

Near-Death Experiences

Insights into Mind, Consciousness and Reality



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<https://youtu.be/CgaCeN4SS80>

Outline

- **Part 1: NDEs: the Mind-Entity Hypothesis** ←
- **Part 2: NDEs and Mind-Brain Consciousness**
- **Part 3: NDEs and the Nature of the Transcendent Reality**



Peter Fenwick



Bruce Greyson

What are Near-Death Experiences?

- **Definition**
- **Striking elements of NDEs**
 - Feeling peace and freedom from pain
 - Feeling separated from the physical body
 - Being aware of things going on elsewhere
 - Seeing deceased relatives or religious beings
 - Encountering a mystical presence or a brilliant light
 - Seeing scenes from one's past come to one (life review)
 - Entering some other heavenly or unearthly world – one's True Home
 - Choosing to return or being told to return to the body
- **NDE scale (Greyson): measures number of elements, intensity of the elements**
 - 16 elements, scale range is 0–32
 - An NDE is defined as a score of 7 or greater
- **“Near-death” is a misnomer**
 - NDEs occur under many different antecedent physical conditions (e.g., sleep, meditation, fainting, alcohol use, etc.—as well as cardiac arrest and coma) (Charland-Verville, et al., 2014)
 - Implies: a common proximate cause for all NDEs (Mays & Mays, 2015)

- Charland-Verville, V., Jourdan, J.-P., Thonnard, M., Ledoux, D., Donneau, A.-F., Quertemont, E., & Laureys, S. (2014). Near-death experiences in non-life-threatening events and coma of different etiologies. *Frontiers in Human Neuroscience*, 8(203).
- Greyson, B. (1983). The Near-Death Experience Scale: Construction, reliability, and validity. *Journal of Nervous and Mental Disease*, 171, 369–375.
- Mays, R. G., & Mays, S. B. (2015). Explaining Near-Death Experiences: Physical or Non-physical Causation? *Journal of Near-Death Studies*, 33(3), 125–149.

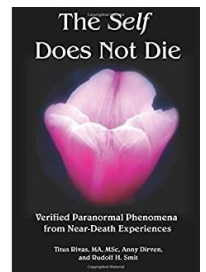


Hieronymus Bosch
Ascent of the Blessed c. 1510

NDE Phenomenology



- **Sense of separation from the physical body – “out-of-body experience”**
 - All cognitive faculties remain: self-conscious awareness, perception, thought, volition, memory, feelings
 - Lucid thoughts, hyperreal perceptions
 - Veridical perceptions of physical surroundings outside normal physical sight
 - Ability to move easily through solid walls, move large distances instantly
 - Prior knowledge & memories preserved, new episodic memories are vivid and unchanging
- Numerous **aftereffects**, loss of fear of death, most significant event of their life
- Evidence of the **objective reality** of the separate mind-entity (7 verified cases)



The Self Does Not Die

- Mays, R. G., & Mays, S. B. (2008). The phenomenology of the self-conscious mind. *Journal of Near-Death Studies*, 27(1), 5-45.
- Rivas, T., Dirven, A., and Smit, R. (2016). *The self does not die: Verified paranormal phenomena from near-death experiences*. Durham, NC: International Association for Near-Death Studies.

Can NDEs be Studied Scientifically?

- **Yes: NDEs have consistent, well-defined characteristic elements and qualities**
 - Vivid and hyperreal
 - Remembered as real, not imagined; the memory is indelible
 - Common proximate cause – separation of consciousness from the body
 - NDErs receive accurate, veridical information – both from the physical and transmaterial realm
- **When taken individually, NDEs appear “subjective”; when considered collectively, they become the consistent observations of a common, objective reality**
 - At 4%–5% of worldwide population, more than 330 million people have experienced an NDE (Knoblauch, et al., 2001).
 - Given the high prevalence and the common, objective nature of NDEr observations, *NDEs are empirical facts in the world*
- **Therefore, taking NDEr accounts as objectively real is justified; they provide valid data for scientific study**

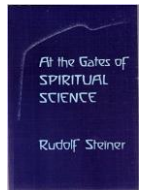
Scientific Methodology

Primary sources are NDE accounts

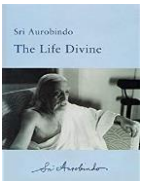
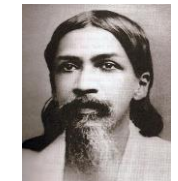
- Standards are needed: Which data to consider? Who is a reliable source? How can the accounts be validated?
 - Tibetan Buddhist philosophy: study of *extremely hidden phenomena*
 - The only method is to rely on the *first-person testimony* of people who have experienced the phenomenon. Person must be reliable, credible.
- Our criteria for using NDE data as *valid* for scientific study
 - Multiple NDE accounts of the same specific phenomenon
 - If possible, additional witnesses to the phenomenon
 - If possible, corroboration by a credible third party of information received in the NDE

Secondary sources come from initiates/seers

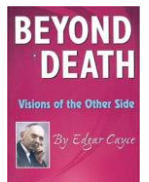
- Examples: Rudolf Steiner, Sri Aurobindo, Edgar Cayce
- Criteria for selection
 - Apparent clairvoyance and other higher sense faculties that resulted in expansive, all-encompassing knowledge of inner and outer realities
 - Indications consistent with NDE content
 - History of credible investigation of supersensible realms, from their own experience, and practical application of their insights



Rudolf Steiner (1861–1925)

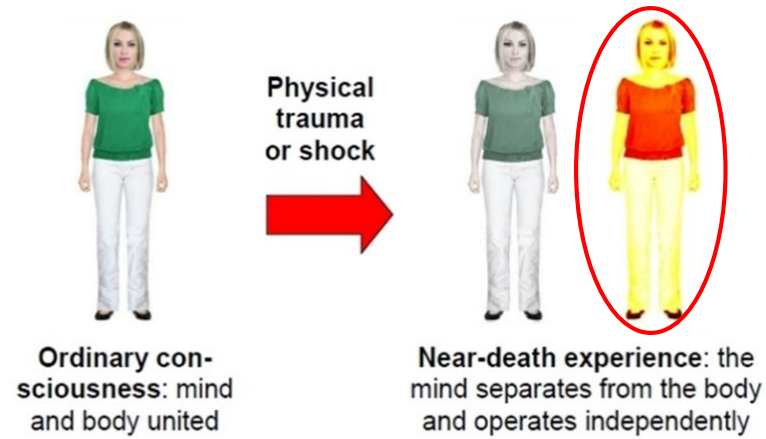


Sri Aurobindo (1872–1950)



Edgar Cayce (1877–1945)

The Mind-Entity Hypothesis



- The mind-entity is a separate entity from the physical body
 - The *seat of consciousness* of the person
 - All mental functions & capacities are in the mind
- Out-of-body state: the mind operates independently of the brain and body
 - Hyperreal perceptions, vivid & indelible memory formation, instant response to volition
 - Interacts directly, energetically with light, sound, physical matter – to produce awareness
- In-body state: the mind is united and coextensive with brain and body
 - Interacts through neural activity in the brain and body – to produce awareness in the mind
 - Consciousness in the body is diminished from the hyperreal level in NDEs

Physical Interactions with the NDEr's Body

- **How does the nonmaterial mind-entity interact with the brain?** (Mays & Mays, 2008, pp. 32–34)
 - Note: *nonmaterial* but not necessarily *nonphysical*
- **Interactions with physical light, sound waves and solid surfaces**
- **Interactions with solid objects**
 - Some NDErs report a slight resistance or change in density in passing through solid walls.
 - Laszlo felt a “whirl” on his left out-of-body shoulder, like wafting smoke or fog, when a man, running up, passed through his shoulder to reach the car accident. (Personal communication, April 28, 2018).
- **Interactions with another person's body during the NDE out-of-body**
 - When a cardiac arrest patient passed her hand through Raymond Moody's arm, she felt it had a “very rarefied gelatin” consistency, with an electric current running through it.
 - An NDEr playfully tickled another patient's nose until the latter sneezed.
 - Ability to “merge” with another person to see and hear through that person's eyes and ears or to hear the person's thoughts.

