

## Human Excellence: The Contribution of Personality<sup>1</sup>

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**Abstract:** This paper presents an analysis from the perspective of Positive Psychology of explanations from researchers concerning human excellence and what promotes and maintains it in the most varied domains. Personal and contextual factors are mentioned in the literature, while cognitive skills and intentional practice to achieve excellence stand out; personality variables are also critical to the development and demonstration of excellence. Based on the literature, this study suggests the importance of persistence, emotional control, and openness to experience.

**Keywords:** positive psychology, personality, performance

## Excelência Humana: A Contribuição da Personalidade

**Resumo:** Este estudo teve por objetivo analisar, sob o enfoque da Psicologia Positiva, as explicações dos pesquisadores da excelência humana sobre o que a promove e a mantém nos mais variados domínios de atuação. Constatou-se que fatores pessoais e contextuais são mencionados, destacando-se as habilidades cognitivas e a prática deliberada no desempenho superior, sendo também as variáveis de personalidade decisivas para o desenvolvimento e a manifestação da excelência. Neste estudo, como na literatura na área, destaca-se a importância da persistência, controle emocional e abertura à experiência.

**Palavras-chave:** psicologia positiva, personalidade, desempenho

## Excelencia Humana: La Contribución de la Personalidad

**Resumen:** El objetivo de este estudio fue analizar, desde el punto de vista de la Psicología Positiva, las explicaciones de los investigadores de la excelencia humana proponen para su desarrollo y manutención en los mas variados campos de actividad. Se encontró que los factores personales y contextuales son mencionados, resaltándose las habilidades cognitivas y el rendimiento superior en la práctica deliberada, siendo las variables de personalidad fundamentales para el desarrollo y la demostración de la excelencia. Este estudio, basado en la literatura, destaca la importancia de la persistencia, el control emocional y apertura hacia la experiencia.

**Palabras clave:** psicología positiva, personalidad, desempeño

The manifestation of outstanding human skills and talents arouses the interest both of scientists and the public in general due to the enigma they represent. A well-written book, the ability to drive the ball to the goal, the brilliance of playing a musical instrument, the ease in conducting research that uncovers a mystery and enables scientific advancement draws attention because they go beyond the ordinary. Oftentimes, such productions represent unique contributions to the development and progress of society. Understanding individuals with this type of performance is among the challenges of the social and human sciences.

From its inception, Psychology has strongly focused on understanding psychological disorders seeking an explanation for individual difficulties, cures for mental illnesses, and stopping the suffering they cause. Nonetheless, Psychology brings at its core the understanding of the human being as a capable and productive being. The first studies in this context, comparing giftedness to its opposite, sought to explain individual differences and what enabled superior performance. In the mid 20<sup>th</sup> century, the humanist movement, directed by Maslow and Rogers, led Psychology to focus on the healthy aspects of the human being and his/her developmental potential. Afterwards, Positive Psychology emerged to investigate optimism, perseverance, virtue, wisdom, wellness and high-level performance (Seligman & Csikszentmihalyi, 2000).

In the last decade, driven by Positive Psychology, many studies have been developed seeking to understand the functioning of individuals with superior abilities in the most varied segments of human life. These studies seek to describe the characteristics of excellence and its foundations, as well as to identify the personal and contextual variables of excellence and under what conditions it occurs.

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There are a great variety of studies in the field. Some researchers are concerned to understand the aspects of developing superior performance, its stages or phases (Ericsson, 2005; Renzulli, 2010); others are concerned with the quality of results, focusing on the efficacy and means to achieve such objectives (Zimmerman, 2002); some emphasize the importance of determination, commitment, and personality characteristics to achieve an established goal (Ardelt, 2004; Moon, 2003); others stress the role of the context in which someone achieves excellence (Robinson & Clinkenbeard, 1998; Sternberg, 2001). All associate excellence with a high level of performance of an individual in a given field (Trost, 2000) and agree that excellence requires some extent of experience and practice in a given domain of knowledge and/or field (Ericsson, 2005). Finally, it is assumed that excellent performance depends on a set of factors that encompasses intrapersonal, interpersonal, and contextual variables that interact in a dynamic and constant manner (Sternberg, 1999; Trost, 2000).

In the attempt to didactically organize studies addressing excellence, Araujo, Cruz and Almeida (2007) highlighted three fields of research consonant with the following: the approach that concerns *superior abilities*, which associates excellence with talent and above average skills; the one concerning *expertise*, to evaluate high performance in certain domains; and *wisdom*, which associates excellence with the experience of life, maturity, and personal integrity of individuals who achieved high performance.

Aiming to clarify these concepts, this study's objective was to analyze, from the perspective of Positive Psychology, the explanations of researchers investigating human excellence concerning what promotes and maintains it in the most varied domains of practice. For that, a theoretical review was performed in the following databases: PsycArticles, SciELO, the CAPES Periodical Portal, and the collection of works of the Human Cognition, Learning and Development Research Group at Universidade do Minho. The following descriptors were used in combination: *human excellence*; *high performance*; *wisdom*; *high ability*; *expertise*; *personality*; *positive psychology*, and only the studies addressing optimal human functioning in socially valued contexts were selected.

