Introduction

Modern psychologists and educators have sought the nature, operation, and development of intelligence in humans, yet denied the existence of God or a Supreme Being as the source of intelligence. Many scientists believe that intelligence exists within human genes and is the result of neural (i.e., brain cell) networks configured in the brain as the result of various experiences. Simply put, they define intelligence materially or in terms of physical matter.

Most definitions of intelligence say nothing about its source. Howard Gardner, Professor of Education at Harvard University, in his book *Frames of Mind* defines intelligence as: "the ability to solve problems or to create products (p. X)." Here intelligence is defined in terms of what it does.

Prior to the last twenty years, models and definitions of intelligence were faulty for they thought that intelligence was bound to space and time (i.e. local). Recent discoveries in quantum physics, especially Bell's Theorem, prove that any model of the physical universe that does not include a non-local part is insufficient (See "Has Science Discovered God in Non-Locality," p. 16 in the September/October 1996 "PLIM REPORT"). Intelligence is far too vast to be limited exclusively to the physical body or located primarily in the brain. Clearly, it took an awesome amount of intelligence to design the universe and the physical body.

What is an idiot savant?

Current research theories show that intelligence is non-local and not bound to the brain. Sometimes nature offers insight into a particular subject by presenting a baffling enigma and contradictory example. Intelligence's contradictory enigma is the idiot-savant.

The word idiot usually refers to a simpleton, in contrast to the word "savant" in French that means "learned one." Idiot savants are a subgroup of a class of people called idiots with an IQ of about 25.

Idiot savants are a group of humans that are incapable of learning, writing or reading, yet they have unlimited access to specific, accurate knowledge in the fields of mathematics, music, and other precise areas. Now the irony of an idiot-savant is that this group of individuals does not acquire knowledge by learning as the average human does. They mysteriously 'know' explicit, exact, correct information. One may wonder: "How do idiots savants know certain information or possess certain skills?" By whatever means they obtain this information, they undermine current definitions about intelligence. Does their knowledge show that a source of intelligence exists? Is it possible to tap into this source and not know of its existence?

Dustin Hoffman made idiot-savants famous in the Hollywood movie "Rain Man." He played the role of a mathematical genius able to keep track of cards at the casino, yet unable to go to the bathroom alone or to make simple decisions about what clothes to wear or foods to eat. Modern science cannot explain this phenomenon.

What is the intent of this article?

The intent of this article is to examine the idiot savant phenomenon that we may acquire an understanding of intelligence. The nature of intelligence is not physical. It is more akin to Spirit lacking a better word.

This article will explore the current scientific theories that give a better picture on how Spirit operates. Although these theories are not complete, they tend to verify the scriptures and confirm that Spirit is the source of intelligence. In the end, this article will also show the purpose of the idiot savant.

What is the nature of the idiot savant?

The idiot savant is one of the most baffling problems modern science has encountered for it defies common sense. Psychologists believe that we learn a particular skill or we develop a potential talent, such as music, mathematics, etc., through education. No one would accept the fact that a talent is perfected without any formal or informal training or education. This is just the case, however, with idiot savants.

Idiot savants are illiterate. They have never been trained. In fact, they are untrainable, according Dr. Joseph C. Pearce in his book *Evolution's End* (p. __). Yet, they have access to a particular field of knowledge where they appear to be infallible. When asked a question within their area of expertise, 99% of the time, the idiot savant will answer correctly. Outside their area of specialty, they are idiots. They cannot perform the most basic functions of life without help and are generally institutionalized.

Dr. Joseph C. Pearce states the following about the general nature of the idiot savant: "so far as can be observed, the savant has not acquired, could not acquire, and is quite incapable of acquiring, the information that he so liberally dispenses. If we furnish the savant with the proper stimulus, a question about the specialty, he gives the appropriate response, but can't furnish himself with that stimulus, can't develop the capacity as an intelligence and can't move beyond his narrow limits (*Evolution's End*, p. 5)."

Simply put, the savant cannot think or comprehend abstract ideas, even in his field of knowledge. If you ask a savant how he knows the information he conveys, Pearce says he would be confused with the abstractness of the question (*Evolution's End*, p. 4). The *New Encyclopedia Britannica* (13th Edition) states the following about the idiot savant. Their "achievement is confined to a very limited area and ... shows little understanding of their ability because of average or subnormal intelligence (Vol. 9; p. 719)." An excellent analogy is a parrot that is able to mimic a human's voice, but has no understanding of what he saying. Examples of savants will give a better understanding of their nature and disposition.
What types of idiot savants exist?