NDE Phenomena with Physical Matter: Implications

- Subtle interactions with physical forces—with light and the molecular structure of matter (e.g., air, solid surfaces, solid matter)
- NDErs easily pass through solid objects, sensing a slight resistance or a change of density
 - This implies a subtle *nonmaterial* interaction with physical matter, like passing one's hand through water
 - In turn, this implies a new, subtle physical force that manifests in material-to-transmaterial interactions (Newton's third law of motion)
 - This subtle physical force is probably involved in physical mind-to-brain interactions
- NDEr interactions with another person's body imply that direct interaction with neurons is plausible
- The brain *mediates* all cognitive functions
 - At some level, the mind must influence neurons to fire
 - At some level, the neural activations must influence the mind to produce subjective experience
 - An intimate pairing of neural activations and subjective experience appears to occur which implies direct interaction (next slide)



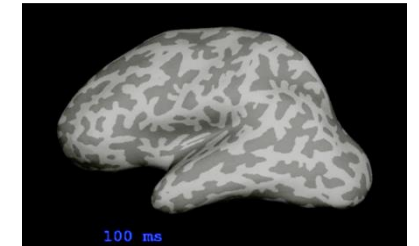
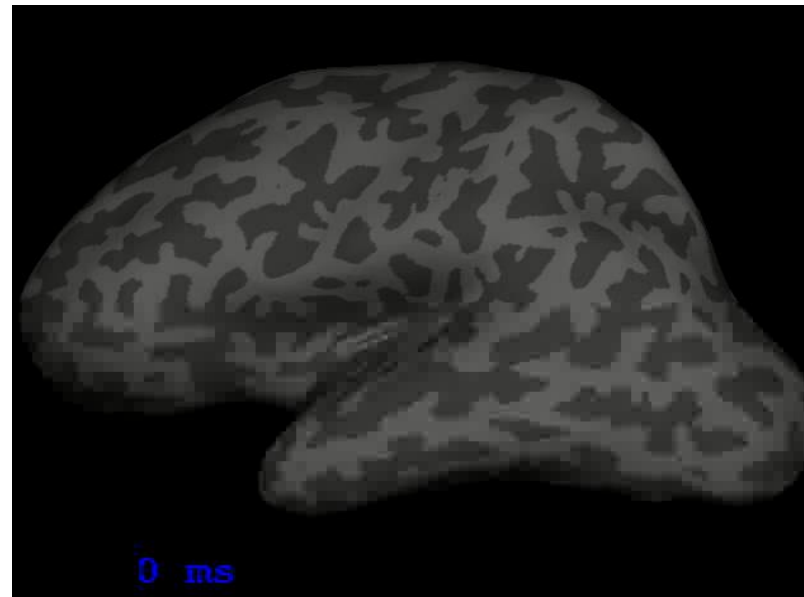
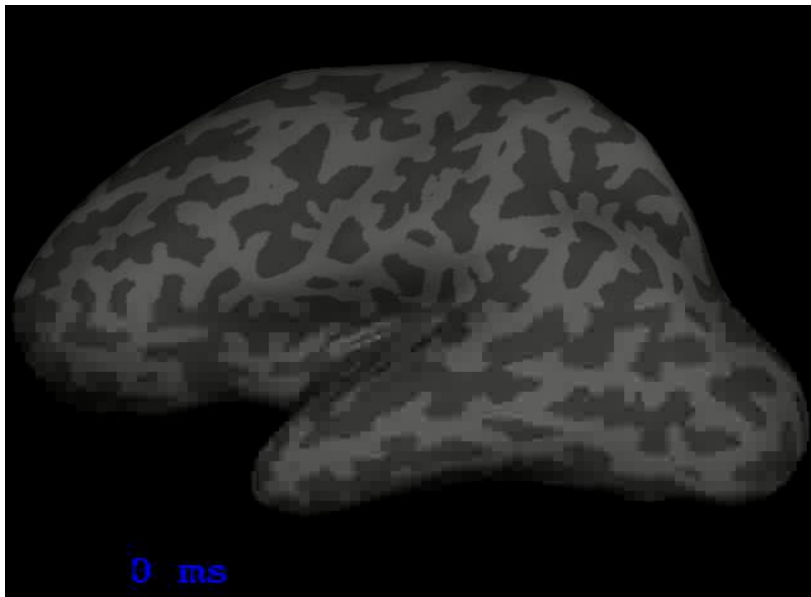
Mind and Brain Interactions

- Given the stages and time scales, *direct interaction* between the mind and brain is the most likely explanation

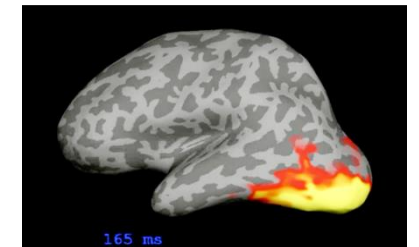
The dynamic brain view of reading a single word

Real time: about 400 ms

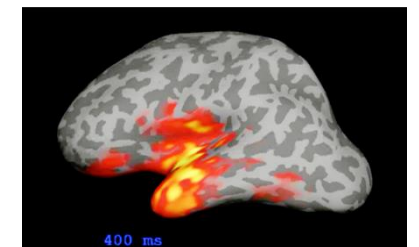
Slowed 32x



100 ms



165 ms

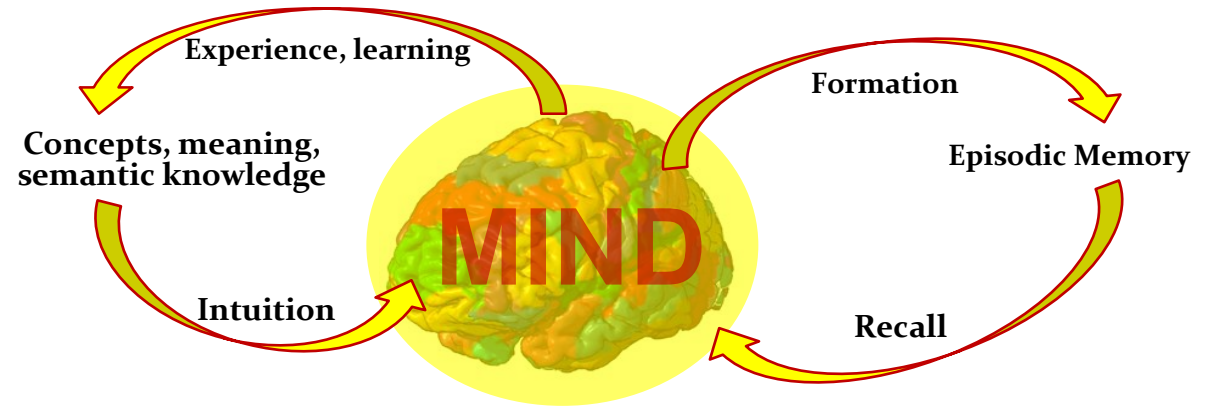


400 ms

Notice the pauses while the brain activity moves to a different area

Ordinary Consciousness: the mind-brain interface

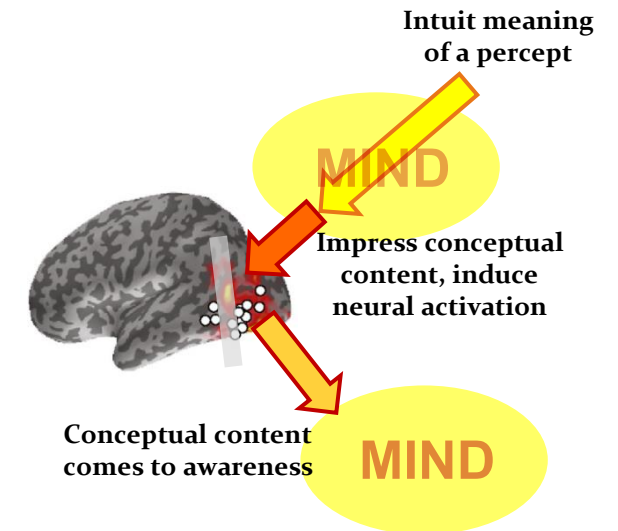
- All conceptual content and memories reside in the mind, even in ordinary consciousness



- The Mind-Brain interface: from NDE phenomena and neuroscience evidence:

- The mind requires neural activation to become aware of its own mental content (Benjamin Libet, 2004)
- Therefore, the mind must first *impress* its conceptual content on the appropriate brain regions
- The neural activation in those regions acts as a *mirror* bringing the mind's conceptual content to consciousness

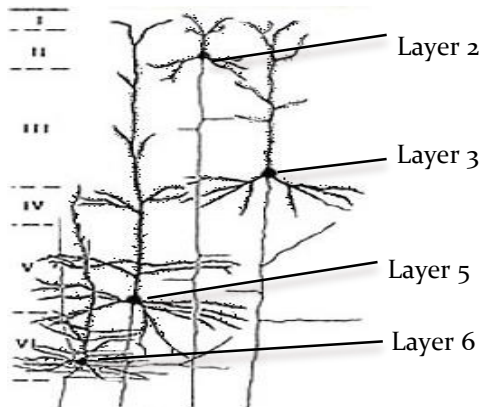
Schematic process



- Libet, B. (2004). *Mind time: the temporal factor in consciousness*. Cambridge, MA: Harvard University Press..
- Mays, R. G., & Mays, S. B. (2016). Unravelling the Mystery of Memory through Near-Death Experiences. 2016 IANDS conference, Orlando, FL.
- Mays, R. G., & Mays, S. B. (2017). Near-Death Experiences and the Neural Correlates of Consciousness. 2017 IANDS conference, Westminster, CO.

