

## ROMANIAN CREATIVITY. CREATIVE THINKING IN ROMANIA

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**ABSTRACT.** This is an exploratory study of creative thinking in Romania. The Torrance Test of Creative Thinking (TTCT) was administered to 46 Romanians (19 high school students, 18 university students, and 9 adults). A profile on the TTCT of the Romanian sample was identified for the global Standard Composite Score and Creativity Index, with the five normative scales (Fluency, Originality, Abstractness of Titles, Elaboration and Resistance to Premature Closure), as well as the thirteen criterion-referenced Creativity Strengths. A significant difference was discovered between the Romanian profile of creative thinking and the American profile of creative thinking. Implications are examined.

**Keywords:** *creativity, creative thinking, Torrance, normative scales*

Creativity has been defined as: sensing problems, searching for possible solutions, drawing a hypothesis, testing and evaluating, and communicating the results to others (Torrance, 1969). The creative process includes developing original ideas, different points of view, breaking out of the mold, recombining ideas, and seeing new relationships among components (Torrance, 1969). In a sense, creativity can be viewed as a type of problem solving used when conventional solutions do not work. It indicates an adaptability and flexibility of thought (Moran, 1988).

The basis of creative thinking is the ability to evaluate a product or idea, combined with the facets of divergent thinking. Divergent thinking is the ability to process diverse stimuli, organize thoughts flexibly, and generate ideas about varied subjects (Guilford, 1967). Creative thought (divergent thinking) is thus innovative, exploratory, and venturesome while non-creative thought (convergent thinking) is cautious, methodical, and conservative (Kneller, 1965). Traditionally, intelligence tests measure convergent thinking. The present research will focus on divergent thinking.

E. Paul Torrance (1969), a pioneer in creativity, defined creativity using four different categories: fluency – the ability to produce a large number of ideas; flexibility – the ability to produce a large variety of ideas; elaboration – ability to

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develop, embellish, or fill out an idea; and originality – the ability to produce ideas that are unusual, statistically infrequent, not banal or obvious. This model of creativity is still influential in current creativity research. Based on this model, Torrance developed a set of tests to assess creative thinking.

The Torrance Test of Creative Thinking (TTCT), an assessment of creative thinking is designed to measure the basic thinking processes that lead to creative products. The underlying assumption of this assessment is that creativity is a multiple construct that can be expressed verbally or visually (figural). Both expressions of creativity (verbal and figural) are composed of the factors of: fluency, originality, and elaboration. The Figural Form of the TTCT does not require the domain of specific knowledge.

Torrance (2002) concluded that basic assumptions about the abilities involved in being creative are universal: that everyone possesses the abilities to be creative to some degree, and, further that these abilities are capable of being increased by training. Moreover, when creativity is manifested early in the life cycle, its development depends on supportive experiences in the social and physical world, along with consonant values of the cultural environment.

Environmental factors have also been identified as contributing to creative thinking and problem solving. Research suggests that culture influences creative and conforming behaviors (Ng 2003, Chan and Chan, 1999). Western culture perceives itself as free of the relationships of hierarchy and exchange that govern social ties. Individuals in this autonomous culture imagine that he or she lives in an inviolate region (the extended boundaries of self) where he or she is free to choose. (Shweder, 1991) This culture is classified as an individualistic culture/society.

This can be contrasted with the collectivist culture/society which is often defined as a society where people are from birth integrated into strong cohesive in-groups that protect them throughout their life, in exchange for unquestioning loyalty (Hofstede, 1991). This holistic world-view shares similarities with context-dependent people in that no attempt is made to distinguish the individual from the state. Moreover, in both views it is found that obligations and rights are assigned by the role and/or group, and people are not inclined to assign intrinsic moral worth to people just because they are people (Shweder, 1991). The holistic culture embraces a sociocentric concept of the relationship of individuals to society and may perceive context and social relationships as conditions for behavior (Shweder, 1991).

Perkins' (1993) research identified two different student groups: group dependent and group independent. Conforming and group-dependent students showed a high need for nurturance, deference, order and control in contrast to group-independent students who showed a high need for achievement, autonomy, aggression, and creativity. Living in a collectivist society (such as, Communism) accentuates the needs for validation and similarity within the social group, which leads to conforming behavior. Living in an individualistic society (such as, democratic) accentuates the psychological need for uniqueness and differentiation thus leading to individualistic behaviors. Research has found that members of individualistic societies scored higher in fluency than members of collectivist societies (Ripple, 1989).