All types of savants have occurred throughout human history. The most common is the calendar, mathematical and music savants, but there are other savants unique to our modern area. In short, savants can be found in a wide range of areas. Calendar savants have the ability to reveal the day of the week and the date of any holiday, such as Easter, whether it be in the past or future. For example, if one asked the savant what date and day of the week Easter will fall on in the year 2045, the savant will give an instant correct answer. Manually determining the date and day that Easter will fall in a particular year would entail figuring a complex calculation.

Mathematical idiot savants have the ability to calculate numbers rapidly in their head. These human calculators can add, subtract, divide, and multiply mentally, and remember large sequences of numbers. According to Dr. Pearce's book the British government employed two mathematical savants who served as human computers during World War II. Howard Gardner in his book Frames of Mind (© 1983 Basic Books) also gives examples of mathematical idiot savants. There was an 11 year old that had the ability to remember virtually endless series of numbers, such as the railroad time schedules or the financial section of a news paper. There was an institutional child named Obadiah that taught himself at the age of six to add, subtract, multiply, and divide. Dr. Gardner says the following about idiot savants. "It must be stressed that these individuals typically are not interested in discovering new problems or in solving venerable old ones, or even in observing how other people have solved them. Idiots savants do not seek to use mathematics to help them in other areas of daily life or tackle scientific puzzles: instead, they have mastered a series of maneuvers that enable them to stand out like freaks (p. 155)."

Music idiot savants cover a wide range of musical skills. Dr. Pearce in his book referred to a blind idiot savant that had the musical ability to replay complex musical compositions after hearing them only once. Another musical savant could sight read a piece of music and play it over and over not discerning tone, nor tempo, and failing to turn the page to finish the composition. Other idiot savants are able to build scale models of any object they view just once. Still others can quote the census of 5,000 cities in the USA along with the number of hotels in each city and the number of rooms in each hotel. These are just a few examples of idiots savants. Let us proceed to look at the various theories of the idiot savant.

What are scientific theories on the idiot savant?

There are all types of theories that try to explain how an illiterate and untrainable idiot can have access to unlimited accurate information in a certain field. Some theories try to explain the idiot savants by genetic and biological abnormalities. Howard Gardner in his book Frames of Mind believes that genetic and environment factors create idiot savants. Professor Gardner thinks that arithmetic calculations of the idiot savant are: "based upon the relative sparing or proliferation of certain brain areas: like hyperlexia, it represents an automatic, impossible-to-stop-process (p. 156)," This theory still does not explain how the people obtained this knowledge.

Other modern theories use the principles of quantum physics, specifically Bell's theorem, to explain idiots savants. [for more details of the Bell's theorem see "Has Science Discovered God in Non-Locality," p. 16 in the September/October 1996 "PLIM REPORT"). Simply put, these theories define intelligence as "fields of potential," in the same way that magnetic fields interact with iron filings. In this theory, an idiot savant's brain receives this information directly from a non-local source forming these "fields of knowledge."

Quoting Dr. Joseph C. Pearce in his book about the cause of the idiots savant, he says an idiot savant "is pre-disposed to the intelligence of his specialty through some early infant-childhood experience that activates a "field of neurons (brain cells) " capable of translating from field of intelligence," within narrow limits (Evolution's End, p. 6)."

Finally, when one looks at the tabernacle pattern, the cloud of Yahweh above the mercy seat symbolically represents the Spirit directing these two angels. This shows that idiot savants have tapped involuntarily into some spiritual knowledge that they do no understand. They simply repeat what they see or hear.

What is the spiritual reality of idiot savants?

Knowing that the physical creation was created to symbolically represent spiritual principles enables one to understand Elohim's purpose for creating the idiot savant (Rom. 1:19-20). The other extreme or side of the coin of an idiot savant is a genius or prodigy. Simply put, an idiot savant is the complement to a genius, just as night is the complement or opposite to day, and darkness is the complement to light.

Israel under the Law of Moses was a type of an idiot savant who had access to an unlimited field of knowledge. They had knowledge of the scriptures to the point that they could quote them back to you, but like an idiot savant, Israel was incapable of understanding their true meaning nor could they use them to spiritually develop. From a spiritual standpoint, Israel was illiterate. She was unable to translate the symbols of the Law and the Prophets into their spiritual reality until the coming of the Messiah. He told the teachers of Israel that they searched the scriptures for eternal life, but in reality they testified of Him (Jn. 5:39). At Pentecost, the idiot savants were transformed into prodigies.

Why must we have a context for our experiences?

