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Human intelligency in sports

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Abstract

Intelligence has been defined in many different ways including one's capacity for logic, abstract thought, understanding, self-awareness, communication, learning, emotional Knowledge, memory, planning, creativity and problem solving in different type of sports activities. It can be more generally described as the ability to perceive information, and retain it as knowledge to be applied towards adaptive behaviors within an environment.

Keywords: Human intelligency, sports, self-awareness, communication, learning

Introduction

History

Intelligence is most widely studied in humans, but has also been observed in non-human animals and in plants. Artificial intelligence is intelligence in machines. (i.e., software) Within the discipline of psychology, various approaches to human intelligence have been adopted. The psychometric approach is especially familiar to the general public, as well as being the most researched and by far the most widely used in practical settings.

Intelligence derives from the Latin verb *intelligere*, to comprehend or perceive. A form of this verb, *intellectus*, became the medieval technical term for understanding, and a translation for the Greek philosophical term *nous*.

Human intelligence

Human intelligence is the intellectual capacity of humans, which is characterized by perception, consciousness, self-awareness, and volition. Intelligence enables humans to remember descriptions of things and use those descriptions in future behaviors. It is a cognitive process. It gives humans the cognitive abilities to learn, form concepts, understand, and reason, including the capacities to recognize patterns, comprehend ideas, plan, problem solve, and use language to communicate. Intelligence enables humans to experience and think.

Note: that much of the above definition applies also to the intelligence of non-human animals.

Intelligency in sports

Intelligence is displayed in sport as the ability to assimilate the technology of comprehensive coordination, multidirectional exercises; learning the laws of growth of sports skills, achieving a high level of stability and reliability of competitive activity, objective, critical analysis and synthesis of personal achievements and failures during competitions, actively seeking the ways to correct them. It has its own evaluation criteria, the most important of which are:

- Amount and level of learnt knowledge, skills and abilities, and the extrapolation ability in new conditions;
- Speed of perception of incoming information and its processing ability;
- Understanding and clear statement of the essence of issue or problem;
- Ability to choose an effective method of solving complex problems;
- Standards of speech, behavior, establishing interpersonal relationships.

The level of intelligence in sport is determined by the readiness for:

- self-education (assimilation of sports terminology, concepts, definitions, conceptual propositions, principles, means and methods of sports training);

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- Organization of the optimum regime of the day, lifestyle, self-restraint;

G factor in non-humans

Evidence of a general factor of intelligence has been observed in non-human animals. The general factor of intelligence, or *g* factor, is a psychometric construct that summarizes the correlations observed between an individual's scores on a wide range of cognitive abilities. First described in humans, the *g* factor has since been identified in a number of non-human species.

Cognitive ability and intelligence cannot be measured using the same, largely verbally dependent, scales developed for humans. Instead, intelligence is measured using a variety of interactive and observational tools focusing on innovation, habit reversal, social learning, and responses to novelty. Studies have shown that *g* is responsible for 47% of the individual variance in cognitive ability measures in primates and between 55% and 60% of the variance in mice (Locurto, Locurto). These values are similar to the accepted variance in IQ explained by *g* in humans (40-50%).

In Plants

It has been argued that plants should also be classified as intelligent based on their ability to sense and model external and internal environments and adjust their morphology, physiology and phenotype accordingly to ensure self-preservation and reproduction.

A counter argument is that intelligence is commonly understood to involve the creation and use of persistent memories as opposed to computation that does not involve learning. If this is accepted as definitive of intelligence, then it includes the artificial intelligence of robots capable of "machine learning", but excludes those purely autonomic sense-reaction responses that can be observed in many plants. Plants are not limited to automated sensory-motor responses, however, they are capable of discriminating positive and negative experiences and of 'learning' (registering memories) from their past experiences. They are also capable of communication, accurately computing their circumstances, using sophisticated cost-benefit analysis and taking tightly controlled actions to mitigate and control the diverse environmental stressors.

Artificial intelligence

Artificial intelligence (or AI) is both the intelligence of machines and the branch of computer science which aims to create it, through "the study and design of intelligent agents or "rational agents", where an intelligent agent is a system that perceives its environment and takes actions which maximize its chances of success. Achievements in artificial intelligence include constrained and well-defined problems such as games, crossword-solving and optical character recognition and a few more general problems such as autonomous. General intelligence or strong AI has not yet been achieved and is a long-term goal of AI research.

