Diagnostic Approaches to Schizotypal Personality Disorder: A Historical Perspective

by Kenneth S. Kendler

Abstract

The goal of this article is to provide a historical perspective on the *DSM-III* concept of schizotypal personality disorder. It is argued that two major traditions have influenced our conceptualization of this diagnostic entity. The first or *familial* approach emphasizes the characteristic traits found in the deviant but nonpsychotic relatives of schizophrenics. The second or *clinical* approach focuses on patients who appear to demonstrate the fundamental symptoms of schizophrenia without psychotic symptoms or severe personality deterioration. A review of these two traditions concludes that while similar in some regards, they also differ in important ways in their views on the characteristics of the true "schizotype." The impact of these two traditions is then traced through the Danish Adoption Studies of Kety et al. to the development of the *DSM-III* criteria for schizotypal personality by Spitzer, Endicott, and Gibbon. Finally, the article reviews recent studies on the validity of specific criteria for schizotypal personality disorder (SPD) and reassesses the conceptual issue about the nature of the relationship of SPD to schizophrenia on the one hand and to other personality disorders on the other.

The goal of this review is to provide a historical perspective on the recently developed *DSM-III* diagnostic category of schizotypal personality disorder (American Psychiatric Association 1980). Two major historical trends in psychiatry have been influential in shaping the current concept of schizotypal personality disorder. The first is expressed in an extensive literature describing the characteristic traits found in the aberrant but nonpsychotic relatives of schizophrenic patients. This literature, termed *familial* because of its emphasis on observing schizotypal characteristics in members of the families of schizophrenic patients, is reviewed in Part I of this article. The second major trend that has shaped our current concept of schizotypal personality disorder consists of descriptions of patients who, though not classically schizophrenic, nonetheless demonstrate, in attenuated forms, what are regarded as the fundamental symptoms of schizophrenia. This literature, termed *clinical* because of its relative emphasis on observing schizotypal features in clinical populations, is reviewed in Part II.

Part III examines the origin of the criteria for "borderline schizophrenia" used in the influential Danish Adoption Study of Schizophrenia (Kety et al. 1968, 1975). The results of this study later served as the basis for the development of the *DSM-III* criteria for schizotypal personality (Spitzer, Endicott, and Gibbon 1979), which are also examined in Part III. The final section, Part IV, describes recent evaluations of the *DSM-III* criteria, and attempts to relate the divergent perspectives on the clinical entity of schizotypal personality disorder.

Part I. Description of Abnormal Personality Traits in Relatives of Schizophrenics

Of necessity, this review of the descriptive psychiatric literature on the personality characteristics most commonly seen in the abnormal but nonpsychotic relatives of schizophrenic patients is selective. Articles

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reviewed are limited to those written in English that provided sufficient description of the diagnostic approach used. The work of a number of German authors writing in the first half of this century is not considered here. For a summary of the history of the "schizoid" concept and a discussion of the contribution of these early German workers, the reader should consult several review articles (Essen-Møller 1946; Planansky 1966, 1972) or the relevant sections of M. Bleuler's (1978) recent major work on schizophrenia.

An inherent difficulty in approaching the diagnosis of personality disorders is the need to summarize the clinical nature of these syndromes into clear, unambiguous clinical criteria. In the past, descriptions of the odd personalities seen in relatives of schizophrenic patients have seemed as much in the province of the novelist as the nosologist. Therefore, in this section I have tried to summarize the diagnostic views of these descriptive psychiatrists, but also to let them speak with "their own voice," thereby conveying some of the literary quality of their descriptions of the aberrant but nonpsychotic relatives of schizophrenic patients. With the former aid in mind, table 1 presents the symptoms most commonly mentioned by the authors to be reviewed. For each author, I have attempted to determine which of these symptoms he felt characterized the nonpsychotic but schizophrenic-like relatives of schizophrenic patients. This determination inevitably involved judgment on my part, a task I tried to approach without preconceptions.

Kraepelin. Emil Kraepelin first articulated his concept of dementia praecox in the 6th edition of his textbook of psychiatry, originally published in 1896 (Kraepelin 1904). In that work he was already aware of the possible relationship between dementia praecox and abnormal premorbid personalities. However, he did not describe the presence of abnormal personalities in the relatives of patients with dementia praecox until the 8th edition of his textbook (originally published in 1909–13). There he wrote:

> Not infrequently . . . among the brothers and sisters of the patients there are found striking personalities, criminals, queer individuals, prostitutes, suicides, vagrants, [and] wrecked and ruined human beings. . . . [Kraepelin 1971, p. 234]

These "eccentric personalities" in the families of schizophrenic patients were, according to Kraepelin, "probably for the most part to be regarded as 'latent schizophrenias' and therefore essentially the same as the principal malady (i.e., schizophrenia) . . ." (Kraepelin 1971, p. 234). Although Kraepelin did not provide detailed descriptions of these eccentric personalities, it is interesting to note that he anticipated recent interest in the "schizophrenia spectrum," both in observing the occurrence of abnormal personalities in close relatives of schizophrenics and concluding that most such relatives probably suffered from a disorder "essentially the same as" schizophrenia itself.

Bleuler. After Kraepelin, our current views on the entity of schizophrenia have been most shaped by the writings of E. Bleuler. In his famous monograph on schizophrenia, originally published in 1911, Bleuler wrote:

> it is extremely important to recognize that . . . [the symptoms of schizophrenia] exist in varying degrees and shadings on the entire scale from pathological to normal; also the milder cases, latent schizophrenics, with far less manifest symptoms, are many times more common than the overt, manifest cases. [Bleuler 1950, p. 13]

Later in the monograph, he notes:

> If one observes the relatives of our patients, one often finds in them peculiarities which are qualitatively identical with those of the patients themselves, so that the disease appears to be only a quantitative increase of the anomalies seen in the parents and siblings . . . . There is also latent schizophrenia, and I am convinced that this is the most frequent form, although admittedly these people hardly ever come for treatment . . . . In *this form, we can see in nuce* all the symptoms and all the combinations of symptoms which are present in the manifest types of the disease. Irritable, odd, moody, withdrawn or exaggeratedly punctual people arouse . . . the suspicion of being schizophrenic. [Bleuler 1950, pp. 238–239]

In his textbook of psychiatry, Bleuler notes that in relatives of schizophrenic patients, one most frequently observes:

> schizoid characters, people who are shut-in, suspicious, incapable of discussion, people who in a narrow manner pursue vague purposes, improvers of the universe, etc. [Bleuler 1978, p. 441]

Gadelius and Rosanoff. Around the time Bleuler was writing his monograph on schizophrenia, we have two descriptions of the personality peculiarities in relatives of schizophrenic patients. Gadelius, working in Scandinavia, wrote in 1910 of a peculiarity in character:

> encountered in nearly all the parents or relatives of the victims

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> of dementia praecox. This type varies equally much in form as the clinical types of the disease itself, it is true, but one trait, a certain unreasonableness and inaccessibility to argument, characterizes all its variations. We find in these persons all kinds of preconceived notions, of superstition and of affected wisdom. From them are recruited the vegetarians, the fanatical outdoor enthusiasts . . . and the champions of quacks and imposters. [As quoted in Essen-Møller 1947, p. 258]

