



## Personality and cognitive predictors of New Age practices and beliefs

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Received 15 July 2004; accepted 1 April 2005

Available online 16 June 2005

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### Abstract

This study represents the first attempt to explore the cognitive underpinnings and personality correlates of New Age practices and beliefs. Ninety-nine subjects from a general population sample completed a battery of self-report tests, including measures of New Age practices/beliefs and traditional religiosity, as well as scales of schizotypy, neuroticism, and “boundaries”. An experimental task consisting of a random display of changing dots was used to measure cognitive looseness. Results indicate that there was a relationship between New Age practices and beliefs and schizotypal personality traits, characterised by magical ideation, a cognitive disposition towards looseness of associations, and emotional hypersensitivity. Women were also more likely to be drawn to New Age practices and beliefs. On the other hand, traditional religiosity was unrelated to all personality indices and measures from the experimental task. These findings suggest that an individual may be attracted to the New Age by virtue of its magical belief system and practices, which provide meaning to unusual ideation and experiences, and which emphasise the exploration and development of a loose cognitive style and emotional sensitivity.

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*Keywords:* New Age practices and beliefs; Magical thinking; Schizotypy; Cognitive looseness; Thin boundaries

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## 1. Introduction

Yoga, meditation, aromatherapy, astrology, Tarot, channelling, energy healing ... all these practices, once held within a niche of the 60s counter-culture, have in the past two decades become increasingly popular, and established themselves as part of a loose form of religiosity known as the New Age. The New Age tends to reject traditional religion, with its set of strict dogmas and rituals, and to adhere to a form of religious syncretism that stresses magical and paranormal beliefs, along with certain physical and mental techniques that aim to promote 'higher levels of consciousness' (Hanegraaff, 1996). These techniques are borrowed from virtually all kinds of religious traditions, from shamanism to Buddhism, but also from modern psychotherapy, and are put together by the individual in order to promote one's self-development.

Although numerous studies on New Age religiosity have been undertaken (for a summary see Heelas, 1996), these have focused on particular groups or techniques, mostly utilising anthropological and sociological approaches. The few studies attempting to study the New Age in terms of differential psychology unanimously report that New Agers differ from traditional religious and non-religious people by their high level of individualism (Houtman & Mascini, 2002), their insecure parental attachment (Granqvist & Hagekull, 2001), and their frequent use of magical attributions in everyday events (Farias, 2004).

The array of magical and paranormal beliefs present in New Agers' everyday explanations is illustrative of their concern with the existence of an intimate connectedness between all things (visible and invisible). Concepts like those of karma or synchronicity are employed as a common belief system, which allows the individual to establish a virtually unending network of connections. Thus, it is possible to explain practically any trivial event as if filled with rare significance. This high frequency of magical attributions suggests that New Age people, more than just sharing a set of beliefs, possess a personality and cognitive disposition, which makes them particularly prone to search for meaningful connections between seemingly distant and unrelated objects and events.

## 2. Magical thinking, schizotypy and cognitive looseness

Jahoda (1969) and Vyse (1997) offer a survey of research on magical thinking (MT), from Freud and Skinner up to more recent experiments, where MT is found to be very much alive among normal adults. In a study conducted during the 1991 Gulf war, Keinan (1994) reported that, under certain circumstances of physical or psychological threat, people may engage more in MT, as a way of coping with uncertainty. On the other hand, there is a category of individuals who seem to show a personality disposition towards MT. A multivariate analysis of scales measuring schizotypal personality traits has shown that the most consistent component to emerge refers to unusual perceptual experiences, thinking styles and magical beliefs (Mason, Claridge, & Williams, 1997).

Research on schizotypy has been carried out following two different conceptual models (Claridge, 1997). The quasi-dimensional model, which originates in the medical tradition, considers schizotypy and normality to be discontinuous, emphasises its discrete genetic basis and treats it as part of a 'schizophrenia spectrum' of psychotic disease. The other model, on the other hand,

proposes a *fully dimensional* perspective where psychotic traits are considered to represent personality variation and do not necessarily lead into pathology; in fact, it may even lead to an increased imaginative capacity and spiritual experiences. The current paper follows the latter model where schizotypy, and its possible relationship to New Age beliefs and practices is understood as a personality dimension and not as clinical pathology.