### History of Studies Addressing Excellence

The studies addressing excellence can be divided into stages that show the course of how existing knowledge was constructed. Aiming to follow a chronological order, we can say that the first stage, which had its heyday in the late 19<sup>th</sup> century, focused on heredity or genetics. At the time, Galton (1869/1979) provided scientific status to the study of giftedness, publishing the first paper on the subject, *Hereditary Genius*, which emphasized family aspects and the genetic transmission of intellectual and motivational ability.

Following this study, Simonton (1990) reports that, in 1904, Havelock Ellis released *A Study of British Genius*

stating there is a connection between the order people are born in a family and the level of creativity of people considered to be geniuses. James McKeen Cattell published *A Statistical Study of Eminent Men*, which classifies one thousand eminent men while Frederick Adams Woods published two books: *Mental and Moral Heredity in Royalty* and *The Influence of Monarchs*. In the first book, he linked intelligence and virtue as a hereditary trait when he evaluated European families and dedicated the second book to understanding what leadership is. He assessed one hundred European monarchs seeking to show that their personality characteristics were predictors of the well being of their countries.

The second stage of studies addressing excellence is marked by the observation of *personality* and other *psychological aspects*. In this stage, Raskin (1936) worked with scientists and writers. The works of Thorndike (1950) related intelligence and morality as a condition of personality, while Terman (1926) conducted a longitudinal study with 1,500 children considered to be gifted based on IQ tests ( $IQ \geq 150$ ) and presented faster physical development, being at the same time psychologically stable and socially well-adjusted. These results were offset by Hollingworth (1942) who reported adjustment problems and emotional difficulties among children with a very high IQ. Cox (1926/1992) estimated the personality scores of one hundred adult individuals considered to be geniuses, confirming that personality traits are complementary to intelligence in the description of high performance levels. Simonton (1990) also mentions the work of Pitirim A. Sorokin (1926) who associated the personality of monarchs and political leaders to the achievement of distinction in some fields, especially in monarchy and governmental leadership.

The next period of studies addressing excellence includes a greater diversity of themes with an emphasis on experience and practice. De Groot (1965/1978) was the first to compare the performance of expert and beginner chess players, attributing expertise to prior knowledge and extensive experience in the field, a concept that was corroborated and further elaborated by Simon and Chase (1973), and was later called "deliberate practice" by Ericsson (2005). In this context, various studies compiling information and observing the extent to which and how training accelerates and enables excellence emerged. Some of these papers refer to Lubinski and Benbow (2006) and Wai, Lubinski and Benbow (2005) who seek to explain facility in math on the basis of practice. Bloom (1985) Gaspar, Ferreira and Pérez (2005), and Ruiz, Sánchez, Durán and Jiménez (2006) added a set of psychological and affective-emotional variables that reinforce training received (e.g. motivation, ability to make commitments or establish objectives, the ability to plan, and attention span) capable of distinguishing excellent athletes from the remaining athletes.

A stage that occurred simultaneously with the latter was initiated by Maslow (1954/1970), who also inaugurated

the humanist movement in Psychology. This author focused on prominent people (e.g. Lincoln, Beethoven, Eleanor Roosevelt and Einstein) and suggested that there is a sequence of needs to be progressively satisfied: (1) physiological; (2) safety and security; (3) belongingness and love; (4) esteem; (5) self-actualization. Maslow explained that self-actualization motivates growth and to reach this stage the previous needs already have to be met. He considered that self-actualizers have determinant personality characteristics, among them: spontaneity, creativity, autonomy and independence, openness to experience, interpersonal relationship skills (they prefer to relate with a few but have deeper relationships) and identify themselves with humanity. Hall, Lindzey and Campbell (2000) note that, for Maslow, all (clinical and research) evidence indicates that “it is reasonable to assume that in practically every human being, and certainly in every newborn baby, there is an active will toward health, an impulse towards growth, or towards actualization.” (p. 357).

Rogers (1961/1982), considered to be the father of humanism, also took a scientific look at what is beautiful and virtuous in the human being – whether it is latent or manifest—based on the unique experience of each. He held that all persons are capable of using their latent potential to do what they desire and transform themselves based on a tendency to self-fulfillment consistent with their heredity, self and context. Rogers highlighted the role of responsibility concerning individual choices, taking free will into account.

After Rogers, there is a scarcity of studies expanding or elaborating on existing knowledge concerning excellence. The work of Seligman and Csikszentmihalyi (2000) then emerges and makes a critique of humanism’s lack of scientific basis and raises many questions concerning Psychology’s lack of knowledge about optimal human functioning. These authors question the level of knowledge of psychologists concerning the way normal people flourish in benign and challenging contexts, on how they feel well at work, and on how they are happy and satisfied with their lives.

According to Seligman and Csikszentmihalyi (2000), Psychology has operated over the course of its history under three approaches: the first is related to the cure of mental diseases, understanding of psychopathologies, repairing damage and creating tools to combat psychological suffering; the second investigates how to make people’s lives more productive and significant in a way that is balanced and appropriate to particular contexts; and the third approach studies the identification and nurturing of talents, directly acting on human potentialities. The most common approach in Psychology according to the authors, in both research and practice, was the first, that is, the cure of mental illnesses. Positive Psychology emerges in this context, seeking to promote understanding concerning the excellence of human performance in the most varied domains.