Working in the United States, Rosanoff noted the following in 1911:

> In the pedigrees of cases of dementia praecox we find ancestors and collateral relatives described in the following significant terms: cranky, stubborn; worries over nothing; religious crank; nervous, queer; restless, has phobias; suspicious of friends and relatives. [Rosanoff 1911, p. 234]

Kretschmer. While peculiarities of several sorts had been noted in relatives of schizophrenic patients, the first detailed account of such personalities is given by Ernst Kretschmer. In his book "Physique and Character," first published in 1921, Kretschmer outlined his theory of temperament and its relationship to psychoses. There he wrote, "Viewed in a large biological framework . . . the endogenous psychoses are nothing other than marked accentuations of normal types of temperament" (Kretschmer 1970, p. 119). He felt that there were two major personality types that corresponded with the two major endogenous psychoses: schizophrenia and manic-depressive psychosis. The normal forms of these personalities he termed schizothyme and cyclothyme. When these personality traits were present to a pathological degree, he called them schizoid and cycloid.

According to Kretschmer, close relatives of schizophrenic patients often had a schizoid personality. Although also observed premorbidly in schizophrenic patients, the schizoid temperament or ". . . typical [personality] characteristics of a constitutional type may sometimes be more clearly delineated in the nearest relations than in the patient himself" (Kretschmer 1970, p. 116). Kretschmer provided several illustrative pedigrees in which only one member was schizophrenic, but in which various aspects of the schizoid temperament were evident in nearly all the other relatives (see Kretschmer 1970, Table X, p. 117, and Table XIII, p. 121).

Kretschmer described three major characteristics of the schizoid character. In decreasing order of frequency, there were:

> 1. Unsociable, quiet, reserved, serious (humourless), eccentric.
> 2. Timid, shy, with fine feelings, sensitive, nervous, excitable, fond of nature and books.
> 3. Pliable, kindly, honest, indifferent, dull-witted, silent.
> [Kretschmer 1970, p. 155]

He elaborated on these three major aspects of the schizoid temperament:

> The characteristics in group 1 are absolutely the most common, in that they run like a scarlet thread through the whole schizoid characterology, as well as through groups 2 and 3. [Kretschmer 1970, pp. 155–156]

Kretschmer frequently emphasized the poor social relations of schizoid individuals. Such people frequently stated that "There is a pane of glass between me and mankind." While they might be comfortable within a small social circle or superficially sociable in a wider gathering, schizoid individuals never had a normal range of intimate human relations. This disinclination for social intercourse led to what Kretschmer termed autism. Since schizoid individuals shut themselves away from their fellow man, they naturally tended to construct an autistic world out of their "thoughts and favorite pursuits." For some gifted individuals, this process could lead to artistic creativity. More commonly, it resulted in the "sulky eccentric, who broods in a locked, ill-ventilated dungeon over his own ideas . . ." or, with more active individuals, to the "queer eccentrics and cranks leaving their corners with a sudden jerk as 'enlightened' and 'converts' . . . [to] preach the ideal of humanity, raw dieting, gymnastics." [Kretschmer 1970, p. 164]

Regarding the second and third common characteristics of the schizoid temperament, Kretschmer wrote:

> Groups 2 and 3 stand in a certain opposition to one another . . . . Group 2 contains, in all the possible shadings, the phenomena of psychic oversensitivity . . . . Group 3 on the contrary contains indications of a certain psychic insensitivity, dullness, and lack of spontaneity. [p. 156]

Kretschmer regarded the "quality of timidity" or "oversensitivity" to be ". . . a specific characteristic of the schizoid temperament . . ." (p. 163). He further noted:

> The timidity is . . . a hyperaesthetic affective attitude at the entrance of a stranger into the proscribed autistic areas of the schizoid personality. The entrance of a new person is felt in itself as an overwhelming stimulus, as well as an unpleasant one, and this abnormally strong stimulus emits a tetanus-like, laming influence over

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> the thought processes . . . . The helpless feeling of anxiety in new and unaccustomed situations . . . is a closely related hyperaesthetic stigma of schizoid pedants and eccentrics. [p. 164]

Kretschmer believed that the feeling of insecurity displayed by schizoid people "is often transferred to the onlooker; many a schizoid behaves so oddly, vaguely, opaquely, and strangely . . ." (p. 163) that their behavior is easily detected by untrained observers as odd.

This hypersensitivity of the schizoid at first seems to contrast with the tendency toward indifference. Of this apparent contradiction, Kretschmer wrote:

> He alone, however, has the key to the schizoid temperament who has clearly recognized that the majority of schizoids are not either oversensitive or cold, but that they are oversensitive and cold at the same time . . . . [Kretschmer 1970, p. 156]

Kretschmer repeatedly commented on the "cold, numbed, lifeless exterior" and the poor affective response often seen in schizoids. In many schizoid individuals, such a demeanor was thought to hide ". . . a tender personality-nucleus with the most vulnerable nervous sensitivity, which has withdrawn into itself, and lies there contorted" (Kretschmer 1970, p. 157). However, other schizoid persons seemed truly devoid of sensitivity and empathy, and therefore capable of extreme cruelty to animals or man.

Kretschmer also often described the "lame" demeanor and psychomotor function of schizoid individuals. Such individuals seemed particularly ill-adapted for stresses of life.

Kretschmer's literary style makes a precise summary of his view of the schizoid difficult. However, he is consistent in emphasizing three major aspects of the schizoid temperament: social withdrawal with accompanying oddness and eccentricity, shyness with a hypersensitivity to social environments, and an abnormal demeanor that could range from cold and lifeless to dull-witted and lame.

Barrett. In the 1925 proceedings of the Association for Research in Nervous and Mental Disease, Barrett presented a paper on "Heredity Relations in Schizophrenia" (Barrett 1928). He noted that:

> in addition to the occurrence of well-differentiated clinical forms of psychoses in the families of those who have schizophrenia, it has long been appreciated that there occur in these families individuals who are otherwise definitely abnormal in their mental qualities. [Barrett 1928, p. 75]

Although he did not give any single description of these "abnormal mental qualities," Barrett presented six large pedigrees of families of schizophrenic patients that contained multiple individuals whom he described as having an "abnormal character" or "schizoid personality." I have abstracted his clinical descriptions of 11 such relatives:

> 1. Irritable . . . outbursts of temper . . . considered by her family as definitely abnormal.
> 2. Odd character, stubborn, unreasonable . . . lived a lonely, secluded life.
> 3. Reserved, unsociable, peculiar . . . "one could never get acquainted with him."
> 4. Irritable, stubborn, unreasonable.
> 5. Strict in his view of life, bigoted, quick-tempered, and excessively religious.
> 6. Irascible . . . disagreeable . . . stingy, quick-tempered, and moody.
> 7. Odd personality who never worked and lived a quiet, secluded life.
> 8. Never married, lived alone, irritable, and showed many eccentricities.
> 9. Emotionally cold, unsympathetic in her family and social life . . . odd, peculiar.
> 10. Unstable character . . . "one of the queerest of men."
> 11. Bad tempered . . . moodiness . . . marked sulkiness and irritability.
>
> [Barrett 1928, pp. 84–87]

Kallmann. Kallmann was one of the first investigators to make a systematic examination of the frequency of "schizoid personality" in the relatives of schizophrenic patients. For his large family study of schizophrenia based on probands selected from the Herzberge psychiatric hospital in Berlin, Kallmann defined two subtypes of schizoid personalities: eccentric borderline cases and schizoid psychopaths (Kallmann 1938). Along with definite and doubtful cases of schizophrenia, these two types of schizoid personalities constituted what he termed the "group of schizoform abnormalities" or the "schizophrenic disease-complex." He defined "borderline cases" as ". . . cranks and eccentrics suggestings schizophrenia . . . [and] the various schizoid personalities with peculiar and emotionally defective attributes" (Kallmann 1938, p. 37 and p. 102). They displayed symptoms ". . . resembling schizophrenic defects without originating from genuine psychotic processes."

