## Learning motivation and giftedness in sociocultural diverse Latin America and the Caribbean societies

Sheyla Blumen\* Pontificia Universidad Católica del Perú, Lima, Peru

Abstract: This theoretical review aims to integrate state-of-the-art learning motivation theoretical concepts within the context of gifted and talent development models for native children living in Latin America and the Caribbean sociocultural diverse societies. Motivation as a determinant factor and a promoter of gifted achievement is analyzed. Also the relation between motivation, outstanding performance and underachievement is discussed and tendencies found in social-emotional development of the gifted linked to motivation are explored. Final remarks are given on the significant role of motivation in the achievement of gifted and talented children living under diverse socio-cultural influences that bias their performance on standardized measures. Recommendations highlight the importance of further research, in order to reach a convergence of theoretical and practical elements needed to promote Latin American children's talent.

Keywords: learning motivation, giftedness, talent development, academic achievement, sociocultural factors

## Učna motivacija in nadarjenost v sociokulturno raznoliki Latinski Ameriki in Karibskih državah

Sheyla Blumen Pontificia Universidad Católica del Perú, Lima, Peru

Povzetek: Namen prispevka je predstaviti prevladujoče teoretske koncepte na področju učne motivacije znotraj razvojnih modelov nadarjenosti in talentiranosti za avtohtone otroke, ki živijo v sociokulturno raznoliki Latinski Ameriki in Karibskih državah. Motivacija je analizirana kot ključni dejavnik in spodbujevalec izjemnih dosežkov. Izpostavljen je odnos med motivacijo, izjemnimi dosežki in učno poduspešnostjo, prikazane so tudi ugotovitve o povezavah med socialno-čustvenim razvojem nadarjenih ter njihovo motivacijo. Sklepni poudarki so namenjeni pomembni vlogi motivacije v okviru učne uspešnosti nadarjenih in talentiranih, izpostavljenim raznolikim sociokulturnim vplivom, ki krojijo njihove dosežke na standardiziranih merjenjih. V podanih predlogih je poudarjena potreba po nadaljnjem raziskovanju, ki bi združilo posamezne teoretske in praktične elemente, potrebne za spodbujanje talentov otrok v Latinski Ameriki.

Ključne besede: učna motivacija, nadarjenost, razvoj talentov, učna uspešnost, sociokulturni dejavniki

Since the birth of Psychology as a science, psychologists have tried to understand gifted individuals (Galton, 1869/1976; Terman, 1954). Taking in consideration the unitary conception of intelligence, prevalent until the beginning of the 20th century, intelligence was considered the determinant factor in the conceptualization of giftedness (Sternberg & Davidson, 2005), and onedimensional IQ measurements were established. Later, Guilford (1959) and Cattell (1971) stated that intelligence could not be understood from a one-dimensional approach, and a multi-dimensional conceptualization was considered, involving abilities, aptitudes, personality characteristics and environmental conditions. Also, in relation to the giftedness concept, Renzulli (2005), Gagné (2013), and Heller (2010) proposed a multi-factorial model called the three-ring model. The model followed a proposal centered on the interaction of high levels of general ability, creativity, and task commitment. All of these traits could be developed in children beginning in primary education, if they are granted with opportunities for self-study, in which they might learn proper methodology and creative strategies (Renzulli & Reis, 1985).

As new methods and techniques of genetic research evolved, and research paradigms changed, the nature-nurture debate also returned to the gifted field (Heller, 2010). Afterwards, Sternberg and Davidson (2005) reaffirmed the multidimensionality of the giftedness concept, in their *Conceptions of Giftedness*, including the analyses of 17 models about giftedness which had related variables among them. Sternberg and Davidson (2005) also clustered theories on giftedness, as they were implicit or explicit.

Implicit theories describe the beliefs that guide individuals' attitudes and behaviors, related to the impression formation process that is context-dependent. Social cognition theory states that beliefs might determine the attitudes and the willingness to be engaged in certain behaviors (Job, Dweck, & Walton, 2010). Implicit theories consider the need to identify the talent domain as the base of individual or social development. Moreover, they underline the essential role of motivation in the development of giftedness, as well as the importance of the developmental path of the talent, taking into consideration the social forces of the context (Sternberg & Davidson, 2005). Dweck's model of motivation (Dweck, 1986; Job et al., 2010; Olson, Dunham, Dweck, Spelke, & Banaji, 2008) states that there is a relation between the implicit theories of students and their self-motivational process, specifically in the kind of goals that they set for themselves (Blackwell, Trzesniewski, & Dweck, 2007; Cabezas & Carpintero, 2007; Job et al., 2010; Valenzuela, 2007).

Heller, Finsterwald, and Ziegler (2010) revealed that teachers' implicit theories formed the basis for their ideas about their pupils' personality traits, qualities, attitudes, and abilities, which can easily contain pre-judgments and stereotypes. Moreover, according to Dweck's (1986) Motivation Process Model, implicit theories are suspected

of exhibiting a significant influence on the development of gender role stereotypes among both girls and boys. Among these are the implicit personality theory of intelligence, theories about the motivational orientation, and student attributions of success and failure. All these components of the motivational processes of students are influenced by teachers and their implicit theories. Heller and colleagues (2010) revealed that there is a strong resemblance between math and physics teachers' implicit theories, whereby both groups of teachers demonstrated comparable gender-role-typical cognitions, due to the tendency to give socially desirable answers. The gender-related differences in teachers' implicit theories were even stronger.

Explicit theories included formal models of giftedness formulated by psychologists, including approaches from cognitive theories, development theories, and theories centered on the specific domain. Common topics among explicit theorists involve questioning the cognitive basis of giftedness, in terms of what the gifted person can do in order to be identified as gifted (Sternberg & Davidson, 2005), and emphasizes the importance of empirical studies as determinants in the understanding of giftedness and talent. Explicit psychological approaches towards giftedness are based on developmental theories. Gruber (1986) emphasizes the need to monitor the development from infancy to adulthood, in order to have a better understanding of gifted individual development. He stated that it is necessary to study a small number of these people, in order to determine the type of talent that could be transformed on an effective creative product for the aesthetical enrichment of the human experience, for the improvement of our understanding of the world, or for the improvement of the human condition, in order to improve our survival possibilities as a species.