## Positive Psychology: A New Approach to Current Psychology

Positive Psychology has been attributed to the work of Martin Seligman, who has worked on gathering studies, promoting debates, publications, and bring together researchers in the field to introduce a new perspective of Psychology in the last decade (Paludo & Koller, 2007). Positive Psychology results from a movement that sought to reexamine scientific effort, redirecting psychologists to appreciate human potential, motivation and capacities, in contrast to traditional Psychology, which only focuses on what is not going well with the human being. He does not (or did not) have the intention to demean the work already developed in Psychology, but asserts that the study of health, achievement, and well being is as meritorious as the study of diseases, disorders, and psychological suffering (Linley, Joseph, Harrington, & Wood, 2006).

Thus, what is Positive Psychology? What does it intend to develop? According to Seligman and Csikszentmihalyi (2000, p. 5) “at the subjective level, Positive Psychology values the experiences of well-being, contentment and satisfaction (in the past), hope and optimism (in the future) and flow and happiness (in the present).” They explain that at the individual level, Positive Psychology seeks to develop the “capacity to love, vocation, courage, interpersonal ability, talent, and wisdom” and at the collective level, “responsibility, altruism, protection, civility, moderation, tolerance, ethics, and work” (p. 5). Sheldon and King (2001) complemented this idea when they assert that Positive Psychology promotes the scientific study of the optimal functioning of human beings, their strengths, potentialities and virtues.

Gable and Haidt (2005) reinforce the thinking of Sheldon and King, stating that Positive Psychology is nothing more than the “study of conditions and processes that contribute to the flourish of optimal functioning in people, groups and institutions” (p. 104). To conclude their explanation of Positive Psychology, Sheldon and King state that “Positive Psychology is simply Psychology” (p. 216) recovering the initial objectives of this science to identify and nurture human talent.

This new perspective of the human being gave emergence to a need to understand how healthy individuals develop, that is, those people who are highly productive in the most diverse fields, who contribute to the development of society, and show satisfaction, wellbeing and happiness with the way they are and with what they work. Araújo et al. (2007) also notes that it is necessary to understand what the conditions are that facilitate the emergence of excellence. These authors clarify that it was the advent of Positive Psychology that mobilized the scientific community to recognize the need to understand the pathways of excellence in the various contexts in which it emerges.

## Human Excellence and Its Research Fields

The term *excellence* comes from the Latin *excellentia*, which means “the quality of being excellent; primacy”. Excellence refers to the excellent as the one at the highest level, and if it is an individual, someone who achieves something superior, in a position above what was expected, exceeding all expectations, surprising, creating new possibilities in a given field of knowledge.

Even though the concept of excellence seems to be objective, some ambiguities emerge when it is put into practice. Genetic, contextual, and personality variables complicate explanatory lines of excellence and its conceptualization. A consensus has not been reached about what factors determine excellence, dividing studies into various fields that may encompass the study of intrapersonal, interpersonal or contextual variables (Sternberg, 1999). Others address the dynamic existing among these variables (Garcia-Santos, Almeida, Werlang, & Veloso, 2010). Additionally, studies may differ according to their focus: high abilities, expertise, or wisdom (Araújo et al., 2007).

### Studies Addressing High Abilities

As it happens with concepts of excellence, there is no consensual definition to or a single direction for the understanding of superior abilities. It is known that excellence expresses a high level of intelligence, a more rapid or early development of brain functions, and is influenced by genetic, psychological, social, cultural and educational factors (Gagné, 2004, 2007). In Brazilian legal terms, according to the National Policy of Special Education (Ministry of Education, 2001) students with special abilities are those whose performance is above average or has a high potential in isolated or combined aspects, in areas such as intellectual capacity, academic aptitude, creativity, leadership, or talent for arts (drama, musical, psychomotor). In Article 5 (§3º, p.15), high abilities are explained as a “great learning ability that leads the individual to rapidly master concepts, procedures and attitudes.”

The concept that seems to encompass all these aspects is that individuals with high abilities surpasses the average for their age group (population in general), have high levels of cognition, a high capacity to elaborate ideas and perform in a specific field of knowledge or in various domains combined (Alencar, 1986). According to this rationale, it is possible to highlight at least five models of current studies that address the understanding of high abilities.

Renzulli’s Three-Ring Model (1986, 2002, 2010) proposes that high abilities are understood as the result of the interaction of three components that have the same level of importance for the result: above average intellectual ability, commitment to tasks, and creativity. High abilities in this model are seen as behavior that is developed and depends on appropriate stimulus, therefore, are the result of opportunities, resources, and encouragement promoted in learning contexts and situations.

The Differentiated Model of Giftedness and Talent was proposed by Gagné (2004) and explains that high abilities depend on natural and hereditary abilities that are spontaneously expressed. Talent derives from the interaction of natural abilities and the individual’s developmental context, subject to learning processes and practice. The development of talent in this model is linked to three types of factors that may speed up or hinder the developmental process: intrapersonal (personality, motivation), environmental (socioeconomic and educational contexts, among others), and factors such as chance or luck (being in the right place, at the right moment, with the necessary preparation).