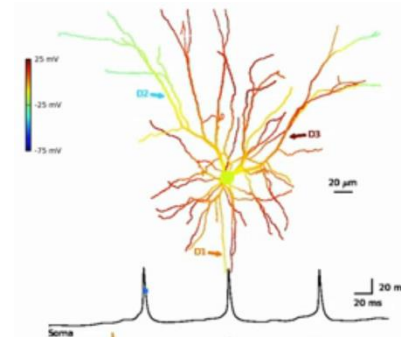
Mind-brain physical interactions

- The interface between the mind and the brain
 - The neural activations must work energetically to induce detection and awareness in the mind (*brain-to-mind* interface – the orange arrow)
 - The mind must work energetically with neurons to induce neural action potentials (*mind-to-brain* interface – the red arrow)
 - We propose that *both* interfaces are in the apical dendrites of pyramidal neurons at the surface of the cortex: (1) via backward propagation of action potentials and (2) via opening of ion channels in the dendritic spines



Apical dendrites in layers 2-3 and 5 pyramidal cells

Brain-to-mind interface

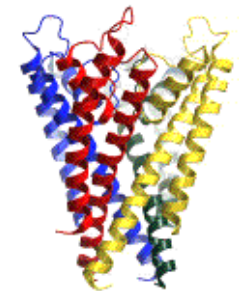


Action potential propagates back through dendritic arbor

Mind-to-brain interface



Dendritic spines in vivo



Molecular structure of a neural ion channel

- Smith, S. L., Smith, I. T., Branco, T., & Häusser, M. (2013). Dendritic spikes enhance stimulus selectivity in cortical neurons *in vivo*. *Nature*, 503:115-120..
- Yang, G., Pan, F., & Gan, W. B. (2009). Stably maintained dendritic spines are associated with lifelong memories. *Nature*, 462(7275), 920-924.

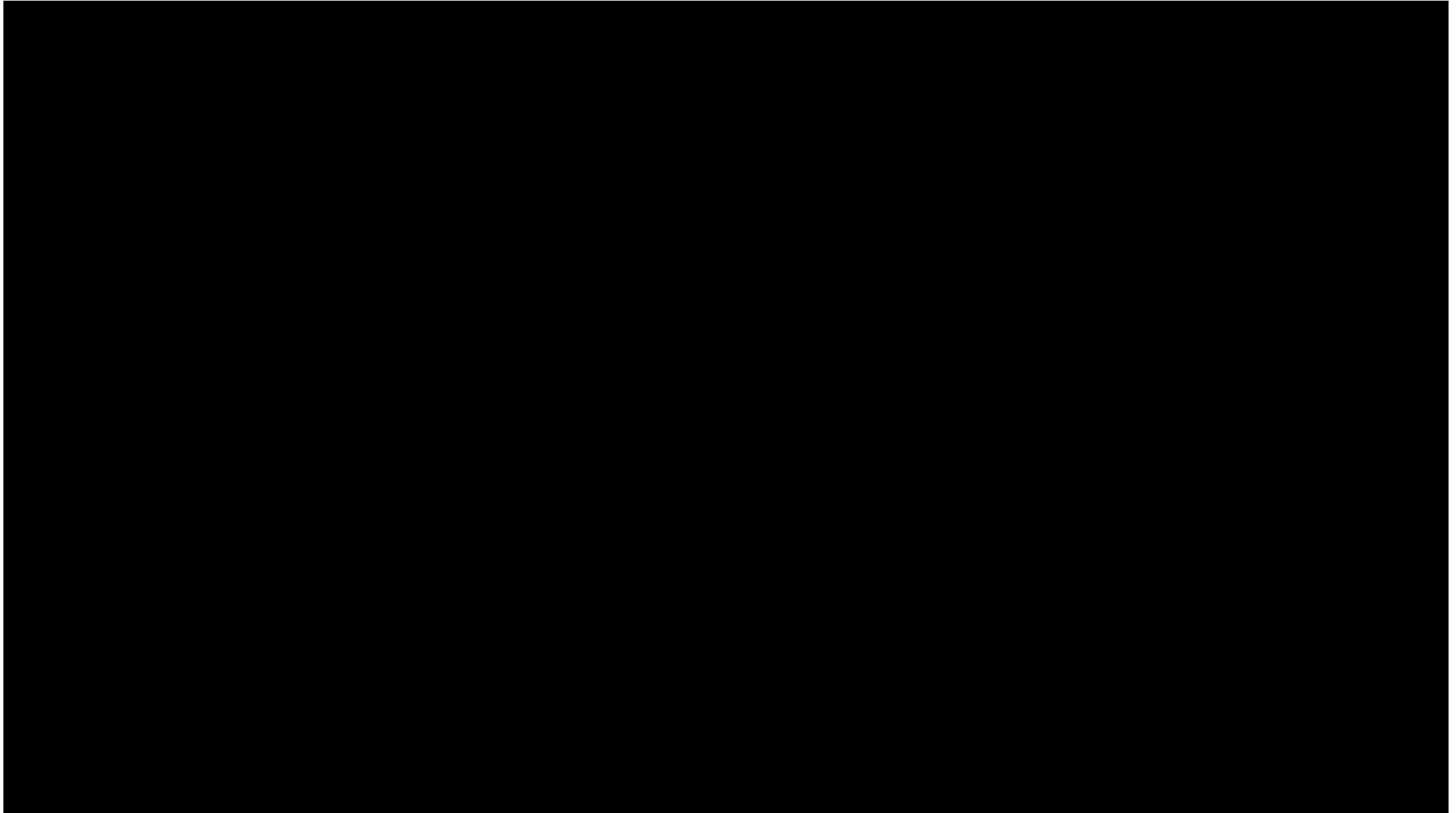
Outline

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An Experience of Visual Perception

- A short video with pairs of images and sentences
- Each visual stimulus is preceded by a white “+” for 1 second: focus your attention!
 - Each stimulus is flashed very quickly, about 50 ms
 - It’s important to pay attention
- First we present three pairs of images
 - Pause — “+” — image 1 — pause — “+” — image 2
 - Repeat
- Then we present two simple sentences: sequence of words, one per second
 - Pause — “+” — word 1 — word 2 — word 3 — word 4
 - Repeat for second sentence

An Experience of Visual Perception...



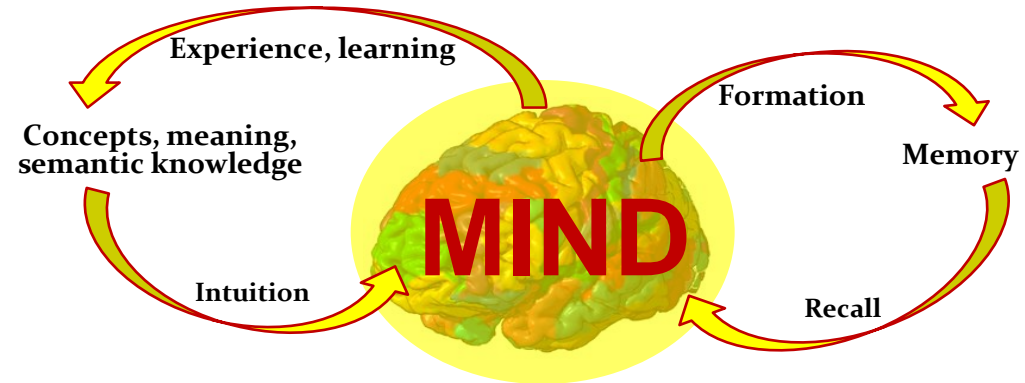
Experience of Visual Perception: Two steps in recognition



Implied Operation of the Mind with the Brain



Functional areas of the cortex

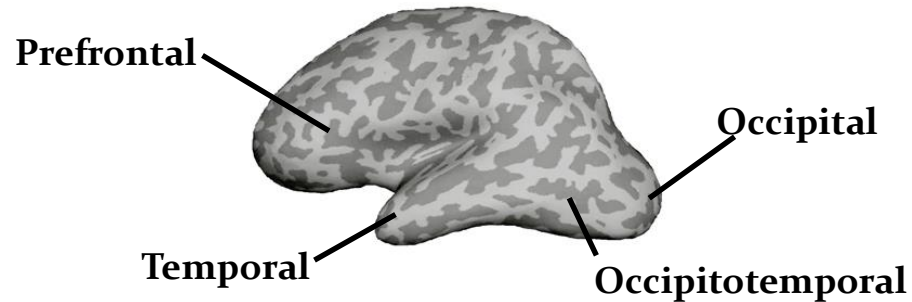


The mind appears to be an energetic entity that interfaces with the brain

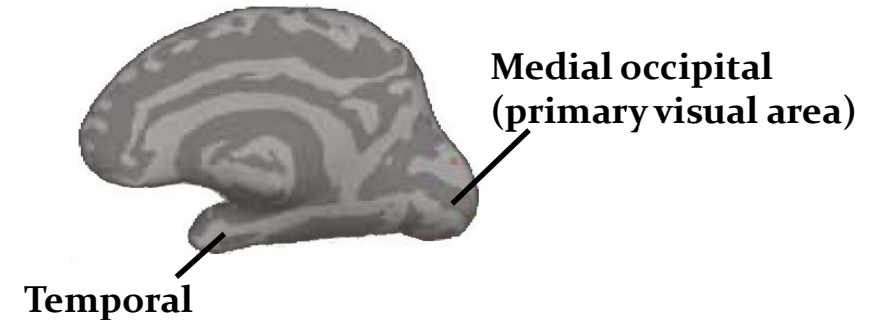
- Concepts, meaning, semantic knowledge and memory reside *in the mind*
- Perceptions begin with sensory brain processes (“exogenous”) but the conceptual, semantic content comes from the mind through *intuition*
- Thoughts, feelings, urges, volitional processes begin in the mind (“endogenous”) and activate neural processes so they come to awareness
- Memories are formed and reside in the mind, not in the brain
 - Episodic memories (life events): formed in the mind through neural processes in the hippocampus
 - Semantic knowledge is formed in the mind through experience and recalled through intuition