Moreover, Gruber (1986) stated that individual interests and behaviors are essential for the development of a gifted or talented individual; and that each personal resource is needed in order to cope with the difficulties along their development. Gruber also underlines the importance of the moment and the social and historical time, as well as do Abuhamdeh & Csikszentmihalyi (2012). Renzulli (2005) recognized that we might not consider giftedness as an absolute concept. For Li & Csikszentmihalyi (2014) giftedness is an ability that emerges along the lifespan, and talent development is a sequential movement by stages. They propose that it depends on the domain, taking into consideration that reaching certain excellence levels on a particular domain might not be reached by everybody. Also for Feldman (1986) giftedness is the result of the sustainable coordination among intersecting groups of forces, including historical, cultural, and social forces, together with individual characteristics. Walters & Gardner (1986) added the concept of crystalized experiences, derived from Gardner's (1999) theory of multiple intelligences. According to Gardner (1999) every individual with average abilities is able to develop nine forms of intellectual performances: linguistic,

musical, logic-mathematics, spatial, corporal-kinesthetic, interpersonal, intrapersonal, existential, and naturalistic. These multiple forms of intelligent performances are presented in early ages as ability types for processing information. Moreover, during the so-called crystalized experiences, latent abilities of non-used intelligence might be activated, modifying the activities in the individual's life.

Albert (1992) considered that giftedness exhibits a biological and experiential nature, focus on the family and the background, and his longitudinal study on families of exceptionally gifted boys provided information about talent development in relation to both, biological and context influences (Runco, 2014). Bloom (1985) also focused on a study on talent development in children, examining the processes along which they achieved excellence as adolescents and adults. The studied groups included piano performers, sculptors, mathematicians, neurologists, Olympic swimmers, and tennis champions. All of them achieved excellent performances before reaching 35 years of age. Results of Bloom's study provided strong evidence that a long and intensive process of encouragement, nurturance, education, and training is necessary in order to achieve extreme levels of talent in the particular fields. Therefore, if we could reproduce the favorable learning and support conditions that led to the development of extremely talented individuals, we could produce great learning almost everywhere. He stated that the basic differences among human beings in terms of learning are relatively small. But, for the types of learning that require enormous time, motivation, and the like, the difference is significant (Runco, 2014).

developmental theorists These underline importance of motivation on talent development along the life-span, taking into consideration the type of specific domain. In this sense, gifted individuals are those that can usually excel in a specific domain, under environmental factors which support the excellence performance. Explicit theorists in the line of specific domain are Stanley & Benbow (1986) and Bamberger (2006), among others (Schlaug, Forgeard, Zhu, Norton, & Winner, 2009; Simonton, 2009). Stanley and Benbow (1986; Kell, Lubinski, & Benbow, 2013) studied precocious youth who excelled in mathematics and were identified at early ages due to their high scores in math achievement tests, and who also participated in enrichment programs.

Bamberger (2006) studied individuals with musical talents because they were identified as musical prodigies until adulthood, focusing on internal representations they had about the musical structure. During the childhood (musical prodigy) – adulthood (talented adult) transition analysis, Bamberger studied adolescents with excellent achievements who found their way to coordinate the different representation network from precocious infancy to adulthood, including a combination of perspectives from cognitive and developmental psychology. The criteria for cognitive developmental progress was characterized as transformations that occur over time in how individuals

organize their perceptions and the strategies they bring to bear in constructing their understandings of the world around them.

Bamberger (2006) stated that musical developmental studies have typically focused on progress as meaning the capacities of children to abstract, name, measure, and hold musical elements constant across changing contexts. However, as an educator and as a researcher, Bamberger proposed that rather than trying to reach a consensus about what counts as progress in the course of musical development and what determines a hearing that counts as better than another, it is more productive to continue refining the debate on the meaning of developmental progress in relation to music.

# Motivation, giftedness, and talent development

The promotion of talent development in poor, sociocultural diverse countries, such as those of Latin America and the Caribbean region, tends to close the historically established gaps in education. These gaps are related to exclusion variables, such as gender, economic income, education, ethnic origin, and diversity (CEPAL/ UNICEF TACRO, 2010). However, psychologists working with gifted and talented school-age children in Latin America and the Caribbean have also dealt with children attending schools of excellence who do not take advantage of the educational opportunities they are being offered (Blumen, 2007). Apparently, a gifted girl or boy needs more than a stimulating environment to develop their talents. It is also necessary to be aware of the context, as well as to be intrinsically motivated to interact with it. If the child is passive in his or her environment, or does not pay attention to the external stimuli, he or she might not develop talents, becoming a problem related to intrinsic motivation.

Talent development may only take place when the individual actively interacts with the environment and is open to the stimuli. Actually, it is thought that development is the result of reciprocal interactions between the organism and the environment, which actualizes the genetic potential of the organism. Therefore, high interaction between the organism and the environment leads to high genetic potential realization. Less interaction will lead to a latent genetic potential which cannot be developed (Bronfenbrenner & Ceci, 1994). Therefore, in order to maximize the genetic potential, children need not only a supportive context which provides opportunities to develop and grow, but also motivation in order to interact with the environment and take advantage of the opportunities offered (Blumen, 2009).

Today, the role of learning motivation in the development of special talents is recognized. Some authors consider motivation as an essential factor in giftedness (Mönks & Katzko, 2005; Renzulli, 2005), while others consider it as a separate factor which determines the amount of energy

which is directed to learning activities in a determined domain (Gagné, 2013). The analysis of both positions is presented.

#### Motivation as a determinant factor

Renzulli (2005) and Mönks (Mönks & Katzko, 2005) are among those that consider motivation as an associate factor in giftedness. Among the components of the threering model, Renzulli is one of the first theorists that focus attention on a manifestation of the motivation variable, naming it task commitment. Although motivation is often defined in terms of a general energetic process that provokes answers in an organism, task commitment represents the energy which emerges while coping with a problem, task, or performance area in particular. The terms often used to describe task commitment are perseverance, hard work, dedication, self-confidence, belief in one's own ability to develop an important product, and applied action on an object or situation that generated individual interest. Mönks & Katzko (2005) stated that Renzulli's components are personality dispositions which need a social context in order to be stimulated and developed. In this context are the family, the school or labor place, and the community.

Scientific studies with people exhibiting exceptional achievements consistently demonstrated that the precursors of an original and unique work are a special fascination and compromise with the selected topic in the domain field, together with perceptive ability and with the ability to identify significant problems (Albert, 1992). This motivation to become *involved* in an activity based on self-interest is generally called intrinsic motivation. When somebody exhibits self-determination and competence towards a certain task, intrinsic motivation emerges and monitors the action.