Two commonly employed measures of the cognitive aspects of schizotypy are Eckblad and Chapman's (1983) Magical Ideation scale and the Schizotypal Personality Scale (STA), developed by Claridge and Rawlings (reported in Claridge & Broks, 1984). A wide range of experimental and quasi-experimental studies, using participants from healthy populations, has been undertaken using these measures. Studies correlating the STA with cognitive tasks of negative and subliminal priming have reported that highly schizotypal subjects have difficulty suppressing irrelevant material from conscious awareness (Williams & Beech, 1997) and show greater subliminal priming (Evans, 1997). Lencz, Raine, Benishay, Mills, and Bird (1995), in a summary of neuropsychological research, similarly conclude that most studies indicate schizotypy to be associated with a decreased inhibition in the contents of consciousness. This tendency has sometimes been referred to as a process of cognitive 'looseness'. Brugger and colleagues have reported that people high on the Magical Ideation scale presented a loosening or disinhibition of semantic network functioning (Pizzagalli, Lehmann, & Brugger, 2001), were able to make more remote semantic associations (Brugger & Graves, 1998; Gianotti, Mohr, Pizzagalli, Lehmann, & Brugger, 2001; Mohr, Graves, Gianotti, Pizzagalli, & Brugger, 2001), and saw more meaningful patterns in a visual display of random dots (Brugger et al., 1993). In the latter article, they argue that such a cognitive disposition, which leads the individual to make close associations between random events, can also account for the emergence of magical and paranormal beliefs.

Such cognitive looseness, in the New Age ideology, seems also to have its emotional counterpart. The New Age emphasises emotional self-expression and personal experience of 'expanded states of being'. In this context, Hartmann's (1991) proposal of a dimension of personality related to thickness–thinness of boundaries is particularly appealing, as it provides a junction between cognitive looseness and another more emotional aspect of the disposition to uncommon beliefs and experiences. Several types of boundary are considered to exist *between* the individual and the environment, including body and interpersonal ones, and *within*, such as those related to thoughts and feelings, and states of awareness and sleep. A person with thin boundaries would be characterised as someone who tends to blend thoughts and feelings, to make fluid associations between events, to be hypersensitive in terms of affect, particularly susceptible to daydreaming and fantasy, and to report experiencing unusual experiences such as clairvoyance. Hartmann, Harrison, and Zborowski (2001) have reviewed a set of studies using the boundaries questionnaire, where thin boundaries were shown to correlate with 'transliminality', hypnotisability and suggestibility, insecure attachment and openness to experience, and to be found in persons with a diagnosis of Borderline and/or Schizotypal Personality Disorder.

The purpose of the current study was to examine the relationship between involvement in New Age religiosity and certain aspects of personality and cognitive functioning. More specifically, it was hypothesised that adherence to New Age practices and beliefs would be associated with schizotypy, cognitive looseness, and thin boundaries. Because New Age religiosity contrasts with a traditional Christian orientation, differences between these types of religiosity were also investigated.

### 3. Method

#### 3.1. Participants

Ninety-nine subjects were recruited through subject panels in the Oxford University Departments of Experimental Psychology and Economics, and through public advertisements. All subjects were native English speakers and had no history of psychiatric or neurological disease. Each subject was paid £3, plus travelling expenses, for participation in the study. Fifty-four per cent of the participants were students, 32% were employed, and the remainder were retired. There were 56 female and 43 male participants. The average age was 38.2 (s.d. 21.1), ranging from 17 to 79. The mean age for females was 35.9 (s.d. 20.5) and for males 41.3 (s.d. 21.6).

#### 3.2. Materials

##### 3.2.1. Questionnaire measures

**3.2.1.1. Religiosity scales.** *New Age Orientation (NAO)*. This 22-item scale developed by Granqvist and Hagekull (2001) focuses primarily on New Age beliefs and attitudes, such as paranormal phenomena, Karma and reincarnation, interest in “alternative” treatments, religious syncretism and holism. Participants were asked to rate each statement on a 6-point scale, 1 indicating ‘Strongly Disagree’ and 6 ‘Strongly Agree’ ( $\alpha = 0.92$ ).