Idiot savants also represent people who have experienced certain types of spiritual phenomenon, but are often paralyzed by their experience because they do not have a context within to place it. The Spirit has spoken to them and they are able to repeat what they heard, but they have no understanding of what they are uttering nor can they grow from this experience. Until they can resolve what has happened to them, they remain unable to digest the essence of the experience. (See some accounts of people who have experienced out-of-body experiences, such as Embraced by the Light, by Betty Eddy and Saved
by the Light, by Dannion Brinkley.)

Idiot savants have access to unlimited knowledge by the Spirit. The problem with idiot savants is that they are unable to grow or to create a product as a result of this knowledge in contrast to a genius or prodigy. The New Covenant established by the outpouring of the Holy Spirit in AD 33 in Jerusalem represents an age where mankind began to understand the things of the Spirit. Man is no longer an idiot savant, but becomes a genius able to grow in the Spirit by having constant access and constant awareness of the Holy Spirit within (Eph. 2:18-22).

Intelligence Article #2---Alfred Binet’s Invention of the Intelligence Test

In 1905 Alfred Binet and Theodor Simon devised a very different sort of test that was considered a breakthrough in measuring intelligence, and still forms the basis for much current IQ testing. As a young psychologist Binet tried out many of the new tests devised by Galton and Cattell on his two young daughters. He found that while his daughters and their friends had average reaction times that were three times as long as adults, they were also much more variable: on some trials the children performed at a similar level to the adults, but on other trials they would take much longer. Binet concluded that the difference lay not in mental speed but in the children’s difficulty in consistently paying attention. On tests of perceptual and sensory abilities the children’s performance often equalled that of adults. The fact that children were capable of performing as well as adults on such sensory tests led Binet to question the idea that they measured intellectual capacity. The tests which did discriminate children from adults involved more complex faculties than acuity or reaction speed, they involved sustained attention or linguistic skills.

Binet was a strong advocate of the importance of individual differences. He was convinced that intelligence could appear in highly diverse manifestations. This conviction sprang from his observation of the profound differences in character and intellectual style between his two girls. He called one ‘l’observateur’ (the observer) and the other ‘l’imagineur’ (the imaginer). For example, here are the teenaged girls’ responses to being asked to describe a chestnut leaf:
l’observateur: ”The leaf I am looking at is a chestnut leaf gathered in the autumn, because the folioles are all almost yellow except for two, and one is half green and yellow. This leaf is composed of several folioles joined at a center which ends on the stem called a petiole, which supports the leaf on the tree. The folioles are not of the same size; out of the 7, 4 are much smaller than the 3 others. The chestnut tree is a docotideлон, as one can tell by looking at the leaf, which has ramified nerves.”

Compare this with his other daughter’s response:
l’imagineur: ”This is a chestnut tree leaf which has just fallen languidly in the autumn wind... Poor leaf, destined now to fly along the streets, then to rot, heaped up with the others. It is dead today, and it was alive yesterday! Yesterday, hanging from the branch it awaited the fatal flow of wind that would carry it off, like a dying person who awaits the final agony. But the leaf did not sense its danger, and it fell softly in the sun.”

Binet understood well that two equally intelligent people could go about solving the same problem in completely different ways. This appreciation of individual differences underpinned Binet’s disinclination to rely on “brute numbers” in summing up a person’s capacities.

In 1904 Binet was appointed to a governmental commission charged with investigating the state of the mentally subnormal in France. Recently enacted universal education laws required that all French children be given public education. Binet and Simon’s 1905 test was devised to distinguish between mentally subnormal children and normal children. The basic insight that drove the design of the test items is that of measuring with respect to age. They found that the subnormal children’s performance could be equated with that of much younger normal children. In the 1905 Binet-Simon test and its subsequent 1908 and 1991 revisions they devised age linked items that should be with the capacities of a child of that age. For example, at age three typical normal children could point at request to body parts, name common objects from a printed picture, repeat back correctly two spoken numbers, and give their last names; at age ten normal children could reproduce line drawings from memory, compose a sentence containing the three words "Paris", "fortune" and "stream", and detect and explain absurdities in stories such as: “Someone said that if I should ever get desperate and kill myself, I should not choose Friday, because Friday is an unlucky day and will bring unhappiness”. The important thing to note is that these items area hodge-podge of different things, brought together only by the general ability of children of a certain age to answer them correctly.