Winner’s Model of Inborn Giftedness, Intrinsic Interest and Motivation suggests that inborn giftedness is at the base of high abilities. According to this model, individuals with exceptional abilities have differentiated brain characteristics and a tendency to become interested in the field or fields for they have greater facility and are more prone. Winner clarifies that for an individual with high abilities to become an eminent adult, personality characteristics related to high levels of creativity, risk-taking, and the ability to break with determined conventions are needed.

The Intellectual Exceptionality Model of Castelló Tardida (2005) considers exceptional abilities and talent to be phenomena of an intellectual nature, as in a building process in which talent could be simpler or more complex, consonant with the cognitive abilities involved and expression domains, subject to the influence of biological or environmental developmental aspects. Despite the differences in each individual’s pace, intellectual development occurs on a continuous basis and can be facilitated (or hindered) by the culture that defines the context, opportunities, and individual’s personality.

Finally, the Developing-Expertise Model of Sternberg (1998, 1999) defines high abilities as a process of acquisition and crystallization of a set of competencies considered necessary for high levels of performance. This process occurs continuously and culminates in mastering a given domain of expertise. In this model, natural abilities and training are reconciled, introducing interactional meta-components: learning competencies, thinking, knowledge, and motivation (Sternberg et al., 2010).

### Studies Addressing Expertise

Another field of research concerning excellence addresses the subject *expertise* in which some of the capacities emphasized in high abilities are no longer relevant and give place to experience and practice in a particular domain. The studies conducted by De Groot (1965/1978) sought to understand how training influenced performance and originated comparisons between experts and novices that were conducted by Simon and Chase (1973). These comparisons indicated that the main difference between those individuals was not in basic cognitive processes but was explained by intense practice in their field of knowledge.

Sharing these ideas and questioning those related to excellence determined by hereditary, Ericsson and Lehmann (1996) proposed an approach of superior performance based on deliberate practice. These authors conceived expertise as superior performance in a specific set of tasks that represent a domain. Ericsson (2005) and Ericsson, Roring and Nandagopal (2007) assert that superior performance occurs in a process of progressive development based on changes at the brain level; changes occur gradually with practice, and even individuals with great potential need training to achieve excellence.

For Sternberg (1998), deliberate practice leads novices to expertise. The author notes that there is a set of metacognitive abilities that enable the development of expertise: extensive knowledge in a specific domain; the presence of well-organized units of knowledge (in terms of memory storage), strongly interconnected to a specific domain; dedication to effective understanding of a given problem to facilitate its solution; the development of an accurate ranking process to classify problems; strategies to complement the knowledge required to reveal a problem and its solution; automation of problem-solving sequences; the ability to solve problems with appropriate agility; and monitoring the implementation of solutions (Garcia-Santos et al., 2010). According to Sternberg, expertise in excellence is the result of the investment individuals make in fields concerning which they have knowledge and feel very competent, and the result of the ability to transform weaknesses in other domains (different from the domain in which they are expert) in aspects that are irrelevant to their performance.

### Studies Addressing Wisdom

The third area of studies addressing excellence, historically grounded in philosophy, is wisdom. According to Barros-Oliveira (2005), interest in the theme crosses the history of mankind. Records about wisdom in Egyptian writings date from 3,000 BC and there are inscriptions about *sophia* for the Greeks as a godsend to philosophers, a way to contemplate truth; *phrónesis* as the prudence that should cloak men of greater responsibility; and also as a virtue that involves the person in the search for goodness, truth and beauty. In Psychology, the interest in studying wisdom emerged under the developmental approach, and was connected to the last phase of life as the summit, since aging favors contemplation, spirituality, and counseling ability. From 1990 on, studies addressing various types of intelligence emerged and Baltes and Staudinger (1993) and Sternberg (1990) resumed studies of wisdom. More recently, in the light of Positive Psychology and excellence, they advanced studies on the theme beyond the traditional work on wisdom associated with intelligence (Kunzman & Baltes, 2003). Additionally, psychologists interested in understand what wisdom involves started developing research methods to test it empirically and confer on it a scientific character (Baltes & Smith, 2008).

Other definitions and insights concerning wisdom emerged, some emphasizing the cognitive aspects, others expertise, and some relating both factors. According to Baltes and Smith (2008), many researchers were influenced by what was called the Berlin Wisdom Paradigm, which resulted from the work of a group of researchers who proclaimed that wisdom is a system of knowledge highly specialized in conduct and ways of understanding life. Hence, Horn and Masunaga (2000) consider wisdom to be a special type of intelligence, expertise that comes with the maturity of personality. Clayton and Birren (1980), based on the popular knowledge of wisdom (implicit theory), identified attributes of wise people: knowledge, understanding, and experience. Sternberg (2001) in turn, after asking diverse people to describe ideal individuals in their professions, characterized the wise person as the one with reasoning ability, wit, insight, ease in processing information and making judgments.