Main critics towards traditional approaches about giftedness establish that they suppose the dichotomy mind-context in its interpretation (Sternberg & Davidson, 2005), and sustain the polarity student-context, implicit or explicitly, trying to explain the impact of the individual over his or her context, or vice versa. However, Barab and Plucker (2002), together with Snow (1997) stated that this dual perspective is non-adequate to explain the interaction between the person and the situations, as integrated systems. Moreover, Snow emphasizes that a more productive analysis might be to examine the processes connecting persons and situations, those which operate at the interphase.

Studies in the past 20 years show the weakness of traditional approaches towards ability and talent based on learning styles and thinking styles, the importance of context, and other factors (Runco, 2014; Simonton, 2009). Nowadays, we know more about achievement motivation than we knew a generation ago. However, teachers continue using learning strategies based on old conceptions (García Cepero & McCoach, 2009), which lead to perceive the gifted as the teacher assistant in the classroom, without visualizing the need to organize

special enrichment or acceleration programs in order to contribute to their own development.

#### Motivation as a promoter

A central element in the criticism towards the conceptualization of motivation as a determinant cognitive factor of giftedness and talent is the conviction that giftedness cannot be characterized in pure cognitive terms as an internal stable trait, and does not have a purely environmental explanation. Giftedness is the visible result of the interaction between the individual with her or his environment. In this line, Pea and colleagues (2012) believe that the ability to act intelligently is achieved more that possessed. This perspective strongly leads to ecological psychology studies, which incorporates situational cognition to the distributive cognition, and student learning.

Moreover, this perspective seems to follow the creativity systemic theory line, such as Csikszentmihalyi (1988) who proposed a systemic theory of creativity which emphasizes the individual roles, as well as the area and domain they try to create. He proposes that taking into consideration how an individual operates in a certain domain or field, more than how he or she operates in a specific area, constitutes a fundamental change in relation to how he or she thinks and acts.

From a motivational perspective, the motivation level of a child determines the frequency and persistence of his or her interactions with the immediate environment, and the actualization of his or her genetic potential. Taking into consideration that motivation for competence in a certain field orients the person towards interactions that might provoke his or her ulterior development, motivation towards competence might be considered as the primary motto of development (Zevalkink, Riksen-Walraven, & Bradley, 2008). At school, lack of motivation for academic tasks is the most common cause for low achievement among gifted students. Differences between interest and motivation among children are obvious for school teachers, and might be detected since preschool years. Moreover, studies by Zevalkink and colleagues (2008) state that motivation towards competence is significantly affected by early experiences. Therefore, early experiences might play a determinant role in the development of talents, because they might bring a motivational base for the interactions between children and their environment, as well as for the actualization of their genetic potential.

In this sense, the quality of the parents' nurturing might be considered emotional support, as well as respect towards child autonomy structure, limits of behavior, as well as high quality of instruction (Zevalkink et al., 2008). The first two elements are basic, since they promote the sensation of security and competence, and will motivate children towards future interactions with the environment.

In the case of children living in Latin America and the Caribbean, 45% of children are affected by at least one moderate to severe deprivation, which means that almost 81 million people aged under 18 suffer from child poverty (CEPAL/UNICEF TACRO, 2010). However, children living under the poverty line in the region are not just deprived from general standards of well-being established in their societies, but they are also largely unable to meet their basic needs, which endanger their ability to take advantage of future opportunities. There are approximately 200 million people under 18 years of age in Latin America and the Caribbean, and poverty affects approximately 81 million children aged 0 to 18 (CEPAL/UNICEF TACRO, 2010). Moreover, in Latin America, extreme poverty affects 51% of children aged 6 to 12 in rural areas.

Therefore, poor children in Latin America and the Caribbean are often not detected as gifted or talented, since their potential talents are not actualized at early ages, and it is probable that they might stay latent throughout their life-span (Blumen, 2013b). However, if these children exhibit personal resources, such as resilience and high intellectual ability, it is possible that they might find their way to develop their talents as adolescents, in their way to adulthood. Although some theorists maintain that children living in poverty do not develop exceptional talents, studies in Peru (Blumen, 2013a, 2013b; Fleith & Soriano de Alencar, 2007) show that some youth manage to develop them, thanks to the support of a teacher, mentor, or specialized school which assumes the challenging responsibility of helping them.

# Motivation and outstanding performance

Understanding the gifted and talented from the individual analysis exhibits limitations. However, the theory of attribution suggests that stable internal attributions (i.e. I have success because I am intelligent and talented) might be difficult to maintain in changing environments, where unstable internal attributions (i.e. I have succeeded or failed depending on my own effort) brings a sense of responsibility in certain situations, and leads to achievement motivation. However, if the students who do not achieve, and tend to perform below the expected, believe that they are not talented, they might not reach success, independently of their effort level (Job et al., 2010). The establishment and maintenance of stable internal attributions of success and failure produces complications when the label good student or bad student is established for a student. Moreover, teachers tend to treat students based on their own expectations or the perceived ability of the students, significantly influencing the increasing or diminishing of their achievement, as states the self-fulfilling prophecy (Rosenthal & Jacobson, 1992).

Necka (1986) proposes the following causes as energizers of productive-creative behavior: (a) instrumental motives, where creative behavior is a way to reach an end; (b) motives of play, by which creative behavior leads to

an internal satisfaction state; this type of motivation is also seen as an aspect of the self-actualization process; (c) intrinsic motives, in which creative behavior increases the competence level in the person, and strengthen the sensation of having the external world under control, and (d) expressive motives, by which creative behavior makes possible communication of own thoughts with others feelings (p. 137). We will illustrate Necka's proposal with an example a verbal gifted Nobel laureate adult, who seeks fame and fortune through the composition of literary works (an instrumental motive), but at the same time has a strong sense of mission (intrinsic motivation) or the desire of reaching others to communicate something (expressive motivation). Also, it is possible that people show different combinations or motivational patterns, with weights in different areas, following their inclinations, with an individual motivational structure. Moreover, the structure might change as time passes. Therefore, the initial motive of the novelist - make money, is replaced with the sensation of doing something important for humanity. As Necka stated, different types of motivation towards creative production include the combination of external and internal factors.