His description of schizoid psychopaths is more thorough:

> . . . stubborn and perverse recalcitrants, malicious and cold-hearted despots, superstitious and pietistic religio-maniacs, secretive recluses,

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sectarian dreamers out of touch with reality, and the over-pedantic, avaricious and literal minded people. [Kallmann 1938, p. 37]

And later:

Our concept of schizoid psychopath . . . embraces the unsociable, cold-hearted, indecisive and fanatic types . . . as well as . . . bullheaded oafs, malicious tyrants, queer cranks, over-pedantic schemers, prudish "model children" and daydreamers out of all touch with reality. However, we included [as schizoid] only psychopaths who showed the fundamental schizoid characteristics of autistic introversion, emotional inadequacy, sudden surges of temperament and inappropriate motor responses to emotional stimuli . . . . [Kallmann 1938, pp. 102–103]

Kallmann emphasized that schizoid personalities share with schizophrenic patients a common "defect" in emotional functioning, social withdrawal, and frequent eccentric and autistic preoccupations.

Slater. One of the most thorough descriptions of the aberrant personalities found in relatives of schizophrenics was provided by Eliot Slater. I quote at length from his major twin-family study of schizophrenia:

The greatest psychiatric interest attaches to the abnormal personalities in [the relatives of] the schizophrenic group. The *paranoid* traits which were their most marked characteristic are described by informants in the following terms: suspicious, sensitive, sullen, touchy, grouchy, morose, resentful, unforgiving, difficult, quarrelsome, self-conscious, jealous, litigious, critical, takes things the wrong way, has rows with all the family, doesn't get on with people, makes heartless accusations.

The *eccentricities*, which are almost equally characteristic, attract a different constellation of epithetical descriptions . . .: giggly, opinionated, pedantic, narrow-minded, meticulous, obstinate, humorless, rigid, conventional, conceited, superstitious, prudish, cranky, miserly, foxy, precise, brusque, verbose, circumstantial talker, little-minded, full of facts, learned but incompetent, old-fashioned, routine-bound, has bizarre ideas strongly held, spiritualistic, believes in self-cure by hypnotism.

The quality we call *lack of feeling* comes out in such descriptions as: impassive, cold, calculating, placid, hard and stingy, disciplinarian, unsympathetic, cold, slack, unscrupulous, withdrawn, very sane, little feeling, unkind and selfish, unconcerned about a debt.

Closely related to lack of affect is the incapacity for warmth which shows itself in qualities of *reserve* . . . shy, serious, staid, haughty, snobbish, studious, unforthcoming, independent, taciturn, unsociable, quite reserved, no give and take, never reveals his thoughts, absorbed in scientific pursuits, one friend only.

The anergic traits seen in the schizophrenic families receive such descriptions as: feckless, dependent, tired, slack, unreliable, subservient, a poor thing, unable to work and health gave way, separated from family and trampled, no initiative or money sense, neglected family and went downhill. All these are descriptions by friends and relatives of actual people . . . . The same or similar words occur in descriptions of abnormal personalities from the other families [with nonschizophrenic psychiatric illness], but much less frequently, not in such concentrated form, and they are usually submerged by descriptions of a very different tone. [Slater 1953, pp. 82–83]

Inouye. Twin studies of schizophrenia are somewhat disappointing as a source of descriptions of the aberrant personality characteristics of the nonschizophrenic cotwins of schizophrenic twins. Although "schizoid" characteristics have been frequently described in these cotwins (Shields, Heston, and Gottesman 1975), the authors only rarely provide clinical details of their criteria for this diagnosis. Tienari (1963), Kringlen (1967), and Fischer (1973) present case histories of their monozygotic (MZ) twin pairs. These histories suggest that the personality type of the "well" member of MZ twin pairs discordant for schizophrenia can be quite variable. However, only Inouye (1970) in Japan attempted to summarize what he felt were the most characteristic features of the abnormal personalities seen in the nonpsychotic members of MZ twin pairs discordant for schizophrenia. He first described impressions gained from interviews with the five "schizoid" MZ cotwins of schizophrenic twins.

They were inactive, passive, and weak-willed on the one hand, and ambivalently sensitive on the other. They were rather mutistic, and their emotion was flat, but sometimes stiff, cold, or harsh. They were indifferent and nonsyntonic, and sometimes suspicious. Their way of thinking is characterized by its peculiar formality. In short, they are typically autistic. [Inouye 1970, p. 94]

They were described by their relatives as being:

introvert[ed], submissive, kind, honest, and stoical, on the one hand, and paradoxically irritable, emotionally unstable, negativistic, egocentric and uncompromising on the other. [Inouye 1970, p. 94]

Stephens and Coworkers. Before the Danish Adoption studies of schizophrenia (examined below), the last systematic attempt to describe the

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abnormal personality syndromes that aggregate in relatives of schizophrenic patients was by Stephens et al. (1975). They found that two particular personality types were substantially more common in interviewed relatives of schizophrenic patients than in interviewed relatives of controls. The first of these syndromes, which they termed "paranoid personality," described the following:

> those who were consistently hostile, not only to the interviewer but also to acquaintances, neighbours and hospital staff, but expressed no overt delusions. [Stephens et al. 1975, p. 100]

The second syndrome, which they termed "schizoid personality," was made up of two "rather distinct" subgroups:

> (i) individuals who were socially withdrawn from choice, shy, submissive, lacking initiative, or unable to establish emotionally warm or close relationships;
> (ii) individuals who were rambling, vague, unrealistic and often excessively anxious at interview and appeared to be eccentric and solitary in their personal lives. [Stephens et al. 1975, p. 100]

Part I. Conclusions. Table 1 presents a summary of the viewpoints of the nine investigators whose descriptions of the prominent abnormal personality traits in nonpsychotic relatives of schizophrenic patients have been examined. Inevitably, such a table is crude in that if a trait is not mentioned by an author, it is unknown whether he looked for it in vain or simply did not consider it. The descriptions of some of the authors in the table are extensive (e.g., Kretschmer and Slater) while others are brief (e.g., Kraepelin).

