Study of latent inhibition at high-level creative personality
The link between creativity and psychopathology

Cristina Chirila*, Aneta Feldman a

*University of Bucharest, Psychology Department, Panduri Street, No 90, Bucharest 050107, Romania

Abstract

This paper tries to find a proper answer, approaching the link between creativity and psychopathology in terms of cognitive connections and personality traits common to creative and mentally disturbed individuals. To verify our hypothesis we conducted a latent inhibition task and we applied several questionnaires. The results indicated a significant relationship between a variety of creativity indicators and low scores of latent inhibition that were related previously with the presence of mental illness. We used IQ as a mediating variable between creativity and latent inhibition. It seems that creativity can also be associated with high scores at the clinical scales.

1. Introduction

The stereotype about artists suffering from psychiatric disorders suggests that mental disorders and creative imagination have common roots. Specialty literature abounds in theories which link creativity with mental disorders, as well as detractors of these theories (Chan 2001). The general theoretical framework in which our research is grounded posits that individuals who possess a high degree of creativity have thought and personality structures similar to accentuated personalities (Andreasen, 1987).

2. Purpose of study

After having studied the available data, it was observed that creative individuals possess certain means to process information (hyperactive imagination, latent inhibition) leading to such a strong

* Corresponding author. Tel.: +40766301023; fax: 40 2108282.
E-mail address: cris_chirila2006@yahoo.com.
individualization that it gives them the possibility to experience situations implying a high degree of creativity, but also placing them, at the same, at the limit between mentally healthy fantasies and illusions (Benjamin, 2008). The lack of capability to filter relevant stimuli which frequently interpose focused thinking processes leads to an exceptional cognitive flexibility which sustains creative behaviour, but, at the same time, is common to psychopathy as well (Carson, Peterson, Higgins 2003).

3. Objectives

This paper tries to review all the findings for a better understanding of the social context that sustains this controversy.

By transferring these conclusions in the context of an organization whose field of interest is publicity, we expect individuals with a high creativity level to have a thinking style (information-processing strategies) similar to those who obtain high scores on clinical scales, which leads to a higher predisposition to mental disorders, compared to less creative individuals. We also assume IQ to be a mediating variable between creativity and latent inhibition (insofar as low/high levels of latent inhibition are compared to moderate/high IQ levels and creative outputs). At the same time, we believe there is a positive correlation between creativity and high scores on clinical scales.

4. Methods

4.1. Participants

In order to verify the truth value of these hypotheses, we have conducted our investigation on a sample of 43 subjects, with ages ranging from 20 to 35 years old, belonging to middle and upper class social environments, with average and high revenues, homogenous as per gender variables. Of the 43 subjects, 22 work in the creative department of advertising agencies and the others in departments which do not absolutely require creative abilities. Creative subjects sample consisted of music composers, actors, photographers, visual artists, copywriters, interpreters, art directors and audio-video producers.

4.2. Procedure

For the latent inhibition task, the subjects participated in a two-phase experiment: In the first part of the experiment, the subjects in the pre-exposure phase were shown an audio-video version of the latent inhibition task. They had to listen to a series of 30 meaningless syllables (masking material), presented 5 times, with no break that would mark the end or the beginning of each repeating cycle. A white noise (which was the target stimulus) was randomly superposed 25 times throughout the recording. The subjects received the masked task to determine how many times the syllable "bim" repeats itself.

In phase 2 (the actual test phase), the recording was put on replay, while a series of 25 yellow discs appeared on the screen. The apparition of yellow discs coincides with the apparition of target stimuli (white noise) which could be heard during the recording with the meaningless syllables. The subjects were asked to determine which are the auditory stimuli signaling the apparition of the yellow dots. When the subject would correctly identify the apparition of the yellow dots from 3 consecutive attempts, the recording would be stopped. In the case of a wrong answer, the presentation would go on until the subject would discover the rule. The subject’s score for this task (attempts to identify the rule) is determined by the number of yellow discs visible on the screen at the time point coinciding with a correct answer.

The subjects in the non-pre-exposure phase are asked to view the same recording, except for the fact that the target stimulus (white noise) is absent from the pre-exposure phase of the task.
4.3. Instruments

Additionally, throughout the tests previously conducted, other several variables have been assessed, such as creativity, intelligence level and presence of accentuated traits in the creative sample subjects. Applying Torrance tests of creative thinking (figural and verbal) enabled us to make a separation between creative and non-creative individuals. Then an intelligence test and a test for accentuated personalities were applied on all participants. In order to assess the intelligence level, we made use of Raven’s progressive matrices, while for investigating pathological tendencies, including both neurotic and somatic psychopathological disorders, we used the DA 307 Questionnaire. The factors captured through this assessment are the following: demonstrativity, hyper-exactness, hyper-perseverance, lack of control hyperthymia, dysthymia, lability, exaltation, emotivity, anxiety, neuroticism, dependence and desirability.