Runco (2014) proposal of personal creativity, closed to the motivation theories, states that a girl or boy may not choose to invest her or his maximum effort in building an original interpretation of something, unless she or he is motivated to do so. Moreover, he considers Piaget's (1976) theory as a theory of ability or of potential, since it describes what children are able to do, but that may not guarantee that children might necessarily do it, establishing differences between potential ability and actual performance.

Rubenson and Runco (1995) stated that there are theorists who focus on creativity and talent and include motivation as intrinsic motivation, more than as extrinsic, although both are present. The question is whether this motivation depends on cognition or in cognitive evaluation. Although there is controversy in this proposal, it makes sense that the individuals are not motivated by things that they do not understand, and that comprehension requires a cognitive evaluation (Lazarus, 1991). Moreover, they state that Piaget (1976) stated that children may adapt since they were intrinsically motivated towards understanding. In this case, motivation precedes and starts the cognitive effort

Applying this to the role of assimilation in the creative work, it might occur that certain situations attract the attention of creative persons, and as a result he or she may orient towards the task, and even continue exploring it, putting effort in building significant interpretations or reinterpretations. This posture is consistent with the studies that show that children with creative talent are generally deeply interested, and constantly thinking on the topic that really attracts them (Rubenson & Runco, 1995). Gifted children tend to be highly persistent and occasionally are so interested in a certain domain or problem that they invest all of their time in it. Consequently, they reach a

solid knowledge base as domain specific competencies, which allow them to become creative productive adults.

Although we do not have a unitary theory of motivation to explain all motivated behaviors, we may use some theoretical models to explain talented productions. For Lens, Vansteenkiste, and Simons (2009) one of the most important motivational construct related to the gifted and talented is intrinsic motivation (Ryan & Deci, 2000), which reflects the natural human propensity to learn and assimilate. Intrinsic motivation is proposed by a number of authors as determinant of outstanding achievement, since it affects curiosity, competence, and efficacy, as well as achievement motivation.

One of the best manifestations of intrinsic motivation is intellectual or epistemic *curiosity* (Lens et al., 2009), which is manifested in gifted children, but seems to diminish along schooling, due to the absurd tendency to decontextualize the topics studied in the regular curriculum (Blumen, 2013b). Stanley (Kell et al., 2013; Stanley & Benbow, 1986) linked curiosity with the so called academic hunger, by which gifted students are able to tolerate uncertainty, and even need to seek new challenges, assuming risks while abandoning comfortable positions. This factor is also defined as the power to create (Treffinger, 2008), since gifted and talented children exhibit high levels of persistency and do not rest until they finish something of interest. Treffinger (2008) also included curiosity among the variables which facilitated the emergency of the creative behavior, which are the following: curiosity, the aim to answer freely in stimulating situations, openness to new or unusual experiences, the aim to take risks, sensibility towards the problems and willing to solve them, tolerance towards ambiguity, and self-confidence.

Another significant factor in the emergence of outstanding productions is the necessity of *competence* and *efficacy* in tasks solutions, which constitutes a challenge and a significant factor for both school and labor work. In this sense, tasks perceived as too easy or too difficult might not become motivating, and the girl or boy may not expect to feel competent or efficient in his performance. It is important to state that stimulating academic experiences for self-concept and self-efficacy might be those that may be internally attributed to their own abilities or self- effort. Moreover, social comparison provides feedback, in the sense that they are more able than their peers, and have fewer difficulties in understanding and solving problems, both relevant aspects for self-efficacy (Bandura, 2012; Graham, 2011).

In this sense, gifted and talented children not only learn fast, but also differently from their non-gifted peers of chronological age. They seem to invent new and creative ways to solve problems. For instance while solving an algebraic problem they seem to intuitively *see* the relationship between the numbers to solve the problem, instead of solving it following the algorithmic way (Feldhusen, 1998). Making progress on their own rhythm means less need of adult support in the domain area, but

also more time to learn by them. Also, they might need support in unexpected ways. We have mathematically gifted children who learn trigonometry *for fun*, but exhibit difficulties on the basic arithmetic operations of multiplication or division.

Winner (2000) uses the term rage to master to describe gifted children's need for competence and efficacy, as key elements of intrinsic motivation to master the area of interest. It is a term of obsessive nature, which orients the child to focus intensely on a certain topic, and to consume the information and develop new competencies. Winner (Forgeard, Winner, Norton, & Schlaug, 2008; Schlaug et al., 2009; Winner, 2000) states that the intellectual gifted show intense levels of concentration, and an obsessive interest in the area of domain. His students work on after school projects not because of getting a good grade, but because they are intrinsically interested. Work and play are inexplicably connected for them. It is very difficult to get them out of their job. However, if the school curriculum does not satisfy their interest area, or it is perceived as too easy, it will be very difficult to motivate their interest.

For many native children in Latin America and the Caribbean, motivation may be derived from social organization. Therefore, top-down classroom organization is often found to be ineffective for children belonging to native cultures that depend on a sense of community, purpose, and competence in order to engage. Horizontally-structured, community-based learning strategies often provide a more structurally supportive environment for motivating native children, who tend to be driven by social/affective emphasis, harmony, holistic perspectives, expressive creativity, and nonverbal communication (Blumen, 2009; Maynard, 2004).

In ethnic-linguistic diverse native communities, children can often portray a sense of community-wide expectations of participation in the activities and goals of the greater groups, rather than becoming engaged on individualized aspirations of success or triumph. They can also exhibit their parent-like interactions with siblings to assist their younger counterparts without being prompted by authority figures (Maynard, 2004). Moreover, through observation techniques and integration methods children learn from *a more skilled other* (Olson et al., 2008), such as a big sibling. The older child will guide the younger learner. Learning through play encourages horizontally-structured environments through alternative educational models such as *Intent Community Participation* (Rogoff, 2011).

Formal Westernized schooling is reshaping the traditionally collaborative nature of social life in native communities, with variations in motivation and learning (Lillemyr, Søbstad, Marder, & Flowerday, 2010). Taking into consideration the low performance of Latin American children on international academic assessments, we could infer the dramatic situation that native gifted children are experiencing on a daily basis. They are forced to attend schools in which the poor teacher training level, the inadequate motivational techniques, and the low

educational quality diminishes their motivation towards school at alarming levels. Hence, there are Secondary school students exhibiting lower creative productions, than those exhibited in Elementary years (Blumen, 2007). Therefore, we pose the classic question "why do they need to attend school if at home they can learn more"?