Considered together, these authors felt that odd-eccentric behavior and demeanor, social isolation, irritability, aloof-cold affect, and suspiciousness were the most common traits seen in the abnormal but nonpsychotic relatives of schizophrenic patients. Other characteristics of such individuals, mentioned by at least two of the authors, were superstitiousness, poor psychosocial functioning, nervousness, odd speech, and social anxiety-hypersensitivity.

Table 1. Specific characteristics of the abnormal personalities of relatives of schizophrenics noted by authors reviewed [1]

Characteristic	Kraepelin	Bleuler	Gadelius	Rosanoff	Kretschmer	Barrett	Kallmann	Slater	Inouye	Stephens et al.	Number noting this characteristic
Eccentric-odd	X	X	X	X	X	X	X	X		X	9
Irritable-unreasonable		X	X	X		X	X	X	X		7
Social isolation		X			X	X	X	X		X	6
Aloof, cold demeanor					X	X	X	X	X	X	6
Suspiciousness		X		X				X	X	X	5
Superstitiousness			X				X	X			3
Poor psychosocial functioning	X				X			X			3
Nervousness				X	X					X	3
Odd speech								X		X	2
Hypersensitivity					X				X		2

[1] Noted by at least two of the authors.

Part II. Clinical Descriptions of Nonpsychotic Patients Presenting With "Schizophrenic-Like" Symptomatology

This section presents a review of the second major tradition that has shaped our current viewpoint on schizotypal personality disorder: clinical descriptions of patients who, although not classically schizophrenic, nonetheless had substantial "schizophrenic-like symptomatology." The authors reviewed will be limited to those who specifically conceptualized the syndrome they described as being fundamentally related to schizophrenia, as opposed to a more general conception of "borderline" function.

Zilboorg—Ambulatory Schizophrenias. Zilboorg described what he termed the "ambulatory schizophrenias" in two articles, published in 1941 and 1957. Such individuals, he noted, presented none of the "flagrant" symptoms of "advanced schizophrenia," such as delusions, hallucinations, or markedly flattened affect. Rather, he viewed these patients as suffering from subtler abnormalities. Foremost, he emphasized that they demonstrated autistic or dereistic thinking. This, he described as a tendency to think "away from things," to confuse the real world with fantasy. Despite their lack of integration into the world around them, Zilboorg emphasizes the apparent superficial normality of such individuals. They "may appear normal in all respects" and rarely attract attention to themselves. They

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can frequently function adequately at work, and can have a number of acquaintances, but no intimate friends. They seek direction from those around them and have an "apparent need of social milieu and social recognition." In spite of this, they do not closely confide in others. Zilboorg describes such individuals as taciturn and emotionally tense. Their inner life, he notes, is "literally suffused with hatred." Ambulatory schizophrenics frequently suffer from hypochondriacal complaints and have sexual interests that are usually of a perverse or sado-masochistic nature. In his 1941 report he describes three cases of ambulatory schizophrenia
—all aloof perpetrators of brutal murders. He concludes his 1957 report with a description of a "young, ambulatory schizophrenic girl of 19 who lived her daily life in a shut-in, more or less remote manner, and who loved to spend many hours acting in front of a mirror various Shakespearian roles" (Zilboorg 1957, p. 682).

Deutsch—The "As-If Personality." Deutsch (1942) reported "psychoanalytic observations" of a series of cases who were characterized by a marked impoverishment in their emotional relationship to the outside world. These individuals presented with a superficial sense of intactness and often a history of apparently normal interpersonal relationships and initial school or occupational success. Underlying this superficial intactness, however, was a striking absence of feelings of which the patient was only dimly aware. The absence of any true sense of identity in these individuals led them to adopt the values and behavior of whomever they were with. In fact, they would often seek out individuals or groups with whom they could identify and so give themselves a sense of internal direction. Although they would only "play act" in producing the behavior expected of them, their "acting" was often skillful. While these patients might experience a lack of affect, neither their behavior nor their often active social life betrayed this.

Many of the cases she presented had a family history of psychosis or schizophrenia. Furthermore, Deutsch noted a similarity between these personalities and the premorbid characteristics of schizophrenic patients. Therefore, she concluded that the "as-if" personality was etiologically related to schizophrenia.

Hoch et al.—Pseudoneurotic Schizophrenia. Of all the dynamically oriented descriptions of patients demonstrating mild "schizophrenic-like" symptomatology, the one that has most influenced the current concept of *DSM-III* SPD is that of Hoch and colleagues. Hoch and Polatin (1949) begin their description of the "pseudoneurotic forms of schizophrenia" by noting that a number of patients were seen in psychoanalysis for neurotic-like symptoms but, on further examination, were shown to differ fundamentally from patients with a true neurosis. They suggested that such patients should be classified

> with the schizophrenic reactions because many of the basic mechanisms in these cases are very similar to those commonly known in schizophrenia. [Hoch and Polatin 1949, p. 248]

In two articles written a decade apart, Hoch and colleagues described what they regarded as the characteristic symptoms of this syndrome (Hoch and Polatin 1949; Hoch and Cattell 1959). In attenuated form, these patients displayed what Hoch and colleagues considered to be the "primary" symptoms of schizophrenia. These symptoms included abnormal thought processes such as "primary process thinking" and tangentiality, and distortions in self-concept and body image. Classic but brief psychotic symptoms often occurred in these cases:

> a daydream emerging into a hallucination or a vague hypochondriacal idea becoming a somatic delusion, ideas on relationship with other people, in the framework of social anxiety, developing into ideas of reference. . . . [Hoch and Polatin 1949, pp. 252-253]

Affect in these cases was typically inappropriate and labile, but could more rarely be strikingly cold and controlled. However, Hoch et al. believed that three symptoms were particularly characteristic of the syndrome of pseudoneurotic schizophrenia: pan-anxiety, pan-neurosis, and pan-sexuality. Pseudoneurotic schizophrenics experienced persistent, diffuse anxiety pervading all aspects of their life. This anxiety was largely unresponsive to "defensive maneuvers and symptoms." Multiple neurotic symptoms including obsessions, conversion symptoms, phobias, depression, neurasthenia, and derealization were observed in these patients. Furthermore, "acting-out" and self-dramatizing behavior, such as aggressive or sexual antisocial behavior or drug dependency, were commonly seen. Chaotic sexuality including "autoerotic, oral, anal, homosexual and heterosexual tendencies," in reality or fantasy, also characterized these patients. Of interest, none of the five case histories presented by Hoch and Polatin (1949) had a family history of schizophrenia.

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Rado. Rado first proposed the term "schizotypal" in 1953 as a shorthand expression for ". . . the psychodynamic expression of the schizophrenic genotypes." He hypothesized that schizotypal individuals have two major abnormalities: an innate deficit in the experience of pleasure, which Rado termed an "integrative pleasure deficiency," and a distorted awareness of "bodily self," which he called a "proprioceptive disorder." The manifest symptoms seen in schizotypal individuals could be understood, according to Rado, as deriving from these two fundamental deficiencies. The major manifest symptoms included interpersonal dependency, "extreme" sensitivity to loss of affection, a "rudimentary [and] ill-proportioned" sexual life, a reduced capacity for substantial relationships, intense, but usually suppressed, feelings of fear and rage, and a propensity for cognitive disorganization under stress, particularly marked by thought disorder. Such individuals carried a lifelong risk for a full psychotic schizophrenic decompensation.

