bipolar-II subjects as 2 and bipolar-I patients were ranked with respect to the proportion of their manic and depressive episodes ($n_D > n_M$, $n_D = n_M$, $n_D < n_M$). The rank order of the manic component is significantly correlated with typus melancholicus (-0.37) and typus manicus features (0.38).

Self-rating of premorbid personality

Because several patients had to be excluded from analyses of MPT scores due to a conspicuous control score (MPT Motivation score < 6), insufficient verbal IQs (< 85) or missing values, sample sizes are smaller for these analyses. Therefore, the statistical power for these compar-

Table 2 Clinicians' rating of the premorbid personality (Biographical Personality Interview) of study groups (means, standard deviations, effect sizes)

	D/Dm ($n = 52$)	DM ($n = 32$)	C ($n = 39$)	D/Dm vs DM r_{pbis} (r_{pbis})[a]	D/Dm vs C r_{pbis} (r_{pbis})[a]
Melancholic type	35.3 ± 17.6	24.9 ± 15.5	22.7 ± 13.0	0.29[b] (0.25[b])	0.37[b] (0.44[b])
Manic type	13.0 ± 9.5	21.7 ± 12.7	23.4 ± 13.8	0.37[b] (0.34[b])	
Anxious–insecure type	18.0 ± 13.1	12.9 ± 10.0	11.6 ± 8.8	0.20 (0.19)	0.27[b] (0.17)

NOTE: Only data for tested hypotheses are shown

[a] Effects due to age, gender and depressive symptoms are controlled

[b] *t*-test ($\alpha \leq 5\%$, corrected for multiple testing according to Bonferroni-Holm)

Table 3 Self-rating of personality (Munich Personality Test) of study groups (means, standard deviations, percentile values, effect sizes)

	D/Dm ($n = 45$)	DM ($n = 29$)	C ($n = 37$)	D/Dm vs DM r_{pbis} (r_{pbis})[a]	D/Dm vs C r_{pbis} (r_{pbis})[a]
Neuroticism	11.0 ± 6.8 (88)	10.4 ± 6.2 (85)	6.6 ± 3.4 (66)	0.04 (0.02)	0.37[b] (0.26)
Frustration tolerance	5.9 ± 3.6 (34)	7.3 ± 4.3 (46)	8.8 ± 3.3 (68)	0.17 (0.07)	0.38[b] (0.24)
Rigidity	9.5 ± 5.3 (63)	9.3 ± 4.9 (53)	7.6 ± 4.5 (43)	0.02 (0.10)	0.20[b] (0.04)
Esoteric tendencies	3.4 ± 2.7 (90)	2.4 ± 2.4 (76)	2.6 ± 1.9 (90)	–0.18 (0.13)	
Extraversion	12.1 ± 6.5 (74)	13.3 ± 6.8 (76)	14.9 ± 5.3 (84)	0.09 (0.07)	0.23[b] (0.19)

NOTE: Only data for tested hypotheses are shown: percentile values are based on a general population sample (von Zerssen et al. 1988)
[a] Effects due to age, gender and depressive symptoms are controlled
[b] t-test ($\alpha \leq 5\%$, corrected for multiple testing according to Bonferroni-Holm)

isons is lower than stated above (β ranges from 0.28 to 0.36 for a medium effect size). Depressives/bipolar-II patients were strongly more neurotic, less frustration tolerant and more rigid and introverted than healthy controls (Table 3). Against our expectation, no differences between both patient groups emerged. It has to be stated that the percentile values of our control subjects indicate that Extraversion and Esoteric Tendencies (e.g. very interested in mysticism, religion and philosophy) were extraordinarily pronounced in our control sample, whereas the corresponding values for the remaining dimension were within normal ranges (see von Zerssen et al. 1988). By controlling age, depressive symptoms and gender, effect sizes dropped considerably. Although the remaining effects were still of (nearly) medium size, they did not – due to the applied α-correction – reach statistical significance.

A possible reason for the lack of differences in personality measures between the two clinical groups might be that Neuroticism scores may increase with the progression of the disorder. To test this hypothesis, correlations between the number of episodes and Neuroticism, as well as Frustration Tolerance, was calculated. No significant correlations were found ($r < 0.15$).