4.4. Data analysis

For testing the first hypothesis, the Pearson linear correlation coefficient was used, precisely for showing how the values of the two variables vary as influenced by one another (latent inhibition and creativity, respectively latent inhibition and scores obtained on clinical scales). Subsequently, low/ high inhibition levels are compared to moderate/ high IQ levels and to creative outputs, in order to test the second hypothesis. Multiple linear regression was used, showing thus how much information on latent inhibition is contained in the simultaneous combination of the two variables, associated, e.g. creativity and the intelligence coefficient.

5. Results

The Pearson correlation coefficient outlines negative, but significant correlations between latent inhibition and the variable associated to high scores in the accentuated personalities questionnaire (r=-0.76, p=0.00), which leads to confirmation of the first hypothesis, justifying the supposition that subjects with low latent inhibition scores rank high on scales assessing pathological tendencies.

The correlation matrix, shows in this case as well significant negative correlations between latent inhibition and figural creativity, e.g. creativity through words. Thus, we may conclude that the first general hypothesis is confirmed, which further means that we are allowed to imply the existence of a means of processing information common to creative individuals and individuals obtaining high scores on clinical scales. This finding could be explained by the fact that individuals with a low latent inhibition level are more predisposed to mental disorders, not being capable to filter relevant stimuli which frequently interposing focused thinking processes. At the same time, a low inhibition level is associated with exceptional cognitive flexibility, which triggers creative behaviour.

As the regression tables show, this time too, the hypothesis has been verified for each form of creativity.

Table 1. Regression table on IQ and latent inhibition

<table>
<thead>
<tr>
<th>M</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.849</td>
<td>.721</td>
<td>.706</td>
<td>13.92041</td>
</tr>
<tr>
<td>2</td>
<td>.853</td>
<td>.727</td>
<td>.706</td>
<td>13.93741</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), IQ, latent_inhibition  
b. Predictors: (Constant), IQ, latent_inhibition
As per the above data, the R² value proves that 72% of the figural creativity variation is determined by the latent inhibition and intelligence coefficient variables, as well as the interaction between them. Individual regression coefficients have significant values, which underlines the description of a significant relationship between the predictor and criterion variables. Confirmation of this hypothesis shows that the ability to exploit unusual ideas (creativity) is sustained as well by general intelligence. As Simonton said, a minimal level of intelligence is necessary for an exceptional creativity (Simonton, 2000). However, as time went by, psychology and related fields have witnessed the shaping of a certain personality profile, typical for creative geniuses. Eysenck (1995) states that independence, neuroticism, nonconformism are associated to psychoticism, representing, at the same time, traits which sustain innovative activities. With regards to latent inhibition, Peterson and Carson (2000) say that this less restrictive means of processing information is associated with openness towards experience and creativity. Other authors believe that a high level of self-sufficiency is a characteristic of the most creative individuals (Barron, 1963). In order to clarify some aspects pertaining to the highly creative individuals personality, and especially the prevalence of personality disorders within this sample, we elaborated the third general hypothesis according to which individuals having high scores on creativity scales rank high on clinical scales as well. To verify if there's any consistency in the reciprocal variation of the two variables' values, we applied Pearson's linear correlation coefficient. A significant positive correlation was observed between figural creativity and the variable which we defined as accentuated personality, r=0.76, p<0.001. Significant results have been observed as well for the second form of creativity, the figural type, and presence of accentuated personality traits. After applying Pearson’s correlation coefficient for each scale of the DA 307 Questionnaire and the two forms of creativity, the results of the research confirmed that individuals with verbal creativity abilities are emotive, sensitive, impressionable, easily affected especially by unhappy events, however not really anxious and not necessarily demonstrative, as we might have expected. The subjects getting high scores for figural creativity are characterized by uncensored behaviors, however without ranking high on the neuroticism dimension.

6. Discussion

Such data adds to the conclusions of empirical research conducted so far on the creative individuals’ personality profile, reducing the power of a whole range of speculations made over time on the link between creativity and mental health. The results and the analyses captured in this study indicate a significant substantial relationship between a variety of creativity indicators and low scores for latent inhibition, previously associated with underlying psychotic states. There is also substantial research evidence to suggest that a high level intelligence coefficient has a moderate positive effect on the expression of latent inhibition, functioning as either a disadvantage, a deficit hindering selective attention, or as facilitating factor of creativity. This study would be incomplete, however, if we failed to acknowledge the issue of the genius within the context of postmodern condition. As postmodernism is characterized by - pluralism, identity & self fragmentation, decentralized control, dissemination of information (Derrida, 1976), skepticism, double encoding (Jencks, 989), globalization (Jameson, 1992), emergence of simulacra, as well as the role of the media in transforming and recreating the real (Braudillard,1988) - nonconformism, hybridity, identity conflicts are enjoying an increasingly wider acceptance, which leads to a deeper understanding of geniuses and their particularities. For future research, it would be desirable to develop a procedure employing multiple methods to assess latent inhibition, on a larger sample size, on different creative groups. Preferably, future projects would also benefit from introducing additional potentially moderating factors, such as memorizing ability, hyperactive imagination, but also personality dimensions which may have an impact on the relationship between latent inhibition and creativity. Furthermore, it would be interesting to look at the way such
subjects adapt to their workplace environment, despite these pathological tendencies interfering with their interpersonal relationships within the organization, as well as the impact on their performance in their activities.

References