*New Age Practices (NAP)*. In contrast to the previous attitudinal scale, this measure adapted from Höllinger (2000) is simply behavioural. Its 12 items ask about the frequency (ranging from ‘never practised’ to ‘practising regularly’) of New Age techniques, such as yoga, meditation, Reiki, Shiatsu, and also divination practices like Tarot, I-Ching and astrology ( $\alpha = 0.74$ ).

*Traditional Religiosity*. This scale comprised items that asked about the frequency of religious practice (religious services, praying and reading the bible) and self-perceived religiousness ( $\alpha = 0.91$ ).

**3.2.1.2. Personality Scales.** *STA*. This 37-item scale for the measurement of schizotypy was developed by Claridge and Rawlings (see Claridge & Broks, 1984), and modelled on the DSM-III criteria for Schizotypal Personality Disorder ( $\alpha = 0.83$ ).

*Magical Ideation (MI)*. This 30 items scale developed by Eckblad and Chapman (1983) asks about interpretations of personal experiences rather than mere beliefs (e.g., precognition, reincarnation, telepathy, spirit influences). The scale was originally designed as an index of schizotypy and in a 10-year follow-up study it has proved to be a reliable indicator of psychosis-proneness (Chapman, Chapman, & Kwapil, 1995) ( $\alpha = 0.82$ ).

*Neuroticism (N)*. Eysenck and Eysenck’s (1991) EPQ-R short scale with 12 items was used ( $\alpha = 0.82$ ). The shorter, rather than the full scale version, was employed to reduce the total length of time of the experimental procedure.

*Boundaries*. The scale developed by Hartmann (1991) consists of 138 statements that are rated along a 5-point scale, zero indicating ‘no, not at all, not at all true of me’ and four ‘yes, definitely, very true of me’. A higher score indicates thinner boundaries ( $\alpha = 0.92$ ).

### 3.2.2. Experimental measure

This consisted of a random display of 100 dots, changing each 4500 ms, shown on a screen to participants for a period of 10 min. The procedure took place in a dimly lit room and all responses were tape recorded for scoring. Participants were told that they would be looking at changing patterns of dots, some of which were random and some of which were programmed to show something. They were then instructed to describe whenever they saw something recognisable (e.g., a figure or a scene). This procedure was used for the first time by Jakes and Hemsley (1986), in a study of psychosis and hallucinatory predisposition and later adapted to study delusional perceptions and belief in extrasensory perception (Brugger et al., 1993). For our experiment, we used the same scoring code as in Jakes and Hemsley's (1986) article, taken from Zuckerman's (1969) review of sensory deprivation studies and types of visual hallucinations. A twofold categorisation in simple and complex types of visual patterns was used. Simple types consisted of reports of uncomplicated geometric shapes (e.g., circles, squares, lines) or letters and numbers. Complex types referred to meaningful objects or integrated/animated scenes (e.g. static or moving people and animals, objects and landscapes). Zuckerman (1969) reports that expectancy or set influences only simple types of patterns, and Jakes and Hemsley (1986) found that only complex patterns are correlated with a measure of hallucinatory predisposition. Thus, report of complex, rather than simple, visual patterns is the most reliable index of a cognitive disposition to unusual perceptions and looseness of associations.

### 3.2.3. Procedure

Each subject was individually tested in a room at the Department of Experimental Psychology. The experiment took about 50 min to be completed.