Brain Structure, Dynamics and Imaging

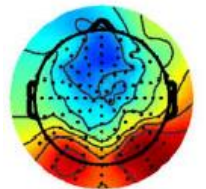
Left Hemisphere – outside lateral view



Right Hemisphere – inside medial view



- **Electroencephalography (EEG)** measures electrical voltage fluctuations at the scalp (+ and – volts)
 - Fluctuations imply neural activity in different brain regions – identified with different cognitive functions – e.g., perception, recognition
 - Advantages: precise measurement of amplitude and timing of brain events
 - Disadvantage: poor spatial resolution of brain regions
- **Magnetoencephalography (MEG)** measures magnetic fluctuations at the scalp (activation levels)
 - Fluctuations imply neural activity which are identified with cognitive functions
 - Advantages: good spatial resolution of brain regions and timing of brain events
 - Disadvantage: not all electrical activity is detected (detected chiefly in brain sulci)



Brain Dynamics: Electroencephalography (EEG)

EEG example: an incongruent word in a sentence evokes a strong minus voltage at the top of the scalp.

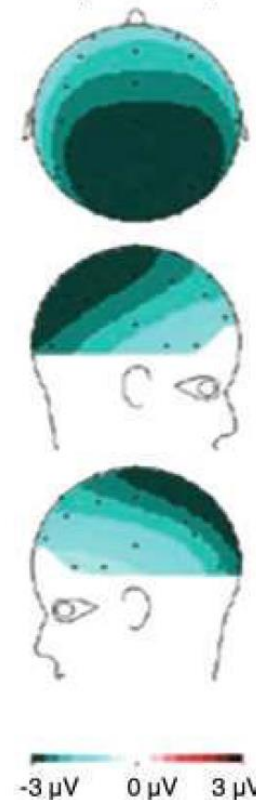
Our interpretation:

- At 115 ms (N1): minus voltage is associated with detecting the word percept (form of the word)
- At 200 ms (P2): plus voltage is associated with detecting the meaning of the word (concept)
- At 400 ms (N400): strong minus voltage is associated with awareness of how congruent or incongruent the word is in context
 - Note: the large N400 disappears when a congruous context has been set, example: “The peanut was in love.”

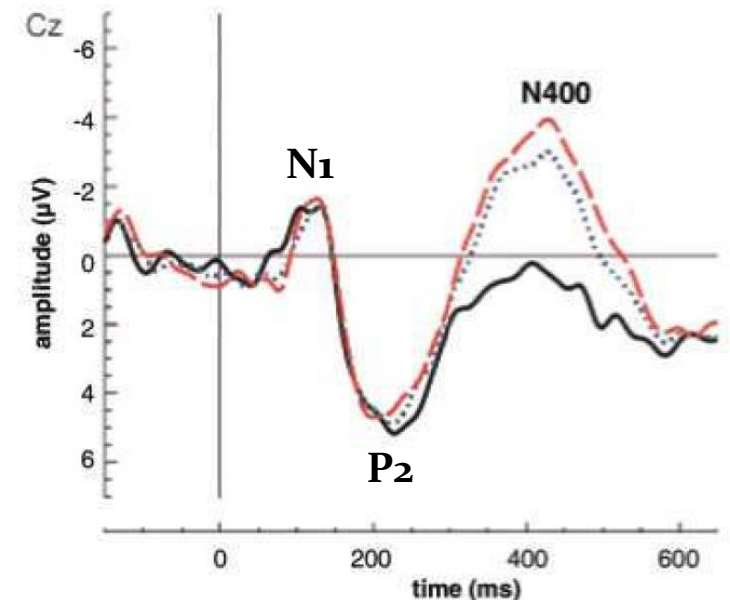
Perception and comprehension appear to proceed in three distinct stages

semantic N400-effect

(300 - 550 ms)



From Hagoort, et al. (2004)



The Dutch trains are yellow and very crowded.

The Dutch trains are white and very crowded. (elevated N400)

The Dutch trains are sour and very crowded. (elevated N400)

- Hagoort, P., Hald, L., Bastiaansen, M., & Petersson, K. M. (2004). Integration of word meaning and world knowledge in language comprehension. *science*, 304(5669), 438-441.
- Nieuwland, M. S., & Van Berkum, J. J. (2006). When peanuts fall in love: N400 evidence for the power of discourse. *Journal of cognitive neuroscience*, 18(7), 1098-1111.

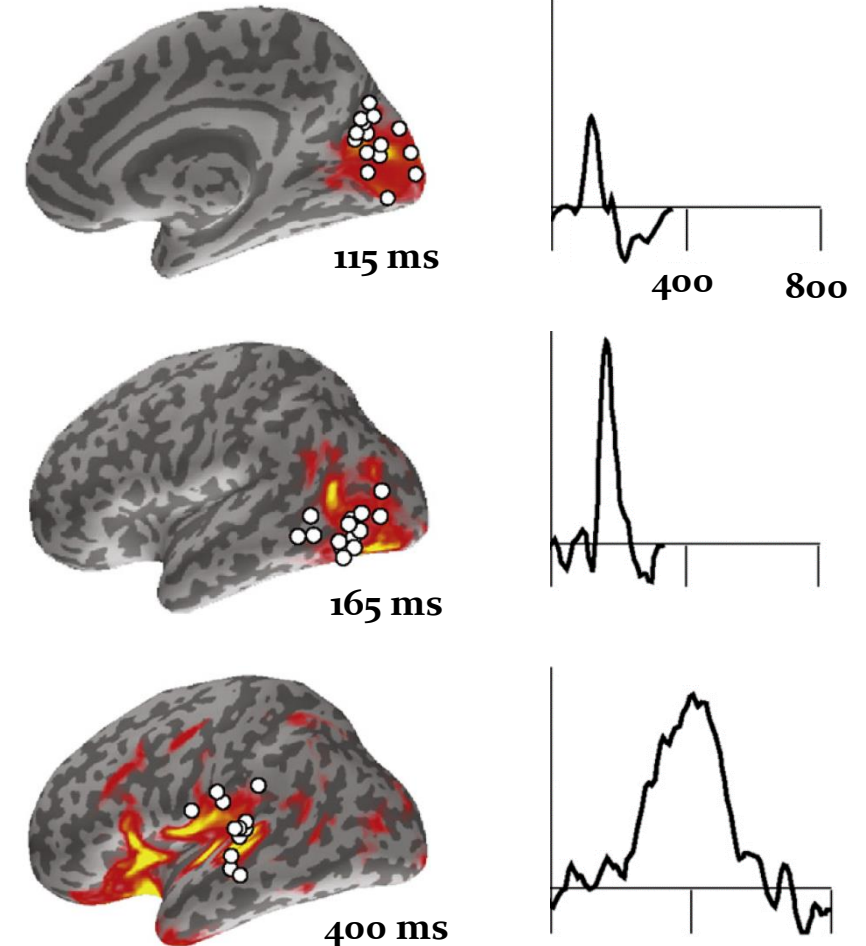
Brain Dynamics: Magnetoencephalography (MEG)

MEG example: reading a word – a novel word producing a large N400

Our interpretation:

- At 115 ms: activation in medial occipital area is associated with detecting the word percept (form of the word)
- At 165 ms: activation in occipitotemporal area is associated with detecting the meaning of the word (concept)
- At 400 ms: activation in superior temporal and prefrontal areas is associated with awareness of how novel the word is from prior experience

Perception and comprehension appear to proceed in three distinct regions of the brain



How long does it take to become aware?