In order to examine the degree of overlap between the single dimensions of the MPT and the more comprehensive personality concepts as measured by way of the interview, correlation coefficients were calculated (see Table 4). Most of the correlation coefficients are merely of moderate size. Against our expectation, Rigidity was significantly correlated with typus manicus features only and not with those of the typus melancholicus.

Table 4 Correlation coefficients between the dimensions of the BPI and MPT ($n = 111$)

MPT	BPI		
	Typus melancholicus	Typus manicus	Anxious-insecure type
Extraversion	–0.47[a]	0.45[a]	–0.38[a]
Frustration tolerance	–0.32[a]	0.30[a]	–0.33[a]
Neuroticism	0.00	–0.06	0.29[a]
Rigidity	0.13	–0.20[a]	0.09
Esoteric tendencies	–0.11	0.07	0.19[a]

[a] $P \leq 0.05$ (Pearson's correlation coefficient)

Discussion

Our results indicate that the premorbid features of expert-rated typus melancholicus traits differ markedly not only between unipolar/bipolar-II patients and bipolar subjects, but also between the former group and control subjects. As expected, typus manicus features discriminate between unipolar depressives/bipolar-II patients and bipolar-I subjects. Typus manicus traits of the latter group are comparable to those reported by healthy persons. However, the unusually high scores of control subjects regarding the self-rating of Extraversion and Esoteric Tendencies might indicate that our controls include an extraordinarily high proportion of subjects with marked typus manicus features (see von Zerssen et al. 1988). Among the many subjects from the general population (recruited with the help of a city board) who were asked (by letter) to participate, those who agreed may have been more open-minded and extraverted.

Our more detailed analysis of the patient's data indicates that traits of the manic type are positively correlated with a tendency towards loss of balance in the direction of mania. The latter result is in line with findings reported by Pössl and von Zerssen (1990a) and von Zerssen et al. 1994a. In their studies, assessment of personality was based on biographical case history data of patients without including a healthy control group. In order to examine definitively the importance of typus manicus features as a risk factor for a predominantly manic course of the disorder, more bipolar-I patients with a strong prevail of manic episodes have to be compared with healthy control subjects.

Compared with healthy control subjects, our group of depressives/bipolar-II subjects shows, as expected, significantly increased scores for anxious-insecure traits. This effect, however, was considerably reduced after statistically controlling for gender and residual depressive symptoms. In addition, after α-correction also the difference between the two patient groups in anxious-insecure traits was diminished and did not reach the level of statistical significance. In contrast to most other studies (e.g. Clayton et al. 1994; Hirschfeld and Klerman 1979), we have included only depressive patients who fulfilled the DSM-III-R criteria of the melancholic subtype. Von Zerssen et al. (1994b) found "neurotoid" personality types more frequently in patients with neurotic depression than in endogenous depressives. Thus, "neurotic" features which are characteris-

tic of the anxious-insecure type may have been less prominent in our patients as compared with those of other authors, who included a lower proportion of patients with an "endogenous" symptom pattern.

In general, personality features of the typus melancholicus and typus manicus appeared to discriminate between the two patient groups and partly between patients and controls, whereas features of the anxious-insecure type did not display a clear relationship to the course of the illness nor did it contribute to the distinction between patients and controls.

A different picture emerges when results obtained by self-rating scales are considered. Here, we found unipolar depressives to be more neurotic, less frustration tolerant and more introverted than the never-ill controls. This is in agreement with other studies, where unipolar patients have repeatedly been found to show a heightened anxiety-proneness together with other traits of neuroticism as habitual personality characteristics (e.g. Bonetti et al. 1977). This is also in line with data reported by other research groups using a prospective design (Clayton et al. 1994; Hirschfeld et al. 1989; Rorsman et al. 1993). However, there was no difference in Rigidity between depressives/bipolar-II patients and controls when controlled for residual symptomatology, gender differences and age of probands. While other authors – using the same inventory as in our study – reported a higher level of Rigidity in remitted depressives (Maier et al. 1992a, b) and their healthy relatives (Krieg et al. 1993; Maier et al. 1992a, b, 1993), Hirschfeld et al. (1986) found that level of obsessionality did not discriminate between depressives, bipolar-I patients and never-ill relatives. In another study, the level of obsessionality did not prove to be predictive of first onset of depression (Hirschfeld et a. 1989). The important influence of variables such as residual symptomatology, age and gender on Rigidity will be analysed by us in more detail using a larger sample. It should be noted, though, that in a study of patients recovered from an episode of either unipolar or bipolar affective disorder, the MPT scale Rigidity discriminated between the two groups of patients even when the influence of these variables was statistically eliminated (Sauer et al., in press). In order to clarify the association between bipolar II disorder and personality traits like neuroticism (see Akiskal et al. 1995) we are currently investigating a larger sample of patients with hypomanic episodes.

