

## On the Prognostic Relevance of Ego-Psychopathology in Schizophrenia: A 2.5-Year Follow-up\*

R. Hauser and C. Scharfetter

Psychiatric University Hospital Zurich, Research Department, P.O. Box 68, CH-8029 Zurich, Switzerland

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**Summary.** Based on a calibration sample comprising 552 schizophrenic patients, ego-psychopathology was modelled in terms of three empirical scales. For this purpose, a special assessment instrument (EPIS) had been designed which measures the phenomena of self-experience in psychotic individuals. Within the scope of these investigations, a 2.5-year follow-up study was carried out with 85 schizophrenic patients. The principal goal of this study was to test the predictive power of typical patterns of self-experience with respect to social functioning. In order to analyse the homogeneity of the data multidimensional scaling and cluster analysis was employed. The results derived from the initial interview suggested a partitioning of the population into two extreme groups termed, according to our model, high-risk and low-risk cases. The predictive power of ego-psychopathology with regard to the social situation was then tested by comparing the outcome of both groups after 2.5 years. The analyses yielded no indication that there is a strong relationship between ego-psychopathology and social adaptation. Only a tendency could be found suggesting that subjects with few ego-psychopathological disturbances have a better occupational behaviour.

**Key words:** Schizophrenia – Prognosis – Ego-psychopathology

### Introduction

The phenomenological concept of ego-psychopathology (EPP; Scharfetter 1976, 1980, 1981, 1986) is a perspective that focuses closely on the profound ego/self experiences articulated by the schizophrenic per-

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Offprint requests to: R. Hauser, Herrligstrasse 27, CH-8048 Zurich, Switzerland

son which directly point to the isolation and fragmentation of the psychotic ego/self. Observations of behaviour and verbal accounts in clinical work with schizophrenics led to the construct of five basic ego “dimensions” that constitute ego-consciousness: ego-identity, -demarcation, -consistency, -activity and -vitality. The phenomenological concept continues the tradition of research in “disorders of the whole person” (Heinroth 1925), or “ego disorders” (Ideler 1848; Kahlbaum 1863) and combines it with empirical methodology. EPP supplements the concept of schizophrenia with structural information regarding the fragmentation of the ego on the psychotic level (in reference to Kernberg 1975) by providing a framework in which to study the experiential side of psychotic states. Disturbances of ego-consciousness are formalized in the Ego-Psychopathological Interview Schedule (EPIS) making “ego-disorders” accessible to empirical study (Scharfetter 1976, 1981; Scharfetter and Weber 1985; Weber and Scharfetter 1984). The EPIS comprises (in its 5th version) 53 items covering the five topics mentioned above. In addition, there are four supplementary sections (overcompensation, body image aberration, thought disorder and psychomotor behaviour) which are differentiated solely for the purpose of facilitating the interview process. These sections are integrally contained in, and should not be considered to be additions to, the five ego “dimensions”<sup>1</sup>. In a non-structured clinical interview, the patient’s self-experiences during psychotic episodes are collected and documented, guided by specifically structured questions according to the EPIS (examples are given as follows):

Ego “dimensions”

Ego-vitality: I felt that my life was dissipating, that I was dying.

Ego-activity: My movements and actions were directed and controlled.

<sup>1</sup> The EPIS is available on request in English, German and Spanish



Ego-consistency:	I felt an internal split or felt that I was being torn apart.
Ego-demarcation:	I felt I was defenceless, at the mercy of outer influences.
Ego-identity:	I had the feeling that I was someone else than the person I used to be.

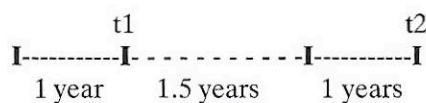
#### Supplementary sections

Overcompensation:	I had tremendous power and influence and was able to direct and control people
Body-experience:	The appearance, the shape, of my body had partially or totally changed.
Thought disorders:	Alien thoughts were suggested to me. My thoughts and feelings came from outside of me.
Psychomotor control:	I had to pay close attention to my movements. I had to control them strictly.

Psychotic experiences play a crucial role for the individual and are usually both a reason for the labelling and hospitalization process as well as the door to therapeutic intervention: "Detailed interest in these experiences may reward the concerned clinician or investigator with important clues to the nature of schizophrenia and to factors central in pathogenesis and recovery" (Strauss and Carpenter, 1981, p 43). There is universal agreement that we need a basis that enables prognosis of untreated course if we want to evaluate need-specific treatments (Alanen et al. 1986). "... a reexamination of the usefulness of signs and symptoms as predictors of outcome is warranted, and that those with predictive value may not be those which are of diagnostic importance." (Bland and Orn 1980). Evaluating psychotic experiences for their predictive value is an attempt in that direction.

#### The aim of the present study

The 1988 catamnestic study in EPP examines the prognostic relevance of the ego-psychopathological concept in a follow-up. The average catamnestic period is 2.5 years. At both t1 and t2 ego-psychopathological experiences within the last 12 months are explored and documented according to the EPIS.