Meehl. In an attempt to conceptualize the nature of the genetic contribution to schizophrenia, Meehl concluded that an "integrative neural defect" (termed "schizotaxia") is "all that can properly be spoken of as inherited" (Meehl 1962). An individual who inherits schizotaxia is, after Rado, called a schizotype. Meehl regarded the following four "core behavior traits" as universally characteristic of schizotypal individuals.

1. Cognitive slippage, seen by Meehl as including the "very mildest forms" of schizophrenic thought disorder.
2. Interpersonal aversiveness, characterized by "social fear, distrust, expectation of rejection and conviction of . . . unlovability."
3. Anhedonia, defined as "a marked, widespread, and refractory defect in pleasure capacity."
4. Ambivalence

Meehl contended that depending on the environment, an individual with an inherited predisposition to schizotaxia could develop a syndrome varying from a "well-compensated" schizotype to a severe schizophrenic. However, fundamentally, all such individuals would manifest, to different degrees, the four characteristics noted above.

Part II. Conclusions. Table 2 presents a summary of the symptoms noted as particularly prominent in patients presenting with a "schizophrenic-like" clinical picture. Considered together, writers on this topic felt that disordered, primary process, or "magical" thinking and a lack of deep interpersonal relationships were particularly characteristic of such patients. However, at least two of the authors noted a variety of other symptoms: deviant sexuality, profound anger, interpersonal dependency, sensitivity to rejection, anhedonia, and superficial social intactness.

How similar are the descriptions of the two broad historical viewpoints that have shaped our current concept of schizotypal personality disorder, i.e., the familial and clinical traditions? A comparison of tables 1 and 2 indicates that although there is some overlap in the symptoms noted by both traditions, the differences are at least as marked as the similarities. The major area of agreement is in the disturbed interpersonal functioning of "schizotypal" individuals. The familial tradition emphasizes their social isolation, while the clinical

Table 2. Specific characteristics of patients who, though not classically schizophrenic, presented with substantial schizophrenia-like symptomatology

Characteristic	Zilboorg	Deutsch	Hoch et al.	Rado	Meehl	Number noting this characteristic
Disordered thinking	X		X	X	X	4
Lack of deep interpersonal relations	X	X		X	X	4
Deviant sexuality	X		X			2
Profound anger	X			X		2
Interpersonal dependency		X		X		2
Sensitivity to rejection				X	X	2
Anhedonia				X	X	2
Superficial intactness	X	X				2
Brief psychotic symptoms			X			1
Widespread anxiety			X			1
Multiple neurotic symptoms			X			1
Preoccupation with fantasy	X					1
Acting-out behavior			X			1

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tradition stresses their lack of deep interpersonal relations. However, with regard to this specific symptom area, it is conceivable that the two traditions are describing, in language unique to each, basically the same phenomenon. There are other areas of more "minor" agreement. The "nervousness" noted by some familial authors may be similar to the "pan-anxiety" noted by Hoch et al. (Hoch and Polatin 1949; Hoch and Cattell 1959). The "irritability" described by the familial authors may be related to the "profound anger" described by several dynamic authors. The "sensitivity to rejection" noted by several clinical authors may correspond to the "hypersensitivity" noted by two of the familial authors. Lastly, the "odd speech" of the familial authors may be related to the "disordered thinking" of the clinical authors.

There are, however, several areas of substantive disagreement between the familial and clinical authors in their views of "schizotypal" individuals. While the familial authors repeatedly emphasize the oddness and eccentricity of such people, the clinical authors, in contrast, speak of the superficial "intactness," normality, and non-oddness of such individuals. The deviant sexuality stressed by the clinical writers has no parallel in the writings of the familial authors. The same is true for the brief psychotic symptoms (such as transient hallucinations and ideas of reference), "acting-out" behavior, and multiple neurotic symptoms (e.g., obsessions and derealization) noted by the clinical authors. The familial authors stress the aloofness and coldness of "schizotypal" individuals, while such characteristics are not stressed by the clinical authors, with the possible exception of Zilboorg. Hoch et al. note that labile affect usually characterizes such individuals.

Is it possible that these two groups of authors are viewing the same basic phenomenon from two very different perspectives? Clearly no definitive answer to this question is possible. However, a review of the symptoms stressed by the two traditions, as well as the subjective "clinical" impression one gains on reading these two literatures, leads me to conclude that although the syndromes described by these two traditions share certain important symptoms, they are *not* fundamentally the same.

Part III. Origin of *DSM-III* Criteria for Schizotypal Personality Disorder

Danish Adoption Study. The criteria for borderline schizophrenia used in the Copenhagen sample of the Danish Adoption Study of Schizophrenia (Kety et al. 1968, 1975) merit examination both because of the substantial influence this investigation had on current interest in the "schizophrenia spectrum" and more specifically because the study played a major role in the formation of *DSM-III* criteria for SPD (Spitzer, Endicott, and Gibbon 1979). The criteria for borderline schizophrenia used in this study, developed largely by Paul Wender (Kety et al. 1968), are shown in table 3.

A comparison of these symptoms with those noted in tables 1 and 2 indicates that the criteria used in the Danish studies were more heavily influenced by the clinical than by the familial traditions as outlined above. The influence of the work of Hoch is particularly evident in the inclusion in this criteria list of unusual mentation, micropsychosis, chaotic sexual adjustment, multiple neurotic symptoms, and widespread anxiety. The work of Deutsch is referred to in the inclusion in these criteria of the description of the "as-if" personality. On the other hand, many of the symptoms stressed by the familial writers, such as eccentricity, aloofness, social isolation, and suspiciousness, are not mentioned.

Development of the *DSM-III* SPD Criteria. During the development of

Table 3. Diagnostic criteria for borderline schizophrenia used by Kety et al. (1968)

1. *Thinking*: Strange or atypical mentation; thought shows tendency to ignore reality, logic, and experience resulting in poor adaptation to life experience; fuzzy, murky, vague speech

2. *Experience*: Brief episodes of cognitive distortion; feelings of depersonalization, of strangeness or unfamiliarity with or toward the familiar; micropsychosis

3. *Affective*: Anhedonia—never experiences intense pleasure, never happy; no deep or intense involvement with anyone or anybody

4. *Interpersonal behavior*: May appear poised, but lacking in depth (as-if personality); sexual adjustment; chaotic fluctuation, mixture of heterosexuality and homosexuality

5. *Psychopathology*: Multiple neurotic manifestations which shift frequently (e.g., obsessive concerns, phobias, conversion, psychosomatic symptoms); severe widespread anxiety

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DSM-III, interest emerged in creating operationalized diagnostic criteria for personality disorders. Spitzer and colleagues proposed criteria for a new diagnostic category they termed SPD (Spitzer, Endicott, and Gibbon 1979). These criteria were developed from 35 interviews with relatives from the Copenhagen sample of the Danish Adoption Study of Schizophrenia (Kety et al. 1975). These interviews included all cases diagnosed by Kety and coworkers as borderline schizophrenia (B_3) ($n = 10$), uncertain borderline schizophrenia ($n = 19$) (D_3), and uncertain acute schizophrenia ($n = 1$) (D_2), and six randomly chosen cases diagnosed by them as schizoid personality ($n = 6$). These interviews were selected without regard to the relationship of the relative to the schizophrenic or control adoptee. Of the 36 cases used, 22 (61.1 percent) were biological relatives of schizophrenic adoptees, 8 were biological relatives of control adoptees, 2 were adoptive relatives of schizophrenic adoptees, and 4 were adoptive relatives of control adoptees.

