

INTRODUCTION - SECTION 1
WHAT IS THE PURPOSE OF THE
ALPHABETICAL BRAIN™ WEBSITE?

May 1, 2020

The purpose of this educational website is to explain the fundamental characteristics of your brain's *physical structures* as well as your mind's *mental functions*, including your ability to *imagine, reason, and remember*.

This website presents the most sensible humanistic scientific explanation of the new brain research. It proves beyond any doubt that you can optimize your *mental force*, which was known as brainpower in the past. The new *linguistic perspective* unscrambles the technical language invented by brain scientists in collaboration with cognitive psychologists that explains how your brain works in plain English.

This website discloses the source of your own *mental force* as being a progressive logical sequence of biological and psychological mental and emotional functions which you can easily learn how to control. This means that you can feel *less* anxious and *more* self-confident after you have learned the definitions which describe your mind's *mental force*. The definitions explain how the parts of your brain are interconnected and interactive so you can move your body, think creative thoughts, and control your feelings.

The *integration* of the 15 brain ideas emphasized on this website is brand new in human history. The mission of this website is to help you understand the many brain facts which support the brain ideas. They can educate you to control your brain's major organs and your microscopic neurotransmitters and hormones. You need to understand the names and meanings of all the main parts of your brain, which control your *willpower* and *creative imagination*.

By opening your mind up to the new perceptions of reality, which are organized around reliable brain facts and ideas, you can conquer your doubts and confidently maintain your sanity as you increase your curiosity about the meaning of life. Soon new thinking habits can provide you with even more health and happiness. You need to freely choose to add feelings of positivity to all new brain words.

The new brain information on this website emphasizes the profound connection between your *working memory* and your *long-term memory* systems. These two key brain ideas are #1 and #15 on the following **Circle of Consciousness Symbol**©:

CIRCLE OF CONSCIOUSNESS SYMBOL©

You can see that #1 and #15 are next to each other on the circle, which reminds you that they are inseparably connected inside your brain.

If your *prefrontal cortex* (PFC) and your *hippocampus* were not connected by a lifeline of healthy neuronal pathways, you would have no conscious self-awareness and would not be able to talk sensibly. This is the shockingly dreadful dilemma of the victims of Alzheimer's disease, which is the most common and fatal form of dementia. The problem is that the conscious self-awareness of an Alzheimer's victim cannot connect with his or her unconscious long-term memories.

The connections between your prefrontal cortex and hippocampus are known as your **anterior cingulate "cortices"** (plural for cortex). These two neuronal pathways, one on the inside of the left hemisphere and one on the inside of the right hemisphere, can be disrupted in several ways. A variety of abnormalities or dysfunctions can cause the disconnect.

When the neuronal pathways are obstructed, dementia victims become progressively less aware of their past memories, whose triggers are located in the hippocampus part of their limbic system. Then their perceptions of reality and their awareness of their own self-identities is diminished: often to the point of no return.

Tragically, when Alzheimer's victims lose contact with their memories of the past, they *forget* the faces of their friends and family members and also *forget* where they are and *forget* how to speak appropriately during conversations. If the connection is severely damaged, the *self-identities* of victims become permanently altered, since essential self-defining memories cannot be recalled.

Then they are compelled to confabulate in order to fill the cognitive void by making up nonsensical explanations. Alzheimer's victims provide stark evidence for the meme:

"You are your memory!"

Since there is no guaranteed way of preventing Alzheimer's disease, it is important that you maintain a healthy brain by sleeping adequately, eating well, doing regular physical exercise, and challenging yourself mentally to increase your "**cognitive reserve**" on a daily basis!

From this perspective, the best mantra to repeat daily is:

"I move, therefore, I am!"

Such a proactive "**growth mindset**" of healthy activities can reduce your risk of getting Alzheimer's, or possibly delay the pace of deterioration of the brain structures and the mental functions far into old age.