The present study relies on a statistically reproducible empirical syndrome structure that provides scales for measuring the ego-psychopathological level. Thus, this report deals first with the construction of scales on the basis of the total population ( $n = 552$ ), then with the comparison of two measurements on the scales of EPP for two extreme groups, and finally with the relationship between scores and social adaptation. The two groups of extreme scorers on the ego-psychopathological scales are studied with the hypo-

thesis that the low-risk group has a significant better short-term prognosis than the high-risk group regarding the course of ego-pathology and social adaptation.

#### Methodology

**Population.** Over the past 8 years, 552 hospitalized schizophrenic persons were interviewed with the EPIS by Scharfetter and a clinical psychologist plus 12 pairs of interviewers, all of whom were clinical psychology students. Diagnostic criteria for inclusion in the study were Schneider's first-rank symptoms and ICD-9 standards. A manual for item definition, standard interviews on video-tape and a 2-month inter-rater training enabled a high inter-rater reliability (weighted kappa) of 0.86 ( $SD = 0.14$ , min. = 0.57, max. = 0.98)<sup>2</sup>. The stability of response patterns 8 days after the first interview was evaluated ( $n = 25$ ); a retest-reliability of 0.65 (kappa weighted) pointed to the relative stability of response behaviour<sup>3</sup>. Further, there was evidence that the EPIS discriminates well the nosological categories schizophrenia, borderline and depression (Scharfetter and Landolf 1988, unpublished manuscript).

Out of the total population of 552 schizophrenic patients (inpatients in various mental hospitals in the German speaking part of Switzerland) the catamnestic study sample of 124 probands was randomly selected. Follow-ups of from 19 to 43 months duration (average 30.5 months) were obtained for 85 subjects – all of them through personal interviews by Hauser. While 85 (68.5%) persons agreed on a meeting of 1 h duration, 22 (17.7%) persons refused – either in a hostile, suspicious mood, declaring openly that they did not expect anything beneficial from psychiatry or were afraid to remember their previous psychotic state. Eleven (8.8%) persons could not be reached in time, but family members informed the author of the whereabouts of these subjects. Three (2.4%) lived abroad in unknown circumstances and 3 (2.4%) had committed suicide. At the time of the second interview (t2), 25% of the probands were hospitalized. Between January and September 1988, the time period of actual interviewing for the present study, a total of 33% of the probands had been hospitalized.

**Construction of the EPP scales.** A factor analytical approach had been chosen to gain insight into the structural properties of the calibration sample including 552 schizophrenic patients. Since this method is extremely sensitive to structural inhomogeneities within the empirical data, it had been critically important to test the reproducibility of all extracted factors in order to construct an instrument which is stable over time and enables follow-up assessments. For this purpose, the repeated cross-over technique was employed: the calibration sample was 12 times randomly split into two subsamples, and each subsample was independently factor analysed. Not more than three factors could be extracted from the 24 solutions under the condition of reproducibility. The achieved overall reproducibility for this solution  $r = 0.76$  lay between satisfactory and good (0.9–1.0: excellent; 0.8–0.9: good; 0.7–0.8: satisfactory; 0.6–0.7: moderate). Based on these three factors, we constructed EPP scales whose qualities concerning distributions and inner consistencies were statistically tested. It turned

<sup>2</sup> Each interview was rated independently by the two interviewers; the high inter-rater reliability is explained to some extent by the fact that it is an intra- and not an inter-pair measure of agreement

<sup>3</sup> Retest study as well as inter-rater reliability were calculated by Landolf