Baltes and Staudinger (2000) explain that wisdom is the expression of cognitive aspects enhanced by affective-emotional aspects, which, when they result in correct behavior, achieve an exceptional level of human functioning, that is, the person evaluated, felt and judged a problem-situation the best way possible, and acted in a balanced and thoughtful manner. The authors add that, based on implicit theories, wisdom is seen as a concept that involves maturity, intelligence, and creativity; an exceptional level of human functioning that is related to excellence; a state of spirit and behavior balanced by intellectual, affective, and motivational aspects. Finally, wisdom is associated with a high level of intra- and interpersonal competence, absolutely necessary for oneself and others.

Barros-Oliveira (2005) explains that explicit theories, based on empirical findings and the theoretical thought of researchers in the field, are divided into three groups of conceptualizations of wisdom: (1) as a personal characteristic or a constellation of personality dispositions; (2) as a product of post-formal and dialectic thinking and; (3) as a system specializing in the meaning and conduct of life. The three forms of approaching wisdom converge in Baltes' Paradigm (Baltes & Kunzmann, 2004; Baltes & Smith, 2008; Baltes & Staudinger, 2000), which considers wisdom to be the application of knowledge to intrapersonal, interpersonal and extra-person actualization. Therefore, wisdom is evidenced as a result of cognitive aspects combined with experience. Contrary to this assertion, Ardelt (2000, 2004) defends wisdom as a characteristic of personality or a combination of personal qualities reserved for people with a deep knowledge of life. The author suggests that wisdom is part of people and is not only linked to knowledge acquired through training received to acquire expertise. Ardelt (2004) advances this, saying that wisdom should be evaluated through personal characteristics related to management of life as a whole and not the solution of hypothetical problems.

## Personality and Excellence

Since the beginning of studies addressing excellence, even when only intelligence or some physical aspect emerged as the focus of the study, some personality trait emerged to inspire the researchers. Superior performance, in any domain, is associated with personality traits that predispose the emergence of abilities and potentialities required for performance. Holland (1997) elaborated a theory that, even though it did not seek discoveries related to excellence, did enable the improvement of understanding on how personality is associated with and influences individual's choices when one is dedicated to achieve a unique accomplishment. The author clarifies that one's interests, preferences during life, vocational choices or professional career, are an expression of one's personality in order to accommodate the individual in a congruent occupational environment.

Based on the Hexagonal Model RIASEC, Holland explains that each vertex of the hexagon refers to one of the six types of personality. The realistic (R) type is more interested in working with machines, tools and the manipulation of objects, prefers outdoors, appreciates nature, and is interested in solving practical problems. The Investigative (I) type is focused on the exploration of ideas, data analysis, explicative theories, is interested in solving mathematical problems, interpreting formulas, is more introverted, less sociable, and prefers independence and the indoors. The Artistic (A) type appreciates creating new things, is imaginative and innovative, prefers individual activities, does not appreciate routines and rules, and is focused on emotions. The Social (S) type is interested in helping and teaching, in teamwork, planning activities, and prefers dealing with people. The entrepreneur (E) type includes individuals interested in activities and environments where they can persuade, make decisions, negotiate, initiate and promote projects, convince others, and are also persistent and enthusiastic individuals. The Conventional (C) type is focused on work with numbers and computer problems, enjoys a structured environment in which they can become responsible for details, organized, efficient and conscientious.

According to the thinking of Holland (1997), personality accommodates itself to the occupational environment that is most comfortable to individuals. All the types in the model are interconnected and the interests of a person can belong to more than one type among the six in the hexagon. Nonetheless, there will be a more evident domain, the one that will manifest and actualize the individual's interests and preferences, characterizing the individual's strength in which s/he will be more resourceful and thus, will have better performance and more personal satisfaction, especially if the individual receives appropriate or challenging stimulus.

Holland's theory associates personality with the context/environment, which was also explored by other authors willing to explain excellence. Hence, when Moon (2003) defines personal talent as an exceptional ability to select and

achieve difficult life objectives that are related to personal interests, values, and the context in which the individual is inserted, he explains that talent is conditioned upon intra- and interpersonal factors and on social intelligence. Staudinger, Lopez and Baltes (1997) point to the relevance of wisdom to personality characteristics such as maturity, the absence of emotional instability, openness of spirit and sociability, recalling the works of Clayton and Birren (1980) and Holliday and Chandler (1986), since they clarify that openness to experience and openness of spirit are the strongest predictors of wisdom related to personality.

It seems that the theory in Cox (1926/1992) explaining that some personality traits are complementary to intelligence and everything else that surrounds excellence has gained followers. Both in studies addressing high abilities as those addressing expertise and those related to wisdom, there was an interest in identifying to what extent some personality aspects were relevant in determining excellence. Simon-ton (1990) notes that studies conducted by Woods verified that the personality of European monarchs influenced the wellbeing of the peoples of their nations. Thorndike (1950) related morality and personality, which was later studied by Orwoll and Perlmutter (1990) who associated wisdom with maturity of character and integrity. The focus on personality in research addressing expertise appears in the works of Gaspar et al. (2005), of Ruiz et al. (2006), and of Poczwadowski and Conroy (2009), focusing, for instance, on the influence of affective-emotional aspects in the performance of excellent athletes. When Maslow (1954/1970) studied eminent people, he also focused on uncovering personality characteristics of self-actualizers while Rogers (1961/1982) highlighted the congruence required between personality and self-actualizing tendencies.

