



A Three Agent Model of Consciousness Explains Spirituality and Multiple Nondual Enlightened States



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- My forthcoming book is entitled,
“Spirituality Explained”
 - This talk presents a few of the core ideas of that book.
- These ideas contain no supernatural, paranormal, occult or pseudoscientific phenomena
 - Everything is completely compatible with the **currently** known theories of physics and science.
- There are **no** ***“spirits”*** in this explanation of **spirituality!**



Outline

Part 1: Agents & the Three Agent Model of the Brain

Part 2: Conscious Cluster of Neurons (CCN)

Part 3: Spirituality & Spiritual Enlightenment

Part 4: Combining these ideas:

Three Agent Model + Conscious Cluster of Neurons

To Explain Spirituality & Spiritual Enlightenment

Part 5: Predictions



Part 1: Agents & the Three Agent Model of the Brain

- An **Agent** has goals, a way of sensing the world, and a way to make changes to the world to achieve its goals.
- A theorem⁽¹⁾ from control theory says “**Any good agent must contain a model of the system**”
 - In addition, if the agent itself is part of the system, then the agent must also contain a **model of itself**.
- Therefore, a conscious agent must contain a **model of the world** and a model of the agent itself (a **self-model**)

(1) Conant & Ashby, Int. J. Systems Sci., 1970, vol. 1, No. 2, 89-97,
“Every Good Regulator of a System Must Be a Model of That System”

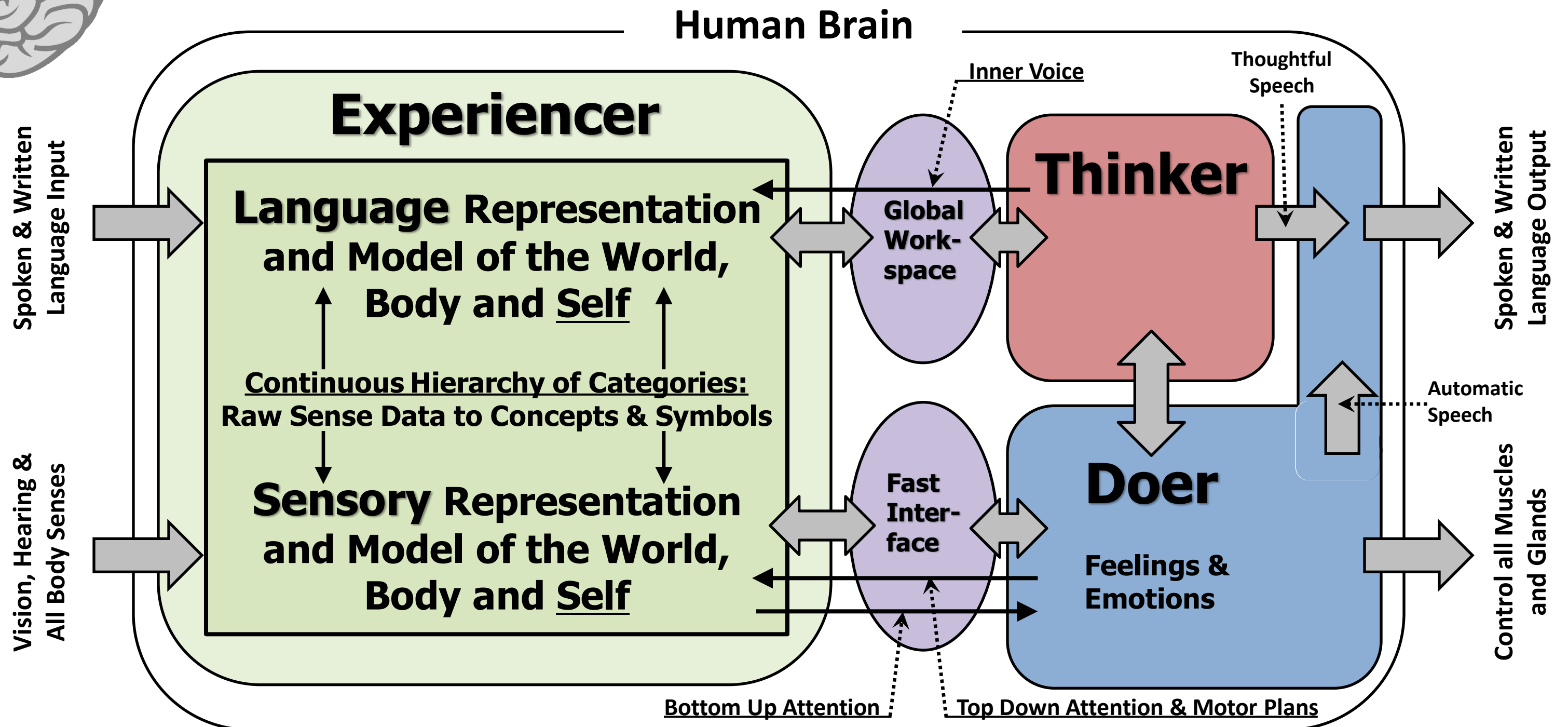


The Three Agent Model of the Brain

- Three different, but integrated, functional agents in the brain:
 - **The Thinker** – the executive function which uses language, symbols, concepts and images to **solve problems**.
 - **The Doer** – controls the body and has emotions.
 - **The Experiencer** – constructs both the sensory and language (or conceptual) model of the world and the body.
- The most compelling evidence for the Thinker and Doer agents is **Dual Process Theory⁽¹⁾** (DPT) in psychology.
 - DPT System 1 (the **“Fast” subconscious** system) is the **Doer**
 - DPT System 2 (the **“Slow” conscious** system) is the **Thinker**