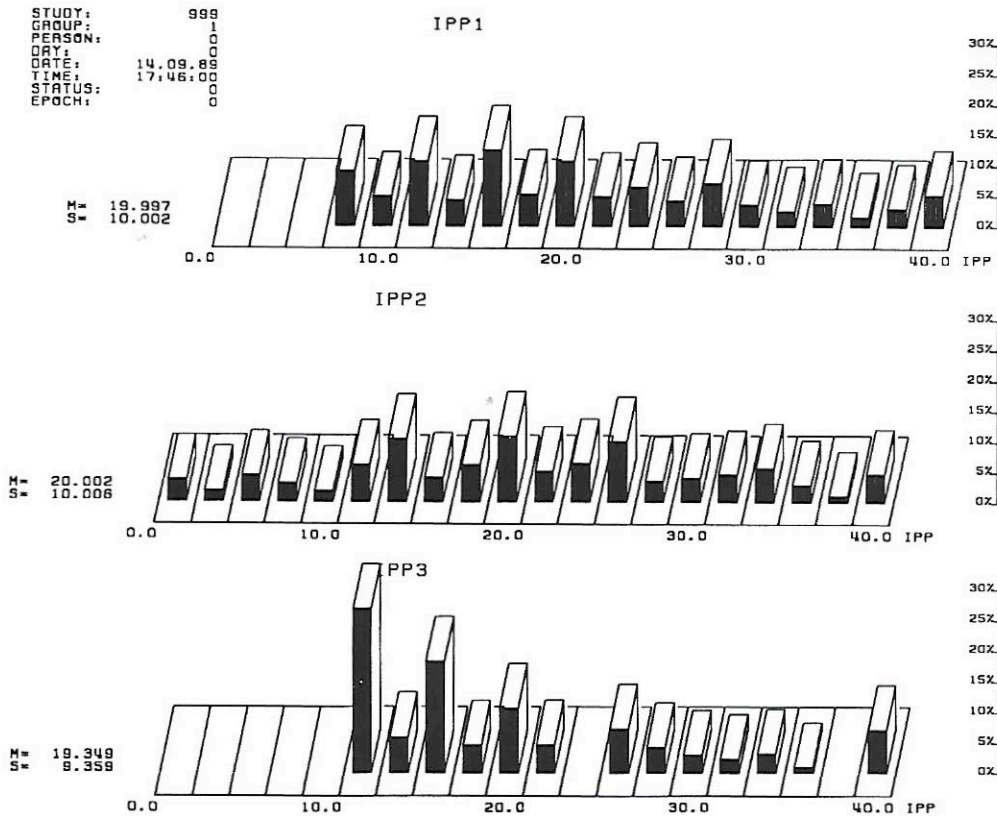


Fig. 1. Test for normal distribution of the three EPP scales

out that two scales were approximately normally distributed, whereas the third scale was left skewed owing to rare occurrence of positive answers (Fig. 1).

As to the inner consistency of the three scales, the results were relatively moderate, but slightly better than for a clinically derived solution and much better compared with random solutions. In view of subsequent applications, the scales were standardized by means of a T-transformation ( $x = 20$ ,  $SD = 10$ ). The three factors are stable, consistent, differentiated and sensible enough (10–15 items/scale) to serve as scales and represent clinically meaningful syndromes (see Appendix for the extensive list of items).

**Extreme groups.** To classify the 85 patients into groups of extreme scores according to their ego-psychopathological disturbances on the basis of the first interview (Atteslander 1984; Strauss et al. 1973) non-metric multidimensional scaling (NMDS) was used in combination with cluster analysis (CA). EPP deals with categoric data (0 stands for non-occurrence, 1 for uncertainty, 2 for certainty of occurrence of a specific experience) which cannot be put directly into metrical CA. Only a procedure of NMDS in conjunction with the F-(similarity) measure (Angst et al. 1983) permits processing of this kind of data. For an NMDS numerical values of similarities are less important than their rank order. To calculate similarities between specified feature-vectors the F-measure considers not only the joint occurrence but also the joint non-occurrence of items. The resulting similarity matrix is still non-metric; NMDS now allows for the recovery of metric information from non-metric data.

After transformation of the non-metric into a metric similarity matrix the standard procedures of CA are applicable.

CA suggested a partitioning into two main clusters or extreme groups ( $n = 29$  and  $n = 38$  probands). The two groups differed significantly with respect to mean values and standard deviations (non-parametric U-test by Mann and Whitney for the comparison of two independent samples) on all three EPP scales (Fig. 2). The high-risk group or high scorers scored significantly higher on the three scales than the low-risk group or low scorers ( $P < 0.001$ ). High scorers reported for the year prior to the first interview a much severer state with regard to EPP than low scorers. This difference is reflected significantly in the age of the subjects as an external variable.

In a next step, the prognostic value of EPP as to psychotic experiences was tested by observing the general tendency of change in scores on the three scales over the catamnestic period of 2.5 years for both groups. The scores of each individual in the two extreme groups at follow-up were compared with the original ones at t1 by the non-parametric Wilcoxon matched-pairs signed-ranks test for two dependent samples.

**Social data.** Research along the axis of occupational and social functioning and dysfunctioning, in the premorbid, morbid and postmorbid state of the psychosis is a prerequisite to an advanced theoretical approach to schizophrenia and of considerable importance for adequate treatment and therapy. Premorbid signs of social dysfunction like "previous duration of psychiatric hospitalization, poor pre-admission social relations functioning, and poor pre-admission work functioning" are prognostically important (Strauss and Carpenter 1981, p 61). Thus, to test a hypothesis involving prognosis not only the presence or absence of psychopathological symptoms and their variation over time should be critically examined, but also the level of



social functioning. According to Ciompi and Müller (1976), the psychopathological symptom structure is but one axis and taken alone often misleading (1976, p 59 and p 128). In the studies on the rehabilitation of the mentally ill (1977–1979) “rehabilitation” is defined as “the best possible reintegration into normal social and occupational life” (Ciompi et al. 1977, p 11).