Silverman (1993) explained that people with exceptional abilities have specific characteristics of personality that constitute a peculiar way of being. Among them are included keenness of perception, passion for learning, vivid imagination, intense dedication, perseverance, pursuit of perfection, sensitivity, and empathy, in addition to self-awareness, ability to reflect and a tendency to introversion. They also have an acute sense of justice, question rules and authority, and manifest an early moral concern. In the same line, Winner (2000) asserts that there are specific personality characteristics necessary for a child to become an eminent adult, which are creativity, openness to experience and the ability to break with conventions. These personality characteristics are necessary to the development of talents (Castelló Tarrida, 2005; Gagné, 2004).

## Final Considerations

The studies addressing excellence in the scope of Positive Psychology are interrelated with considerations concerning the variables that determine superior performance of some individuals in different fields of knowledge. It

seems that the authors previously mentioned have no doubt that genetic inheritance does not matter for the achievement of superior performance nor context or luck, not even knowledge or intelligence, if the person does not have some personality traits that facilitate perseverance, assertive social relationships, appropriate affective-emotional conditions, creativity, firmness of purpose, and emotional management, among others.

In terms of evaluation and attention paid to high abilities, it does not seem to be a coincidence that some schools in the Nordic countries, in the United Kingdom and in the United States are currently identifying the interests and personalities of children from an early age. Based on their preferences, children are then stimulated and monitored early on in order to develop the domains in which they have greater interest and facility, deepening their physical and intellectual efforts toward that which is the most congruent with their personality, according to the rationale of Holland (1997).

Much effort has been exerted to achieve expertise, especially in the field of sports, where 'overcoming' has been the keyword, to confirm that (intra, inter and extra-personal) balance, the establishment of goals, concentration, intensive training, and perseverance lead to the podium. Organizations, as well, in an attempt not to fall behind, have started a movement to train and qualify their best employees (those with exceptional performance combined with intelligence, knowledge, commitment and favorable personality characteristics) so that they make a difference in the currently highly competitive business world. The exploration of wisdom has produced sophisticated studies designed to learn the essence of excellence, associating a large number of positive characteristics in a single individual to practical results concerning exceptional understanding of life, maturity, integrity, and other qualities that indicate an individual is wise.

Psychology took a hundred years to get where it is; there is no telling where it will be in a hundred years, but it is possible that knowledge generated by Positive Psychology and studies addressing excellence will be embodied in Psychology so that it will be part of it. We expect that appreciating nuances of the happiness and well-being of people, their causes and effects, will become inherent to this science as well as the construction of psychological strategies focused on what makes life worth living, giving meaning and resulting in optimal human functioning.

The development and stimulation of human potential emerges as one of the major concerns of the modern world because it seems to be one of the most effective ways to ensure the survival of human beings on Earth. Through their unique achievements, those who exceed expectations change previously established models and try new solutions, producing unexpected answers for what was standard so far. Therefore, the promotion of excellence in all the socially valued domains is extremely urgent, simply because of the moment in which humanity finds itself.

## References

- Alencar, E. M. L. S. (1986). *Psicologia e educação do superdotado*. São Paulo: EPU.
- Araújo, L. S., Cruz, J. F. A., & Almeida, L. S. (2007). Excelência humana: Teorias explicativas e papel determinante do professor. *Psicologia, Educação e Cultura*, 11(2), 197-221.
- Ardelt, M. (2000). Intellectual versus wisdom-related knowledge: The case for a different kind of learning in the later years of life. *Educational Gerontology*, 26(8), 771-789. doi:10.1080/036012700300001421
- Ardelt, M. (2004). Where can wisdom be found? A reply to the commentaries by Baltes and Kunzmann, Sternberg, and Achenbaum. *Human Development*, 47(5), 304-307. doi:10.1159/000079158
- Baltes, P. B., & Kunzmann, U. (2004). The two faces of wisdom: Wisdom as a general theory of knowledge and judgment about excellence in mind and virtue vs. wisdom as everyday realization in people and products. *Human Development*, 47(5), 290-299. doi:10.1159/000079156
- Baltes, P. B., & Smith, J. (2008). The fascination of wisdom: Its nature, ontogeny, and function. *Perspectives on Psychological Science*, 3(1), 56-64. doi:10.1111/j.1745-6916.2008.00062.x
- Baltes, P. B., & Staudinger, U. M. (1993). The search for a psychology of wisdom. *Current Directions in Psychological Science*, 2(3), 75-80. doi: 10.1111/1467-8721.ep10770914
- Baltes, P. B., & Staudinger, U. M. (2000). Wisdom: A metaheuristic (pragmatic) to orchestrate mind and virtue toward excellence. *American Psychologist*, 55(1), 122-136. doi:10.1037/0003-066X.55.1.122
- Barros-Oliveira, J. H. (2005). Sabedoria: Definição, dimensionalidade e educabilidade. *Revista Portuguesa de Pedagogia*, 39(2), 151-173.
- Bloom, B. S. (Ed.). (1985). *Developing talent in young people*. New York: Ballantine.
- Castelló Tarrida, A. (2005). Aproximación a la evaluación de la superdotación y los talentos. In M. Sánchez-Cano & J. B. Picas (Coords.), *La evaluación psicopedagógica* (pp. 383-415). Barcelona, España: Graó.
- Clayton, V. P., & Birren, J. E. (1980). The development of wisdom across the life span: A re-examination of an ancient topic. In P. Baltes & O. Brim, Jr (Eds.), *Life-span development and behavior* (pp. 104-137). New York: Academic Press.
- Cox, C. M. (1992). The early mental traits of 300 geniuses. In R. S. Albert (Ed.), *Genius & eminence* (2nd ed., pp. 53-58). Oxford, England: Pergamon. (Original published in 1926)
- De Groot, A. D. (1978). *Thought and choice in chess* (2nd ed.). The Hague: Mouton. (Original published in 1965)

