



# Schizotypy and creativity: an evolutionary connection?

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Received 28 August 2000; received in revised form 3 October 2000; accepted 23 October 2000

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## Abstract

Previous researchers have suggested that there might be an association between psychotic traits and creativity, and that this association might explain the retention of psychosis genes in the gene pool. A multidimensional measure of schizotypal traits, the Oxford-Liverpool Inventory of Feelings and Experiences, and Torrance tests of divergent thinking were administered to humanities and creative arts students. Students in the creative arts scored higher on the unusual experiences dimension of schizotypy in comparison with the humanities students. For the students as a whole, divergent thinking scores were predicted by scores on the unusual experiences dimension of schizotypy. Further analyses suggested that this association was accounted for by degree subject (humanities vs creative arts), and no direct association between schizotypy and divergent thinking could be demonstrated in either group of students. However, the unusual experiences dimension was a significant predictor of engagement in the verbal arts, even when degree subject was controlled for. The findings indicate that schizotypy may play a role in determining creative pursuits, but does not contribute directly to divergent thinking. Future studies should explore both direct and indirect paths linking schizotypy to creativity. © 2001 Elsevier Science Ltd. All rights reserved.

*Keywords:* Schizotypy; Creativity; Divergent thinking; Evolution

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## 1. Introduction

In his celebrated textbook on *Dementia Praecox or the Group of Schizophrenias*, Eugen Bleuler (1911/1950) observed that: “There is such a thing as latent schizophrenia and I almost believe that it is the most frequently occurring form even though it comes under treatment the least often.... All the symptoms and symptom combinations which can be found in the fully developed illness can appear here in nuce.” This hypothesis of a continuum between psychosis and normal functioning was developed further by Kretschmer (1925), who argued that there are normal personality types associated with both schizophrenia and manic depression. However,

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modern research on this continuum began with the work of Meehl (1962), who attempted to explain the results of genetic studies of schizophrenia by arguing that a susceptibility to the disorder, known as schizotaxia, was inherited, rather than full-blown mental illness. According to Meehl, schizotaxic individuals show schizotypal personality characteristics in the absence of mental illness, unless exposed to environmental hazards, in which case a psychiatric disorder becomes evident. Subsequent studies in the United States (e.g. Chapman & Chapman, 1980; Chapman, Chapman & Raulin, 1976; Eckblad & Chapman, 1983, 1986) and in Great Britain (e.g. Claridge, 1985; Claridge & Broks, 1984) showed that questionnaire measures could identify a substantial proportion of the normal population that has experienced psychotic-like experiences. More recent investigations have revealed that psychotic traits have a multidimensional structure. For example, Bentall, Claridge and Slade (1989) found that scores on schizotypy scales loaded on four main factors: cognitive and perceptual experiences (presumably related to the positive forms of psychotic symptomatology); anxiety and cognitive disorganisation; anhedonia and introversion; and impulsive nonconformity. Similar results have been obtained in other studies, including a much larger sample recruited by Claridge's group (Claridge et al., 1996), leading Mason, Claridge and Jackson (1995) to devise a new instrument to detect the four dimensions of psychotic traits.

The development of models that emphasize a continuum (or continua) between psychotic traits and normal functioning may help to address one of the most puzzling aspects of psychosis, namely the persistence of psychotic traits within populations over many generations. Studies of patient populations indicate that psychosis has grim implications for survival and reproduction. Patients often have difficulty maintaining employment, are relatively poor, are often socially isolated, face a high risk of early death from suicide, and enjoy less reproductive success than normal individuals (Jablensky, 1995). As Huxley et al. (1964) pointed out, unless these social and reproductive disadvantages of psychosis are balanced by advantages, genes that confer vulnerability to psychiatric disorder should be selected out over successive generations. Huxley et al. reasoned that a physiological advantage experienced by the nonaffected relatives of schizophrenia patients, such as resistance to infection, might compensate for the selective disadvantage of lower survival and fertility experienced by patients. Jarvick and Chadwick (1972) noted the lack of corroborative evidence for this hypothesis and argued instead that the behavioural and personality characteristics associated with psychosis might confer advantages in the social rather than the physical domain. They suggested that genes for paranoia encourage a healthy defensiveness in threatening environments. More recently, Stevens and Price (1996) have argued that schizophrenia genes facilitate the splitting of overlarge groups in primitive societies. However, these hypotheses are highly speculative and the only substantial research exploring the possible benefits of madness has focused on creativity.

Associations between madness and creative genius have been noted by observers from ancient Greek times through to the modern era, "partly fostered by a notion of creativity as involving divine intervention or dictate, i.e. some kind of mystical, mysterious, and inchoate eruption from the 'sea of unconsciousness'.... from which madness was also, popularly, thought to emerge" (Brod, 1997, p. 277). More recently, Eysenck (1993) has proposed a detailed and complex model of creativity that attempts to explain this apparent association. He has argued that cognitive characteristics associated with high scores on his psychoticism personality dimension, particularly the tendency towards over-inclusive thinking, would tend to facilitate originality (defined as a trait), which, in optimum circumstances, would lead to creativity (defined as achievement).

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