## 4. Results

### 4.1. Questionnaire measures

Table 1 presents the means and standard deviations of scores on questionnaire measures, for both sexes. Females scored significantly higher on all scales, except Boundaries. Gender

Table 1  
Means and standard deviations of scales, and *t*-values for gender comparisons (*N* = 97)

	Total		Female		Male		<i>t</i>
	<i>M</i>	s.d.	<i>M</i>	s.d.	<i>M</i>	s.d.	
New Age Practices	1.5	0.5	1.59	0.48	1.33	0.40	2.80**
New Age Orientation	2.6	0.8	2.79	0.79	2.36	0.79	2.67**
Traditional Religiosity	3.0	1.8	3.31	1.81	2.59	1.67	2.05*
STA	14.1	6.2	15.16	5.99	12.65	6.30	2.02*
Magical Ideation	7.6	6.2	8.50	4.77	6.37	4.73	2.21*
Neuroticism	4.9	3.2	5.45	3.05	4.16	3.28	2.01*
Boundaries	260.9	45.7	261.91	44.93	259.7	47.23	0.24
Age	38.2	21.1	35.9	20.5	41.3	21.6	0.21

\*  $p < 0.05$ .

\*\*  $p < 0.01$ .

differences on the religiosity scales suggest that women are keener adherents to New Age practices and beliefs than men, and are also more active participants in Traditional Religiosity. The genders showed no significant age difference.

Logarithmic transformation was applied to the NAP and age variables to correct for a skewed distribution. After correction, Pearson correlations were calculated between all questionnaire measures and with age (Table 2). The New Age scales were highly correlated with each other and both showed a very similar pattern of associations with the personality measures. New Age practices and beliefs were strongly correlated with MI, thin boundaries, and the STA. No significant association with *N* was found. In contrast, Traditional Religiosity showed no significant associations with any of the personality measures. A weak correlation of Traditional Religiosity with the NAO was reported, which may be attributed to an overlapping of the New Age with some beliefs of a religious superstitious nature, concerning the existence of special spiritual places, fate, premonitions and contact with the dead. The NAO scale also showed a weakly significant correlation with age, which did not occur for NAP.

The STA showed weaker correlations than MI for both New Age scales. In order to explore this further, the STA was divided into three scales, following Hewitt and Claridge's (1989) analysis in which they reported three sub-factors. These factors were divided into three measures: Magical thinking with 9 items ( $\alpha = 0.53$ ), unusual perceptual experiences with 10 items ( $\alpha = 0.63$ ), and paranoid ideation with 8 items ( $\alpha = 0.79$ ). Pearson correlation results showed a significant association between magical thinking and NAP ( $r = 0.35$ ) and NAO ( $r = 0.49$ ). On the other hand, unusual perceptual experiences and paranoid ideation failed to correlate significantly with either of the New Age scales.

Additionally, the STA, MI, Boundaries and New Age scales were checked for overlap of items, in particular those concerning magical-religious beliefs/experiences, such as telepathy, premonition, reincarnation and contact with the dead. These items were eliminated from the total scores and correlations between the scales recalculated in order to check for the influence of item contamination. Elimination of the overlapping items did not affect the high correlations between MI, the STA and Boundaries. The New Age scales were equally strongly correlated with each other ( $r = 0.56$ ) and the association between NAP and the personality measures was not affected.

Table 2  
Pearson correlation coefficient between scales and for age ( $N = 99$ )

	New Age Practices	New Age Orientation	Traditional Religiosity	STA	Magical Ideation	Neuroticism	Boundaries	Age
New Age Practices	–	0.54**	0.15	0.29**	0.42**	0.13	0.34**	0.09
New Age Orientation		–	0.24*	0.28*	0.42**	0.14	0.20*	0.22*
Traditional Religiosity			–	0.05	0.08	–0.02	0.01	0.06
STA				–	0.74**	0.62**	0.40**	–0.51**
Magical Ideation					–	0.38**	0.47**	–0.43**
Neuroticism						–	0.08	–0.37**
Boundaries							–	–0.43**
Age								–

\*  $p < 0.05$ .

\*\*  $p < 0.01$ .

However, the NAO showed a moderate decrease in correlating with MI ( $r = 0.24$ ) and the STA ( $r = 0.14$ ), though for Boundaries the association was not weaker than the one reported before ( $r = 0.24$ ). Overall, this indicates that the measures used do not owe the strength of their association merely to a similarity of items, but more probably to a common factor underlying seemingly unrelated items.