- Ericsson, K. A. (2005). Recent advances in expertise research: A commentary on the contributions to the special issue. *Applied Cognitive Psychology*, 19(2), 233-241. doi:10.1002/acp.1111
- Ericsson, K. A., & Lehmann, A. C. (1996). Expert and exceptional performance: Evidence of maximal adaptation to task constraints. *Annual Review of Psychology*, 47, 273-305. doi:10.1146/annurev.psych.47.1.273
- Ericsson, K. A., Roring, R. W., & Nandagopal, K. (2007). Giftedness and evidence for reproducibly superior performance: An account based on the expert performance framework. *High Ability Studies*, 18(1), 3-56. doi:10.1080/13598130701350593
- Ferreira, A. B. H. (2004). *Novo dicionário Aurélio da língua portuguesa* (3a ed.). Curitiba: Positivo.
- Gable, S. L., & Haidt, J. (2005). What (and why) is positive psychology? *Review of General Psychology*, 9(2), 103-110. doi:10.1037/1089-2680.9.2.103
- Gagné, F. (2004). Transforming gifts into talents: the DMGT as a developmental theory. *High Ability Studies*, 15(2), 119-147. doi:10.1080/1359813042000314682
- Gagné, F. (2007). Ten commandments for academic talent development. *Gifted Child Quarterly*, 51(2), 93-118. doi:10.1177/0016986206296660
- Galton, F. (1979). *Hereditary genius: An inquiry into its laws and consequences*. London: Julian Friedman. (Original published in 1869)
- Garcia-Santos, S. C., Almeida, L. S., Werlang, B. S. G., & Veloso, A. L. M. (2010). Processamento da informação em gestores de alto desempenho. *Motricidade*, 6(1), 85-102.
- Gaspar, P., Ferreira, J. P., & Pérez, L. M. R. (2005). Tomadas de decisão no desporto: O seu ensino em jovens atletas. *Revista Mackenzie de Educação Física e Esporte*, 4(4), 95-111.
- Hall, C. S., Lindzey, G., & Campbell, J. B. (2000). *Teorias da personalidade* (M. A. V. Veronese, Trad., 4a ed.). Porto Alegre: Artmed.
- Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Odessa, FL: Psychological Assessment Resources.
- Holliday, S. G., & Chandler, M. J. (1986). *Wisdom: Explorations in adult competence*. Basel, Switzerland: Karger.
- Hollingworth, L. S. (1942). *Children above 180 IQ, Stanford-Binet: Origin and development*. New York: World Book.
- Horn, J. L., & Masunaga, H. (2000). On the emergence of wisdom: Expertise development. In W. S. Brown (Ed.), *Understanding wisdom: Sources, science, and society* (pp. 245-276). West Conshohocken, PA: Templeton.
- Linley, P. A., Joseph, S., Harrington, S., & Wood, A. M. (2006). Positive psychology: Past, present, and (possible) future. *The Journal of Positive Psychology*, 1(1), 3-16. doi:10.1080/17439760500372796
- Lubinski, D., & Benbow, C. P. (2006). Study of mathematically precocious youth after 35 years: Uncovering antecedents for the development of math-science expertise. *Perspectives on Psychological Science*, 1(4), 316-345. doi:10.1111/j.1745-6916.2006.00019.x
- Maslow, A. H. (1970). *Motivation and personality* (2nd ed.). New York: Harper & Row. (Original published in 1954)
- Ministério da Educação. Secretaria de Educação Especial. (2001). *Diretrizes nacionais para a educação especial na educação básica*. Retrived January 29, 2010, from <http://portal.mec.gov.br/seesp/arquivos/pdf/diretrizes.pdf>
- Moon, S. M. (2003). Personal talent. *High Ability Studies*, 14(1), 5-21. doi:10.1080/13598130304095
- Orwoll, L., & Perlmutter, M. (1990). The study of wise persons: Integrating a personality perspective. In R. J. Sternberg (Ed.), *Wisdom: Its nature, origins, and development* (pp. 160-177). New York: Cambridge University Press.
- Paludo, S. S., & Koller, S. H. (2007). *Psicologia positiva: uma nova abordagem para antigas questões*. Paidéia (Ribeirão Preto), 17(36), 9-20. doi:10.1590/S0103-863X2007000100002
- Poczwardowski, A., & Conroy, D. E. (2009). Coping responses to failure and success among elite athletes and performing artists. *Journal of Applied Sport Psychology*, 14(4), 313-329. doi:10.1080/10413200290103581
- Raskin, E. A. (1936). Comparison of scientific and literary ability: A biographical study of eminent scientists and men of letters of the nineteenth century. *Journal of Abnormal and Social Psychology*, 31(1), 20-35. doi:10.1037/h0060483
- Renzulli, J. S. (1986). The three-ring conception of giftedness: A developmental model for creative productivity. In R. J. Sternberg & J. E. Davidson (Eds.), *Conceptions of giftedness* (pp. 53-92). New York: Cambridge University Press.
- Renzulli, J. S. (2002). Emerging conceptions of giftedness: Building a bridge to the new century. *Exceptionality*, 10(2), 67-75. doi:10.1207/S15327035EX1002\_2
- Renzulli, J. S. (2010). El rol del profesor en el desarrollo del talento. *Revista Electrónica Interuniversitaria de Formación del Profesorado*, 13(1), 33-40.
- Robinson, A., & Clindenbeard, P. R. (1998). Giftedness: An exceptionality examined. *Annual Review Psychology*, 49, 117-139. doi:10.1146/annurev.psych.49.1.117
- Rogers, C. R. (1982). *Tornar-se pessoa* (M. J. C. Ferreira, Trad.). São Paulo: Martins Fontes. (Original published in 1961)
- Ruiz, L. M., Sánchez, M., Durán, J., & Jiménez, C. (2006). Los expertos en el deporte: Su estudio y análisis desde una perspectiva psicológica. *Anales de Psicología*, 22(1), 132-142.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1), 5-14. doi:10.1037/0003-066X.55.1.5