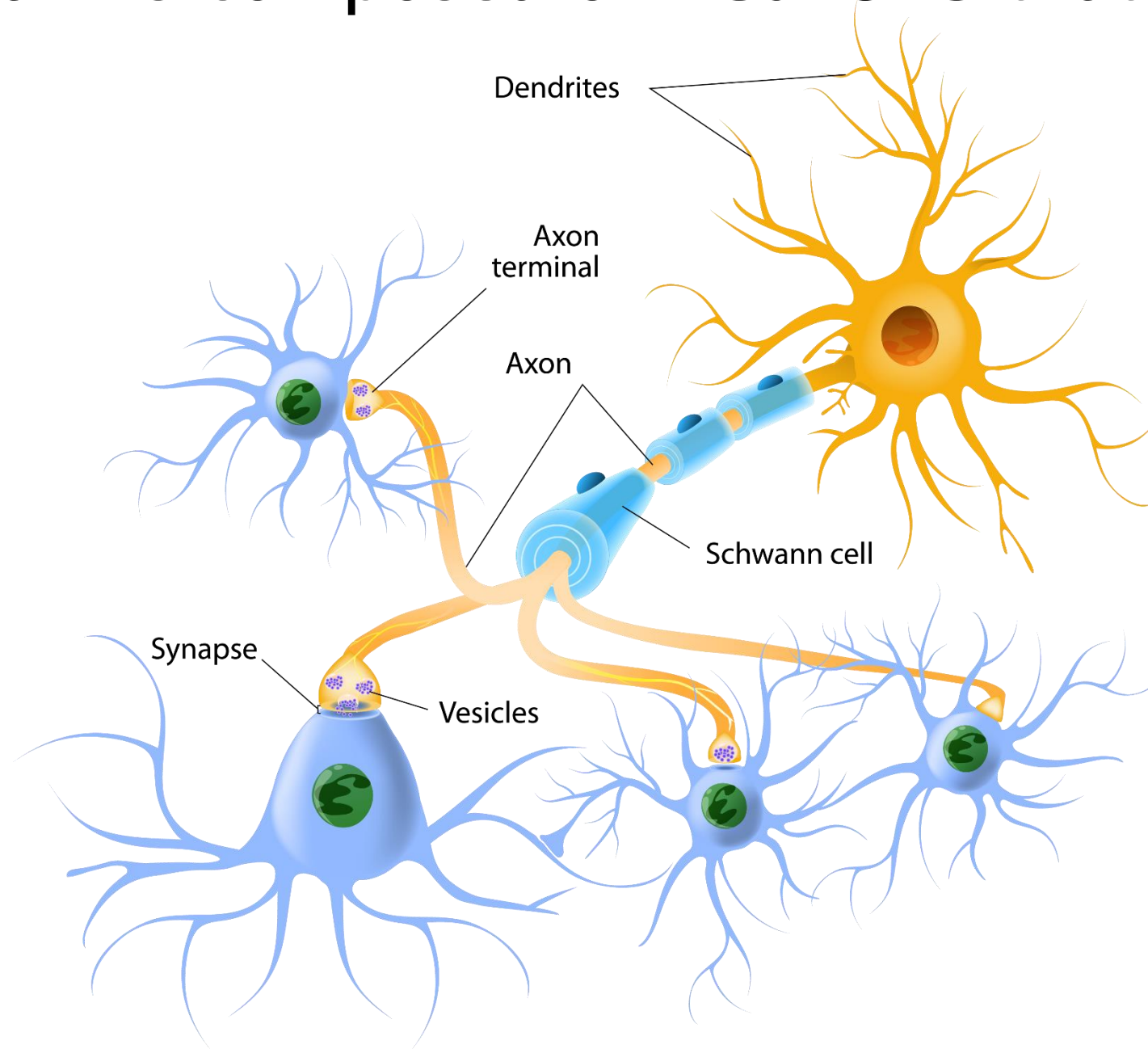
⁽¹⁾ Nobel Laureate **Daniel Kahnemann** popularized **Dual Process Theory** in his 2011 book, **“Thinking, Fast and Slow.”**

The Three Agents & Their Interfaces:



Part 2: Conscious Cluster of Neurons

- The brain is composed of **neurons** that process signals:





Consciousness

- We can be **conscious** of many different kinds of things:
 - Sensory inputs, thoughts, emotions, feelings, and our actions.
- The brain performs **significant subconscious** processing.
- Which neurons do **conscious** vs. **subconscious** processing?
- **Neural Correlates of Consciousness (NCC)⁽¹⁾**: the neural events & mechanisms sufficient for consciousness.
- The set, or cluster, of neurons needed by the NCC, at a given time, will be called the:

Conscious Cluster of Neurons (CCN)

⁽¹⁾ Crick F. and Koch C. (1990) Towards a neurobiological theory of consciousness.



Some Questions About the Conscious Cluster of Neurons (CCN)

- Can the CCN be determined **experimentally**?
- Is there a **theory** that could determine the CCN?
- Is the CCN **static** or **dynamic** and does it depend on the **activity** and the **connectivity** of the neurons?