- It takes time for neural activation to build up to conscious awareness
 - Awareness requires a stimulus of (1) minimum “liminal” intensity and (2) minimum duration of neural activity
 - Otherwise the stimulus remains unconscious (a “subliminal” stimulation)
 - If the stimulus is above “liminal” intensity, one becomes aware of it only after the 300 to 500 ms of neural activity
 - Libet’s “time-on” principle
- Libet distinguished between detection and conscious awareness
 - Even without conscious awareness, subliminal stimulations are detected and have an effect (“priming”) (Shevrin, 2001)
- The delay of awareness applies generally to all sensation and also to *endogenous* thoughts, volition, imaginations
- In our view, the *primary purpose* of neural activations is to bring mental content to conscious awareness.
 - The mind is engaged throughout this process—from detection to awareness

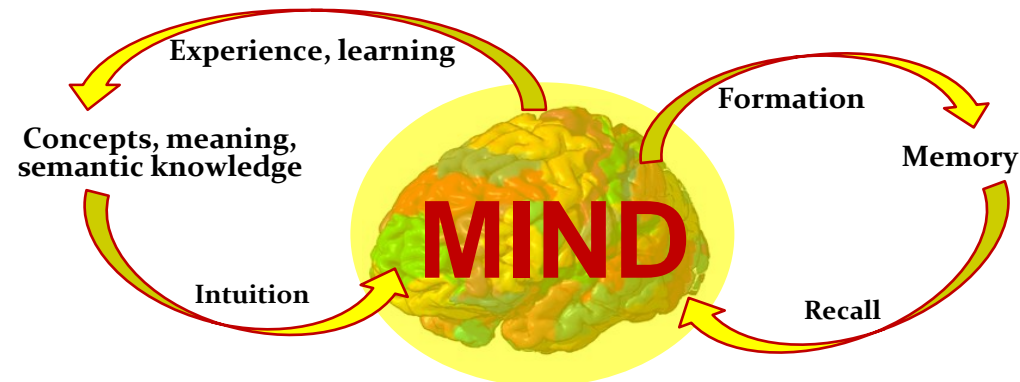


Benjamin Libet
(1916-2007)

- Libet, B. (2004). *Mind time: the temporal factor in consciousness*. Cambridge, MA: Harvard University Press.
- Shevrin, H. (2001). Event-related markers of unconscious processes. *International Journal of Psychophysiology*, 42(2), 209-218.

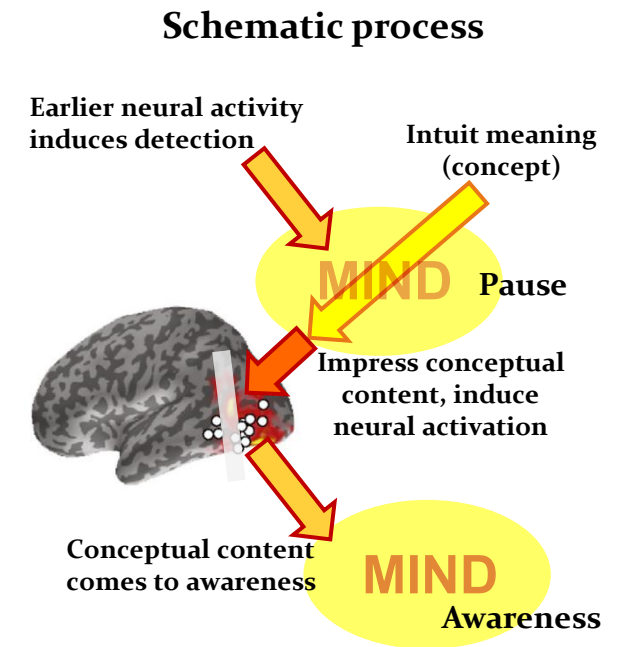
Constraints to mind-brain functional interactions

- The invisible, non-material mind-entity is intimately united with the brain
- From NDE phenomena and Libet's work, the mind operates under the following constraints:
 - All conceptual content resides in the mind
 - The mind requires neural activation to become aware of its own mental content
 - Therefore, the mind must first *impress* its conceptual content on the appropriate brain regions
 - The neural activation from those regions acts as a *mirror* bringing the mind's conceptual content to consciousness



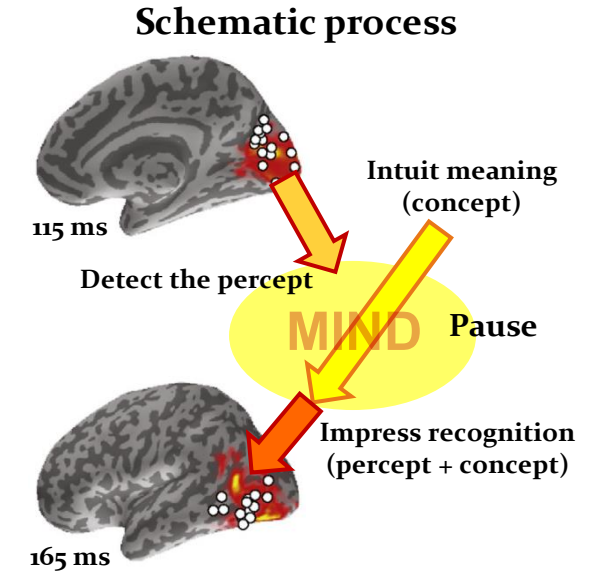
Neural activity acts as a mirror for the mind

- Functional interactions between the mind and brain: a schematic view
 - Earlier neural activity induces some content in the mind (top orange arrow)
 - During the pause between stages, the mind adds *conceptual* content (yellow arrow) and *impresses* this combined content on the next brain region (red arrow) to induce neural activation in that region
 - The neural activity *mirrors* the content and induces *awareness* of the mental content in the mind (bottom orange arrow)



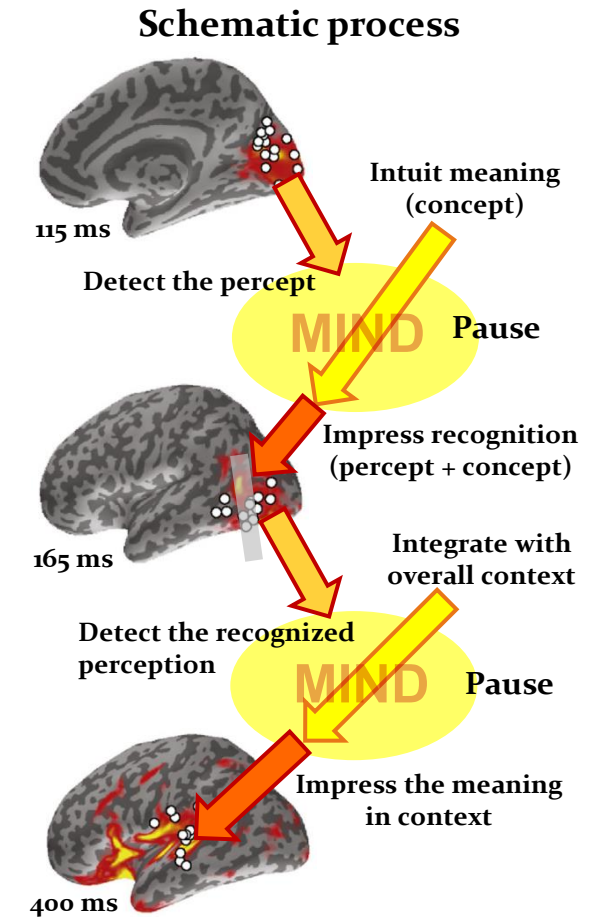
Stages in the mind-brain process of perception - 1

- **Stage 1:** When the visual stimulus activates the primary sensory neurons, the mind detects the *percept*, the raw, uninterpreted sensory content – the letters w-h-i-t-e
 - During the pause between stages, the *conceptual content* of the percept (the meaning of “white”) comes to the mind through *intuition*. The *perception* (percept + added concept of the meaning of “white”) is *impressed* on the subsequent neural structures.



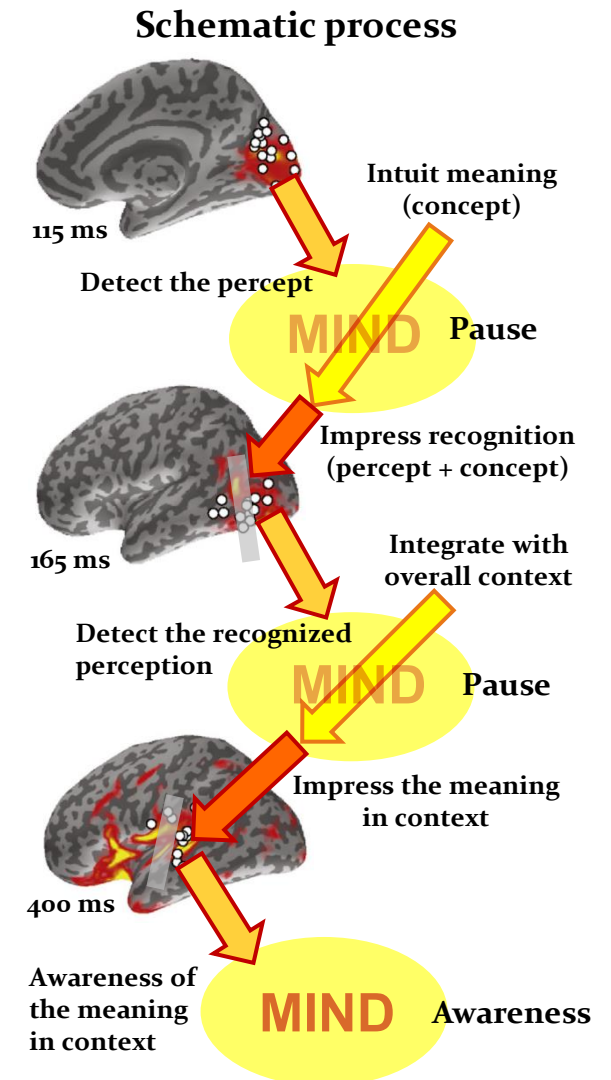
Stages in the mind-brain process of perception - 2

- **Stage 1:** When the visual stimulus activates the primary sensory neurons, the mind detects the *percept*, the raw, uninterpreted sensory content – the letters w-h-i-t-e
 - During the pause between stages, the *conceptual content* of the percept (the meaning of “white”) comes to the mind through *intuition*. The perception (percept + added concept of the meaning of “white”) is *impressed* on the subsequent neural structures.
- **Stage 2:** The activation of the second brain region mirrors the new mental content, and the mind detects the *perception* – the meaning of “white”
 - During the pause between stages, the *integration* of perception in the current context (“Dutch trains”) is developed in the mind from world knowledge through *mental activity* (perception + added context), and is *impressed* on subsequent neural structures.
 - The level of neural activation reflects the “fit” of the perception within the context (the N400): White is an incongruous color for Dutch trains.