The goal of living long and well requires that you keep fresh blood flowing through your blood vessels and keep sparks of electro-chemical ionic signals flowing throughout your *connectome*. Connectome is the new name for your brain and nervous system operating as a unified system in all its nano-microscopic miniaturization. The computerized microscopes allow researchers to "see" smaller organisms and molecular interactions than ever before in human history!

WORKING MEMORY METAPHOR

"The relationship between working memory and long-term memory is similar to that of a librarian and a library. Like a librarian, working memory allows you to search through the '**books**' [your memories] of information stored in the '**library**' [your long term memory] in order to accomplish a specific task." (Book Source = **Working Memory Advantage**, 2013, page 160)

"With Alzheimer's disease, both elements are under attack: the 'librarian' [executive leadership function] struggles to search through the stacks, and the bookworms that are eating through the 'books' [topics in your memory]. A shrinking working memory [executive leadership function] has a detrimental effect on your ability to access the 'books' [your specific memories], to search through the 'library' [your whole memory] and find and apply what you need." (page 160)

"And when the 'books' [specific memories] deteriorate, it is much harder to 'read' [recall the specific memories] of what remains." (page 160) However, working memory [in your prefrontal cortex] is such a dynamic and adaptive function that if it remains strong, even if Alzheimer's

begins to eat away at the [nerves inside your neuronal pathways], it may in fact help to prevent the [dysfunctional] cognitive symptoms associated with the disease" for a long time. (page 160)

You will learn that your working memory and long-term memory both have overlapping reciprocal recursive feedback and feedforward functions, which can be described in hierarchical layers once you understand them in their modern linguistic context.

You can do it one word and one name at a time just like children learn each new word in their emerging vocabularies as they expand their conscious self-awareness and adaptive self-identity.

Book Source = Working Memory Advantage, 2013 (page 183); See also the Appendix: **Working Memory Quick Hits Manual** on pages 280-291

DETAILS, SOURCES, AND QUOTATIONS

The 15 brain flash cards, which introduce the 15 major brain ideas, have quick links to files that are named **DETAILS** and **SOURCES**.

The short declarative statements on both the fronts and backs of the 15 brain flash cards provide an easy way to learn the basic vocabulary needed to understand what causes your conscious self-awareness and adaptable self-identity, which both depend on your total memory resources.

The question and answer format can help you easily and rapidly memorize the brain ideas and their relationships. The **Q/A format** provides a scientific perspective concerning the true causes of your *consciousness* and *sense-of-self*.

The brief declarative statements on both sides of the 15 brain flash cards can coalesce in your long-term memory to strengthen your willpower so you can use your creative imagination to construct your own self-identity.

Soon you will be able to comprehend the 15 new brain ideas just as easily as you understand the meanings of familiar household words such as "**table**" and "**chair**" and "**kitchen**" and "**bedroom.**"

After the new brain vocabulary is safely stored in your permanent *long-term memory*, you will be able to understand how your *creative imagination* and your *emotional intelligence* depend upon learning specific critical thinking skills and critical reading strategies.

You will learn why it is so important to keep asking the question "**WHY?**"

In addition, there is a special link on the homepage of this website called "**Quotations about Human Consciousness.**" It contains a variety of definitions of human consciousness taken from many books about neuroscience, biology, and psychology, which are all based on the secular humanistic perspective of life.

This new scientific perspective is known as "**cognitive neuroscience.**" It replaces obsolete traditional philosophical ideas about the functions of the brain and reason and emotions with new scientific facts based upon current brain research and new perspectives on evolution by descent.

Today, one of the most important scientific studies ever undertaken in human history is the "**mapping**" of the human *connectome*. The connectome is the name for the "**neuronal pathways**" of your brain and nervous system. This mapping project is a monumental worldwide neuroscience research activity that will provide immeasurable future benefits.

This new brain research seeks fundamental knowledge as well as medical knowledge about how human brains work. There is a special emphasis on brain disorders and diseases in the hope that new insights can be discovered to treat abnormal physical, mental, or emotional illnesses better.