A detailed examination of these interviews by Spitzer and co-workers revealed 17 items that they felt characterized these cases. Using the eight most commonly rated of these items, they could identify 30 of the 36 original cases and only 2 of 43 other interviews that had been given a diagnosis by Kety et al. as outside the "schizophrenia spectrum." These eight criteria, which were then proposed as the criteria for SPD, are listed in table 4.

Before these proposed criteria are examined in detail, it is important to stress the rationale behind their development. These criteria were created in an attempt to operationalize the judgments used by Kety and coworkers in diagnosing borderline schizophrenia and *not* primarily to identify biological relatives of schizophrenic adoptees. Since a substantial majority of the cases so diagnosed by Kety et al. were biological relatives of a schizophrenic, it could be predicted that these criteria would successfully identify such individuals. However, had the *primary* goal of Spitzer and coworkers been to develop criteria to identify relatives of schizophrenic patients, they might have taken two other approaches, both different from the one they employed. Either they could have examined all the biological relatives of the schizophrenic adoptees and found what criteria could best discriminate them from biological relatives of controls. Or, they could have examined only the 20 cases of borderline or uncertain schizophrenia diagnosed by Kety et al. who were biologically related to a schizophrenic. As a function of their method of development, the criteria for *DSM-III* SPD derive from the criteria initially used by Kety et al. for diagnosing borderline schizophrenic (table 3) that were first applied to the interviews by Kety et al. and then "re-extracted" in operationalized form by Spitzer et al. Furthermore, because of their method of development, it would not be surprising if the criteria for SPD were not optimal for identifying the aberrant but nonpsychotic relatives of schizophrenics.

Table 4. Criteria for schizotypal personality disorder [1]

1. Magical thinking
2. Ideas of reference
3. Social isolation
4. Recurrent illusions
5. Odd speech
6. Inadequate rapport, aloof, cold
7. Suspiciousness
8. Undue social anxiety-hypersensitivity

[1] Proposed by Spitzer, Endicott, and Gibbon (1979).

Nevertheless, the criteria for schizotypal personality disorder (table 4) differ considerably from those initially used by Kety et al. to identify borderline schizophrenia. Of the eight criteria, three have a close correspondence to the criteria proposed by Wender (table 3): magical thinking, odd speech, and recurrent illusions. Two other criteria have a possible loose relationship with the criteria outlined by Wender: ideas of reference and undue social anxiety. Three of the criteria proposed for schizotypal personality disorder, however, have no obvious relationship to the criteria outlined by Wender: social isolation, inadequate rapport with an aloof, cold affect, and suspiciousness. Of interest, all three of these symptoms were among those most commonly noted by the descriptive psychiatrists as characteristics of the aberrant but nonpsychotic relatives of schizophrenic patients (table 1). While the criteria for borderline schizophrenia proposed by Kety et al. were representative of the clinical viewpoint on "schizotypal personality disorder," the criteria developed by Spitzer et al. from interviews diagnosed by Kety et al. represent a hybrid including symptoms from both the clinical and familial traditions. One plausible explanation for this initially puzzling result is that Kety et al. were not explicitly applying only their published criteria for borderline schizophrenia. In addition (S. Kety, personal communication, 1984), at least one of the original investigators also considered the entity of latent schizophrenia as described by Bleuler as within the framework of borderline schizophrenia. As noted

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above, this syndrome probably resembles the concept of "schizotypal personality disorder" as articulated by the familial tradition. Thus, the criteria for *DSM-III* SPD as proposed by Spitzer et al. may reflect the admixture in the minds of the initial investigators in the Danish Adoption Study of Schizophrenia of the concepts of "schizotypal personality disorder" as articulated by the familial and clinical traditions.

Part IV. Perspectives on SPD Criteria

Recent Studies. Four studies have recently attempted to evaluate the *DSM-III* criteria for SPD (Kendler, Gruenberg, and Strauss 1981; Baron et al. 1985; Gunderson, Siever, and Spaulding 1983; Kendler, Gruenberg, and Tsuang 1983). Kendler, Gruenberg, and Strauss (1981) applied the *DSM-III* criteria for SPD to all 321 complete and 7 incomplete interviews (judged by the authors to provide sufficient diagnostic information) from the Copenhagen sample of the Danish Adoption Study of Schizophrenia. They found that the relatives meeting criteria for SPD strongly aggregated in the biological relatives of the schizophrenic adoptees. Compared to the diagnoses of borderline and uncertain schizophrenia given by Kety et al., the diagnosis of SPD was more specific (i.e., identified proportionally fewer relatives not biologically related to a schizophrenic) but less sensitive (i.e., identified fewer biological relatives of a schizophrenic). Furthermore, the distribution of cases of SPD in the biological relatives of the three subgroups of schizophrenic adoptees differed from that found for borderline and uncertain schizophrenia. While the latter diagnosis was approximately equally frequent in the biological relatives of the chronic, borderline, and acute schizophrenic adoptees, the diagnosis of SPD was significantly concentrated in the biological relatives of the chronic schizophrenics. The major limitation of this study is that the criteria for SPD were reapplied to cases of which a subset were used to develop the criteria. However, this study does demonstrate that the criteria can identify biological relatives of schizophrenics with a relatively high degree of accuracy. Furthermore, the results suggest that the criteria define a syndrome that shares some characteristics with borderline schizophrenia as globally diagnosed by Kety et al., but is by no means identical to that diagnostic category. This study does not address the question of whether the criteria for SPD are those that would have maximal sensitivity and specificity for the identification of biological relatives of schizophrenic patients.

A validation of the ability of the *DSM-III* criteria for SPD to identify relatives of schizophrenic patients on an independent sample was recently provided by Baron et al. (1985). In personally interviewed first-degree relatives of schizophrenic patients (meeting *DSM-III* criteria) and matched controls collected in New York, Baron et al. found that *DSM-III* SPD was highly significantly more common in the relatives of the schizophrenic patients. In a related report from the same sample, Baron (1983) examined the familial relationship between schizophrenia and SPD from another perspective. He found that siblings of schizophrenic probands had a higher risk for schizophrenia when both their parents had SPD than when both their parents were without psychiatric illness.