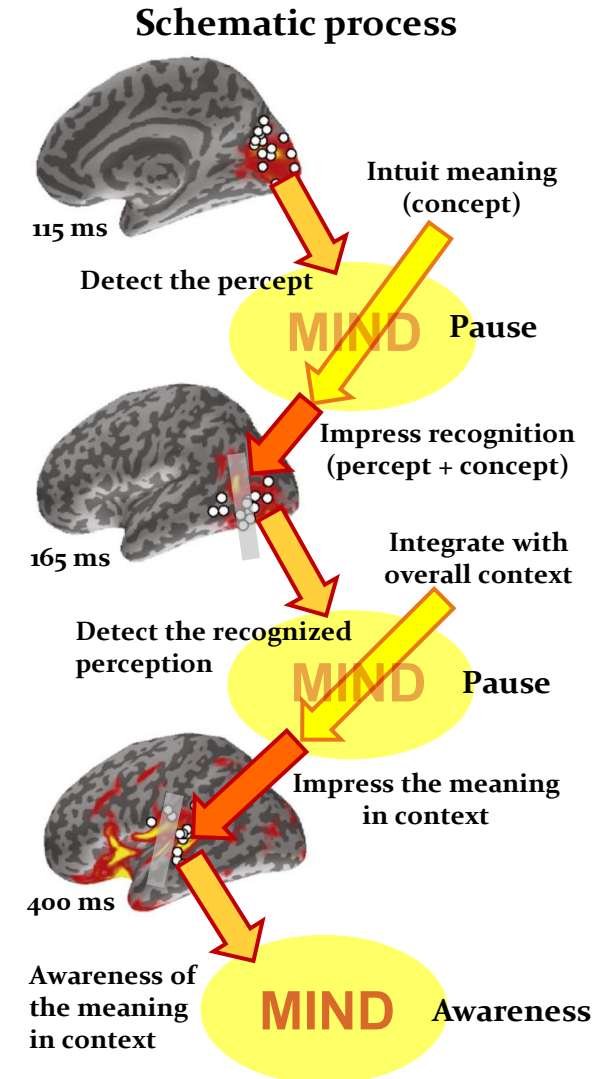
Stages in the mind-brain process of perception - 3

- **Stage 1:** When the visual stimulus activates the primary sensory neurons, the mind detects the *percept*, the raw, uninterpreted sensory content – the letters w-h-i-t-e
 - During the pause between stages, the *conceptual content* of the percept (the meaning of “white”) comes to the mind through *intuition*. The perception (percept + added concept of the meaning of “white”) is *impressed* on the subsequent neural structures.
- **Stage 2:** The activation of the second brain region mirrors the new mental content, and the mind detects the *perception* – the meaning of “white”
 - During the pause between stages, the *integration* of perception in the current context (“Dutch trains”) is developed in the mind from world knowledge through *mental activity* (perception + added context), and is *impressed* on subsequent neural structures.
 - The level of neural activation reflects the “fit” of the perception within the context (the N400): White is an incongruous color for Dutch trains.
- **Stage 3:** The activation of the third region mirrors the new mental content
 - During the final pause, the mind comes to *conscious awareness* of the incongruous word within the current context. Dutch trains are *not* white.



Interplay of bottom-up brain and top-down mind processes

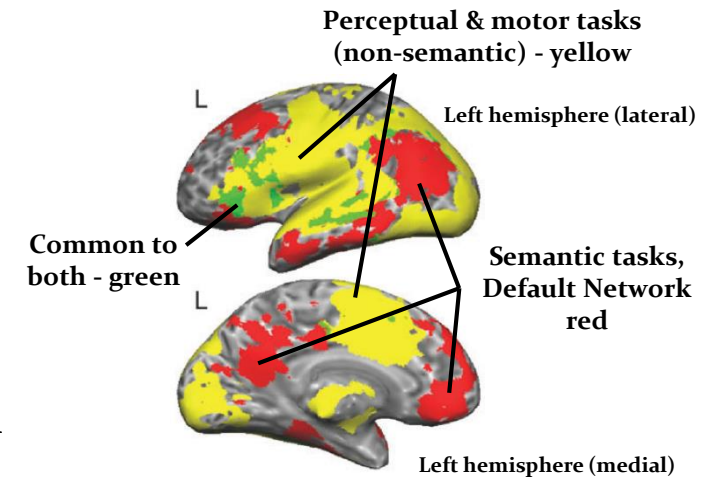
- There is an interplay between alternating bottom-up processes (the orange arrows) and top-down processes (yellow and red arrows)
- Different brain regions are specialized to induce different mental content in the mind
 - Object recognition areas, face recognition areas, language comprehension areas, working memory, etc.
 - In the pause after Stage 1, the mind directs which region is to be activated, based on the recognized content. Neural connections from occipital regions must also play a part.
 - The mind is engaged *throughout* the process of "coming to awareness" but awareness does not occur until Stage 3.
- The 3 stages in the brain are: (1) neural activation of the raw percept, (2) neural activation of the perception (percept + concept) and (3) neural activation of the newly enhanced conceptual context (previous context + added perception).
- The result of the 3 stages in the mind are: (1) detect the raw percept, (2) detect the recognized meaning, and (3) awareness of the meaning in context.



Mind-entity model is applicable to *all* conscious experience

There are two largely distinct, complementary brain networks

- An externally directed *perceptual* system involving sensory and motor processes with minimal semantic content (yellow areas)
- An internally directed *conceptual* system used in semantic tasks—the “default network” (red areas)
- Both networks are involved in perception.
- The *default network* is active when we are engaged in inward or endogenous mental activity. Examples: “lost in thought,” daydreaming, solving a problem, planning the shopping list, etc.



In this model, the mind is engaged in both networks, throughout the cortex:

- External sensory and motor processes: the mind brings perceptions to consciousness across all sensory modalities, coordinates motor interactions with external environment
- Internal sources of information: the mind brings semantic knowledge, simulations, imaginations, future plans, episodic memories, etc. to consciousness

- Binder, J. R., Desai, R. H., Graves, W. W., & Conant, L. L. (2010). Where is the semantic system? A critical review and meta-analysis of 120 functional neuroimaging studies. *Cerebral Cortex*, 19(12), 2767-2796.
- Binder, J. R., Medler, D. A., Desai, R., Conant, L. L., & Liebenthal, E. (2005). Some neurophysiological constraints on models of word naming. *Neuroimage*, 27(3), 677-693.
- Buckner, R. L., Andrews-Hanna, J. R., & Schacter, D. L. (2008). The brain's default network: Anatomy, function, and relevance to disease. *Annals of the New York Academy of Sciences*, 1124(1), 1-38.

The Pauses Between Neural Activations

- Steiner acknowledged the necessity of a brain for embodied consciousness.

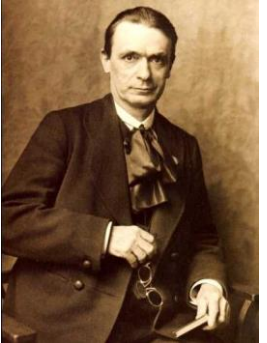
For this life, man needs the physical brain as an instrument of consciousness: without it, man cannot be conscious. (Steiner, 1906)

- At the same time, the mind needs to repress brain activity so that the conceptual content can be given:

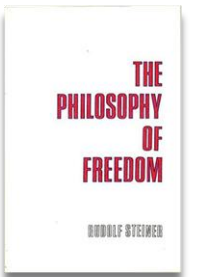
The human organization *recedes* whenever the activity of thinking makes its appearance; it *suspends* its own activity, it *yields ground*; and on the ground thus left empty, the *thinking appears*.

The essence which is active in thinking has a two-fold function: first, it *represses the activity of the human organization*; secondly, it *steps* into its place. For the repression of the physical organization is a consequence of the activity of thinking, and more particularly of that part of this activity which *prepares the manifestation of thinking*. (Steiner, 1894, ch. 9, emphasis added)

- We propose that this process of repression occurs in the pauses between stages of neural activations.
- The insertion of a combined perceptual and conceptual content is followed immediately by neural activation in a different region, that then brings the combined mental content to detection or awareness.