Achievement motivation is also a determinant element in the emergence of outstanding productions. For students oriented towards success, achievement motivation generates a positive tendency that takes them to action. And for students who exhibit anxiety towards evaluation, or fear of failure, the presence of this variable widens the inhibitory tendency (Blumen, 2009). Therefore, for the majority of gifted and talented children that attend regular classes, the tasks might be too easy to become motivating, since they may excel over their peers. However, this situation does not constitute an incentive for the gifted and talented students, since it is not perceived as an achievement from their self-effort, since the effort needed to achieve is minimum. Therefore, it is suggested to cluster by ability, with peers with equivalent ability, in order to improve their achievement motivation towards goals in contexts that constitute a challenge for them. For Lens et al. (2009) another important element to take into consideration on achievement motivation is the future-time perspective, since gifted children tend to present different future-time perspectives than those of their peers. They tend to easily perceive the instrumental value of their actions in the present, which increases their motivation.

Although intrinsic motivation is relevant for giftedness and talent development, extrinsic motivation is also important, particularly at the Secondary education level, due to the need to exhibit outstanding academic performances, in order to enter college studies. In this sense Dweck (1986) differentiates among three types of achievement goals: (a) the aim to develop competence, (b) the achievement of competence, and (c) to exhibit competence. For Pintrich & Schunk (1996), the first two types of goals are learning goals (intrinsic), while the third one is a performance goal, reached with extrinsic motivation.

However, the influence of extrinsic motivation in talent development generated controversy in the beginning. Amabile (1990) even adopts an extreme position while stating that extrinsic motivation is absolutely negative for creative performance, stating that the best way to promote children creativity was immunizing them towards extrinsic motivation. For her, the crucial element for creative production was intrinsic motivation, since it provides internal satisfaction, as well as a sense of wellbeing. Moreover, extrinsic motivation is generally caused by factors such as money or gifts, and might undermine the sense of autonomy if it is perceived as externally controlled (Amabile, 1990). However, later, Amabile & Kramer (2011) stated that for any extrinsic factor which is the basis of the sense of competence or which provokes the deep commitment with the task, there might be a reinforcement effect of the intrinsic motivation. This positive combination of apparent opposite motivational types, might be called *extrinsic at the service of the intrinsic* (Amabile & Kramer, 2011), more information about the synergic effect of extrinsic motivators over the intrinsic, is still necessary, since the high commitment to the task might be the result of this synergic effect.

For Lens et al. (2009), the optimal motivational level for giftedness and talent development is achieved based on the connection between a high orientation towards the learning goal, and less performance orientation. The orientation towards performance goals through the competency with others, does not exclude working towards learning goals. In this sense, double goals are generally used by college students who choose their subjects in terms of their future career. For better understanding of the importance of motivation in the performance of the gifted and talented, we will analyze the case of an atypical talent population from the performance level, although very common in our schools: the gifted underachiever.

### The gifted underachiever

Gifted children tend to face a crisis while reaching school age, because schools have difficulty meeting their needs. This establishes a gap between them and their peers, who perceive gifted children as superior in abilities and interests. Should gifted children be placed in a regular classroom in order to share with their age peers? Or should they skip school grades in order to be with their mental age peers? Should schools provide special classrooms for the intellectually gifted children? Or would it be enough to offer after school programs for the gifted?

John's story (Blumen, 2013a) tells what usually happens to children with extreme intellectual giftedness in Peruvian schools. When John was in Kindergarten the teacher referred him for psych-educational assessment, since the school suspected mental retardation. John's family lived in a rural area, and the mother contacted a psychologist of Lima, the capital city of Peru. Surprisingly John scored in the very superior range on intellectual ability, exhibited higher emotional resources than his peers, and was recommended for academic acceleration. As Primary schools in rural areas do not provide this kind of support, John was placed on a pull-out program, one hour per week, together with three other gifted children. However, he spent most of his school time in his regular classroom and started to show behavioral problems, constantly interrupting the teacher at class-time. Finally he refused to complete his homework.

John became the classic gifted underachiever: advanced in comparison with his age peers, bored at school, and exhibiting behavioral difficulties. Afterwards, his mother decided to homeschool him. Nowadays, John is a successful graphic designer, and runs his own business. This is a child that could not find a space at school, but found a place in life.

John's case shows the importance of motivation in the achievement of giftedness and talent development. When John's intellectual functioning was assessed, his motivational levels were optimal, and showed his best performance. However, John was not motivated for the routine school work, and therefore his results were below the expected. Since he exhibited motivational difficulties, his school performance was poor, and he ended up exiting the regular educational system. This situation is common to many gifted and talented children that end up functioning as low or low average students in schools of Latin America and the Caribbean region. Lack of motivation hides possibilities of higher achievements. Gifted children's parents fight to find proper education for their children, although generally, they are perceived as selfish parents, with an unreal perspective on their children's abilities (Blumen, 2013a; Fleith & Soriano de Alencar, 2007; Webb, Gore, Amend, & DeVries, 2007).

# Social-emotional development and giftedness

Most of school-age children have different profiles, since some perform better than others in certain areas. Every child has strengths that should be identified and promoted along the regular educational system. Moreover, we have outstanding students with exceptional potential for academic excellence in one or more areas that should be promoted. With or without the label gifted, some are atypical students in the classroom (Mönks & Katzko, 2005). And, the more atypical they are, the less might their possibilities cover their cognitive and affective needs from the standard curriculum that establishes the Secretary of Education (MINEDU, 2011). They not only need something else, but they might need something different. In social, personality, and emotional terms, gifted and talented children are also different and might exhibit the following tendencies (Fleith & Soriano de Alencar, 2007; Webb et al., 2007):

Introversion: They exhibit more tendency to introversion than their peers, and tend to spend some periods of time alone, for different reasons: (a) First, they have difficulties in finding peers similar to them, with whom to share their interests and mood; (b) Second, they tend to be isolated from their peers, since they are perceived as *nerds*, and (c) Third, they tend to become so focused on their own projects and have less time to socialize. As their mental internal lives are so rich, they understand loneliness from a different perspective than other children. However, they would rather have friends than be alone, and suffer in their loneliness (Li, & Csikszentmihalyi, 2014). A mother of a gifted boy from Huacho-Peru stated "...I want him to play with other children, but it does not work... he has friends, although he does not like to go partying... just once in a while is more than enough for him... and that, here, in such a small town is a problem... here you have to go out... they have to see you to be invited..." (Blumen, 2009, p. 109).