The social adaptation scheme used in this study is a modified version of the “Lausanne” scale (Ciompi and Müller 1976) which covers (a) social independence versus dependence, (b) quality and (c) quantity of interpersonal relationships. Additionally, we incorporated the occupational situation since the average age of the population was 36 years as compared with 74 years in the Ciompi study (1976, p 58, p 130). Ranks 1–5 were assessed on three axes (A–C), each of which consists of three subscales (1–3)<sup>4</sup>:

#### A. Axis of social independence versus dependence

Scale 1: Independence vs dependence of domicile  
Scale 2: Full rights and duties vs guardianship  
Scale 3: Amount of disablement pension

#### B. Occupational axis

Scale 1: Present occupational level compared with premorbid functioning  
Scale 2: Sheltered vs free market employment  
Scale 3: Quantity of occupational activity in relation to catamnestic period

#### C. Relationship axis

Scale 1: Amount of conflict in social situations  
Scale 2: Frequency of social contacts  
Scale 3: Partnership/contacts with other sex

As the author relied for the rating (rank 1–rank 5) only on the patient and his or her hospital records and not on other informants, the results have to be interpreted cautiously and regarded as tendencies.

## Results

The two subgroups did not differ significantly as to the tested external variables except for age and duration of the catamnestic period. A tendency ( $0.05 < P < 0.25$ ) was found for differences in gender, type of onset and utilization of treatment facilities (see Table 1). The chi-square distribution test as well as the Mann-Whitney U-test for group means yielded similar results.

Age	Low scorers	High scorers
16–25	1	5
25–35	13	14
35–45	18	3
45–55	3	6
55–65	3	1

<sup>4</sup> Details about the content of each subscale are available from the author upon request

High scorers were younger (34.2 years) than low scorers (38.6 years) with a probability of error of  $P < 0.006$  (chi-square) and  $P < 0.05$  (U-test). The younger the person the more florid the syndrome. This may relate to another finding reported earlier, namely, that high scorers have significantly more identity disturbances than low scorers (Scharfetter and Landolf 1988, unpublished manuscript). The catamnestic period was significantly longer for low scorers (32.9 months) than for high scorers (27.9 months) with a probability of error of  $P < 0.002$  (chi-square) and  $P < 0.001$  (U-test).

As to tendencies the following held true. The high-scoring group showed a tendency toward male preponderance (62%;  $P < 0.23$ ); marital status (70% single vs 30% married/separated/divorced) was even in both groups and corresponded to numbers reported elsewhere (Bleuler 1972; Ciompi and Müller 1976; Huber 1979; Schubart et al. 1986). A somewhat better social situation of the low scorers was reflected as a tendency in professional status as well low scorers were on a higher professional level than high scorers. Over 50% of the low scorers were employees with an adequate education compared with only 30% of the high scorers; 18% of the high scorers had no profession at all while only 2% of the low scorers were in a similar situation ( $P < 0.25$ ).

Of the low scores 25% (against 10% of the high scorers) did not use any treatment facilities ( $P < 0.13$ ); 10% of them experienced positive life events (marriage, partner, job) while high scorers reported no positive events. Instead, 4 of them (14%) attempted suicide, but none of the low scorers did ( $P < 0.16$ ). Accordingly, high scorers tend to have a higher suicide risk than low scorers. As in the past 2.5 years 2 high scorers and 1 low scorer actually committed suicide, this matter needs further investigation in the future. Another tendency indicated that onset of illness was more often acute (< 6 months) in the low-scoring group, but because of the high rate of missing data this result must be treated with caution. Statistically, both groups were homogenous concerning subdiagnosis (Table 2, chi-square: NS) and the ratio of inpatient vs outpatient status. Neither chronicity (> 2 years without free intervals) nor phasic acuity with symptom-free intervals correlated with either group.

#### EPP scores

To explore the quantitative inter- and intragroup differences in detail, the Mann-Whitney U-test and Wilcoxon test were applied to the three scales. As expected (depending on the construction) intergroup differences of the scores on the three EPP scales were highly significant for the first period, t1 (Fig. 2, U-



**Table 1.** Overview of data concerning extreme groups

Variable	Low scorers ( <i>n</i> = 38)	Chi-square test	High scorers ( <i>n</i> = 29)
Age	38.6 (SD 8.52, min. = 25, max. = 60)	$P < 0.006$	34.2 (SD 10.0, min. = 23.2, max. = 57.7)
Sex	f = 20 (52.6%), m = 18 (47.4%)	Tendency <sup>a</sup>	f = 11 (38%), m = 18 (62%)
Age at first manifestation	27.5 (SD 8.3, min. = 18, max. = 54)	NS	24.9 (SD 7.5, min. = 13, max. = 41)
Time in hospital	22 months (SD 25.3, min. = 1, max. = 92)	NS	24 months (SD 27.5, min. = 1, max. = 121)
Number of hospitalizations	6.6 (SD 6.3, min. = 1, max. = 30)	NS	7.0 (SD 6.8, min. = 1, max. = 26)
Course-type	15 (40%) chronic, 18 (47%) acute	NS	13 (45%) chronic, 14 (48%) acute
Onset	15 (40%) > 6 months, 13 (34%) < 6 months	Tendency <sup>a</sup>	10 (34%) > 6 months, 5 (17%) < 6 months
Clinic at t2	8 (21%) in-, 30 (79%) outpatients	NS	8 (27.5%) in-, 21 (72.4%) outpatients
Time in hospital t1-t2	6.2 months (SD 7.8, min. = 0, max. = 28)	NS	7.8 (SD 7.1, min. = 0, max. = 28)
Number of hospitalizations t1-t2	1.3 (SD 1.4, min. = 0, max. = 6)	NS	1.5 (SD 1.5, min. = 0, max. = 6)
Neuroleptics	10 (26.3%) = none, 27 (71%) = med.	NS	5 (17%) = none, 24 (83%) = med.
Treatment	9 (25%) = none at all	Tendency <sup>a</sup>	3 (10%) = none at all
Catamnestic period	32.9 months (SD 5.5, min. = 24, max. = 42)	$P < 0.002$	27.9 months (SD 6.0, min. = 19, max. = 39)