Rudolf Steiner



Outline

- **Part 1: NDEs: the Mind-Entity Hypothesis**
- **Part 2: NDEs and Mind-Brain Consciousness**
- **Part 3: NDEs and the Nature of the Transcendent Reality** ←

The Transcendent Realm Hypothesis: Proposal & Evidence

- The Transcendent Realm hypothesis proposes:
 - Reality consists of the physical realm *plus* a more fundamental Transcendent Realm.
 - The physical realm is coextensive with and *dependent* on the Transcendent Realm.
- NDErs report hyperreal experiences in two *realms*: physical realm and a supersensible, transmateral realm
- “Transcendent” here implies surpassing usual limits:
 - Perceptions beyond the range of usual perception, i.e., “supersensible”
 - Free from the constraints of the material world
- In both realms, NDErs report obtaining veridical information – impossible through ordinary physical means
- In both realms, NDErs report encounters with deceased persons and “spiritual” beings
- In the Transcendent Realm, NDErs report experiencing:
 - Unconditional love and interconnectedness—one’s True Home,
 - Memories of life events and visions of the future (that are later verified),
 - Access to limitless knowledge and wisdom, and a sense of life purpose and meaning

The Transcendent Realm Hypothesis: Methodology

The fundamental elements of physical reality:

- Space
- Time
- Matter & fundamental physical forces

To develop our Transcendent Realm hypothesis:

- Space – examine the quality of NDEr perceptions in the physical realm
- Time – examine phenomena of the NDE life review, life preview, and timelessness
- Matter – examine interactions with the NDEr's nonmaterial body and **physical matter** (e.g., passing through solid walls) – already discussed

NDE Phenomena Regarding Space ...

- **Researchers**

- **Ken Ring & Sharon Cooper (1997, 1999) “transcendental awareness,” “mindsight,” “omnidirectional awareness”**
- **Jean-Pierre Jourdan (2000, 2001, 2011) “global perception,” “360° spherical perception,” “perception by transparency”**
- **Robert Brumblay (2003) “hyperdimensional perception”**

- **Archetypal accounts: veridical perceptions of the physical realm but greatly enhanced**

- **I could see at an angle of 360°, I could see in front and behind, I could see underneath, from far, I could see up close and also transparently. I remember seeing a stick of lipstick in one of the nurses’ pockets. ... I could see, all at once, a green plaque with white letters saying “Manufacture of arms of Saint Etienne.” The plaque was under the edge of the operating table, covered up by the sheet I was lying on. I could see with multiple axes of vision, from many places at once. ... I wanted to go through the wall, I don’t know why. I realized that it was not resisting me, and I went through it. I saw what was on the other side: a huge garden, a bicycle garage... . (Jourdan, 2000, 2001, 2011).**
- **I could see everything. And I do mean everything! ... 360 degree spherical vision. And not just spherical. Detailed! I could see every single hair and the follicle out of which it grew on the head of the nurse standing beside the stretcher. At the time I knew exactly how many hairs there were to look at. (Ring & Cooper, 1999, p. 162).**

- Brumblay, R. J. (2003). Hyperdimensional Perspectives in Out-of-Body and Near-Death Experiences. *Journal of Near-Death Studies*, 21(4), 201-221.
- Jourdan, J.-P. (2000). Just an Extra Dimension ... *Les Cahiers scientifique de IANDS-France*, 1. Retrieved from <http://www.iands-france.org/SRC/PDF/justextra.pdf>.
- Jourdan, J.-P. (2001). Les Dimensions de la Conscience. *Les Cahiers scientifique de IANDS-France*, 7. Retrieved from [http://dr.jp.jourdan.pagesperso-orange.fr/Les Dimensions de la Conscience.pdf](http://dr.jp.jourdan.pagesperso-orange.fr/Les%20Dimensions%20de%20la%20Conscience.pdf)
- Jourdan, J.-P. (2011). Near Death Experiences and the 5th Dimensional Spatio-Temporal Perspective. *Journal of Cosmology*, 14. Retrieved from <http://cosmology.com/Consciousness152.html>.

NDE Phenomena Regarding Space ...

Perceptual features

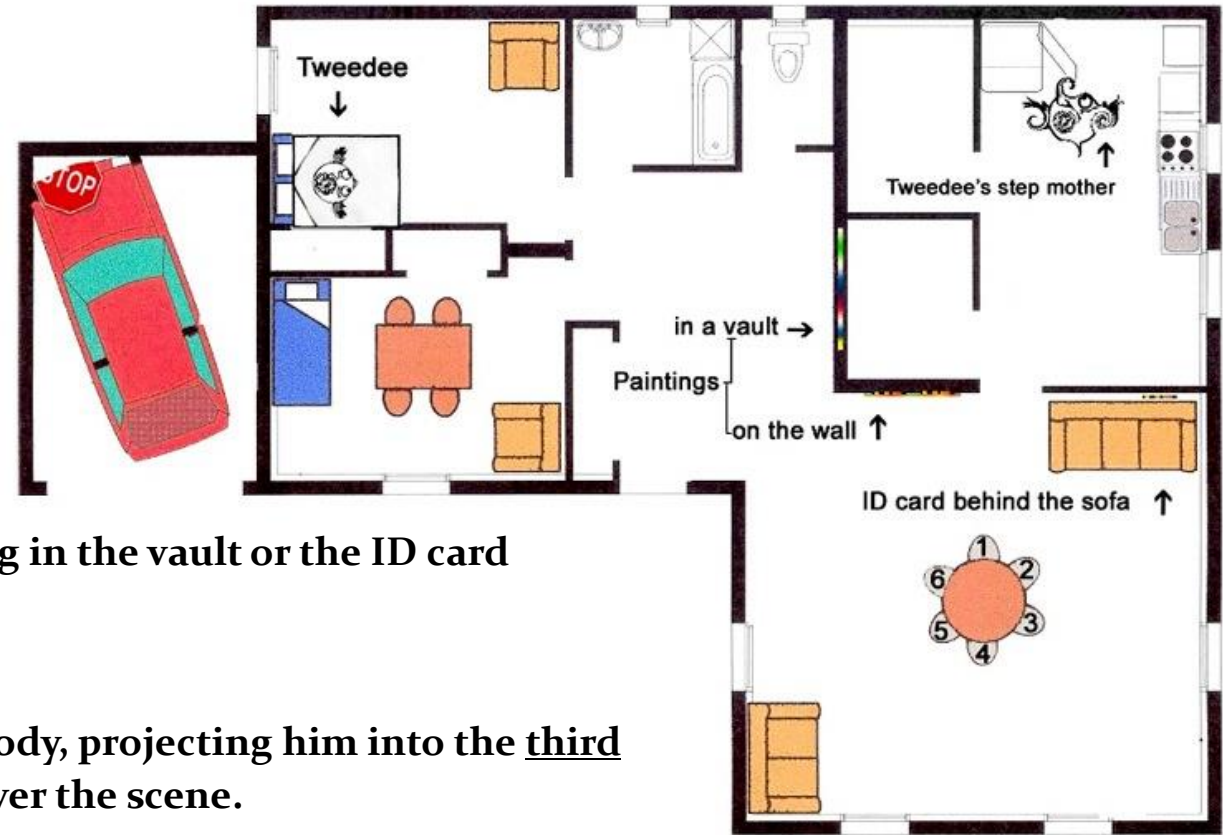
- **Global perception** – I noticed, we see everything from all sides simultaneously! I could see everywhere. (Jourdan, 2011).
- **360° spherical perception** – I had a 360° spherical-like vision. (Jourdan, 2011).
- **Perception “from everywhere”**
 - Although my eyes were closed, I could suddenly see everything—the whole room and myself in it—and I couldn’t tell where I was seeing from! ... I seemed to be seeing everything from everywhere. ... There seemed to be no observer separate from what was seen. There was simply awareness. (Ring & Cooper, 1999, p. 161).
- **Perception by transparency**
 - When I woke up I was above my body. I was aware of all the people who had been called into the room to help and what they were thinking. I also found myself able to see my mother on the other side of the wall in the waiting room. ... At that time I could also see other people in other nearby rooms, all separated from the x-ray area by [lead-lined] walls. ... I still could tell that the walls were there, but I could see the other people in the other rooms. (Brumblay, 2003).
- **Zoom / instantaneous displacement**
 - What must also be understood is that it works like a zoom and a displacement all at once. When we take an interest in something, it’s as if we zoomed in. It is the displacement and perception occurring simultaneously which allows this to happen. (Jourdan, 2011).

NDE Phenomena Regarding Space

Flatland thought experiment

from Jourdan & Brumblay, based on Edwin Abbott, 1884.