This collectivist harmony may lead to conventional behavior while independence may lead to more unconventional and creative behavior (Runco, 2007). The emphasis on harmony may lead people in collectivist societies to look either upwards toward authority or towards the traditions of the past for guidance (Runco, 2007). When the emphasis is on harmony, socialization is homogenizing and does not encourage the child to extend the boundaries and behave creatively (Cropley, 1973).

Ng's (2003) research indicated that individualistic members with an independent self-construct find it easier to engage in creative behavior compared to collectivists. Culture has an indirect influence on creativity by the way it shapes the psychological make-up of each person and supports addressing the issue of culture when researching creativity (Ng, 2003).

Past cross-cultural research on creativity has been based on explicit theories of creativity and investigated differences in creative performance and expression across cultures (Niu and Sternberg, 2002). This assumes that there is a universal concept of creativity that can be measured by a standardized or a universally meaningful test. This assumption ignores the idea that creativity may be culture and domain specific. This would then mean that measurements of creativity would need to incorporate culture and domain factors.

However, cross-cultural creativity research based on explicit theories yielded contradictory results. The TTCT was found to yield higher results for Arabs living in modernized societies with high levels of intellectual freedom (Mar'i & Karayanni, 1983). Niu and Sternberg (2002) indicated that similar studies with Asians did not correlate modernized society into higher TTCT scores for Asians. Torrance and Sato (1979) found that Japanese students do better than Americans in flexibility, originality and elaboration on the Figural Form of the TTCT.

Niu and Sternberg (2002) summarized that the universal core characteristics of creativity shared between the East and the West include: originality, imagination, intelligence, independence, and high energy/activity levels. People in Eastern cultures, however, emphasize the social and moral components of creativity, while Western societies emphasize the value of personal success as a creator and the expression of individual characteristics (such as, humor & aesthetic tastes).

Romania has historically been a collectivist society, but it is now moving to more western and democratic values. The country, however, remains a highly traditional culture. Traditional cultures typically do not emphasize individuality and independent thought. As an emerging democracy, the following questions bear investigation. Is the creativity pattern of Romanians changing as they change from a collectivist society to a democratic society? Are teaching styles changing as the government changes? A post-revolution research project addressing teaching styles and creativity in Romania identified that Romanian children (age 5-7) taught with child-centered learning strategies in an early childhood development program were found to be more creative than children in traditional Romanian educational programs. TTCT-Verbal flexibility on Unusual Tasks was found to be highly significant ( $p < .001$ ), with an effect size of .432 (Brady Dickinson, Hirschler, & Cross 1999).

## **Purpose**

The study itself is exploratory, based on a rich sample of convenience. The purpose of this study is to examine the creative thinking patterns of a sample of Romanian high school students, university students, as well as adults. The primary question to be investigated is: Does a difference exist between a Romanian profile of divergent thinking and the American profile of divergent thinking? What is the pattern of creative thinking for the sample of Romanian students on the Torrance Test of Creative Thinking- Figural Form A?

## **Method**

### ***Participants***

The participants for this research are individuals who live in Romania. Specific participants were chosen because of their location in Romania and their willingness to be approached for participation.

Participants identified their ethnicity (Romanian, Roma) and age.

Forty-six Romanians participated in this research including 39 females and 7 males. Eighteen subjects were university students (2 males, 16 females) in Cluj-Napoca, Romania. Nineteen subjects were from a high school (2 males, 17 females) in Baia Mare, Romania, and nine were adults (3 males, 6 females).

### ***Measures:***

The Torrance Test of Creative Thinking (TTCT) Figural Form A was administered to identify a pattern of creativity among the Romanian sample groups. The TTCT has been intensively researched since the 1960's. The Torrance Test of Creative Thinking explores verbal and figural dimensions of creative thinking. It defines creativity in four categories: fluency, flexibility, originality, and elaboration. Torrance defined fluency as the ability to produce a large number of ideas, flexibility as the ability to produce a large variety of ideas, elaboration as the ability to develop, embellish or fill out an idea, and originality as the ability to produce ideas that are unusual, statistically infrequent, not banal or obvious (Torrance 1969). The TTCT has also been used in different countries to identify patterns of creative thinking.

