

## Review Article

# Physiognomic perception, vitality affect and delusional perception in autism

RYUJI KOBAYASHI, MD, PhD  
*Tokai University School of Health Sciences, Kanagawa, Japan*

**Abstract** The relationship between autism and schizophrenia has been denied from the symptomatological and epidemiological standpoints. However, the mechanism whereby psychotic symptoms appear in association with autism has not been investigated at any length. Therefore, an investigation was conducted on how the unique modes of perception in autism are related to the psychotic symptoms observed. Through the therapy of one case of adolescent autism, the author points out the existence of physiognomic perception and vitality affect as characteristic modes of perception in autism. It was inferred that should autistics be placed under circumstances forcing them to withdraw from open communalism, their unique interpretation of the environmental world could give rise to psychopathological phenomena which would be considered delusional perception.

**Key words** autism, delusional perception, physiognomic perception, schizophrenia, vitality affect.

## INTRODUCTION

Association between autism and schizophrenia has already been negated from the symptomatological and epidemiological standpoints.<sup>1–4</sup> Following classification of autism as a developmental disorder by international diagnostic standards, contemplation of any relationship between the two has essentially ceased. However, following accompanying accumulation of data from long-term follow-up studies on autism, it has become clear that more than a few cases of autism exhibit schizophreniform or psychosis-like symptoms,<sup>5–8</sup> while similarly, retrospective study on schizophrenia with onset in childhood has revealed more than a few cases which are re-diagnosed as autism through analysis of their developmental history in infancy.<sup>9</sup>

However, because cases of autism presenting pathological states, hallucinations or delusions befitting diagnoses of schizophrenia are not that common in reality,<sup>10,11</sup> difficult issues abound in exploring the relationship between the two. In light of the fact that a decisive difference exists between the two in terms of timing of onset, with onset of autism being early

infancy, while onset of schizophrenia is primarily school-age and older,<sup>12</sup> it appears to call not only for investigation from the symptomatological and epidemiological standpoints, but investigation on the transitional forms of the two,<sup>13</sup> as well as incorporation of the developmental standpoint.

Autism research, particularly investigation on the psychopathology of adolescent and adulthood autism, is a research field with issues of vital importance, harboring the potential of introducing the developmental aspect as a new viewpoint into the realm of psychopathology, which is based primarily upon the conventional psychopathological phenomena of adulthood. It is possible that attempts to clarify present psychopathological phenomena prospectively, based upon data obtained directly starting in infancy, could provide a new perspective to the association between autism and schizophrenia.

The absence of hallucinations or delusions is cited explicitly in the diagnostic criteria of DSM-III<sup>14</sup> as one of the reasons whereby autism is regarded as being disparate from schizophrenia. However, this item was removed from their next revision, DSM-III-R,<sup>15</sup> and has remained that way to present.<sup>16</sup> If psychotic symptoms such as hallucinations or delusions, which take on significance in considering difference or similarity between the two, do appear in autism, what are their modes of expression and mechanism by which they arise?

Correspondence address: Bohseidai, Isehara, Kanagawa, 259–1193, Japan. Email: ryuji@is.icc.u-tokai.ac.jp

Received 23 February 1999; revised 10 May 1999; accepted 12 May 1999.

The author has recently experienced the opportunity of closely investigating the perception mode peculiar to autism in an adolescent case diagnosed as autism in infancy from this standpoint. That a perception mode peculiar to autism does exist is gradually coming to light through observation of their behavior and through recollections by the autistics themselves.<sup>17,18</sup> However, in order to capture the characteristics of perception phenomena, which are extremely intersubjective in themselves<sup>19</sup> in relation to autism, it is necessary to adopt a phenomenological approach for capturing the mode of existence of each individual case in detail.<sup>20</sup>

The author has already established that physiognomic perception<sup>21</sup> strongly persists as a characteristic mode of perception among autistics, remaining active well beyond adolescence.<sup>20</sup> In addition, the 'perception metamorphosis phenomenon' has been propounded as a phenomenon believed capable of providing a new perspective in discerning the difference between autism and schizophrenia.<sup>22</sup> Capturing how this 'perception metamorphosis phenomenon' progresses in the autistic, how it approaches their inner world, and how it leads them on to psychotic breakdown in its various modes of existence through therapeutic involvement is strongly called for in order to clarify the relationship between autism and schizophrenia from the standpoint of causality. To this end, we have investigated how the perceptual modes peculiar to autism are involved with onset of the psychotic state, for re-evaluating therapy for autism from this perspective.