Independence: Gifted students are highly independent, self-monitored, stubborn, and less conformist (Job et al., 2010). Independent thinking of some gifted students allows them to ignore temptations and signs of culture, in order to focus on their talents. While others attend social gatherings, they stay at their desks, play piano, or program their computers. They can be so involved in their activities that they could not be interested in others' opinions; they might follow their own way (Piirto, 2014; Webb et al., 2007).

Emotional difficulties: Extremely gifted children tend to exhibit higher emotional difficulties than moderately or highly gifted (Fleith & Soriano de Alencar, 2007; Janos & Robinson, 1985), especially in social relations. Moreover, they are at risk for ruminating thoughts about existential problems (Piirto, 2014; Webb et al., 2007) or exhibit difficulties in their adjustment to school, although their educational needs are properly attended. They might seem oppositionist or might develop dysfunctional behavior at school, such as absenteeism, headaches, or chronic stomach aches. They might even refuse to do academic work (Webb et al., 2007). Gifted children are part of a minority; they know this, and their age-peers too. They feel different, lonely, and it is difficult for them to find friends. Some strengthen their social networks while taking part in popular activities, such as socially accepted sports or play in musical bands. They also seek friendship from older peers, and tend to underestimate their social status (Blumen, 2009; Fleith & Soriano de Alencar, 2007).

High and low self-esteem: Gifted students exhibit an unusual combination of high and low self-esteem. They exhibit low self-esteem in relation to their social life, since they do not feel comfortable to achieve excellence in their talented area. This is particularly observed in younger children (Csikszentihalyi, 1988). These are the forms in which gifted students are qualitatively different from average students, even different from those outstanding students due to their responsibility, perseverance, and adult support.

#### **Final Remarks**

Developmental theorists underline the importance of motivation on talent development across the life-span, depending on the type of specific domain. And talent development may only take place when the individual actively interacts with the environment and is open to the stimuli. However, most children living in sociocultural diverse Latin America and the Caribbean societies exhibit low achievement due to the poor performance on reaching learning goals, as international comparisons suggest (Mullis, Martin, Foy, & Arora, 2012). This is also a problem for the gifted and talented children, since they tend to develop on lower levels than those of their gifted peers living in more advanced societies.

In order to maximize the genetic potential, children need a supportive context with opportunities to develop and grow, as well as motivation to interact with the environment and take advantage of the opportunities offered. Therefore, the educational standards of the Latin America and the Caribbean countries, actually lower than those from Western Europe or Eastern Asia (CEPAL/UNICEF TACRO, 2010), need to improve for all students. If expectations are higher, then most of the moderately gifted, who are actually bored in class, and might exhibit behavioral difficulties, will receive proper stimulation. After all, countries such as Finland, Singapore, or South Korea that have higher educational exigency levels need few services for their gifted students (Tirri, Tallent-Runnels, Adams, Yen, & Lau, 2002).

Giftedness is the visible result of the interaction between the individual with her or his environment. And it could be that the higher 1% of the children living in the Latin America and the Caribbean region is developing in equivalent levels of those from more developed countries. However, it is also probable that 5% exhibit academic underachievement and their talents are hidden from society. This situation might be the result of using inadequate motivational techniques in the class time (Blumen, 2007; CEPAL/UNICEF TACRO, 2010). Therefore, horizontally structured, community-based learning strategies which provide a more structurally supportive environment for motivating native children, driven by social/affective emphasis, and expressive creativity, might be considered. These students might be placed in advanced math, sciences, or social studies, both at the Primary and Secondary level. This approach by specific domain should be consistent with Stanley's proposal (1979; Kell et al., 2013). Elementary school children, whose schools cannot provide them with advanced studies, should have the possibility to assist classes in Secondary education. And those in Secondary education might be able to take college classes.

Children exhibiting extreme giftedness, so-called prodigies, to which advanced classes might not be enough, should be given special treatment. They might ideally need special schools for the gifted in which they can interact with other extreme gifted peers. This condition might not always be possible, particularly in rural areas. However, other options might be explored, such as academic acceleration, and homeschooling, with the supervision of specialized tutors. These options might be explicit in the norms of Special Education in every country. Also, monthly gatherings for gifted students, networking, and interactive television might bring support in the consolidation of a network among extremely gifted students.

Finally, it is necessary to establish that it is not enough to do our best to identify our gifted children. Instead, we must improve our understanding about what it means to be a gifted or talented child in a sociocultural diverse society, and how is the socio-emotional development flowing, assuming that many of them might be developing in poverty contexts, lacking opportunities to develop their best abilities. It is important to propose formal lineaments for attention to the gifted and talented in its different

manifestations, with the commitment of different agents of the civil society and the state, including participation of the academic centers, and enterprises, in order to insure a communal, social, and working place; to promote talent development with social responsibility.

### References

- Abuhamdeh, S., & Csikszentmihalyi, M. (2012). Attentional involvement and intrinsic motivation. *Motivation and Emotion*, *36*, 3, 257–267.
- Albert, R. S. (1992). *Genius and eminence: The social psychology of creativity and exceptional achievement* (2nd ed.). Oxford, UK: Pergamon Press.
- Amabile, T. M. (1990). Within you, without you: Toward a social psychology of creativity and beyond. In M. A. Runco & R. S. Albert (Eds.), *Theories of creativity* (pp. 61–91). Newbury Park, CA, USA: Sage.
- Amabile, M. T., & Kramer, S. (2011). The Progress Principle: Using Small Wins to Ignite Joy, Engagement, and Creativity at Work. Cambridge, MA, USA: Harvard Business Review Press.
- Bamberger, J. (2006). What develops in musical development? A view of development as learning. In G. MacPherson (Ed.), *The child as musician: Musical development from conception to adolescence* (pp. 60–74). Oxford, UK: Oxford University Press.
- Bandura, A. (2012). On the functional properties of self-efficacy revisited. *Journal of Management*, 38, 9-44
- Barab, S. A., & Plucker, J. (2002). Smart people or smart contexts? Talent development in an age of situated approaches to learning and thinking. *Educational Psychologist*, *37*, 165–182.
- Blackwell, L. S., Trzesniewski, K. H., & Dweck, C. S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child Development*, 78, 246–263.
- Bloom, B. S. (Ed.). (1985). *Developing talent in young people*. New York, NY: Ballantine Books.
- Blumen, S. (2007). Identificación del talento y la superdotación e intervención en entornos multiculturales [Gifted and talent identification and intervención in multicultural contexts]. In L. Pérez Sánchez (Ed.), Alumnos con capacidad superior: Experiencias de intervención educativas [Students with high ability: Educational intervention experiences] (pp.45–77). Madrid, Spain: Agapea.
- Blumen, S. (2009). Motivación y emoción en el talento y la sobredotación [Motivation and emotion in giftedness and talent]. In D. Herrera (Ed.), *Teorías contemporáneas de la motivación: Una perspectiva aplicada [Contemporary theories of motivation: An applied perspective]* (pp. 95–118). Lima, Peru: Fondo Editorial de la Pontificia Universidad Católica del Perú.