To identify the best predictors of New Age practices and beliefs stepwise multiple regression analyses were carried out with NAP and NAO as the dependent variables, and the STA, MI, Boundaries,  $N$ , age and sex, as independent variables. The results for NAP as the dependent variable are shown in Table 3, where it can be seen that MI, sex, boundaries and age were the most significant predictors.

A similar, though more powerful, model emerged for the New Age Orientation Scale (see Table 4).  $N$  was not a significant predictor in either of the models. For NAO, if MI was excluded from the independent variables, schizotypy (STA) reached significance ( $t = 4.11$ ,  $p < 0.001$ ). However, the resulting model was weaker (adjusted  $R^2 = 0.34$ ) than the one reported in Table 4. Overall, MI and thin boundaries were the best personality predictors of New Age practices and beliefs, while sex and age were also found to have significant effects.

#### 4.2. Experimental task

Table 5 presents the correlations between the visual task and the other measures. Variables from the visual task were subjected to logarithmic and square root transformations for normalisation of distributions. While simple reports generally failed to achieve significant associations, all personality measures with the exception of  $N$  were moderately to strongly correlated with frequency of report and latency time of complex visual patterns. A significant, though weaker

Table 3  
Regression model for New Age Practices

Predictor variable	$\beta$	$t$	$p$
Magical Ideation	0.33	3.12	0.002
Sex	-0.25	2.77	0.007
Boundaries	0.27	2.56	0.012
Age	0.20	2.06	0.042
Adjusted $R^2 = 0.25$			

Table 4  
Regression model for New Age orientation

Predictor variable	$\beta$	$t$	$p$
Magical Ideation	0.529	5.71	<0.001
Age	0.571	6.41	<0.001
Sex	-0.214	2.71	0.008
Boundaries	0.270	2.14	0.012
Adjusted $R^2 = 0.42$			

Table 5

Pearson correlation coefficients between the experimental task, questionnaire measures and age ( $N = 99$ )

	New Age Practices	New Age Orientation	Traditional Religiosity	STA	Magical Ideation	Neuroticism	Boundaries	Age
<i>Simple patterns</i>								
Total simple reports	0.16	0.18	-0.04	0.03	0.18	-0.19	0.20	-0.03
Number of different simple reports	0.19	0.17	-0.04	0.09	0.22*	-0.14	0.24*	-0.08
Latency of first simple report	-0.18	-0.12	0.01	-0.07	0.05	0.04	-0.07	-0.01
<i>Complex patterns</i>								
Total complex reports	0.29**	0.18	0.09	0.38**	0.45**	0.10	0.35**	-0.32**
Number of different complex reports	0.25**	0.18	0.04	0.39**	0.45**	0.11	0.36**	-0.29**
Latency of first complex report	-0.24*	-0.15	0.16	-0.28*	-0.31**	0.04	-0.30**	0.12

\*  $p < 0.05$ .\*\*  $p < 0.01$ .

association occurred for NAP, but not for the NAO scale. Finally, the negative correlation between age and the report of complex reports indicates that younger people tend to see more complex visual patterns in a random display of dots. Multiple regression analysis with the indices of the experimental measure as independent variables was conducted but none of the variables was a significant predictor of NAP and NAO.

## 5. Discussion

The results of this study indicate that New Age practices and beliefs are associated with schizotypal personality traits, particularly those concerning magical ideation. Multiple regression analysis revealed that magical ideation was a strong predictor of adherence to the New Age. The STA was strongly correlated with magical ideation ( $r = 0.74$ ), but its association with the New Age scales was weaker, and so was its predictive power in a multiple regression model, compared with magical ideation alone. The differences between these two schizotypy measures regarding New Age adherence can be attributed to the multiple factorial nature of the STA; it is the magical thinking factor, rather than paranoid ideation and perceptual ideation, which is more strongly correlated with the New Age scales. Otherwise, the STA and magical ideation measures present a very similar pattern of correlations with age, boundaries and the experimental task. They also behave similarly regarding sex, as women score significantly higher than men on both scales.