## CASE REPORT

Reiko, a 23-year-old female who was an only child. There were no problems during the prenatal period. Birth and physical development were normal. As an infant, she showed a poor response to her mother and no anxiety towards strangers. Her dependency on her mother was not noticeable. Her speech was delayed in that she did not speak any words that were understandable until aged 3 years. At 3 years of age, she became very hyperkinetic. She became so sensitive to certain sounds, such as a baby's cry, that she sometimes reacted violent. At 4 years of age she started kindergarten, but she could not behave socially as the other children did. She was referred to a child guidance clinic, diagnosed as autistic and was put in play therapy for 6 months. At home, she was preoccupied with putting bottles in a straight line, writing and drawing on the walls. When visiting the doctor, she would arrange all the shoes in order,<sup>4</sup> even though she was asked to stop doing it by her mother. At 5

years, she became so uneasy at hearing the noise of a car horn that she would approach the car and beat on the car's bumper.

During elementary school, she was obsessed with learning *Kanji* (Chinese) characters to the extent of being called 'Professor of *Kanji*'. Following graduation from junior high school, and during her years at a dress-making school, she became very sensitive to having been diagnosed as autistic in the past, accompanying elevation of self-awareness. From around that time, her strong interest in *Kanji*, together with a strong interest towards the opposite sex, she took a special liking to four characters denoting the Kyushu Electric Company or 'Kyu-shu-Den-ryoku' and came to perceive the characters physiognomically, noting that they were laughing, crying, angry or otherwise, depending on the particular font of the characters. The first two characters for Kyu-shu, Kyu and shu were transformed into objects of longing, two young males, she named 'Kyu-kun' and 'Shu-kun', the 'kun' being an appellation denoting familiarity in Japanese. As such, it was believed that her heightened interest towards male adolescence resulted in physiognomic perception of her environmental world. The author strove to share such adolescent mentality with her in the therapeutic relationship. As a result, she was able to attend dress-making school (in place of high school) without incurring great confusion, and subsequently find employment in a retail store operated by an owner with great understanding for the handicapped. Along the same axis as her steady development in reality adaptation, both 'Kyu-kun' and 'Shu-kun', on whom she had been obsessed with in her internal world both graduated from high school, and proceeded on to college and finding employment.

Subsequently, her place of work became her niche in life in which she could experience fulfilment. However, there were times in the first few months after starting her job when she became somewhat unstable, owing mostly to fatigue from over-enthusiasm. At such times, the hyperesthesia noted from infancy became pronounced. For instance, there were times when upon hearing the sound of a revving engine near her home, she would fall into a state of panic, expressing outright feelings of dislike, driving her on to the impulse of wishing to destroy the car. However, growing self-control was evident through the various countermeasures she came up with, such as wearing ear-plugs, distracting herself through listening to music, or closing the window to shut out the noise. She had been taking 2–4 mg pimozide/day ever since her first visit to the clinic, and she continued to express a positive attitude to continuing medication even after starting her job, expressing introspective attitudes such as: '*I might*

resort to hitting people or breaking things like before. I think I might hit someone if I didn't take the medicine'.

However, because of the remnant hyperesthesia, which was pronounced from infancy, she still over-responded to noise in her surroundings, which gave rise to unexpected trouble from time to time. For example, she would over-respond particularly when young people, who she referred to as delinquents, would race past the shop noisily, and she would complain: 'I feel young people's cars to be mean, harsh, and provocative'.

Approximately 1 year into her job, aggravated by the irritation she was feeling from the oppressing heat, a taxi stopped in front of the shop and sounding the horn twice, this prompted her to board the cab and assault the driver. Since this incident, she has been striving toward greater self-control, wearing ear-plugs at work as well.

She had always been fond of trains, and she used to spend time almost daily watching trains go by near her home and school. However, during one interview, about 1 year after starting her job, she started insisting that a sleeper express train named 'Fu-ji' was her boyfriend (Fig. 1). She said that she liked 'Kyu-kun' and 'Shu-kun' next to 'Fu-ji'. It was true that in her dress-making school days, her equivalent to high school, she used to spend time between classes as well as going to and from school watching the sleeper express train 'Fu-ji' go by, but this was the first time she mentioned 'Fu-ji' physiognomically as 'Fu-ji-kun'. She started speaking about 'Fu-ji-kun' with fervor from the subsequent interview in a way which she made clear that she was empathizing with Fu-ji-kun's lifestyle: 'Watching Fu-ji-kun, I am impressed by how he works so hard pulling those cars, without missing even one day, even though I don't know how Fu-ji-kun feels about me'.