Binet observed that children varied a great deal in the particular items that they could answer, and that there was substantial variability from test to test for the same child. He developed the rule of thumb that a score of two years below chronological age would result in the child experiencing difficulty in ordinary schools. It is important to note that Binet believed that intelligence itself was liable to substantial change within an individual; he did not take a hereditary view of intelligence. He believed that there was always room for improvement; there may be an upper limit for each person’s intelligence, but few people actually approach that limit in real life. Binet developed a program of “mental orthopedics” which included the game of “Statue” and a Memory game to develop attention and memory. In this Binet differed radically from Galton: Binet regarded intelligence as fluid and subject to change through learning, whereas Galton saw it as a fixed hereditary characteristic. It is no coincidence that these two men were concerned with opposite ends of the spectrum: Binet felt his tests were only appropriate at the lower end of the distribution, in diagnosing difficulties in learning, whereas Galton focused on the top end of the scale, emphasizing genius which he took to be hereditary.
The Stanford-Binet: Coming to America

As Gould very clearly sets out in the "Mismeasure of Man", many of Binet's qualifications and good intentions were dismantled in the American translation of his tests. Gould states that Binet insisted on three cardinal principles for using his tests that were all contravened in their American instantiation:
1. The scores are a practical device; they do not buttress any theory of intellect. They do not define anything innate or permanent. We may not designate what they measure as "intelligence" or any other reified entity.
2. The scale is a rough, empirical guide for identifying mildly retarded and learning-disabled children who need special help. It is not a device for ranking normal children.
3. Whatever the cause of difficulty in children identified for help, emphasis shall be placed upon improvement through special training. Low scores shall not be used to mark children as innately incapable.

Lewis Terman a psychologist at Stanford, administered translations of Binet's test to American children and found that the tests overestimated mental age for young American children while underestimating it for older children. Terman and his graduate student Childs added new items like "fill-in-the-word" and fable interpretation, and removed several of Binet and Simon's original items. In 1916, with the help of a large number of graduate students, Terman conducted an extensive standardization of the new test. At this time Terman also introduced the term IQ; following a suggestion of the German psychologist William Stern, Terman divided the mental age by chronological age to get one number, then multiplied by 100 to get rid of decimals. This simplification of the results of the test into one easy number contributed to the reification of the concept of intelligence, and was completely counter to Binet's careful qualifications and cautions about 'brutal' numbers. Not surprisingly, Terman fell on the hereditarian side of the nature/nurture divide and spent much of his career studying gifted children.

Intelligence Article #3---Multiple Intelligences: Gardner's Theory. ERIC Digest.

Arguing that "reason, intelligence, logic, knowledge are not synonymous...," Howard Gardner (1983) proposed a new view of intelligence that is rapidly being incorporated in school curricula. In his Theory of Multiple Intelligences, Gardner expanded the concept of intelligence to also include such areas as music, spacial relations, and interpersonal knowledge in addition to mathematical and linguistic ability.

This digest discusses the origins of Gardner's Theory of Multiple Intelligences, his definition of intelligence, the incorporation of the Theory of Multiple Intelligences into the classroom, and its role in alternative assessment practices.

SEVEN INTELLIGENCES

Gardner defines intelligence as "the capacity to solve problems or to fashion products that are valued in one or more cultural setting" (Gardner & Hatch, 1989). Using biological as well as cultural research, he formulated a list of seven intelligences. This new outlook on intelligence differs greatly from the traditional view which usually recognizes only two intelligences, verbal and computational. The seven intelligences Gardner defines are:

- Logical-Mathematical Intelligence--consists of the ability to detect patterns, reason deductively and think logically. This intelligence is most often associated with scientific and mathematical thinking.
- Linguistic Intelligence--involves having a mastery of language. This intelligence includes the ability to effectively manipulate language to express oneself rhetorically or poetically. It also allows one to use language as a means to remember information.
- Spatial Intelligence--gives one the ability to manipulate and create mental images in order to solve problems. This intelligence is not limited to visual domains--Gardner notes that spatial intelligence is also formed in blind children.
- Musical Intelligence--encompasses the capability to recognize and compose musical pitches, tones, and rhythms. (Auditory functions are required for a person to develop this intelligence in relation to pitch and tone, but it is not needed for the knowledge of rhythm.)
- Bodily-Kinesthetic Intelligence--is the ability to use one's mental abilities to coordinate one's own bodily movements. This intelligence challenges the popular belief that mental and physical activity are unrelated.
- The Personal Intelligences--includes interpersonal feelings and intentions of others--and intrapersonal intelligence--the ability to understand one's own feelings and motivations. These two intelligences are separate from each other. Nevertheless, because of their close association in most cultures, they are often linked together.
- Although the intelligences are anatomically separated from each other, Gardner claims that the seven intelligences very rarely operate independently. Rather, the intelligences are used concurrently and typically complement each other as individuals develop skills or solve problems. For example, a dancer can excel in his art only if he has 1) strong musical intelligence to understand the rhythm and variations of the music, 2) interpersonal intelligence to understand how he can inspire or emotionally move his audience through his movements, as well as 3) bodily-kinesthetic intelligence to provide him with the agility and coordination to complete the movements successfully.