- Sheldon, K. M., & King, L. (2001). Why positive psychology is necessary. *American Psychologist*, 56(3), 216-217. doi:10.1037/0003-066X.56.3.216
- Silverman, L. K. (1993). Counseling needs and programs for the gifted. In K. A. Heller, F. J. Mönks, & A. H. Passow (Eds.), *International handbook of research and development of giftedness and talent* (pp. 631-647). Elmsford, NY: Pergamon.
- Simon, H. A., & Chase, W. G. (1973). Skill in chess. *American Scientist*, 61(4), 394-403.
- Simonton, D. K. (1990). Psychology, science, and history: Introduction to historiometry. New Haven, CT: Yale University Press.
- Staudinger, U. M., Lopez, D. F., & Baltes P. B. (1997). The psychometric location of wisdom-related performance: Intelligence, personality, and more? *Personality and Social Psychology Bulletin*, 23(11), 1200-1214. doi:10.1177/01461672972311007
- Sternberg, R. J. (Ed.). (1990). *Wisdom: Its nature, origins, and development*. New York: Cambridge University Press.
- Sternberg, R. J. (1998). Metacognition, abilities, and developing expertise: What makes an expert student? *Instructional Science*, 26(1-2), 127-140. doi:10.1023/A:1003096215103
- Sternberg, R. J. (1999). Intelligence as developing expertise. *Contemporary Educational Psychology*, 24(4), 359-375. doi: 10.1006/ceps.1998.0998
- Sternberg, R. J. (2001). Giftedness as developing expertise: A theory of the interface between high abilities and achieved excellence. *High Ability Studies*, 12(2), 159-179. doi:10.1080/13598130120084311
- Sternberg, R. J., Grigorenko, E., Ferrando, M., Hernández, D., Ferrándiz, C., & Bermejo, R. (2010). Enseñanza de la inteligencia exitosa para alumnos superdotados y talentos. *Revista Electrónica Interuniversitaria de Formación del Profesorado*, 13(1), 111-118.
- Terman, L. M. (1926). Mental and physical traits of a thousand gifted children. In L. M. Terman (Ed.), *Genetic studies of genius* (2nd ed., Vol. 1). Stanford: Stanford University Press.
- Thorndike, E. L. (1950). Traits of personality and their intercorrelations as shown in biographies. *Journal of Educational Psychology*, 41(4), 193-216. doi:10.1037/h0055716
- Trost, G. (2000). Prediction of excellence in school, higher education, and work. In K. A. Heller, F. J. Mönks, R. J. Sternberg, & R. F. Subotnik (Eds.), *International handbook of giftedness and talent* (2nd ed., pp. 317-325). Oxford, England: Elsevier Science.
- Wai, J., Lubinski, D., & Benbow, C. P. (2005). Creativity and occupational accomplishments among intellectually precocious youths: An age 13 to age 33 longitudinal study. *Journal of Educational Psychology*, 97(3), 484-492. doi:10.1037/0022-0663.97.3.484
- Winner, E. (2000). The origins and ends of giftedness. *American Psychologist*, 55(1), 159-169. doi:10.1037/0003-066X.55.1.159
- Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory Into Practice*, 41(2), 64-72.
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