One day soon thereafter, she expressed her feelings upon running into her beloved 'Fu-ji-kun' by chance when travelling to a neighboring town with her grandmother: 'Getting off a train at 04:40 h to make a transfer, I found Fu-ji-kun in the train station. The horn sounded twice. (Hearing that) I wondered if he had been thinking of me. I had said, Fu-ji-kun, you are working so diligently (in my mind), and it made be happy to think that perhaps he had responded to my words. When I was in high school, seeing the train, Fuji, only made me want to keep watching. I started calling him Fu-ji-kun this September. Mr M, the owner of the shop, traveled on Fu-ji to visit a facility for the handicapped in Tokyo. I started to take a special liking to Fu-ji-kun from then.' Through interviews with the mother, it gradually became clear that she had captured the figure of Mr M, whom she both adored

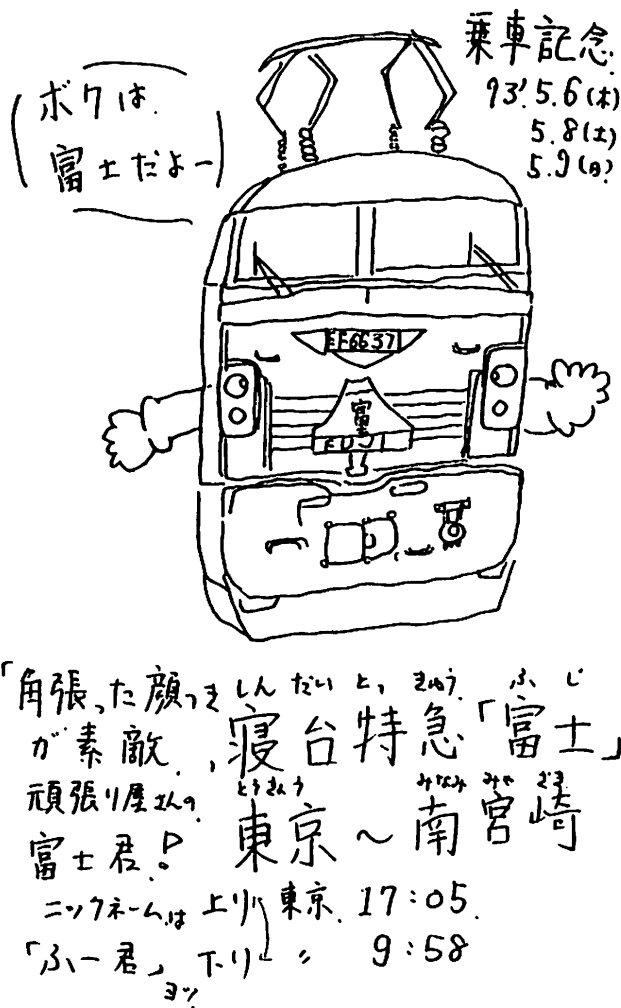


Figure 1. 'Fu-ji-kun' as drawn by Reiko.

and depended upon, working hard keeping them all together, and that of the sleeper express 'Fu-ji' working diligently pulling all the carriage trains behind him, dynamically, in the same context.

Her attitude towards work was a picture of honesty and loyalty throughout. However, this meant that she ended up being asked to take on more work, and occasionally she had to work overtime. Under such circumstances, there were times she would bow to the impulse of attacking the owner.