<sup>a</sup>  $P < 0.25$

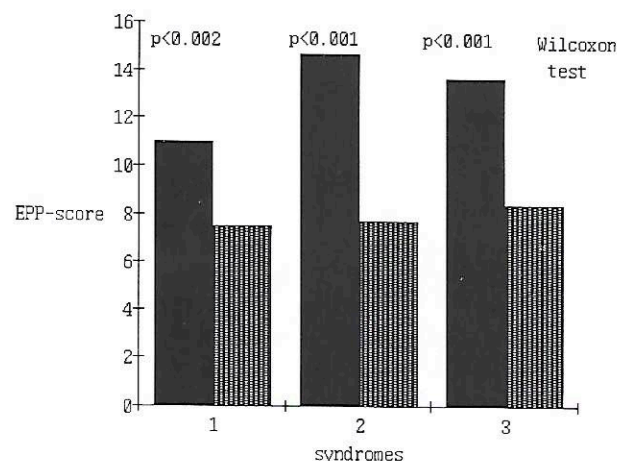
**Table 2.** Subdiagnoses: high scorers versus low scorers

Subdiagnoses	Chi-square-test: NS	
	Low scorers	High scorers
2950	1 (2.6%)	—
2951	7 (18.4%)	3 (10.3%)
2952	3 (7.9%)	3 (10.3%)
2953	17 (44.7%)	17 (58.6%)
2954	3 (7.9%)	3 (10.3%)
2955	1 (2.6%)	—
2956	1 (2.6%)	—
2957	5 (13.2%)	2 (6.9%)
2958	—	1 (3.4%)
2959	—	—

test,  $P < 0.001$ ), thus confirming our previous results derived by NMDS and CA.

Subsequently, the two extreme groups were used as a basis of the follow-up study, and we investigated changes of EPP over time in terms of the three EPP scales. According to the hypothesis, the level of the basic scores should predict the course of illness: low scorers are expected to have a better prognosis with regard to social functioning than high scorers. As to EPP, it appeared that for low scorers the three ego-psychopathological scores remained stable over time (Fig. 3, Wilcoxon test, NS), whereas for high scorers significant differences on all three scales became apparent between first interview and follow-up (Fig. 4, Wilcoxon test,  $P < 0.002$ ).

Moreover, the chance of the average low scorer having a full remission seems to be better than for the

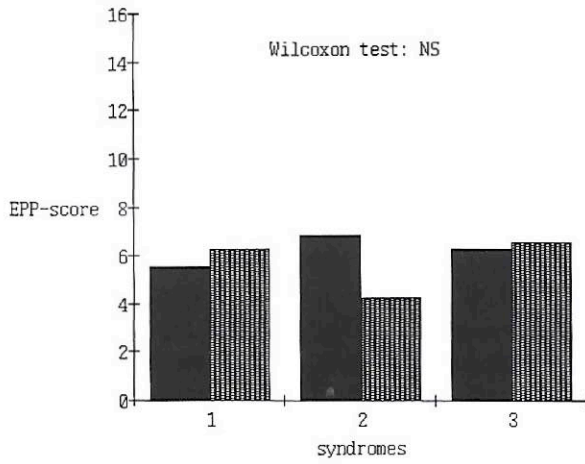


$\bar{x}$ =	11.0	7.5	14.7	7.7	13.7	8.4
SD=	4.9	4.0	3.7	5.6	4.2	3.6

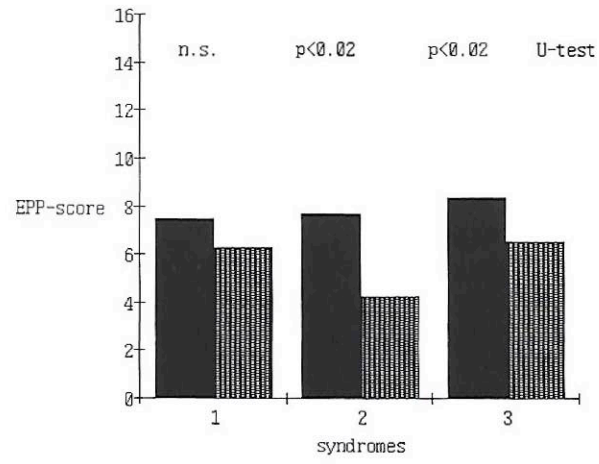
**Fig. 2.** Mean values on the three scales for high scorers (■ (*n* = 29)) and low scorers (▨ (*n* = 38)) at t1

average high scorer: 5 patients of the low-scoring group (13%) reported no more schizophrenic experiences at all, while none of the high scorers did. However, it is an open question whether the reduction of EPP in high scorers continues towards a “virtual” baseline and whether a merging with the low scorers would take place in the future. For an answer to that question we need to follow the subject’s experiences over several years and to consider follow-ups at 2-year intervals.