This gender difference for schizotypy was also found for New Age adherence. Women practice New Age activities more often and have more New Age beliefs and interests than men. That women are generally more religious than men has been widely established (Hood, Spilka, Hunsberger, & Gorsuch, 1996) and it is also indicated in this study as women score higher on the Traditional Religiosity scale. On the other hand, sex and age were shown to be significant predictors of New Age adherence. This finding, which demographically circumscribes New Age individ-

uals to a particular population, is supported by a previous large-scale study (Rose, 1996), where New Agers were found to consist mostly (70%) of women and to be middle aged (about 60% were between 35- and 54-year-old).

The results from the experimental visual task generally mirror those of Jakes and Hemsley's (1986) original study, where no significant associations were found between simple reports and personality measures, but frequency and latency of complex reports were shown to correlate with psychoticism. In our study, both schizotypy scales and boundaries were associated with complex reports but, among the religiosity scales, only NAP showed a significant correlation with these reports. As a measure of a behavioural nature, this scale offers a more reliable link between the practice of New Age techniques and a particular cognitive style, than the simple endorsement of a set of attitudes and beliefs, as measured by the NAO scale.

Williams (1994) has used cluster analysis to look at the multidimensional nature of schizotypy and the existence of different combinations of schizotypal traits. She refers to a particular cluster of schizotypal people who are relatively high on magical ideation, along with a low level of physical and social anhedonia, suggesting that these individuals experience primarily 'positive' aspects of schizotypy—ideational and perceptual disturbances. This cluster seems generally to describe the schizotypal profile suggested by our results. However the overwhelming centrality of the magical ideation factor for the New Age adherents also seems to be associated with a particular emotive sensitivity characteristic of people with 'thin boundaries'.

For the New Age, the particularities of the cognitive style, and personality traits of its adherents are made clearer by the results of the Boundaries scale. Thin boundaries were a significant predictor of New Age adherence in multiple regression analysis. The thin boundaries construct accounts for some characteristics of the New Age religiosity, such as the sense of 'connectedness' and 'holism', as well as a particularly associative thinking style, and an emotional vulnerability or hypersensitivity (Hartmann, 1991). In New Age practices and beliefs one finds explicit reference to the development of one's emotional sensitivity and of an associative cognitive style which stresses how 'everything is connected'. The New Age in fact uses a variety of techniques (e.g., visualisation, free association) which aim to promote a cognitive and emotional 'holistic self-awareness'. Future research should perhaps try to experimentally verify what the consequences of these practices might be. As to our study, the results indicate the presence of underlying personality and cognitive structures disposing the New Age individual to unusual ideas and perceptions.

None of this, however, is meant to pathologize the New Age individual. According to the fully dimensional model advocated by Claridge and collaborators' (Claridge, 1997), schizotypy is a personality trait subject to individual variation with psychosis as only one of its outcomes; the other outcome will be perfectly healthy. Peters (2001) summarising the research done with members of New Religious Movements, like Druids and Hare Krishna, and comparing them to Christians, non-religious people, and deluded patients, concludes that the members from these non-traditional religious groups are at the intersection of the continuum between 'normal' and psychotic or deluded individuals.

Finally, in our results traditional religiosity was found to be unrelated both to the personality measures and the experimental task. A possible interpretation for this is based on the often reported negative association between religiosity and psychoticism, using the P scale which at the low end measures conformity behaviour, suggesting that Christian religious people would be more tender-minded, conventional and readily conditioned (Francis, 1993). Thus, traditionally religious

people would be understood to be more socially conformist than those individuals taking part in ‘alternative’ activities. This, of course, does not imply that religious people are more likely to engage in ‘good’ behaviour than New Age individuals, but that there are significant differences in cognition and personality between these two groups. On the other hand, the unusual ideation and perceptual experiences of certain individuals, mostly female, may lead them towards the New Age and not traditional religion, as the New Age seems particularly apt to frame these ideas and experiences into an unconventional modern belief system.

## Acknowledgments

The authors would like to thank Manik Varma (Jesus College, Oxford) for writing the programme for the experimental task, and Mrs. Anne Baker for organising the recruitment of participants. During the course of this study, the first author was supported by a doctoral scholarship from the Portuguese Foundation for Science and Technology.

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