- In Flatland, *2-dimensional beings* live in a flat world of just length and width – no height. Everything is visible to them only on its edge.
- Tweedee sees the opening of the door to his bedroom and the edges of his arm chair in the corner.
- Tweedee slides off his bed. Moving on a line, he goes through the door, the hallway and living room, and sees his step mother “edge-on” in the kitchen.
- He admires the painting on the wall but can’t see the painting in the vault or the ID card behind the sofa.
- Tweedee can’t pass through the walls of the house.
- Suppose Tweedee suddenly has an NDE. He rises above his body, projecting him into the third dimension above the 2-dimensional plane. He now hovers over the scene.
- Now Tweedee perceives everything in his world all at once, *just as we 3-dimensional beings do.*
- He gazes over the whole scene (global perception). He can see through the sofa and walls to the ID card and the painting inside the vault (perception by transparency). He can easily move through the walls in the whole house in the “above” dimension.



(from Jourdan, 2011)

NDE Phenomena Regarding Space: Interpretation

- With an NDE in Flatland, Tweedee is propelled from two dimensions into a higher dimension, with expanded abilities
 - Instead of seeing things only edge-on, he can see the whole scene at once and each object from all directions at once.
 - He can see *inside* objects (e.g., including inside his own body); he can zoom in to any detail and move out to see the whole scene.
 - Tweedee's step mother can't see him out-of-body because she can't see into the "above" dimension. His NDEr body is transparent in the 2D realm.



Tweedee's
physical body

(from Jourdan, 2011)

NDE Phenomena Regarding Space: A Fifth Dimension

Tweedee's experiences moving to a "higher" dimension during his NDE correspond well to the NDEr's experiences in their NDE in the physical realm

- By extending the analogy of the 2-dimensional case going to 3 dimensions, we can postulate that there is an *extra dimension* to our physical reality
- Physical reality has three spatial dimensions; with the additional dimension of time, we speak of physical reality as having *four* dimensions.
- The expanded perceptual and movement abilities reported by NDErs can be explained by the NDEr being in a higher, fifth dimension.

What are the 5-dimensional analogs of Tweedee's 3-dimensional abilities

- Tweedee "above" Flatland has global perception of all of the 2-dimensional world → NDEr has simultaneous omnidirectional awareness of all of the physical surroundings
- Tweedee sees "inside" objects → NDEr sees *through* objects
- Tweedee floats "above" walls, defying the physical laws governing Flatland → NDEr moves *through* walls, defying physical laws
- Tweedee can zoom instantly from place to place in Flatland → NDEr can zoom instantly across physical distances by thought alone

NDE Phenomena Regarding Space: Implications

- The postulated fifth dimension explains the NDEr's reports of enhanced perception:
 - Global 360° perception
 - Perception from everywhere
 - Perception by transparency
 - Zoom and displacement
 - Moving through walls and solid objects
 - The invisibility of out-of-body entities to ordinary sight
- The enhancement of perceptual abilities probably accounts for the near-universal description that NDE perceptions are *hyperreal*—"realer than real"
- The postulated fifth dimension subsumes and infuses all of physical reality and includes all of the unlimited transcendent, nonmaterial reality
- Currently understood physical laws are not immutable

NDE Phenomena Regarding Time ..

Life review phenomenon – Archetypal accounts

- [During the Vietnam War, Dannion Brinkley blew up a hotel building, killing 50 innocent people.] I felt the stark horror that all of those people felt as they realized their lives were being snuffed out. I experienced the pain their families felt when they discovered that they had lost loved ones in such a tragic way. In many cases I even felt the loss their absence would make to future generations. (Brinkley, 1994, p. 22).
- I saw my life intricately woven into everything I'd known so far. My experience was like a single thread woven through the huge and complexly colorful images of an infinite tapestry. All the other threads and colors represented my relationships, including every life I'd touched. ... Every single encounter was woven together to create the fabric that was the sum of my life up to this point. (Moorjani, p. 68)
- Because of the love and understanding radiating from the being of light, I found the courage to see for myself ... what in my actions had caused him [the being of light] pain. And for most of the episodes ... the being offered me an alternative way to act; not what I *should* have done ... but what I *could* have done—an open invitation that made me feel completely free to accept or not to accept his suggestions. (Ring, 1998, p. 157).

- Brinkley, D. (1994). *Saved by the Light: The true story of a man who died twice and the profound revelations he received*. New York: Harper.
- Moorjani, A. (2012). *Dying to be Me: My journey from cancer, to near death, to true healing*. New York: Hay House.
- Ring, K. (1998). *Lessons from the Light: What we can learn from the near-death experience*. Needham, MA: Moment Point Press.

NDE Phenomena Regarding Time ...

Features of the life review

- **Simultaneous presentation of all events generally in a 360° panorama / tableau**
- **Every episode of one's life: focusing on one's interactions with others**
 - **Displays the details of one's emotions and actions, and the effects on others**
 - **One is observing the event as if looking down on one's earlier self from an out-of-body position**
- **Every event shown is hyperreal, with perception from “everywhere,” zoom / displacement perception**
 - **Same type of enhanced perception as the NDEr's out-of-body perception of the physical realm—further supports the idea that NDEs are objectively real events, in both realms**
 - **I relived every exact thought and attitude; even the air temperature and things I couldn't have possibly measured when I was eight years old. For example, ... in the life review, I could have counted the mosquitoes [that were in the area]. Everything was more accurate than could possibly be perceived in the reality of the original event. (Farr, 1993, p. 30).**

NDE Phenomena Regarding Time ...

Features of the life review ...

- Generally one is in the presence of a loving being, frequently described as a Being of Light
 - There is no judgment except by oneself, no condemnation
 - The loving being feels disappointment and pain from our misdeeds
- Ripple effect of one's actions to others in widening circles and through generations
- Vast, intricate tapestry of human relationships—every life that one has touched, showing one's interconnectedness with everything
- One is shown how one *could have acted*, without condemnation or coercion—implying human free will
- The purpose of life is Love—an activity that can be expressed only in relationship to other living beings

NDE Phenomena Regarding Time ...

Life preview phenomenon

- **Visions of one's personal future**

- Two predictions from NDE at age 10 in 1941: 1. *You will be married at age twenty-eight.* ... This did indeed happen, even though at [my] twenty-eighth birthday I had yet to meet the person that I was to marry. 2. *You will have two children and live in the house that you see.* ... This “memory” suddenly became present one day in 1968, when I was sitting in the chair, reading a book, and happened to glance over at the children. ... I realized that *this* was the “memory” from 1941! (Ring, 1984, pp. 186–187).
- And in a flash I saw the rest of my life. I could see a large part of my future life: taking care of my children; my wife's illness; everything that would happen to me ... I wrote down all the things I saw back then; over the years I've been able to check them all off. (van Lommel, 2010, p. 38).

- **Visions of future world events**

- Future technological advances (e.g., Ritchie, 1978)
- Numerous visions of the Kennedy assassination, the 9/11 attacks, natural disasters, political upheaval.

- **Further features of the life preview**

- **The memory of a future event is frequently suppressed; it may come back in a dream just prior to the event's occurrence or is remembered only when the event occurs.**
- **Predictions that fail to materialize may be due to the free-will choices of individuals that change the trajectory of the events.**

NDE Phenomena Regarding Time: Implications

- **Implies an exact, detailed recording of all events in the physical realm**
 - All actions, emotions, thoughts of a person and their effects on other people seem to be inscribed in a “Book of World Memory”
 - The record appears to be *built into the fabric of reality* in the transcendent realm
 - In esoteric traditions: the record is called the “Akashic Record” or “Book of Life”
 - The record appears as an intricate network or tapestry of interrelationships for events as they unfold through time in the physical realm
- **Implies free will in one’s actions: one is shown how one acted and how one *could have acted***
- **Implies that future events are laid out and even “rehearsed” well in advance of actual earthly events**
 - Each person has an overall life plan
 - But out of free will, one can choose differently from what was originally planned and the plan is adjusted based on one’s choices
 - [The Being of Light] also told me that the future was not necessarily cast in stone. “The flow of human events can be changed ...” (Brinkley, 1995, p. 16).

Overall Picture of the Transcendent Realm

- The common message “It’s not your time. You must return. You have more to do in your life on Earth.”
 - Implies there is a plan and purpose for one’s life: things specifically to be learned, experienced and done
 - Implies that one’s purpose was set before birth and agreed to
 - Implies there are benevolent guiding transcendent beings present throughout one’s life
- The transcendent realm can be viewed as the ground of all existence
 - The existence of the Akashic Record implies the centrality of earthly human experience
 - **Carl Sagan derided** “[our] delusion that we have some privileged position in the universe ... [where] our planet [is] a lonely speck in the great enveloping cosmic dark ... a mote of dust suspended in a sunbeam.” (Sagan, 1994, pp. 7–8).
 - **On the contrary, we are co-creators with God:** “You humans are truly the heroes,” a Being [of Light] told me, “... because you are doing something that no other spiritual beings have the courage to do. You have gone to earth to co-create with God.” (Brinkley, 1994, p. 57).
- The higher purpose of earthly life
 - Individual development
 - Evolution of humanity
 - Transformation of the Earth



Earth 3.7 billion miles away.
Photo Voyager 1, 1990.