Three years into her job, a new employee arrived. Perhaps due to heightened tension owing to transformation in the atmosphere at work, she attacked her mother at home after a few weeks. The following day, finding the newcomer working the cash register at which she had until then borne a responsible role, she impulsively attacked him. She found difficulty in empathizing with the status of the newcomer unaccustomed to the job, revealing the involvement



**Figure 2.** The particular font of the characters 'Fuji' to which Reiko expressed fear.

of extreme anxiety towards invasion of her own realm of activities, which brought home the aspect of over-adaptation peculiar to autistics.<sup>6</sup> Following these incidents, the author felt the need for additional sedation, for which she was prescribed 4 mg haloperidol and 5 mg levomepromazine per day. She evaluated the extra medication as being good for her, although she became unsteady on her feet, in addition to being lethargic. Four weeks after increasing medication, she asked for reduction of the dosage, complaining that *'It makes me lose vitality. It makes me weary'*. However, her following comments in relating this came as a great shock for the author: *'Going home from work, I feel people looking at me. Like they were looking at me out of the corner of their eyes.'* Furthermore, holding up a cardboard sheet on which she had pasted the characters for 'Fu-ji' which she always carried with her to the clinic, she noted seriously, in a small timid voice: *'I feel just like "Fu-ji" right here (Fig. 2). I feel as if the (right-hand) character ji in Fu-ji is looking at me, which makes me want to run away'*. Through the interview, the existence of fear towards being accorded lowered evaluation, not being able to work as she wished to because of the strong general fatigue she was experiencing became clear as the backdrop behind her words and actions. The author immediately reduced her medication of haloperidol to 1 mg/day, and by the following week, her previous complaints vanished. Impulsive behaviour was not seen in the ensuing 6 months, and she has been able to safely complete 3 years in the job.

## DISCUSSION

Kobayashi has pointed out physiognomic perception as a mode of perception peculiar to autistics, in which he suggests that the perception mode characteristic of early infancy may remain operative in the autistic even with ageing.<sup>20</sup>

In the case presented in this paper, it is seen that although the train 'Fu-ji' had been an object of strong interest for some time, her perception of the train underwent transformation, after which she came to perceive the train physiognomically. This started with travelling by train on business trip with her employer, who she respected, as a turning point in her treatment. Apart from there being an episode confirming the existence of physiognomic perception, the point of particular significance in this case is the meaning behind the incident triggering onset of this mode of perception. As confirmed by the patient 'Reiko's' own words, Reiko perceived the picture of her employer working energetically in a dynamic mode, and it is believed her capturing the sleeper express train 'Fu-ji' which her employer used as a similar existence to have led to the train becoming perceived physiognomically.

Apart from physiognomic perception which is captured in terms of categorical emotions, vitality affect of dynamic nature is known to have an important function in the modes of experience of infants.<sup>23</sup> The vitality affect is the direct experience of characteristics such as form, strength, motion, number, and rhythm of objects and people in a comprehensive form of perception irrespective of modality, to which great importance is attached along with physiognomic perception, as modes of experience peculiar to infants. In this particular case, the sleeper express train coming to be perceived physiognomically is a vivid representation of how vitality affect was actively functional as background in this episode.

However, a point of note is that the outer world was not being continuously perceived physiognomically by this patient. In other words, a major characteristic lies in the very fact that physiognomic perception is in itself subject to transformation accompanying changes in the subject's emotions, so that such transformations in perception were readily invoked during episodes involving strong emotional

trauma such as those related in this case. It is believed that facts such as this may be taken as explicit indication that perceptive phenomena is in itself an entity of strong intersubjective nature.

### **How do autistic children interpret the meaning of their environmental world captured physiognomically?**

The dialogue Reiko had in her inner world with '*Fu-ji-kun*' when they met at a station by chance was of great interest. It depicted with clarity how Reiko vividly captured the horn of the express train, interpreting it in the context of her present lifestyle. In other words, she interpreted the sound of the horn to be a response to her dynamically capturing '*Fu-ji-kun*' himself. This again, is another clear indication of the active functioning of vitality affect.

A further point of interest was the transitional fear reaction the subject exhibited during interviews in the period she was receiving extra medication for sedation of heightened emotional excitation. Alongside her complaint that: '*Going home from work, I feel people looking at me. Like they were looking at me out of the corner of their eyes*', she expressed the fact that the characters for '*Fu-ji*', which she always carried around with her pasted on cardboard, were closing in on her physiognomically. Seriously exhibiting fear, she indicated in a plaintive voice pointing to the triangular portion alongside the right of the italic representation of the character *ji* in *Fu-ji*, that: '*I feel just like (the character) Fu-ji right here. I feel as if the character ji in 'Fu-ji is looking at me, which makes me want to run away. I'm scared*'.