- Blumen, S. (2013a). Motivacao e desenvolvimento de talentos no Peru [Motivation and talent development in Peru]. In de Souza Fleith, D., & Soriano de Alencar E. M. L. (Eds.), Superdotados: Trajetorias de desenvolvimento e realizacoes [The Gifted: Developmental trajectories and accomplishments] (pp. 193–206). Brasilia, Brazil: Juruá Editora Psicologia.
- Blumen, S. (2013b). New trends in talent development in Peru. *Journal for the Education of the Gifted, 36*(3), 346–364.
- Bronfenbrenner, U., & Ceci, S. J. (1994). Nature-nurture reconceptualized in developmental perspective: A bioecological model. *Psychological Review*, *101*, 568–586.
- Cabezas, D., & Carpintero, E. (2007). Comparative analysis of implicit theories on intelligence elaborated by teachers and students of educational careers. *EduPsykhé*, 6(1), 109–121.
- Cattell, R. B. (1971). *Abilities: Their structure, growth, and action*. Boston, MA, USA: Houghton Mifflin.
- CEPAL/UNICEF TACRO (2010). Child poverty in Latin America and the Caribbean. Santiado de Chile, Chile: División de Desarrollo Social CEPAL, Naciones Unidas
- Csikszentmihalyi, M. (1988). Society, culture, and person: A systems view of creativity. In R. J. Sternberg (Ed.), The nature of creativity: Contemporary psychological perspectives (pp. 325–339). New York, NY, USA: Cambridge University Press.
- Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist*, *41*, 1040–1048.
- Feldhusen, J. F. (1998). Programs for the gifted few or talent development for the many? *Phi Delta Kappan*, 79(10), 735–738.
- Feldman, D. H. (1986). Giftedness as a developmentalist sees it. In R. J. Sternberg & J. E. Davidson (Eds.), *Conceptions of giftedness* (pp. 285–305). New York, NY, USA: Cambridge University Press.
- Fleith, D., & Soriano de Alencar, E. M. L. (Ed.) (2007). Desenvolvimento de talentos e altas habilidades [Development of talents and high skills]. Porto Alegre, Brazil: Artmed.
- Forgeard, M., Winner, E., Norton, A., & Schlaug, G. (2008). Practicing a musical instrument in childhood is associated with enhanced verbal ability and nonverbal reasoning. *PLoS ONE 3*(10), e3566. doi:10.1371/journal.pone.0003566
- Gagné, F. (2013). Yes, Giftedness (aka "Innate" Talent) Does Exist. In S. B. Kaufman (Ed.), *The Complexity of Greatness: Beyond Talent and Practice* (pp. 191–222). New York, NY, USA: Oxford University Press.
- Galton, F. (1869/1976). Hereditary Genius. In A. Rothenberg & C. Hausman (Eds.), *The creativity question* (pp.42–47). Durham, NC, USA: Duke University Press.
- García Cepero, M. A. & McCoach, D. B. (2009). Educators' implicit theories of intelligence and beliefs about the identification of gifted students. *Universitas Psychologica*, 8(2), 295–310.

- Gardner, H. (1999). *Intelligence reframed: Multiple intelligences for the 21st century.* New York, NY, USA: Basic Books.
- Graham, S. (2011). Self-efficacy and academic listening. Journal of English for Academic Purposes, 10(2), 113–117.
- Gruber, H. E. (1986). The self-construction of the extraordinary. In R. J. Sternberg & J. E. Davidson (Eds.), *Conceptions of giftedness* (pp. 247–263). New York, NY, USA: Cambridge University Press.
- Guilford, J. P. (1959). Three faces of intellect. *American Psychologist*, *14*, 469–479.
- Heller, K. A. (2010). Fundamental questions about gifted education. In K. A. Heller (Ed.), *Munich Studies of Giftedness* (pp. 345–354). Berlin, Germany: Lit Verlag.
- Heller, K. A., Finsterwald, M., & Ziegler, A. (2010). Implicit theories of mathematics and physics teachers. In K. A. Heller (Ed.), *Munich Studies of Giftedness* (pp. 239–252). Berlin, Germany: Lit Verlag.
- Janos, P. M., & Robinson, N. M. (1985). Psychosocial development in intellectually gifted children. In F. E. Horowitz & M. O'Brien (Eds.), *The gifted and talented: Developmental perspectives* (pp. 149–195). Washington, DC, USA: American Psychological Association.
- Job, V., Dweck, C. S., & Walton, G. M. (2010). Ego depletion –Is it all in your head? Implicit theories about willpower affect self-regulation. *Psychological Science* 21(11), 1686–1693.
- Kell, H. J., Lubinski, D., & Benbow, C. P. (2013). Who rises to the top? Early indicators. *Psychological Science*, *24*, 648–659.
- Lazarus, R. S. (1991). Cognition and motivation in emotion. *American Psychologist*, 46, 352–367.
- Lens, W., Vansteenkiste, M., & Simons, J. (2009). El rol de la perspectiva de tiempo futuro en la motivación estudiantil [The role of future time perspective on student motivation]. In D. Herrera (Ed.), *Teorías contemporáneas de la motivació: Una perspectiva aplicada* [Contemporary theories of motivation: An applied perspective] (pp. 267–294). Lima, Peru: Fondo Editorial de la Pontificia Universidad Católica del Perú.
- Li, Q., & Csikszentmihalyi, M. (2014). Moral creativity and creative morality. In S. Moran, D. Cropley, & J.C. Kaufman (Eds.), *The ethics of creativity* (pp. 75–91). New York, NY, USA: Palmgrave Macmillan.
- Lillemyr, O. F., Søbstad, F., Marder, K., & Flowerday, T. (2010). Indigenous and non-indigenous primary school students' attitudes on play, humor, learning and self-concept: A comparative perspective. *European Early Childhood Education Research Journal*, 18(2), 243–267.
- Maynard, A. E. (2004). Cultures of teaching in childhood: Formal schooling and Maya sibling teaching at home. *Cognitive Development*, *19*(4), 517–535.
- MINEDU [Ministerio de Educación] (2011). Reglamentación de la ley general de educación No.