To explain enlightenment, this consciousness model **needs**:

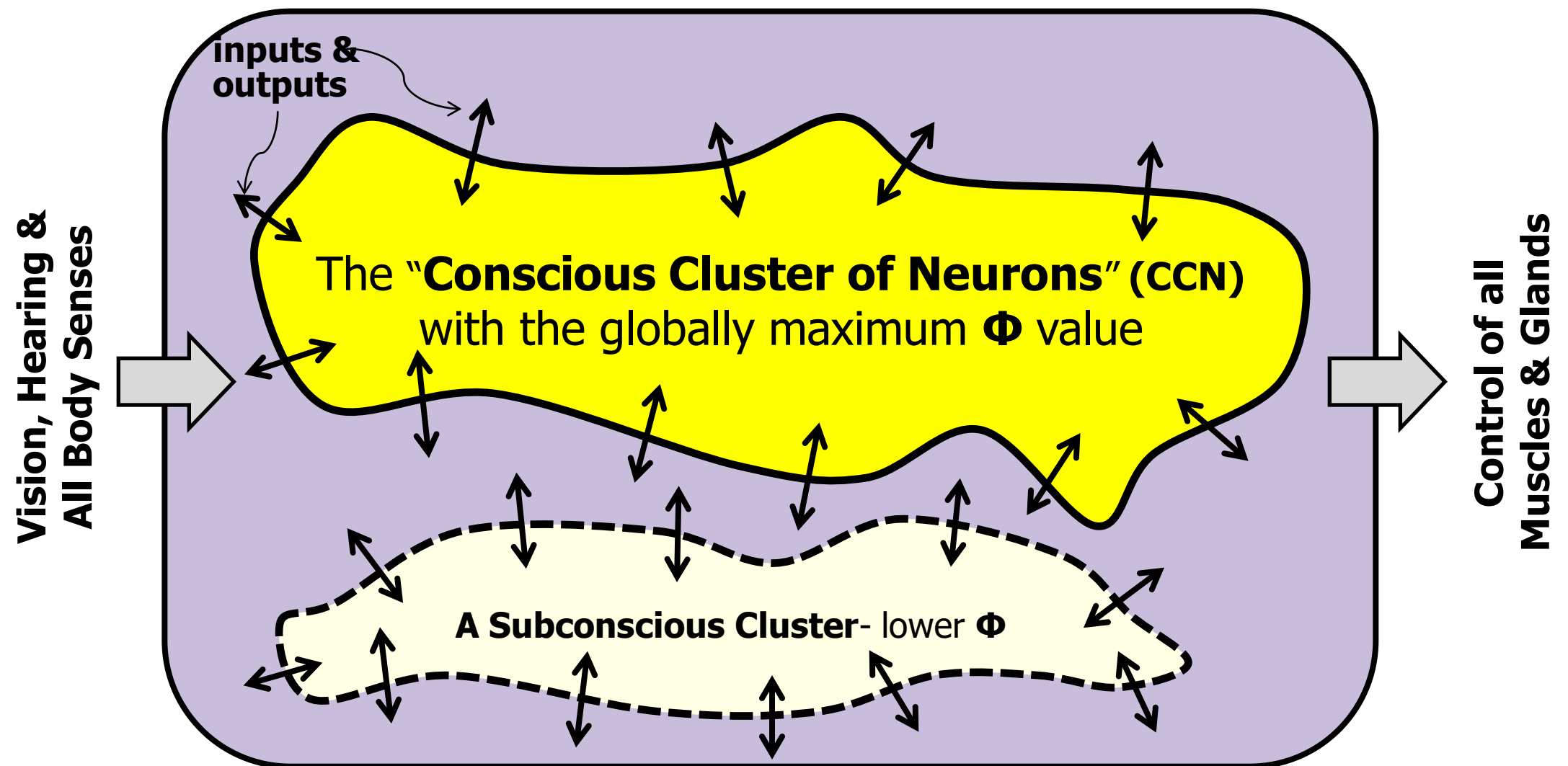
- The CCN to be **dynamic** and to **depend** on the **activity** and **connectivity** of the neurons.
- There are several CCN “theories” that satisfy these needs:
 - For example, the CCN could be the set of neurons firing synchronously in the EEG gamma frequency band.
 - **Integrated Information Theory (IIT)** is another CCN theory.

Integrated Information Theory (IIT)

- **IIT⁽¹⁾** is a neuroscientific theory that can determine the **Conscious Cluster of Neurons (CCN)**

IIT uses the symbol Φ to represent the amount of integrated information in any given neuron cluster.

For a given system, the neuron cluster with the globally maximum Φ value will be the CCN.




⁽¹⁾ Tononi, Giulio, (2008) V1.0, (2012) V2.0, (2014) V3.0

Part 3: Spirituality & Spiritual Enlightenment

- What is the “**problem**” that Spirituality solves?
- What is Enlightenment?





What is the “problem” that Spirituality and Spiritual Enlightenment Solve?

The problem is the Thinker! (= the Ego)

- The Thinker is **ideal** for developing civilization, science and technology; and to help us achieve goals...
 - But it is **not good** at living a happy life.
- The Thinker **finds** problems everywhere
 - This can lead to a negative critical attitude towards life.
- If there is **no** problem, then that is a problem!
 - So the Thinker will find an old problem or invent a new problem.
- The Thinker **argues** with reality: “**This should not happen.**” or “**This is bad and wrong.**” or “**I should not have done that!**”
 - ⇒ An Experiencer model of the world filled with contradictions.



More about The Thinker “problem”

- ❑ **Negative emotions** are a problem for the Thinker to solve:
 - ❑ “How do I prevent this from happening again?”
- ❑ **Positive emotions** can also be a problem for the Thinker:
 - ❑ “How do I make sure this happens all the time?”
- ❑ Problems can be in the **past** – often called a **resentment**;
- ❑ Problems can be in the **future** – usually triggering **fears**.
- ❑ Thus, the Thinker is an **emotion amplifier** and an **emotion echo chamber!**
 - ❑ Buddhism: the cause of Suffering is Attachments and Aversions.
 - ❑ The Thinker amplifies and echoes Attachments and Aversions.