BASIS FOR INTELLIGENCE

Gardner argues that there is both a biological and cultural basis for the multiple intelligences. Neurobiological research indicates that learning is an outcome of the modifications in the synaptic connections between cells. Primary elements of
different types of learning are found in particular areas of the brain where corresponding transformations have occurred. Thus, various types of learning results in synaptic connections in different areas of the brain. For example, injury to the Broca's area of the brain will result in the loss of one's ability to verbally communicate using proper syntax. Nevertheless, this injury will not remove the patient's understanding of correct grammar and word usage.

In addition to biology, Gardner (1983) argues that culture also plays a large role in the development of the intelligences. All societies value different types of intelligences. The cultural value placed upon the ability to perform certain tasks provides the motivation to become skilled in those areas. Thus, while particular intelligences might be highly evolved in many people of one culture, those same intelligences might not be as developed in the individuals of another.

USING MULTIPLE INTELLIGENCES IN THE CLASSROOM

Accepting Gardner's Theory of Multiple Intelligences has several implications for teachers in terms of classroom instruction. The theory states that all seven intelligences are needed to productively function in society. Teachers, therefore, should think of all intelligences as equally important. This is in great contrast to traditional education systems which typically place a strong emphasis on the development and use of verbal and mathematical intelligences. Thus, the Theory of Multiple Intelligences implies that educators should recognize and teach to a broader range of talents and skills.

Another implication is that teachers should structure the presentation of material in a style which engages most or all of the intelligences. For example, when teaching about the revolutionary war, a teacher can show students battle maps, play revolutionary war songs, organize a role play of the signing of the Declaration of Independence, and have the students read a novel about life during that period. This kind of presentation not only excites students about learning, but it also allows a teacher to reinforce the same material in a variety of ways. By activating a wide assortment of intelligences, teaching in this manner can facilitate a deeper understanding of the subject material.

Everyone is born possessing the seven intelligences. Nevertheless, all students will come into the classroom with different sets of developed intelligences. This means that each child will have his own unique set of intellectual strengths and weaknesses. These sets determine how easy (or difficult) it is for a student to learn information when it is presented in a particular manner. This is commonly referred to as a learning style. Many learning styles can be found within one classroom. Therefore, it is impossible, as well as impractical, for a teacher to accommodate every lesson to all of the learning styles found within the classroom. Nevertheless the teacher can show students how to use their more developed intelligences to assist in the understanding of a subject which normally employs their weaker intelligences (Lazear, 1992). For example, the teacher can suggest that an especially musically intelligent child learn about the revolutionary war by making up a song about what happened.

TOWARDS A MORE AUTHENTIC ASSESSMENT

As the education system has stressed the importance of developing mathematical and linguistic intelligences, it often bases student success only on the measured skills in those two intelligences. Supporters of Gardner's Theory of Multiple Intelligences believe that this emphasis is unfair. Children whose musical intelligences are highly developed, for example, may be overlooked for gifted programs or may be placed in a special education class because they do not have the required math or language scores. Teachers must seek to assess their students' learning in ways which will give an accurate overview of the their strengths and weaknesses.

As children do not learn in the same way, they cannot be assessed in a uniform fashion. Therefore, it is important that a teacher create an "intelligence profiles" for each student. Knowing how each student learns will allow the teacher to properly assess the child's progress (Lazear, 1992). This individualized evaluation practice will allow a teacher to make more informed decisions on what to teach and how to present information.

Traditional tests (e.g., multiple choice, short answer, essay...) require students to show their knowledge in a predetermined manner. Supporters of Gardner's theory claim that a better approach to assessment is to allow students to explain the material in their own ways using the different intelligences. Preferred assessment methods include student portfolios, independent projects, student journals, and assigning creative tasks. An excellent source for a more in-depth discussion on these different evaluation practices is Lazear (1992).

CONCLUSION

Schools have often sought to help students develop a sense of accomplishment and self-confidence. Gardner's Theory of Multiple Intelligences provides a theoretical foundation for recognizing the different abilities and talents of students. This theory acknowledges that while all students may not be verbally or mathematically gifted, children may have an expertise in other areas, such as music, spatial relations, or interpersonal knowledge. Approaching and assessing learning in this manner allows a wider range of students to successfully participate in classroom learning.