Examining 54 selected interviews from the Danish Adoption Study, Gunderson, Siever, and Spaulding (1983) attempted to evaluate the ability of particular symptoms to discriminate various subgroups of these relatives. Specifically, they examined which particular symptoms and signs could identify all relatives considered borderline or uncertain borderline schizophrenics by Kety et al., or only those relatives so diagnosed who were biological relatives of chronic schizophrenic adoptees, compared to relatives diagnosed as having other personality disorders, especially borderline personality disorder (BPD). They found that only certain of the criteria for *DSM-III* SPD were useful in this regard. Psychotic-like experiences (i.e., recurrent illusions) were actually more common in relatives diagnosed as BPD. They conclude by proposing a revised set of criteria for schizotypal personality disorder:

> (1) social isolation and anxiety; (2) suspicious, superficial, distant interpersonal relationships; (3) odd, eccentric, "off-putting" appearance and behavior; (4) frequent somatic problems; (5) detached, constricted, flattened affect; and (6) serious social dysfunction at school and work. [Gunderson, Siever, and Spaulding 1983, p. 21]

Of these six criteria, only three (Nos. 1, 2, and 5) are similar to *DSM-III* SPD criteria proposed by Spitzer, Endicott, and Gibbon (1979). However, all but one of these criteria (No. 4) are among those most frequently noted in relatives of schizophrenic patients by the descriptive psychiatrists reviewed (table 1).

The last recent study of the validity of *DSM-III* SPD criteria was based on a blind evaluation of interviews with the relatives of schizophrenic patients and controls from the Iowa 500 study (Kendler,

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Gruenberg, and Tsuang 1983). The major limitation of this investigation was that the interviews had not been specifically designed to elicit these symptoms. Therefore, although the evaluations were done under blind conditions, it is certain that the ascertainment of schizotypal symptoms was incomplete. Kendler, Gruenberg, and Tsuang divided the *DSM-III* SPD symptoms a priori into two groups, which they called negative and positive. The negative symptoms, which they felt were attenuated forms of the negative or deficit symptoms of classic schizophrenia, included criteria 3, 5, 6, 7, and possibly 8 (table 4). The positive symptoms, which they felt were mild forms of the positive symptoms of typical schizophrenia, included *DSM-III* SPD criteria 1, 2, and 4. The authors hypothesized that the negative *DSM-III* SPD symptoms but not the positive ones would be more common in the relatives of schizophrenic patients versus controls. These predictions were in large part borne out. Four of the eight *DSM-III* SPD symptoms were found to be significantly more common in relatives of schizophrenic patients versus relatives of controls: criteria 3 (social isolation), 5 (odd speech), 6 (inadequate rapport with aloof, cold affect), and 7 (suspiciousness). All four of these symptoms were "negative" *DSM-III* SPD symptoms, and three of them were among those symptoms most frequently described in relatives of schizophrenic patients by previous writers in the familial tradition (table 1).

Of these four recent reports on the *DSM-III* SPD criteria, two (Kendler, Gruenberg, and Strauss 1981; Baron et al. 1985) demonstrated that individuals meeting these criteria were, to a high degree of statistical significance, more common among biological relatives of schizophrenic patients than among relatives of matched controls. Two of these studies (Gunderson, Siever, and Spaulding 1983; Kendler, Gruenberg, and Tsuang 1983) addressed the more specific question of whether *DSM-III* criteria for SPD were optimal in identifying biological relatives of schizophrenic patients. As noted above, the method of development of the *DSM-III* criteria for SPD was to objectify the global diagnostic criteria used by Kety et al. to diagnose borderline and uncertain borderline schizophrenia, and *not* to design criteria specifically to identify relatives of schizophrenic patients. Therefore, it is not surprising that both studies found other criteria sets to be potentially more useful in identifying relatives of schizophrenic patients than the original eight criteria proposed by Spitzer, Endicott, and Gibbon (1979). The criteria found by these two investigations to maximize the identification of relatives of schizophrenic patients were rather similar to one another and both sets of criteria more closely resembled the symptoms commonly noted in relatives of schizophrenic patients by the psychiatrists in the familial tradition (table 1) than did the original *DSM-III* criteria for SPD proposed by Spitzer, Endicott, and Gibbon (1979).

Two Models for Schizotypal Personality Disorder

This review has been based on the theme that from both a historical and conceptual perspective, there have been two major models for what *DSM-III* has termed schizotypal personality disorder. The first model, which is epitomized by the descriptive, "familial" literature reviewed in the first section of this article, considered "schizotypal personality disorder" to characterize the aberrant, but nonpsychotic, relatives of patients with schizophrenia. The second model, which is characterized by the clinical literature reviewed in the second section of this article, considers "schizotypal personality disorder" to describe individuals who demonstrate the fundamental features of classic schizophrenia without any of the characteristic signs of chronic psychosis or severe deterioration.

A basic question is whether such models are in fact describing the same syndrome from different perspectives. This question can be addressed in two ways. First, from a historical perspective, we have seen that the two literatures reviewed on "schizotypal personality disorder" have substantial areas of disagreement about what symptoms characterize the syndrome. Historically, these two models have not resulted in very similar views of the syndrome.

Second, this question can be addressed from a theoretical perspective. Must a deviant relative of an individual affected with a familial syndrome display an attenuated form of the disorder manifest by the severely affected relative, or can the symptom picture differ from that found in the severely affected relative? The question can best be answered by considering an example from internal medicine. Consider that the severely affected relative is an individual who has had a hemorrhagic cerebrovascular accident secondary to hypertension, and now displays severe right-sided weakness and aphasia. What kinds of signs and symptoms would we expect in his affected relatives? Rarely, he might have an affected relative with a similar condition. More frequently, his affected relatives will have hypertension only, which may present with

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no symptoms, or with symptoms of headache, congestive heart failure, etc. We would not expect his affected relatives to have mild right-sided weakness and mild aphasia.

Using the same logic, we would not necessarily expect the deviant relatives of schizophrenic patients to display attenuated forms of all the classic symptoms of schizophrenia such as hallucinations, delusions, formal thought disorder, and "primary process thinking." If the familial tradition is correct, the deviant relatives of schizophrenics in fact do not usually display such symptoms. Instead, they tend to be socially withdrawn, eccentric, odd, and suspicious. If our parallel can be extended further, it would suggest that just as the hypertensive relatives of the individual with the hemorrhagic stroke reveal to us the underlying pathophysiology of his disorder, so the characteristic symptoms of the deviant relatives of schizophrenics tell us something important about the fundamental psychopathology underlying schizophrenia.

From both a historical and a theoretical perspective, these two modes for schizotypal personality disorder need not define a similar syndrome. Is there, therefore, any basis for considering one model for this disorder superior to the other? From a purely conceptual standpoint, I see no grounds to choose one model over another. However, this is not the case if one considers a more practical perspective. Appropriately, much attention has recently been paid to the problem of the validation of psychiatric disorders (Robins and Guze 1970). The model for schizotypal personality disorder which proposes that this syndrome should describe the abnormal personality characteristics of the deviant, but nonpsychotic relatives of schizophrenics is by its nature open to straightforward empirical validation. On the basis of this model, criteria proposed for schizotypal personality disorder should have maximal sensitivity and specificity in identifying relatives of schizophrenic patients. However, the model for schizotypal personality disorder which posits that this syndrome should describe patients presenting with attenuated forms of the "fundamental" symptoms of schizophrenia in the absence of signs of the classic schizophrenic psychosis cannot be empirically validated in any unambiguous fashion. As revealed by the many theories about schizophrenia proposed in the last 70 years, people do not agree about what constitutes the "fundamental" symptoms of this disorder. This disagreement is demonstrated by an examination of table 2, where it can be seen that despite some areas of agreement, the five authors reviewed also disagreed considerably about the main characteristics of cases demonstrating attenuated forms of the fundamental symptoms of schizophrenia. This is not to say that the descriptive psychiatrists of the "familial" tradition all agreed about what symptoms characterized the deviant relatives of schizophrenics (although they did agree better than did their "clinical" colleagues). But the crucial difference between these two models for schizotypal personality disorder is that a clear-cut empirical method exists for resolving differences in the familial approach to this disorder, while this is not the case for the clinical model.