The assessment is divided into three-ten minute sections. The first section requires the participant to draw a picture from a shape on a page to make the picture tell an interesting story and then to give the picture a title. The second section requires the participant to finish incomplete figures to make interesting objects, or pictures and to title each picture. The third section allows the student ten minutes to make as many objects or pictures out of two straight lines, and then to title each picture. The instrument was selected because it has been used in cross-cultural research of creative thinking, and possesses high reliability and validity.

The norms for this assessment instrument are the most extensive of any creativity instrument. The figural norms are based on responses from 88, 335 students

from 42 different states (Center for Creative Learning, Inc. 2002). The streamlined scoring was updated in 2008. The instrument revealed excellent validity with extensive documentation of content, construct, and concurrent validity, including short and long term validity studies. Inter-scorer reliability is reported in the .90 range. Test-retest and alternate form reliability rates range from .59 to .97 in various published reports (Center for Creative Learning, Inc. 2002). The directions were translated into Romanian and then back-translated to verify for translation accuracy.

### ***Procedures***

The investigator used a sample of convenience. Specific participants were chosen because of their location (Romania) and their willingness to participate. A local university granted permission for research to be conducted.

Quantitative data was collected using the TTCT-Figural Form A. All instructions were translated into Romanian and administered in Romanian. Instructions were read to university students desiring to take the TTCT in Romanian. Students were approached in classes and small groups and given the opportunity to take the assessment. All students were read and received a copy (in Romanian) of the information sheet describing the purpose of the research, the procedures, the risks and benefits to the participants, confidentiality.

Scoring of the TTCT was reviewed by another professional to check for inter-scorer reliability of the scoring. The TTCT norms used for scoring the Romanian adult sample used the oldest age norm (19 years) available at the time of the research (1998 norms). The TTCT standardized sample included 1449 adults (out of the 55,600 total).

### ***Results***

The Standard Composite Score for the TTCT reflects the compilation of all five norm-referenced TTCT ability scores: Fluency, Originality, Abstractness of Titles, Elaboration, and Resistance to Premature Closure. The Romanian sample mean score for the TTCT Standard Composite Score was 100.14 ( $sd=16.72$ ). This score is classified as average and within normal limits. This indicates that the Romanian Standard Composite Score of the five norm referenced ability scores, is at the 55<sup>th</sup> percentile when compared to the American standardized sample.

The Creativity Index is a compilation of the TTCT Standard Composite Score and 13 criterion referenced measures of Creative Strengths: Emotional Expressiveness, Storytelling Articulateness, Movement/Action, Expressiveness of Titles, Synthesis of Incomplete Figures, Synthesis of Lines, Unusual Visualization, Internal Visualization, Extending/Breaking Boundaries, Humor, Richness of Imagery, Colorfulness of Imagery, and Fantasy. The mean score of the Romanian sample for the Creativity Index was 112.45 ( $sd=20.57$ ) which is classified as average. The Romanian Creativity Index is at the 56<sup>th</sup> percentile when compared to the American standardized sample.

Viewing the subfactors of the TTCT is revealing and indicates differences in performance between the Romanian sample and the American standardized sample. Fluency is one of the most critical aspects of the TTCT. The score on this factor indicates the number of ideas a person expresses that uses the stimulus in a meaningful manner. Figural scoring for the total Romanian sample for Fluency was a mean score of 114.46 ( $sd=16.63$ ). This score is high average and within normal limits. This indicates that the Fluency mean score for the Romanian sample is in the 76<sup>th</sup> percentile when compared to the American standardized sample.

Originality is defined on the statistical frequency and unusualness of the response, in respect to the frequency of Americans responses. The Romanian sample mean score for Originality was 109.41 ( $sd=22.27$ ), which is classified as average and within normal limits. This indicates that the Romanian sample mean Originality score is in the 68<sup>th</sup> percentile when compared to the American standardized sample.

