The positive-negative distinction has emerged as a meaningful basis for understanding the heterogeneity of schizophrenia and treatment alternatives, but its delineation requires carefully devised, well validated techniques. This article considers the psychometric requisites for such an instrument and describes 30 criteria associated with operationalization, scale construction, and standardization. Six prominent positive-negative scales are compared on these criteria, and most are found deficient in terms of: a formalized interview procedure; detailed definitions for levels of symptom severity; exclusion of "secondary" negative symptoms; comparative scales to assess positive symptoms, depression, and global severity of illness; broad sampling of negative symptoms; large scale standardization studies; and determination of multiple facets of reliability and validity. The Positive and Negative Syndrome Scale (PANSS) is described as an effort to approach these principles of test standardization, and its clinical and research applications are discussed.

Since the early writing of Bleuler (1), schizophrenia has been identified as a complex multifaceted disorder. In the decades to follow, there has been growing recognition that this disease entity...
comprises more than one pathological process and that such heterogeneity may provide important clues to the treatment, the past and future course of illness, and possibly also the etiology. Particularly in the past few years, with the development of newer atypical antipsychotic compounds such as clozapine, risperidone, and amperozide, a more diversified and individualized approach to treating schizophrenic patients has prevailed, one that transcends the dopamine hypothesis and a simple, unitary model of schizophrenia.

The effort to address the heterogeneity of schizophrenia has historically been dominated by Kraepelin's (2) description of paranoid, catatonic, and hebephrenic (disorganized) subtypes, which after more than 70 years is still officially recognized in today's diagnostic nomenclature (3). Notwithstanding the heuristic value of Kraepelin's work, the subtypes clearly have not sufficed as a basis for decisions on treatment or prognosis, which raises some fundamental questions about their validity and practical benefit. The need for an undated perspective on the differing processes within schizophrenia thus has become evident to clinicians, researchers, and theoreticians alike.

THE POSITIVE-NEGATIVE DISTINCTION

A changing model of schizophrenia has come into focus beginning with the factor analytic study of Strauss and colleagues (4), which revealed in these patients the presence of two distinct symptom profiles. They described a "positive" presentation, in which the clinical picture is dominated by productive features, such as hallucinations and delusions, and a "negative" presentation, one characterized by pervasive deficits and loss of function, such as evidence of blunted affect and poverty of speech. This phenomenological distinction has been hypothesized to reflect basic neurobiological differences, with the positive symptoms linked to dopamine excess and hence a favorable response to classic neuroleptics (5) and the negative symptoms associated with structural brain deficit (5) or dopamine deficiency (6). Although the status of these proposals remains subject to dispute, the literature does confirm that the positive-negative distinction corresponds to differences in fundamental aspects of the schizophrenic disorder, such as premorbid functioning, family history of psychosis, neurological soft signs, neuroradiological measures, cognitive developmental and infor-