Additional medication did bring about sedation of her condition, but as she herself complained '*It makes me lose vitality. It makes me weary*', the general fatigue induced by the medication leading to lowered vitality was the direct trigger for this episode. This invoked the fear that being unable to work as she wished to, might result in lowered evaluation. As such, this episode is a good depiction of vitality affect itself, demonstrating how changes in the physiological condition of her body altered her perception of the outer world itself.

It is believed that infants not only experience the characteristic of vitality affect through the behavior of others, but also through the inner world of the infants themselves.<sup>23</sup> In other words, the vitality affect infants perceive in connection with their inner physiological changes influences the very state of how they perceive the outer world, so that they come to experience the same sort of vitality affect towards the outer world as well. This mode of experience peculiar to

infants is notably present in the autistic is also visible in this case. It is inferred that Reiko is capturing various incidents regarding self, others, and the environmental world as one continuously fused world constituting a harmonious whole.

As such, how can the fact that rise and fall in vitality is directly responsible for altering the mode of perception of the environmental world be interpreted in terms of the psychopathology of autism. Kobayashi<sup>22</sup> has noted the characteristics of perception of the environmental world in autistics as the: '*perception metamorphosis phenomenon*', pointing out the ease with which their environmental world can be transformed. In other words, he asserts that for such subjects, for whom the environmental world readily becomes physiognomic, it is necessary to consider element as the backdrop in interpreting their multifarious psychotic symptoms and behavior characteristics.

Ordinarily, a cognitive process for capturing the environmental world objectively through ascribing individual interpretations to the outer world perceived is at work within us. Therefore, how the environmental world perceived is interpreted by the autistic, that mental process in itself, is a key of great significance. It is believed that the much debated fundamental nature of cognitive disturbance in the autistic will come to light, only upon clarification of this mental process.<sup>24</sup>

Attachment of meaning to the environmental world is made possible by making use of the language function containing universal concepts in this world textured by communality. Doing so enables us to capture the environmental world in orderly manner as if it were one characterized by constancy. However, for the autistic who has harbored severe disturbance in the development of interpersonal relationships from early infancy, the quality of such language and cognitive functions is seriously affected.<sup>25</sup> For this reason, seeing order and discipline in the environmental world becomes an inordinately difficult task for such subjects. In this context, is it not possible to regard the existence of physiognomic perception or '*perception metamorphosis phenomenon*' which have been taken up as perception modes peculiar to autism, as indication that their problem lies in the cognitive process of applying meaning to what they perceive, and that the great difficulty lies in ascribing meanings which can be shared with others?

From the standpoint of descriptive psychopathology, the attribution of a new meaning, usually in the sense of self-reference, to a normally perceived object is regarded as delusional perception.<sup>26</sup> Is it then not possible to regard the perceptual mode of autism described in this report as a mental phenomenon

approximating delusional perception? In the case presented here, it is seen that what the subject perceived became physiognomic and threatened the patient, to which she ascribed a peculiar meaning. However, the trigger for Reiko coming to capture the sleeper express train 'Fu-ji' physiognomically as 'Fu-ji-kun' was active interaction with her employer. In other words, because Reiko did not closet herself in her own world, and because she was placed within a wealth of relationships, her perception mode did not become pathological (delusional). However, the perception mode she exhibited towards the characters of 'Fu-ji' triggered by general fatigue brought on as a side-effect of medication was characterized by persecutory ideas of reference as psychological background, depicting that delusion had been active in place of physiognomy in that case.

From the phenomenological standpoint, perhaps it is justified to regard such transformations in perception which become apparent in autistics; after reaching adulthood as being the same or very similar to delusional perception occurring as abnormal experiences in schizophrenia. However, even if that were true, we must still take every caution in discussing the two within the same frame of reference epidemiologically at this stage. Now that questions regarding disparity or similarity between autism and schizophrenia<sup>9,11,27</sup> are coming to be addressed once again in, recent years, it is believed that the characteristic perception modes in autism depicted in this study is worthy of examination in greater detail from the developmental viewpoint.

## ACKNOWLEDGMENT

This study was supported by the Research Grant (8B-3) for Nervous and Mental Disorders from the Ministry of Health and Welfare, a Grant-in-Aid for Scientific Research (C) (No. 08671110) from the Ministry of Education, Science and Culture of Japan, and Mitsubishi Foundation Fund.