Enlightenment

- What is **Enlightenment**?
 - Enlightenment is **not** about any sort of **perfection!** ⁽¹⁾
 - Enlightenment **is** a different kind of perception of the world, **and** requires a fundamental change in the **self-model** of the human.
- **Nonduality** is the key property of Enlightenment:
 - The subject-object distinction falls away
 - => The world and I are one.
- There are **multiple** kinds of enlightenment⁽²⁾
 - Buddhism claims two to ten different paths of enlightenment. ⁽¹⁾

⁽¹⁾ Daniel L Ingram, "**Mastering the Core Teachings of the Buddha**" (2008) see the 31 different models in the "Models of the Stages of Enlightenment" chapter.

⁽²⁾ Bernadette Roberts reports two different kinds of enlightenment: "**What Is Self**" (2005)



Since Enlightenment Requires a Change in Our Self-model

- ...let's look at the three different self-models of the Agents:
- ❑ **Thinker** = the autobiographical narrative history of “me”;
 - ❑ **Doer** = the body
 - ❑ **Experiencer** = No Self Model
 - ❑ or “Presence Awareness”
 - ❑ Presence – the sense of existence or “beingness”
 - ❑ Awareness – perception of the body, world, thoughts & feelings

When the CCN contains most of an agent, the self-model of the CCN will match the self-model of the agent.



Part 4: Combining Ideas:

Combining IIT and the Three Agent Model can explain:

- ❑ The **purpose** of **spirituality** in general,
- ❑ Multiple **kinds** of enlightenment and
- ❑ The key property of **nonduality**.

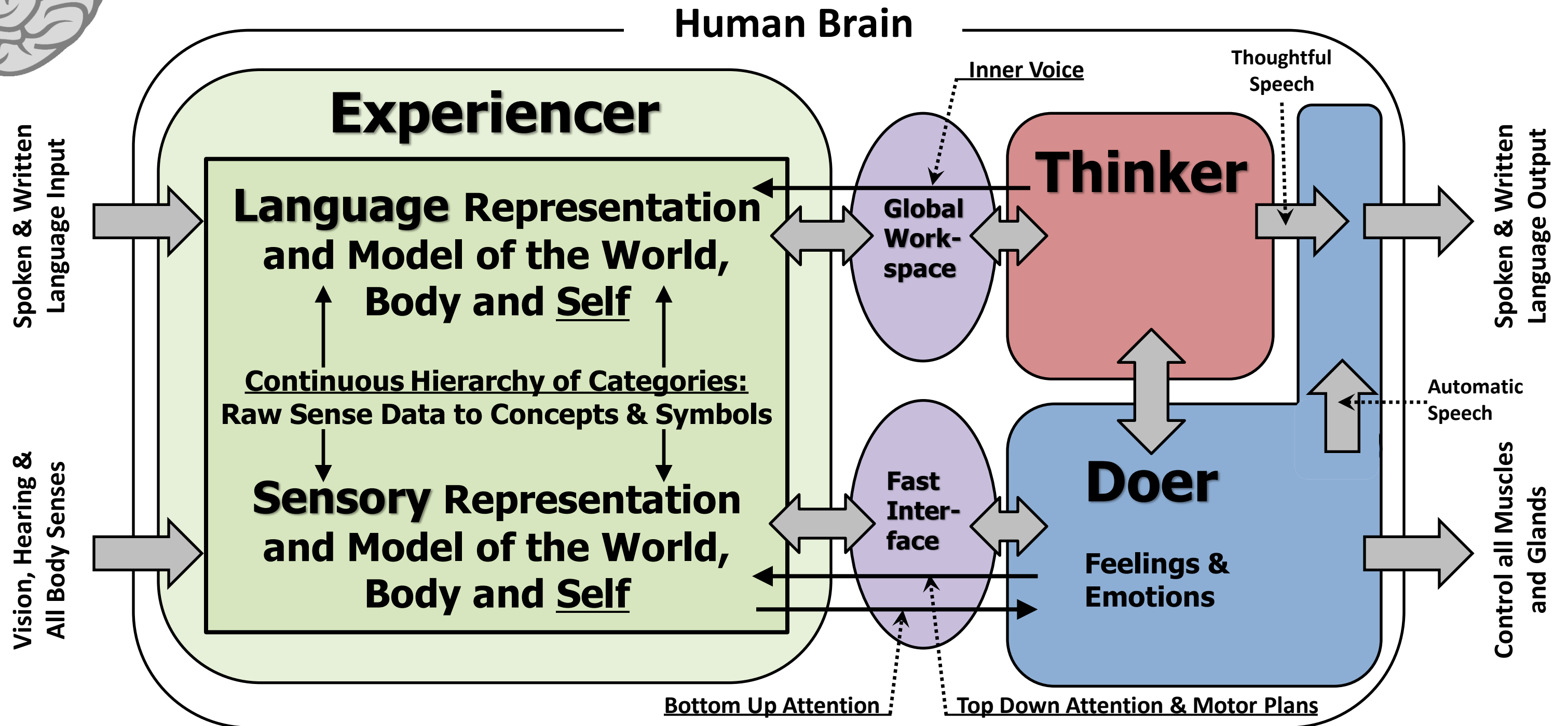
These are explained by the way the **CCN** is distributed among the **Three Agents**.