An adoption of the "familial" model for schizotypal personality disorder is not, however, without difficulty. Two specific issues would be raised by this approach. First, should the diagnosis of schizotypal personality disorder ever be made in an individual not related to a schizophrenic patient? Using a slightly different terminology (substitute schizotypal personality disorder for schizoid psychopath), Kurt Schneider succinctly stated his view on the broad application of the diagnosis of "schizoid psychopath":

> Much confusion. . . resulted [from this practice]. There is carelessness in *deciding whether a psychopathic* patient has to be dealt with. Psychopaths are set down as schizoid psychopaths though there may be not the slightest trace of schizophrenia in the family history. [Schneider 1958, p. 62]

It is not clear whether this question can be answered from an empirical perspective. However, if schizotypal personality disorder is viewed as a less "penetrant" form of schizophrenia, all current major theories about the transmission of schizophrenia suggest that schizotypal personality disorder would often occur in an individual with no schizophrenic relative. While the criteria to diagnose schizotypal personality disorder would be developed from relatives of schizophrenic patients, it would be unnecessarily restrictive to limit this diagnosis to such relatives. Rather, important insights into the etiology of schizotypal personality disorder and schizophrenia might be gained by studying schizotypal personality disorder in a general population, looking at such features as prevalence, familial relationship to schizophrenia and other psychiatric disorders, and the presence or absence of environmental risk factors and biological markers that have been associated with schizophrenia.

The second major issue that would be raised by formally adopting the view that schizotypal personality disorder ought to describe the

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deviant but nonpsychotic relatives of schizophrenics is the relationship of this disorder, so defined, to other personality disorders. This problem is epitomized by the results of two studies (Kendler and Gruenberg 1982; Baron et al. 1985) which show that paranoid personality disorder, as defined by *DSM-III*, is significantly more common in biologic relatives of schizophrenics than of controls. Should the features of paranoid personality disorder that occur in relatives of schizophrenic patients then be incorporated into those of schizotypal personality disorder so that the latter diagnosis will cover all the deviant relatives of schizophrenic patients? If this were done, what should happen to the category of paranoid personality disorder? Should schizotypal personality disorder be viewed as one of the personality disorders (as it is in *DSM-III*), or should it be viewed as a conceptually different kind of syndrome and classified under schizophrenic disorders as cyclothymic disorder is classified within the affective disorders? A discussion of a possible reorganization of the framework of the section on personality disorder in *DSM-III* is beyond the scope of this review. However, if schizotypal personality disorder is defined as a syndrome characterizing deviant but nonpsychotic relatives of schizophrenic patients (or as a personality demonstrating in subtle form the clinical features of schizophrenia), one could argue, on the grounds of conceptual clarity, that this syndrome ought to be classified with the schizophrenic disorders and renamed "schizotypal disorder" to emphasize the difference in the conceptualization of this disorder from that of the other personality disorders in *DSM-III*. This nosological shift would reduce the problems created by areas of overlap in the criteria for schizotypal personality disorder and the criteria for the traditional personality disorders, such as schizoid or paranoid, which would remain in the personality disorder section.

Summary

In this historical review of the antecedents to the current diagnostic concept of schizotypal personality disorder, it is inescapable that there has been a tension, often unarticulated, between two viewpoints of what this diagnostic entity ought to be. On the one hand, the familial tradition has emphasized the characteristics seen in the aberrant but nonpsychotic relatives of schizophrenic patients. On the other hand, the clinical tradition has conceptualized this disorder as one displaying the attenuated symptoms regarded as essential to classic schizophrenia. While there are certain aspects in common between these two viewpoints, there are many points of conflict. The familial tradition characterized this syndrome by the following main symptoms: eccentric and odd behavior, beliefs, and demeanor; irritable and unreasonable behavior; social isolation; an aloof, cold, and distant demeanor; and suspiciousness. The clinical tradition, by contrast, emphasized symptoms such as disordered, primary process, or "magical" thinking; lack of deep interpersonal relations despite superficial "intactness"; anhedonia; profound anger; frequent psychotic-like symptoms; and acting-out behavior.

An examination of the criteria for "borderline schizophrenia" developed for use in the Danish Adoption Study revealed that these criteria were more similar to those found in the clinical than in the familial tradition. The criteria for *DSM-III* SPD, developed from cases diagnosed as borderline schizophrenia in the Danish Adoption Study, contained some items emphasized in the descriptive literature (i.e., social isolation, inadequate rapport with aloof, cold affect, and suspiciousness), while others (i.e., magical thinking, recurrent illusions, and ideas of reference) were more characteristic of writings in the dynamic literature. Not surprisingly, studies done since the proposal of these criteria by Spitzer, Endicott, and Gibbon have found that the schizotypal symptoms that were also noted in the familial literature better characterized relatives of schizophrenic patients than did the other criteria proposed for schizotypal personality disorder. This essay concludes with a discussion of the two "models" for schizotypal personality disorder: as a syndrome which characterized the aberrant but nonpsychotic relatives of schizophrenics and as a disorder that presents, in subtle form, the symptoms considered fundamental to classic schizophrenia. Several points were made. First, the two models need not describe the same syndrome. Second, a method of validation is easily operationalized for the first model for schizotypal personality disorder, while this is not clearly the case for the second model. Third, an adoption of the first model would of necessity require a reexamination of the relationship of schizotypal personality disorder to other personality disorders in *DSM-III*.

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Expressed Emotion in Families

Expressed Emotion in Families: Its Significance for Mental Illness, authored by Julian Leff and Christine Vaughn, has been recently published by The Guilford Press (200 Park Avenue South, New York, NY 10003). The discovery that discharged schizophrenic patients who returned home to parents or spouses often fared worse than those living alone led researchers to look for conditions within the family that might influence the schizophrenic patient's condition. At the vanguard of this endeavor was George Brown, whose recognition of the debilitating effect of high levels of expressed emotion—such as hostility, criticism, and overinvolvement—has stimulated important insights as well as considerable controversy. In this volume, Leff and Vaughn, together with two other prominent investigators, address some of the confusions and misconceptions that have arisen regarding the measures of expressed emotion and the techniques for obtaining data, and present important new findings which significantly expand Brown's original insights. The book will be of great interest to psychiatric researchers as well as to all mental health professionals who work with schizophrenic patients and their families.

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