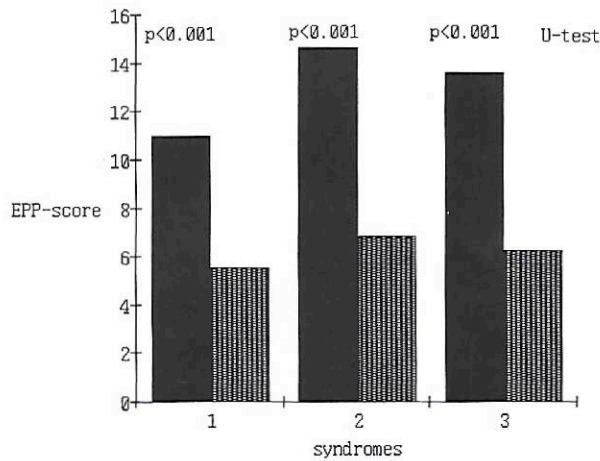
Figure 5 compares mean values of the high-risk and the low-risk groups at t2. At this time high scorers were still high-scoring as compared with the low



**Fig. 3.** Mean values on the three EPP scales for low scorers at t1 (■(n = 38) and t2 (▨(n = 38))



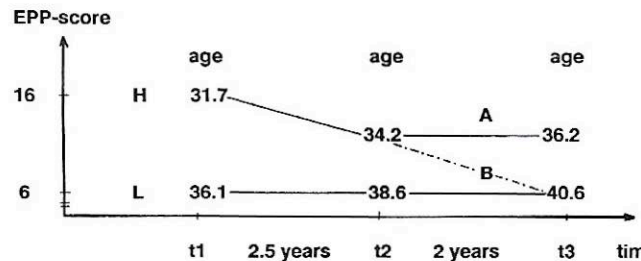
**Fig. 5.** Mean values on the three EPP scales for high scorers (■(n = 29) and low scorers (▨(n = 38)) at t2



**Fig. 4.** Mean values on the three EPP scales for high scorers at t1 (■(n = 29) and t2 (▨(n = 29))

scorers; they did so with statistical significance on scales two and three (U-test,  $P < 0.05$ ).

Though the relative improvement was greater than for low scorers, the absolute manifestation of illness stayed significantly higher. The present results might suggest two different subtypes of schizophrenia with distinct short-term courses and outcomes, as both groups are still discernible with regard to their EPP. Within 2 years the high scorers will be the same age as the low scorers were at the time of the first interview (36 years). If such a subclassification merits any credibility both groups must stay segregated over time (Fig. 6, A). Reviewing the results, another hypo-



**Fig. 6. A, B.** Further prognostic hypotheses. A (—) High scorers (H) and low scorers (L) stay segregated over time (t1, t2, t3) with statistical significance suggesting that the EPP extreme groups might be two distinct subtypes of schizophrenia. B (---) The EPP extreme groups might merge within the next two years when high scorers (H) at t3 will have reached the age of low scorers (L) at t1 (36 years). This alternative suggests that differences in EPP score are a side-effect of age

thesis appears more probable. Catamnestic period (2.5 years) and differences of age between the two groups (4 years) lie in the same order of magnitude; this invites the alternative that the present outcome is a side-effect of the time factor. The alternative hypothesis states that in 2 years' time there will be no remaining significant differences between the groups; in other words, the present differences indicate two stages in the development process of the disease (Fig. 6, B). Another follow-up could clarify whether we have distinct groups with distinct courses/outcomes or whether different levels of pathology occur during different phases of the illness. The constant level of EPP reported by the low scorers over time could be understood as a confirmation of the low-risk group's tendency toward chronicity. High scorers



could then be said to be in an early phase and low scorers in a settled, chronic phase of schizophrenia.

The principal findings on ego-psychopathology can be summarized as follows:

1. Low scores fluctuate around a "virtual" baseline but remain essentially stable over time.
2. High scorers have a considerable reduction in EPP and seem to approach this baseline.
3. However, no reliable prognosis is possible for a specific patient.

### Social data

As to the predictive power of EPP with respect to social functioning, we found, contrary to our expectations, no significant correlations between EPP scores and the three social axes.