- 28044 [Regulation of the General Law of Education No. 280044]. Lima, Peru: MINEDU / Dirección Nacional de Educación Básica Especial.
- Mönks, F. J., & Katzko, M. W. (2005). Giftedness and gifted education. In R. J. Sternberg & J. E. Davidson (Eds.), *Concepts of giftedness* (2nd ed., pp.187–200). New York, NY, USA: Cambridge University Press.
- Mullis, I. V. S., Martin, M. O., Foy, P., & Arora, A. (2012). *TIMMS 2011. International results in math.* Chestnut Hill, MA, USA: TIMSS & PIRLS International Study Center, Boston College.
- Necka, E. (1986). On the nature of creative talent. In A. J. Cropley, K. K. Urban, H. Wagner, & W. H. Wieczerkowski (Eds.), *Giftedness: A continuing* worldwide challenge (pp. 131–140). New York, NY, USA: Trillium.
- Olson, K. R., Dunham, Y., Dweck, C. S., Spelke, E. S., & Banaji, M. R. (2008). Judgments of the lucky across development and culture. *Journal of Personality and Social Psychology*, *94*(5), 757–776.
- Pea, R., Nass, C., Meheula, L., Rance, M., Kumar, A., Bamford, H., Nass, M., Simha, A., Stillerman, B., Yang, S., & Zhou, M. (2012). Media use, face-toface communication, media multitasking and social well-being among 8-12 year old girls. *Developmental Psychology*, 48(2), 327–336.
- Piaget, J. (1976). *To understand is to invent*. New York, NY: Penguin.
- Piirto, J. (2014). Organic creativity in the classroom: Teaching to intuition in academics and the arts. Waco, TX, USA: Prufrock Press.
- Pintrich, P. R., & Schunk, D. H. (1996). *Motivation in education: Theory, research, and applications*. Englewood Clifs, NJ: Prentice Hall.
- Renzulli, J. S. (2005). The three-ring conception of giftedness. In R. J. Sternberg & J. E. Davidson (Eds.), *Conceptions of Giftedness*, (2nd ed., pp. 53–92). Cambridge, UK: Cambridge University Press.
- Renzulli, J. S., & Reis, S. M. (1985). The schoolwide enrichment model: A comprehensive plan for educational excellence. Mansfield, UK: Creative Learning Press.
- Rogoff, B. (2011). *Developing destinies: A Mayan midwife and town*. Cambridge, UK: Oxford University Press.
- Rosenthal, R., & Jacobson, L. (1992). Pygmalion in the classroom: Teacher expectation and pupils' intellectual development. New York, NY, USA: Irvington.
- Rubenson, D. L., & Runco, M. A. (1995). The psychoeconomic view of creative work in groups and organizations. *Creativity and Innovation Management*, 4, 232–241.
- Runco, M. A. (2014). *Creativity theories and themes: Research, development, and practice* (2nd ed.). Boston, MA, USA: Elsevier.
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. Contemporary Educational Psychology 25, 54–67.

- Schlaug, G., Forgeard, M., Zhu, L., Norton, A., & Winner, E. (2009). Training-induced neuroplasticity in young children. *Annals of the New York Academy of Sciences* 1169(1), 205–208.
- Simonton, D. K. (2009). Genius 101. *The Psych 101 Series*. New York, NY, USA: Springer Publishing Company.
- Snow, R. E. (1997). Aptitudes and symbol systems in adaptive classroom teaching. *Phi Delta Kappan*, 78(5), 354–360.
- Stanley, J. C. (1979). Educational non-acceleration: An international tragedy. In J. J. Gallagher (Ed.), *Gifted children: Reaching their potential* (pp. 16–43). Jerusalem, Israel: Kollek & Sons.
- Stanley, J. C., & Benbow, C. P. (1986). Youths who reason exceptionally well mathematically? In R. J. Sternberg & J. E. Davidson (Eds.), *Conceptions of giftedness* (pp. 361–387). New York, NY, USA: Cambridge University Press.
- Sternberg, R. J. & Davidson, J. E. (Eds.) (2005). Conceptions of giftedness (2nd ed.). New York, NY: Cambridge University Press.
- Terman, L. M. (1954). The discovery and encouragement of exceptional talent. *American Psychologist*, 9, 221–230
- Tirri, K., Tallent-Runnels, M., Adams, A., Yen M., & Lau, P. (2002). Cross-cultural predictors of teachers' attitudes toward gifted education: Finland, Hong Kong, and the United States. *Journal for the Education of the Gifted*, 26(2), 112–131.
- Treffinger, D. (2008). Understanding and developing creativity: A practical approach. *Revista de Psicología*, 26(1), 7–22.
- Walters, J., & Gardner, H. (1986). The crystallizing experience: Discovering an intellectual gift. In R. J. Sternberg & J. E. Davidson (Eds.), Conceptions of giftedness (pp. 306–331). New York, NY: Cambridge University Press.
- Webb, J. T., Gore, J. L., Amend, E. R., & DeVries, A. R. (2007). *A parent's guide to gifted children paperback*. Scottsdale, AZ, USA: Great Potential Press.
- Winner, E. (2000). Giftedness: Current theory and research. *Current Directions in Psychological Science*, 9, 153–156.
- Valenzuela, J. (2007). Más allá de la tarea: pistas para una redefinición del concepto de Motivación Escolar [Beyond the task tracks for a redefinition of School Grounds]. *Educação e Pesquisa*, 33(3), 409–426.
- Zevalkink, J., Riksen-Walraven, J. M., & Bradley, R. H. (2008). The quality of children's home environment and attachment security in Indonesia. *The Journal of Genetic Psychology, 169*(1), 72–91.

Prispelo/Received: 15.5.2014 Sprejeto/Accepted: 6.1.2015