The Abstractness of Titles score identifies a person's use of titles for the drawings. The criteria for Abstractness of Titles requires that the individual title goes beyond simple description and communicates something about the picture that graphic cues do not express without the title. The Romanian sample mean score for Abstractness of Titles was 76.91 ( $sd=37.2$ ). The Romanian sample mean for Abstractness of Titles is below average and seen as a normative weakness when compared to the American standardized population. The Romanian sample's mean for Abstractness of Titles score is in the 15<sup>th</sup> percentile when compared to the American standardized sample. However, this lower score could be due to language translation issues and therefore may not be a valid representative of the criteria for Abstractness of Titles. It is important to note that the university students (who are required to pass a foreign language (English) proficiency exam to get their degree had a mean Abstractness of Titles of 105.23 (60%) compared to the US mean of 95 (41%). The Romanian sample mean (76.9) for Abstractness of Titles is over one standard deviation below the American mean (95/41%) of the standardized sample for the TTCT.

The Elaboration score reveals the imagination through the exposition of detail. This is an identified function of creative ability. The Romanian sample mean score for Elaboration was 122.65 ( $sd=24.59$ . ) and at the 82<sup>nd</sup> percentile when contrasted to the American standardized norm. This score is classified as above average. The Romanian sample mean (122.65) for Elaboration is over 1 ½ standard deviations above the mean (99/50%) of the American standardized population. This is a significant difference between the American and Romanian sample mean.

Resistance to Premature Closure reveals the person's ability to keep open and delay closure long enough to develop original ideas. Less creative people tend to leap to conclusions prematurely without considering the available information thus cutting off chances of developing more powerful original images. Unfortunately, people who complete only a few responses are penalized in that if there are fewer responses to score, and accordingly Resistance to Premature Closure will be lower. This may give an inaccurate picture of the subject's ability to delay closure. The

Romanian sample mean score for Resistance to Premature Closure was 109.2 ( $sd=15.1$ ) which is classified as average when compared with the standardized American sample population. This indicates that the Romanian Resistance to Premature Closure is in the 60<sup>th</sup> percentile when compared to the American standardized sample.

### **Discussion**

The results of the study indicate that the Romanian sample differs from the American norms. That is, a different profile for Romanian students emerged. The most notable difference was in Elaboration and Abstractness of Titles. The Romanian Elaboration mean is over 1 ½ standard deviations above the mean of the American standardized population. This correlates with Torrance and Sato's (1979) research with Japanese students. This indicates that two collectivist cultures (Romania and Japan) both have significantly higher scores in elaboration than those in the western culture.

Another difference between the Romanian and American pattern of creative thinking occurred in Abstractness of Titles factor. The Romanian sample mean is over one standard deviation lower than the Americans norm in Abstractness of Titles. This result could be confounded by translation difficulties and that many students chose to write their titles in English even when given the option to write the titles in Romanian. It is important to note that the university students (who are required to pass a foreign language (English) proficiency exam to get their degree had a mean Abstractness of Titles of 105.23 (60%) compared to the US mean of 95 (41%).

The initial data suggests that Romanians may have a unique figural TTCT profile since the Romanian sample mean is over one standard deviations above the American sample mean in Elaboration, and over one standard deviation below the American mean in Abstractness of Titles. However, it must be kept in mind that this was a small sample,  $N=46$  with 18 University Students, 19 high school students and 9 non-student adults.

It must be noted that the normative weakness in the Abstractness of Titles could be due to language and translation issues. Many of the students chose to write their titles in English so they could practice their English. This could have inhibited the students potential to elaborate in the titles than if they had chosen to answer in their native language. The translator identified that it was sometimes difficult to translate the titles because there would not be an exact translation for what the subject wrote in Romanian.

The traditional and collective culture has been characterized by the Romanian society until recent times. Currently western and democratic values are now being assimilated in to the Romanian culture. Creativity scores on the TTCT revealed that Romanian students pursuing secondary and higher education have a great potential for divergent thinking.

### **Future Areas for Research**

What accounts for the difference in the profile between the Romanians and Americans is speculative. A qualitative study involving the interview of Romanian students and their teachers may yield some insight as to the pedagogical nature of the teachings that may influence divergent thinking. Are there differences in teacher and student values? An empirical study using a values scale that identifies collectivist, individualist, and universalist sentiments might prove to be revealing.

Another aspect that needs to be explored is the Romanian culture, particularly in the creative arts domain, and its influence on the development of divergent thinking. The Romanian society, even in the collectivist day, was always alive with visual and musical appreciation and activity.

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