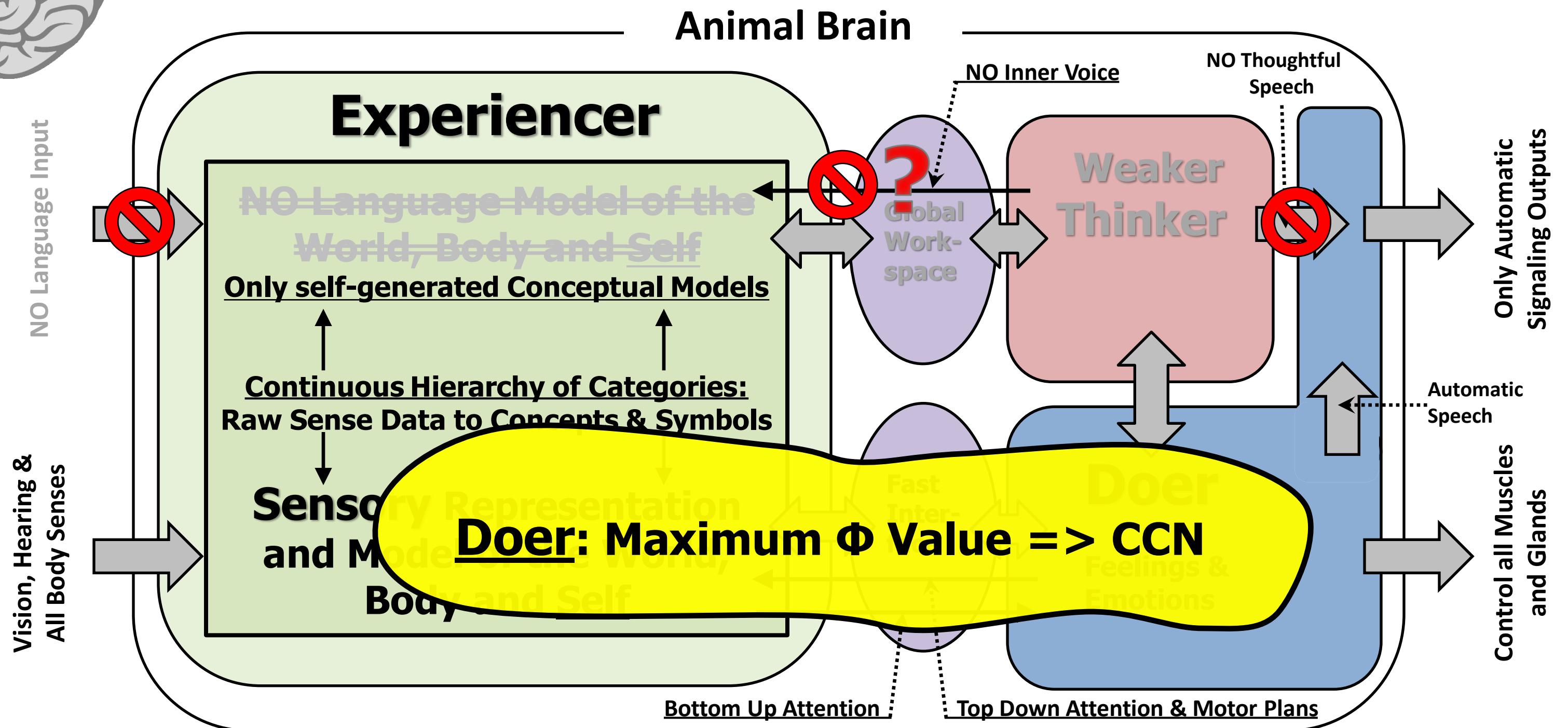
How Does **Spirituality** Help Solve the Thinker “Problem”?

- Spiritual practices can give insight that we are **more** than just the **Thinker**
 - The Doer or Experiencer could have been misrecognized as “the soul” or as our connection to a “God.”
 - Some say **intuition** (Doeer & Experiencer) is God’s communication to us.
- **Surrender** is the Thinker giving up his illusion of control.
 - Thinker uses **Prayer** to ask for help from Doer & Experiencer.
- **Forgiveness & acceptance** can mitigate resentments caused by the Thinker trying to solve problems in the past.
- **Trusting a Higher Power** (or God) can mitigate fear caused by the Thinker trying to solve problems in the future.