Among the traits that researchers hope machines will exhibit are reasoning, knowledge, planning, learning, communication, perception, and the ability to move and to manipulate objects. In the field of artificial intelligence there is no consensus on how closely the brain should be simulated.

A theory of hierarchical learning mechanisms, named *practopoiesis*, may be able to provide a conceptual bridge between biological and artificial intelligence.

Types of intelligence

1. Naturalist Intelligence ("Nature Smart")

Designates the human ability to discriminate among living things (plants, animals) as well as sensitivity to other features of the natural world (clouds, rock configurations). This ability was clearly of value in our evolutionary past as hunters, gatherers, and farmers; it continues to be central in such roles as botanist or chef. It is also speculated that much of our consumer society exploits the naturalist intelligences, which can be mobilized in the discrimination among cars, sneakers, kinds of makeup, and the like.

2. Musical Intelligence ("Musical Smart")

Musical intelligence is the capacity to discern pitch, rhythm, timbre, and tone. This intelligence enables us to recognize, create, reproduce, and reflect on music, as demonstrated by composers, conductors, musicians, vocalist, and sensitive listeners. Interestingly, there is often an affective connection between music and the emotions; and mathematical and musical intelligences may share common thinking processes. Young adults with this kind of intelligence are usually singing or drumming to themselves. They are usually quite aware of sounds others may miss.

3. Logical-Mathematical Intelligence (Number/Reasoning Smart)

Logical-mathematical intelligence is the ability to calculate, quantify, consider propositions and hypotheses, and carry out complete mathematical operations. It enables us to perceive relationships and connections and to use abstract, symbolic thought; sequential reasoning skills; and inductive and deductive thinking patterns. Logical intelligence is usually well developed in mathematicians, scientists, and detectives. Young adults with lots of logical intelligence are interested in patterns, categories, and relationships. They are drawn to arithmetic problems, strategy games and experiments.

4. Existential Intelligence

Sensitivity and capacity to tackle deep questions about human existence, such as the meaning of life, why do we die, and how did we get here.

5. Interpersonal Intelligence (People Smart")

Interpersonal intelligence is the ability to understand and interact effectively with others. It involves effective verbal and nonverbal communication, the ability to note distinctions among others, sensitivity to the moods and temperaments of others, and the ability to entertain multiple perspectives. Teachers, social workers, actors, and politicians all exhibit interpersonal intelligence. Young adults with this kind of intelligence are leaders among their peers, are good at communicating, and seem to understand others' feelings and motives.

6. Bodily-Kinesthetic Intelligence ("Body Smart")

Bodily kinesthetic intelligence is the capacity to manipulate objects and use a variety of physical skills. This intelligence also involves a sense of timing and the perfection of skills through mind-body union. Athletes, dancers, surgeons, and craftspeople exhibit well-developed bodily kinesthetic intelligence.

7. Linguistic Intelligence (Word Smart)

Linguistic intelligence is the ability to think in words and to use language to express and appreciate complex meanings.

Linguistic intelligence allows us to understand the order and meaning of words and to apply meta-linguistic skills to reflect on our use of language. Linguistic intelligence is the most widely shared human competence and is evident in poets, novelists, journalists, and effective public speakers. Young adults with this kind of intelligence enjoy writing, reading, telling stories or doing crossword puzzles.

8. Intra-personal Intelligence (Self Smart[™])

Intra-personal intelligence is the capacity to understand oneself and one's thoughts and feelings, and to use such knowledge in planning and directioning one's life. Intra-personal intelligence involves not only an appreciation of the self, but also of the human condition. It is evident in psychologist, spiritual leaders, and philosophers. These young adults may be shy. They are very aware of their own feelings and are self-motivated.

9. Spatial Intelligence ("Picture Smart[™]")

Spatial intelligence is the ability to think in three dimensions. Core capacities include mental imagery, spatial reasoning, image manipulation, graphic and artistic skills, and an active imagination. Sailors, pilots, sculptors, painters, and architects all exhibit spatial intelligence. Young adults with this kind of intelligence may be fascinated with mazes or jigsaw puzzles, or spend free time drawing or daydreaming.

Conclusion

The intelligence community (IC) seeks to reduce uncertainty and provide warning about potential threats to the national security of the United States, it faces increasing demands for analyses that are accurate, actionable, and properly qualified, so that decision makers know how much confidence the analyses warrant. Producing those analyses requires great institutional and intellectual agility as threats emerge from new quarters and require different kinds and combinations of expertise.

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