The old metaphor of the brain being like a clock or computer with "**fixed wiring**" has been debunked because of the new brain knowledge about the brain's *plasticity*. Plasticity is your brain's natural ability to change and adapt at all ages and is what gives you the capacity to create a "**growth mindset**" whenever you want to learn more about it!

This new ongoing brain research explains more completely than ever before in history how the human brain and nervous system are connected at the very tiny nano-microscopic scale. In addition, the new brain knowledge of the past 100 years can replace ancient mythical religious explanations of the meaning of human life. Traditional religious and spiritual rituals and doctrines are not relevant for educated people.

Now there is no need to think that you need the help of any mysterious divine gods or goddesses to save your imaginary "**soul.**" We now know that individuals can make up their own minds about how to do everything important without the need to rely on historical **superstitions** anymore.

For example, instead, of believing in such biblical ideas as "**original sin**" and "**heaven**" or "**God's will for you,**" you can now use your true *mental force*, which is the *causal agent* of your *willpower* and *creative imagination*, to make effective ethical and political decisions by yourself.

You do not need to rely on the traditional supernatural deities of the past since they were always based upon *magical thinking* and not science.

The following short essay provides the best modern analysis of the factors involved in understanding the cultural context of your natural *willpower*. The latest brain research evidence supports the idea of a "**secular self**" and the idea that *free will is real*: if you learn how to train your brain to use it!

**Online Link to:
WHY DOES FREE WILL MATTER?**

The new brain knowledge is based upon new brain experimentation concerning the intricate nano-microscopic functions of the physical structure of the human brain. That previously unknown brain structure makes mental and emotional brain functions possible.

But "How?"

Now the new brain knowledge is confirming the existence of human *willpower* (free will). Since willpower is your dominant *mental force* (brainpower), it gives you the ability to make goals and plans for achieving them by choosing to make wise decisions. It gives you the ability to have a robust "**growth mindset**" based upon choices instead of being limited to a "**fixed mindset**" where your behavior is determined primarily by outside traditional cultural ideas.

This new revolutionary idea relies on the theory of *quantum effects*, which is beginning to replace the old reductionist/deterministic *scientific cultural stereotype* that was based upon ignorance of reality. It claimed that free will was an illusion. However, the experiments were inadequate and the conclusions of half a century ago were wrong.

Therefore, to summarize, the new brain research is explaining the objective biological sources of your *subjective* perceptions of your *consciousness*. It is also explaining the factual basis of your perception of your *sense-of-self*. Now it is known that your brainpower can control your emotions, if you have the personal knowledge that includes facts about your *willpower* and *creative imagination*.

In addition, the science-based "**whole-brain**" decision-making model of *rational thinking* is emphasized on this website. It provides an *objective* way for all family members to use their own personal knowledge and logic to explain the best way to create trusting interpersonal relationships for all family members, from youngest to oldest.

Just like *implicit* unconscious gender biases and *implicit* unconscious racial prejudices can interfere with your ability to create trusting relationships and success in life, *implicit* unconscious ignorance about your brain functions can ruin your whole life!

To compensate for past ignorance, this website offers you the scientific alternative of using evidence-based *rational thinking* to make decisions rather than faith-based *magical thinking*. Now you can use your *creative imagination* to control your feelings and choose your own *self-identity* based upon reasons.

WHY THIS MATTERS: The purpose of this website is to assist you in understanding your brain's physical structures and your mind's mental functions. It explains how the new scientific brain vocabulary can improve the quality of your reasoning and creative imagination, thereby giving you more effective control over your own emotions and behavior and life planning.

RECOMMENDATION: You may print this pdf version and read it and edit it by adding or deleting ideas. Then, you can read your edited version of these ideas according to a *reinforcement schedule*, such as a few hours later and a few days later and then several times in the next week or two. This strategy can help you take advantage of the power of the *spaced-repetition method of memorization*. Such deep introspection can change your adaptive *self-identity* and increase your *self-esteem* (positive feelings about yourself).

REMEMBER ALWAYS:
You Are Your Adaptable Memory!