In particular, we calculated for each proband of the two extreme groups the respective scores on the axes of (1) social independence (axis A), (2) occupational behaviour (axis B), and (3) relationships (axis C). For each proband the rank score for one axis of

social functioning was calculated by averaging the ranks of the three corresponding subscales. The ratings varied between rank 1 for the highest and rank 5 for the lowest level of functioning in any particular area. Subsequently, for each axis the three categories "high level", "middle level" and "low level" were formed. For the axis assessing relationships the criteria of category formation were slightly different from those for the axes describing social independence and occupational behaviour. The reason is that on the axis of social contacts rank 2 tends towards a high level, while on the latter two axes clearly only rank 1 is equivalent to high-level functioning. For the axes of social independence and occupational behaviour the criteria for the categories were the following: high level (mean rank = 1), middle level ( $1 < \text{mean rank} \leq 3$ ), and low level (mean rank  $> 3$ ). The categorization along the relationship axis was less strict: high level (mean rank  $< 2$ ), middle level ( $2 \leq \text{mean rank} < 4$ ) and low level (mean rank  $\geq 4$ ). Finally, high scorers and low scorers were tested against each other for each axis separately. The results of the chi-square tests are summarized in Table 3.1. Additionally, the additive rank score comprising the three subscales of each axis was tested by means of the Mann-Whitney U-test (Table 3.2).

Briefly, the principal features concerning EPP and social functioning assessed along three axes are:

1. EPP and overall social functioning do not correlate with statistical significance.
2. However, there is a tendency ( $P < 0.10$ ) of the low-risk group towards better occupational adaptation.

**Table 3.1.** EPP extreme groups and levels of social functioning

	Low scorers	High scorers	Chi-square test
<i>A. Social independence vs dependence</i>			
Socially independent	13 (34.2%)	6 (21.4%)	
Socially dependent	17 (44.7%)	15 (53.6%)	
Strongly socially dependent	8 (21.1%)	7 (25%)	$P < 0.53$ , NS
<i>B. Occupational axis</i>			
Normal working ability	10 (26.3%)	3 (10.3%)	
Slightly handicapped	15 (39.5%)	13 (44.8%)	
Severely disabled	13 (34.2%)	13 (44.8%)	$P < 0.25$ , NS
<i>C. Relationship axis</i>			
Regular active	8 (21.1%)	3 (10.3%)	
Irregular passive	20 (52.6%)	20 (69%)	
No contact	10 (26.3%)	6 (20.7%)	$P < 0.35$ , NS

**Table 3.2.** EPP extreme groups and social functioning on main axes

	Low scorers versus high scorers (U-test)
Social independence	$P < 0.85$ , NS
Occupational behaviour	$P < 0.10$ , tendency
Relationships	$P < 0.25$ , NS

### Discussion

Since the times of Kraepelin (1896) and Bleuler (1911), an immense amount of research has been done. Results point in the direction of multidimensional rather than uniform conceptualizations of course and outcome of schizophrenia. Even with sophisticated replicable diagnostic criteria, the precision of prediction of course and outcome lie only somewhere between 8% and 40% of explained outcome variance (Bland 1982). Comparing five different prognostic scales (Phillips 1953; Harris 1975; Vaillant 1964; Stephens et al. 1966; Strauss et al. 1977), Pietzcker and Gaebel (1987a) found that none had prognostic power concerning symptomatology. They showed that the two-item scale on premorbid sexual and social adjustment (Harris 1975) predicted social contacts and employment duration. The Strauss-Carpenter scale with 21 items predicted social contacts, employment duration, and additionally exhibited a strong relation-



ship to overall outcome assessment with the Clinical Global Impressions scale (CIPS 1977). With the help of multiple regression analysis Pietzcker and Gaebel (1987b) demonstrated that the Strauss-Carpenter scale explained between 10% (symptomatology) and 38% (employment duration) of outcome variance.

EPP examines the structure of psychotic experiences in an attempt to understand the endangered and overcompensated, split and persecuted, dismembered and mortified ego/self/body complex. On an abstract statistical level it helps to detect syndromes and points to three basic reaction patterns in schizophrenia. It emphasizes through statistical investigation the integral role of the human body for ego-consciousness. In groups with distinct degrees of ego-pathology it observes a baseline of symptomatology as a possible indicator of chronicity. Following the experiential patterns over time could answer the question whether the groups are distinct with regard to ego structure or whether different scores reflect different phases in the same process. Exploring phenomenologically the inner world of the psychotic individual adds awareness of structural viewpoints that one day may be prognostically relevant for the prediction of the individual course of schizophrenia.

The present investigation did not reveal a clear relationship between EPP and social adaptation. Our approach to solving the problem, however, was more or less tentative. In particular, the criteria for identifying "high-risk" and "low-risk" cases on the basis of EPP scores were heuristic and lacked an appropriate clinical description. Accordingly, we are planning to re-analyse our calibration sample with respect to the three empirically derived EPP scales. This analysis will yield a description of samples in terms of EPP, thus allowing, firstly, for detecting of phenomenologically homogenous subgroups and, secondly, for deciding upon the clinical relevance of our scales.

