Chapter 9
Creativity and Giftedness: A Study of Attitudes

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ABSTRACT
During the last decades there is a growing interest in theory and research on creativity and giftedness. Creativity and giftedness are two distinct, but intercorrelated terms. They can be combined into a new distinct type of giftedness, the creative giftedness. Creative giftedness is associated with originality and inventiveness in highly cognitively demanding scientific and/or artistic fields. In this chapter, there will be a presentation in the form of a brief historical overview of the research on the topic of creativity and giftedness. This chapter also includes a review concerning data from neuropsychological research coming from children, adolescents and adults, who are both creatively and intellectually gifted, and data from a Greek research for the general population’s attitudes toward individuals who are characterized as both intellectually and creatively gifted. Finally, some questions that need clarification through future research and a discussion concerning new methodological paradigms will be presented.

INTRODUCTION
The scientific study of giftedness began during the Victorian era and focused on the systematic investigation of the cognitive differences among people (Robinson & Clinkenbeard, 2009). From the very beginning it was obvious that the examination of extensive family pedigrees of British men, who achieved eminence (in terms not only of intellectual superiority, but also of creative production) in various domains (like science, politics, literature, art, and music), often appeared among individuals who were genetically related. This provided the very first theoretical assumption of a biological and genetic etiology of giftedness in one or more scientific and/or artistic domains, which is claimed to be found in relatively few individuals among the population (Galton, 1869). Thus started the debate of how one acquires the gifted or the creatively gifted label and the nature versus nurture debate; it, however, did not succeed in acknowledging the role of creativity in giftedness. Although there is evidence of a vital heritability element for general cognitive ability, characterized by Spearman’s $g$ factor (Kalbfleisch, 2004), there are

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no clear answers yet for the genetics of giftedness and the real role of environmental and educational factors not only on giftedness, but also on creative potential. Beyond these findings, a series of research attempts followed in the USA, focusing on high cognitive ability in children and the possible connections to adult academic and vocational success (Terman, 1922, 1925, 1954; Terman & Oden, 1947, 1959).

There is no single definition of giftedness, but there exist various definitions of gifted, creative, and talented individuals in the scientific literature, which all carry their own strengths and weaknesses (Porter, 2002). The fact that there is not an agreement on this issue is clear if we take into account that many scientists and writers keep using these terms interchangeably as synonyms. There are many problems in distinguishing high achievers from gifted learners and creative thinkers. A differentiation has been proposed between giftedness and talent; giftedness is associated with domains of abilities which foster and explain exceptional performance in varied fields of activities, that is, talents. Thus, one can be gifted without necessarily being talented (as is the case of underachievers), but not vice versa (Gagné, 1985). As a general rule, children before they reach the age of their entrance to the school system tend to be highly creative, they have vivid imaginations, and the learning process is a process that involves exploration of the environment, taking risks, manipulating, testing, and modifying ideas. But not all children have high cognitive abilities. So, what is the role of creativity in identifying the gifted and talented?

There have been many approaches to the concept of creativity, which present it as an integral, but distinct part of the concept of giftedness beginning with the Marland Report (1972). This plethora of approaches (due to the variety and diversity of creative expressions) is reflected in the many different ways of measuring creativity (Brown, 1989). Creativity can be expressed as creative performance (e.g. in musicians, actors, dancers etc.), and/or as creative production (e.g. playwrights, choreographers, historians, biologists, psychological scientists etc.) (Subotnik, Olszewski-Kubilius & Worrell, 2011). In addition to that, creativity can be seen as either the normally distributed trait of the creative potential, which refers to the ability to generate something novel and useful (Eysenck, 1995; Sternberg & Lubart, 1999), or as creative achievement, which refers to the actual realization of this potential in terms of real-life accomplishments (major scientific discoveries, publications etc.) (Carson, Peterson, & Higgins, 2005).

Although a myth exists that creativity is too difficult to measure, most common in the assessment of creativity are the divergent thinking tasks-tests. These tests estimate the potential for creative thought (Runco, 1993), such as the well-known Torrance Tests of Creative Thinking which focuses on fluency, originality and elaboration. Other well-known tests in the assessment of creativity are the alternate uses tasks in which participants are instructed to find creative uses for everyday objects ( Kaufman, Plucker, & Baer, 2008), the Guilford tests (Wilson, Guilford, & Christensen, 1953), and the Wallach and Kogan tests (Wallach & Kogan, 1965). A new approach to creativity assessment includes not only creativity tests (which can be misinterpreted), but also information that comes from self-ratings, such as the Creative Achievement Questionnaire (CAQ; Carson et al., 2005) for which intelligence seems to significantly predict the obtained scores (Carson, Peterson, & Higgins, 2003; Kéri, 2011) and also expert third-person raters who evaluate creative work, as outlined in the Consensual Assessment Technique. In addition to that, information for creativity of an individual can be given by peers, parents and teachers, who can give more ecologically valid information when the assessment of an individual's creativity is necessary.

Of course, creativity may be a key quality in a broadened conception of giftedness, that of creative giftedness (Stenberg & Lubart, 1993). In a cognitive way of approaching the concept “creativity” it may refer to a process that involves information from different fields, which may result in the production of new-novel-original-different-unique ideas/insights and things/solutions/products, which are also useful, appropriate, or relevant as defined within some specific socio-cultural context (Plucker, Beghetto, &