## REFERENCES

- Green WH, Campbel M, Hardesty AS *et al.* A comparison of schizophrenic and autistic children. *J. Am. Acad. Child Psychiatry* 1984; **23**: 399–409.
- Green WH, Padron-Gayol M, Hardesty AS *et al.* Schizophrenia with childhood onset: A phenomenological study of 38 cases. *J. Am. Acad. Child Adolesc. Psychiatry* 1992; **31**: 968–976.
- Kolvin I, Ounsted C, Humphrey M *et al.* Studies in the childhood psychoses. II. The phenomenology of childhood psychoses. *Br. J. Psychiatry* 1971; **118**: 385–395.
- Rutter M. Childhood schizophrenia reconsidered. *J. Autism Childh. Schizophr.* 1972; **2**: 315–337.
- Clarke DJ, Littlejohns CS, Corbett JA *et al.* Pervasive developmental disorders and psychoses in adult life. *Br. J. Psychiatry* 1989; **155**: 692–699.
- Kobayashi R. Psychotic breakdown of 24 year-old person with autism. *Jpn. J. Child Adolesc. Psychiat.* 1985; **26**: 316–327 (in Japanese with English abstract).
- Petty LK, Ornitz EM, Michelman JD *et al.* Autistic children who become schizophrenic. *Arch. Gen. Psychiat.* 1984; **41**: 129–135.
- Realmutto GM, August GJ. Catatonia in autistic disorder: A sign of comorbidity or variable expression? *J. Autism Dev. Disord.* 1991; **21**: 517–528.
- Watkin JM, Asarnow RF, Tanguay PE. Symptom development in childhood onset schizophrenia. *J. Child Psychol Psychiat.* 1988; **29**: 865–878.
- Kobayashi R, Murata T. Behavioral characteristics of 187 young adults with autism. *Psychiatr. Clin. Neurosci.* 1998; **52**: 383–390.
- Volkmar FR, Cohen DJ. Comorbid association of autism and schizophrenia. *Am. J. Psychiatry* 1991; **148**: 1705–1707.
- Makita K. The age of onset of childhood schizophrenia. *Folia Psychiatr. Neurol. Jpn* 1966; **20**: 111–121.
- Kurita H. Schizophrenia and pervasive developmental disorder. In: Doi, T (ed.), *Psychopathology of schizophrenia, No. 16*. Tokyo University Press, Tokyo, 1987; 27–45 (in Japanese).
- American Psychiatric Association. *Diagnostic and statistical manual of mental disorders (3rd edn) (DSM-III)*. American Psychiatric Association, Washington DC, 1980.
- American Psychiatric Association. *Diagnostic and statistical manual of mental disorders (3rd edn revised.) (DSM-III-R)*. American Psychiatric Association, Washington DC, 1987.
- American Psychiatric Association. *Diagnostic and statistical manual of mental disorders (4th edn) (DSM-IV)*. American Psychiatric Association, Washington DC, 1994.
- Bemporad JR. Adult recollections of a formerly autistic children. *J. Autism Dev. Disord.* 1979; **9**: 179–197.
- Williams D. *Nobody Nowhere*. Times Books, New York, 1992.
- Merleau-Ponty M. *Phénoménologie de la Perception*. Gallimard, Paris, 1945.
- Kobayashi R. Physiognomic perception in autism. *J. Autism Dev. Disord.* 1996; **26**: 661–667.
- Werner H. *Comparative Psychology of Mental Development*. Follett, Chicago, 1948.
- Kobayashi R. Perception metamorphosis phenomena in autism. *Psychiatr. Clin. Neurosci.* 1998; **52**: 611–620.
- Stern D. *The Interpersonal World of the Infant*. Basic Books, New York, 1985.
- Kobayashi R. Mental retardation and autism: Reconsideration of cognitive deficits in autism. *Jpn. J. Neuropsychopharm.* 1993; **15**: 773–779 (in Japanese).

25. Rutter M. Cognitive deficits in the pathogenesis of autism. *J. Child Psychol. Psychiat.* 1983; **24**: 513–531.
26. Hamilton M. *Fish's Clinical Psychopathology: Signs and Symptoms in Psychiatry*. John Wright & Sons, Bristol, 1974.
27. Frith CD, Frith U. Elective affinities in schizophrenia and childhood autism. In Bebbington PE (ed.) *Social psychiatry: Theory, methodology, and practice*. Transaction, London, 1991; 65–88.