The overall result of non-correlation of pathology and social adaptation demonstrated again that florid psychotic symptomatology does not necessarily mean failure in social adaptation. An intensely hallucinating person may work and enjoy social contacts at times while another person with negative symptomatology may not function at all. This observation necessitates future research in negative symptoms which concur most with social disablement. Further, it has been demonstrated that there is little transfer across different variables; rather, in an "open-linked systems" approach each variable is its best predictor (Strauss and Carpenter 1981). "The acute symptoms do not, however, predict the future severity of the clinical poverty syndrome. Only the severity of social withdrawal and associated behaviours, and the indices of social performance with which they are corre-

lated, can do that. Like predicts like" (Wing, 1978, p 607).

Today, the phenomenological concept of EPP is still an interpretative psychiatric approach that assists in the therapeutic resynthesis of ego-consciousness including body-ego awareness. EPP by providing observational tools for the clinician, who in turn furnishes the researcher with data builds a bridge across clinical and therapeutic work, on the one hand, and research, on the other.

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## Appendix

### The three empirical syndromes

#### 1. *The endangered and overcompensated ego* (reproducibility 0.77)

(Item-no.)

- 1 I was not sure that I was the same person I used to be (Mr./Mrs...) or I had the feeling I was someone else.
- 5 I thought I had different family, a different life history, compared to what I used to believe.
- 11 I had the feeling the whole world was exploding and falling to pieces.

- 18 I felt overwhelmed, possessed by alien forces, powers or people.
- 24 I had tremendous power and influence and was able to direct and control people, natural forces or world affairs.
- 25 I was able to heal sick people by spiritual means.
- 26 I had visions. I was able to see things which happened far away and at another time.
- 27 I had one or several children.
- 28 I gave birth to living beings (without requiring sexual relations).
- 29 I felt doubled or multiplied. I consisted of many living beings or these beings lived inside of me.
- 40 Other people were able to read my thoughts.
- 41 I was able to read other people's thoughts.
- 42 I changed my language or my thoughts to symbols that only I understood so that nobody else could understand them.

Inner consistency (Pearson correlation coefficient): mean correlation = 0.20, min. (18.41) = 0.07, max. (24.25) = 0.50. Cronbach's alpha: item to total correlation = 0.76

#### 2. *The split and persecuted ego* (reproducibility 0.72)

- 6 I felt I was defenceless, at the mercy of outer influences. I couldn't defend myself and I wasn't aware of my own boundaries anymore.
- 7 I had to separate myself physically or mentally from other people in order to protect myself. I didn't allow anybody to come close to me. I shut myself off from others.
- 10 I felt an internal split or felt that I was being torn apart, splintered as a person or I felt that I was dissolving or falling to pieces.
- 12 My feelings weren't the same as my thoughts, experiences or actions. My experience was paradoxical and incongruent.
- 13 I felt torn between two powers/opposites (good/bad). Opposite feelings or incompatible emotions separated my being.
- 15 Something mysterious impaired my movements, my actions and decisions. My activity was obstructed, I felt slowed down or paralysed.
- 16 I felt spied upon, persecuted, watched and followed. I was no longer free in my actions and decisions.
- 17 I could no longer do what I intended to do; my movements and actions were directed and controlled. I experienced being a tool, a puppet.
- 19 I felt that my life was dissipating, that I was dying.
- 22 My soul, my inner liveliness was taken from me, was annihilated or killed.
- 43 My own thoughts left my head, they spread everywhere. They slipped away and everybody knew them.
- 44 My thoughts were torn apart. I had a tremendous confusion in my head.
- 46 My thoughts were disturbed from outside. My chain of thoughts was interrupted or some thoughts were taken away from me.



- 47 Everything that happened around me seemed dangerous or strange. I felt alarmed and watched everything attentively and anxiously.
- 48 I had to pay close attention to my movements. I had to strictly control them.

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Inner consistency (Pearson correlation coefficient): mean correlation = 0.16, min. (16.22) = 0.04, max. (12.44) = 0.33. Cronbach's alpha: item to total correlation = 0.75

3. *The dismembered and mortified body-ego*  
(reproducibility 0.70)

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- 2 I checked my appearance in the mirror more frequently than I did before.
- 4 My gender had changed. I felt I was a man (a woman).
- 19 I felt my life was dissipating, that I was dying.

- 20 I felt lifeless, dead as a mummy.
- 30 The appearance, the shape, of my body had partially or totally changed.
- 31 My limbs did not fit together in the usual way. Their connection was loosened, everything was disarranged or out of place. (I felt disoriented in my body).
- 32 My body or parts of it were torn to pieces or fell apart.
- 33 Parts of my body separated themselves from the whole so that I experienced them outside of me.
- 34 My whole body or parts of it were dead or dying (possibly already decaying).
- 36 I had to hurt myself in order to see my blood.

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Inner consistency (Pearson correlation coefficient): mean correlation = 0.23, min. (4.33) = 0.09, max. (31.32) = 0.45. Cronbach's alpha: item to total correlation = 0.75