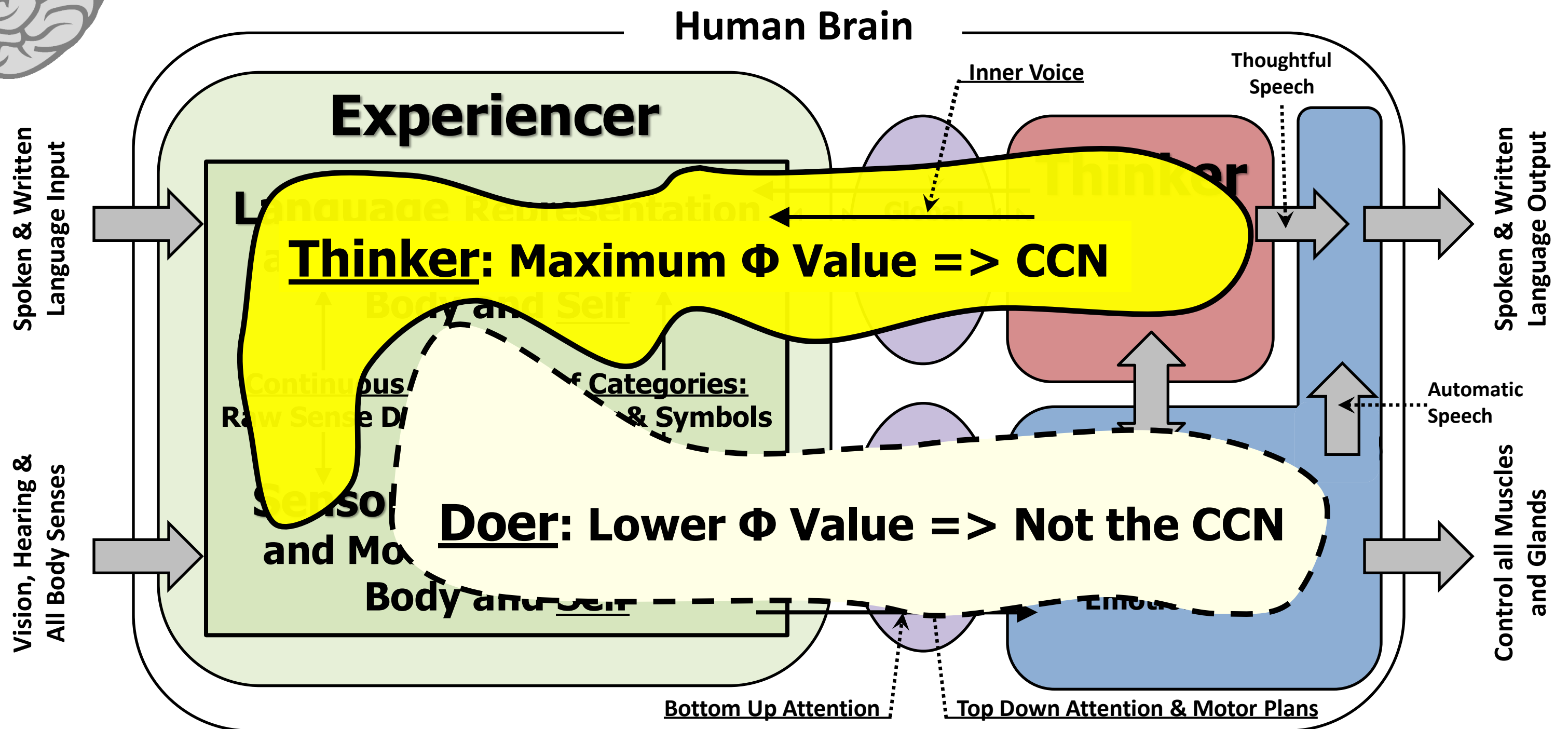
The 3 Agents in a Modern Human:



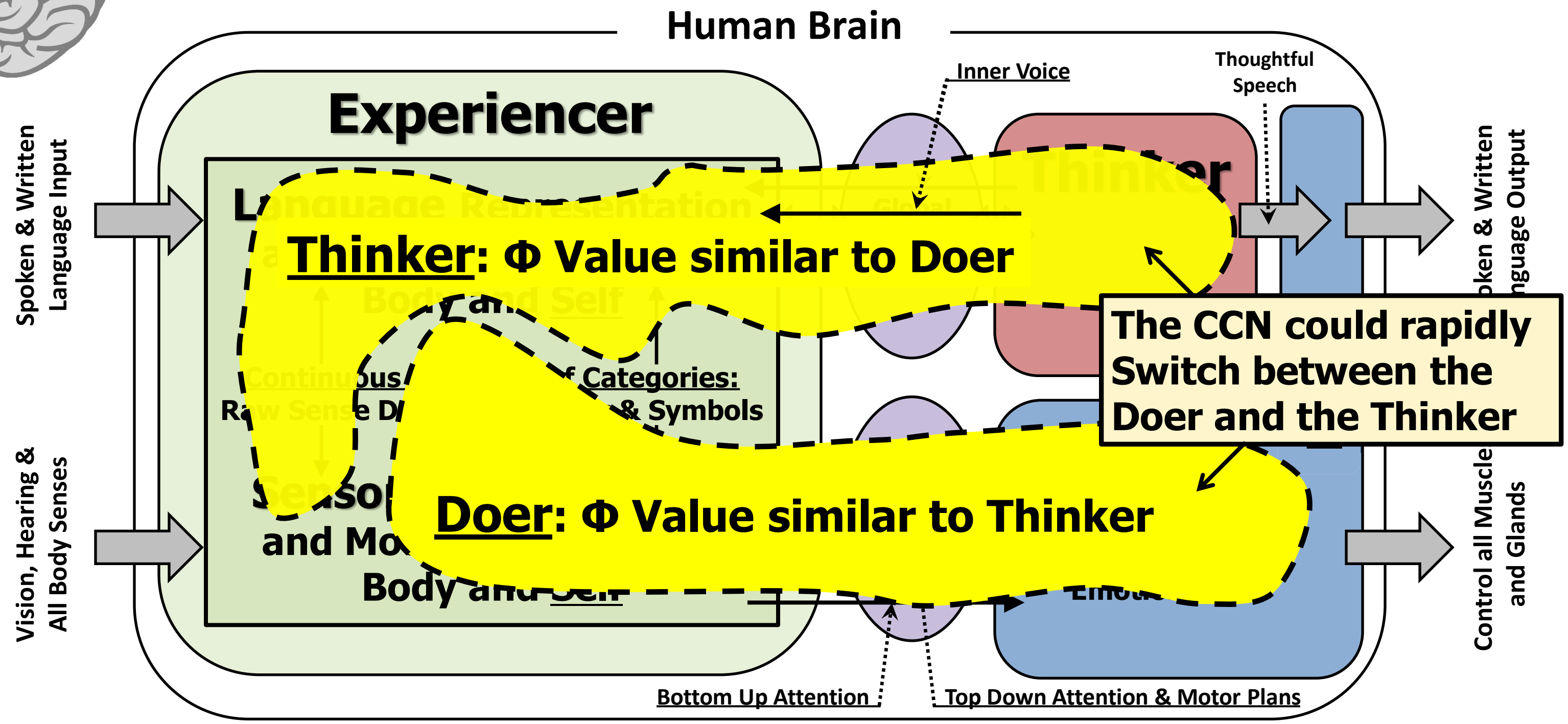
Animal's CCN State:



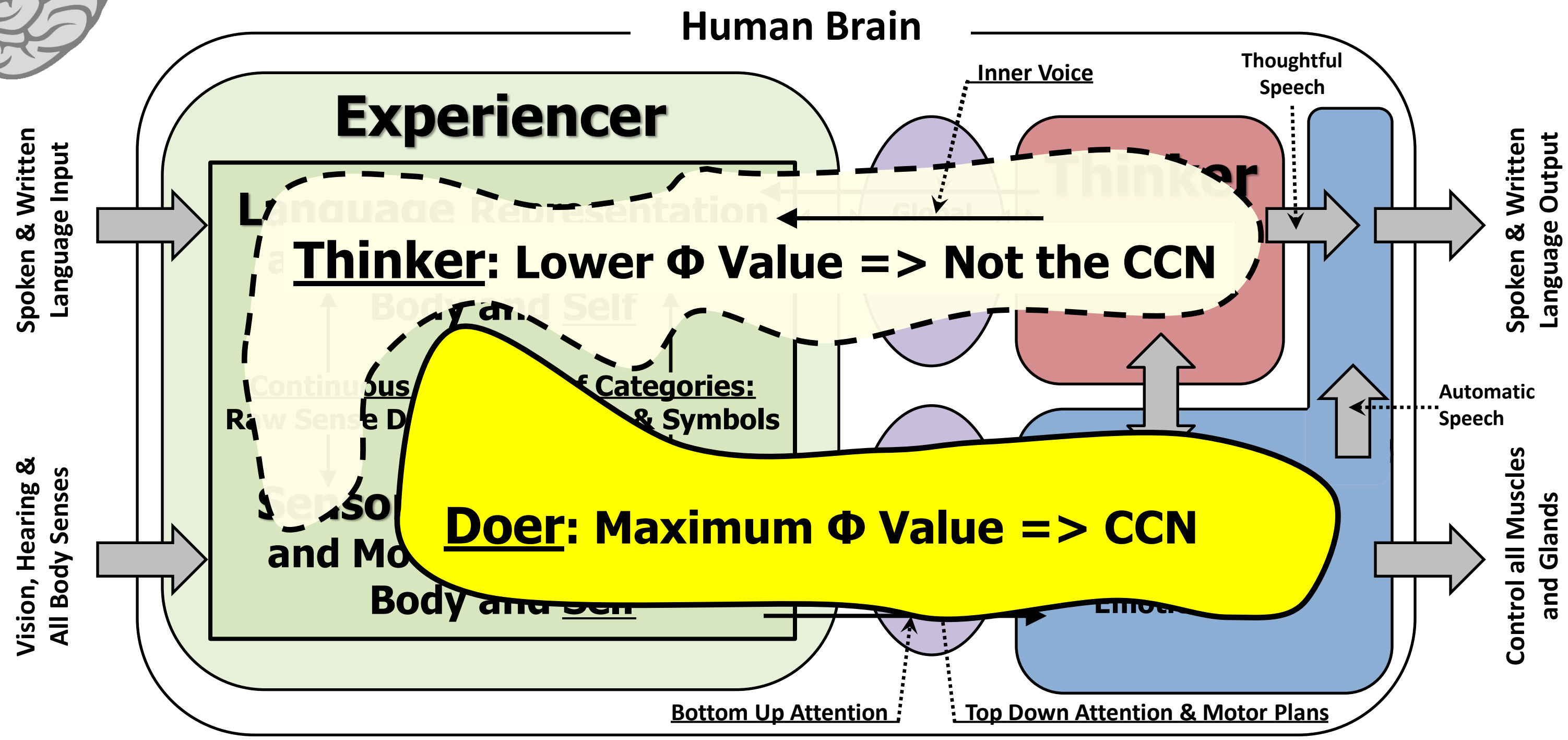
Modern Human CCN State:



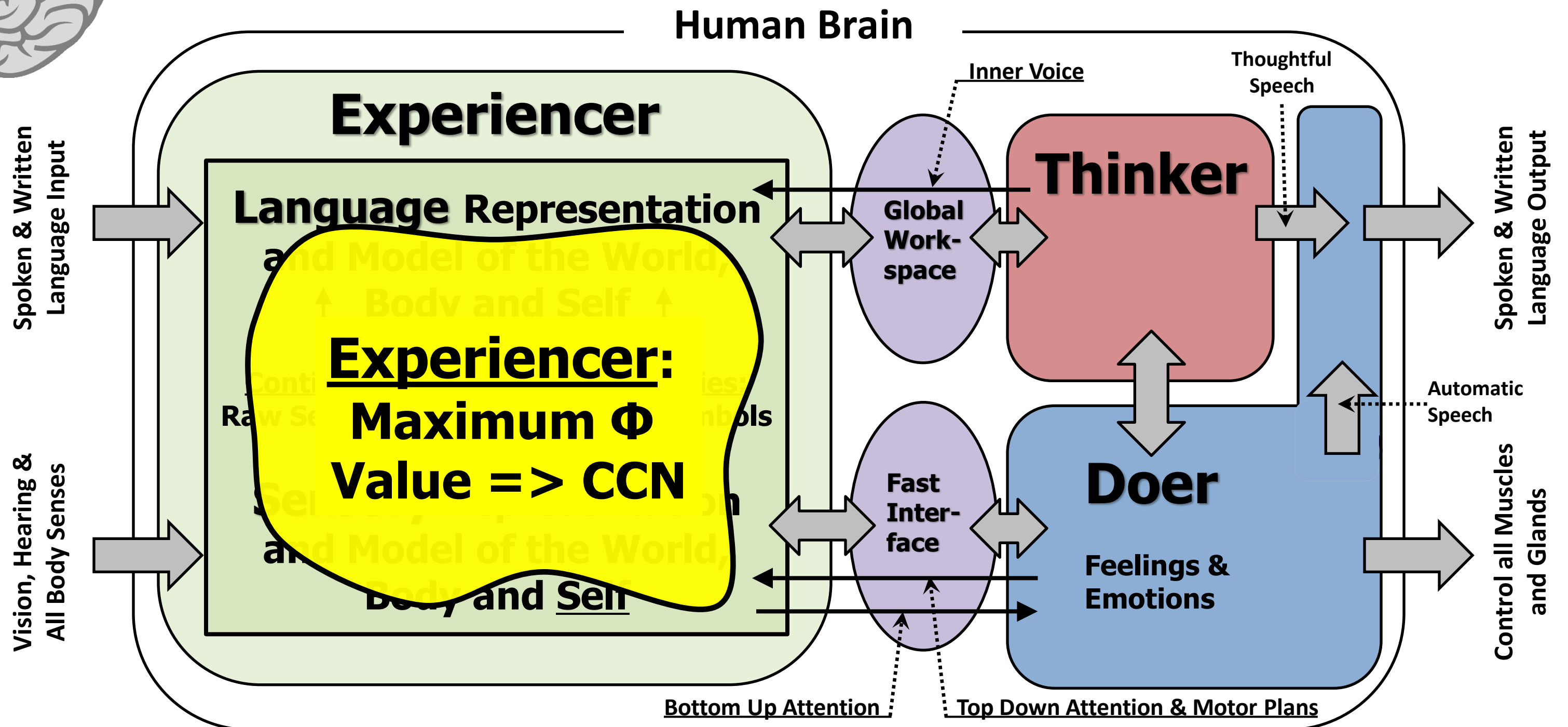
Enlightenment Begins:



First Enlightened CCN State:



Fully Nondual CCN State:



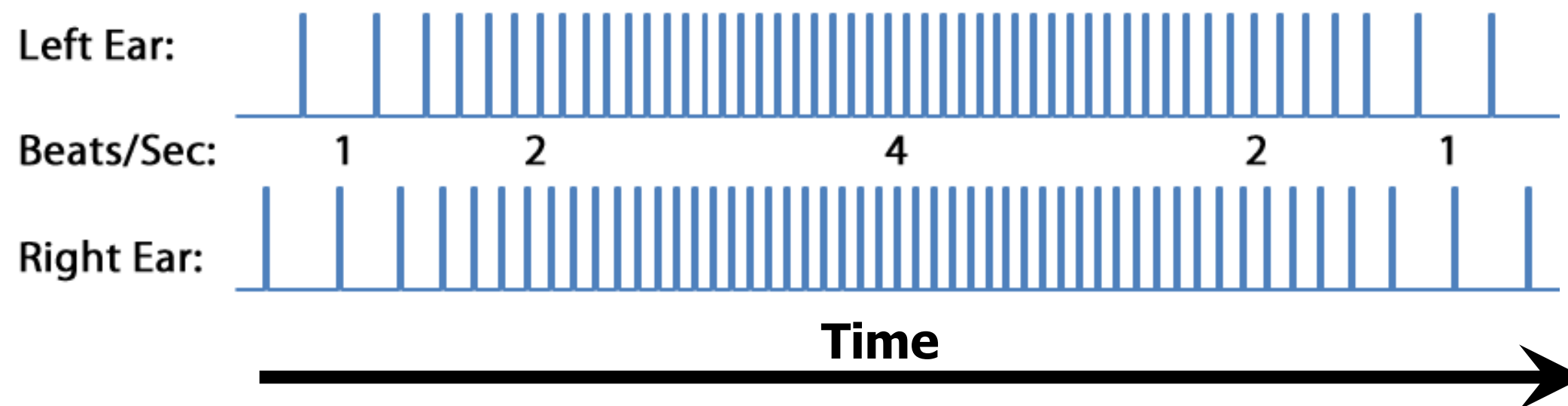


Part 5: Predictions

- ❑ **Prediction #1:** Fully nondual humans should be able to consciously detect masked images presented too fast for normal humans.
- ❑ **Explains:** Why Open Monitoring (OM) meditation practices are more effective at producing enlightenment than Focused Attention (FA) meditation.
 - ❑ Doing OM quickly should also increase effectiveness.

Predictions

- **Prediction #2:** A new kind of bottom up attention “meditation,” triggered by technology generated alternating sensations, should be effective for achieving enlightenment.



An example of left/right tick/tocks that range from 1 bps to 4 bps to 1 bps



The End

- I would very much appreciate any and all thoughts and feedback. Thank you!

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