Furthermore, when evaluated by self-rating scales, unipolar depressives did not significantly differ from the bipolar-I patients in any of the personality dimensions. This finding is in line with those of Bech et al. (1980), Benjaminsen (1981), Hirschfeld et al. (1986) and Tölle et al. 1987 who reported that the similarities in personality patterns of unipolars and bipolars were much more pronounced than the differences. They are, however, in contrast to those of others who reported differences in the personalities of bipolar and unipolar patients (e.g. Abouh-Saleh and Coppen 1984; Richter et al. 1993; von Zerssen 1982). Various reasons for the divergence of these results can be envisaged: One reason might be the substantial influence of the clinical state, gender differences and age of probands on the self-rating of personality. Indeed, controlling for these confounding variables substantially reduced the effect sizes observed for the differences between depressives/bipolar-II patients and controls in all personality features and totally extinguished any difference in the case of Rigidity (see Table 3). Furthermore, because the differences in personality profiles between the two patient groups are obviously not very impressive, the statistical power of studies based on small sample sizes might simply be insufficient to detect such small effects.

In summary, data obtained by the self-rating questionnaire did not reveal any pronounced differences in the premorbid personalities of the two patient groups, but supported the well-known distinction between depressive patients and controls with regard to the higher scores of Neuroticism and Introversion of the former group. By contrast, data obtained by expert rating using the BPI revealed clear-cut differences in premorbid typus melancholicus and typus manicus features between the two patient groups and between depressives and controls. Thus, our results obtained by expert rating appear to be at variance with the parallel evaluation by self-rating scales. The main difference in the results obtained by both methods is that the two patient groups were discriminated in the assessment by the BPI, but not in the assessment by the self-rating questionnaire.

The moderate and low correlation coefficients between clinicians' ratings and corresponding self-ratings of personality found in our study (Table 4) indicate that there is only a partial overlap between the self-ratings of personality and ratings done by clinicians (see von Zerssen et al. 1996). This is in line with results reported by others. When comparing self-rating questionnaires and expert ratings for the assessment of personality disorders, the agreement between both procedures is insufficient (Bronisch et al. 1993; Hyler et al. 1990). Using two versions of the MPT, one for self-rating and one for relatives' rating, the correlation coefficients between both versions are relatively low (between 0.52 for Extraversion and 0.34 for Frustration Tolerance). To our knowledge, potential sources of the discrepancies between different approaches have not been evaluated. One important reason may be that the same question frequently has different meanings for different subjects, a problem that can be dealt with in the interview. Another potential source of variance between self-rating and expert rating as performed in the BPI is that the BPI is based on the evaluation of premorbid behaviour as reported by the subjects in relation to concrete life situations, whereas questionnaires generally ask for the subject's self-concept. Expert rating as performed by the BPI is therefore probably better suited to obtain valid results with regard to premorbid personality features than self-rating, which is notoriously compromised by errors due to a subjective reference system. In addition, problem-solving behaviour of subjects with predominantly typus melancholicus or typus manicus features has been measured recently by use of a complex computer-aided task. Achievement of subjects characterized by typus melan-

cholis features were worse than those of subjects with typus manicus features. The former group was especially handicapped by the more rigid and less flexible strategies they used for problem solving (Wilmers 1996). Thus, personality measures by way of the BPI appear to exhibit also a substantial degree of predictive value. Data obtained by means of the BPI are therefore probably more valid than those gathered by self-administered questionnaires.

In conclusion, the present work indicates that premorbid features of typus manicus and typus melancholicus probably represent specific predictive factors for the preponderance of a more manic or a more depressive course of an affective disorder.

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