

Nourish Your Brain

Holzkirchen, Germany
June, 2008

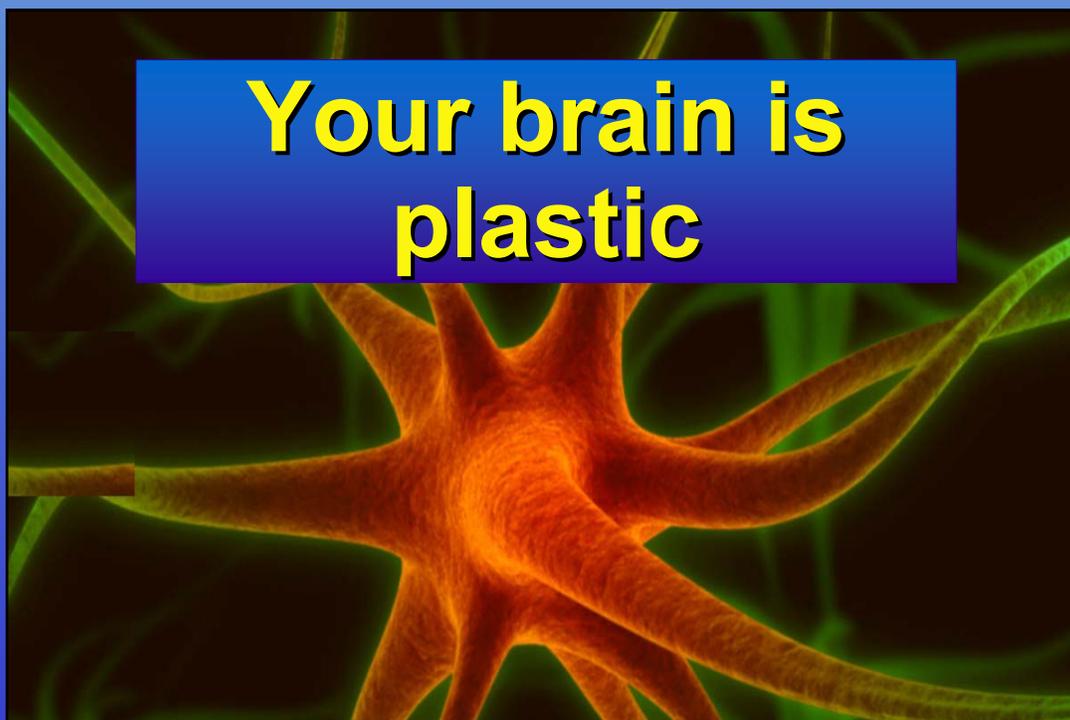
Alarik Arenander, Ph.D.



**Brain Research
Institute**

and

**BrainMatrix,
Inc.**



Power of Attention

DAY 1

DAY 2

DAY 3

DAY 4

DAY 5

Pascual-Leone et al, *Ann Rev Neurosci* 28:377, 2005

Aging

**We chose
everything in life!**

**Our choices make
us who we are!**

- **Most important area**
- **Last to develop**
- **Longest development**
- **Most vulnerable to aging**
- **Loss of executive & memory functions**

G. Bartzokis, *Neurobiol Aging*, 25:5, 2004

Glia Control

- 1. Nourishment**
- 2. Information**
- 3. Transmission**

Connectivity

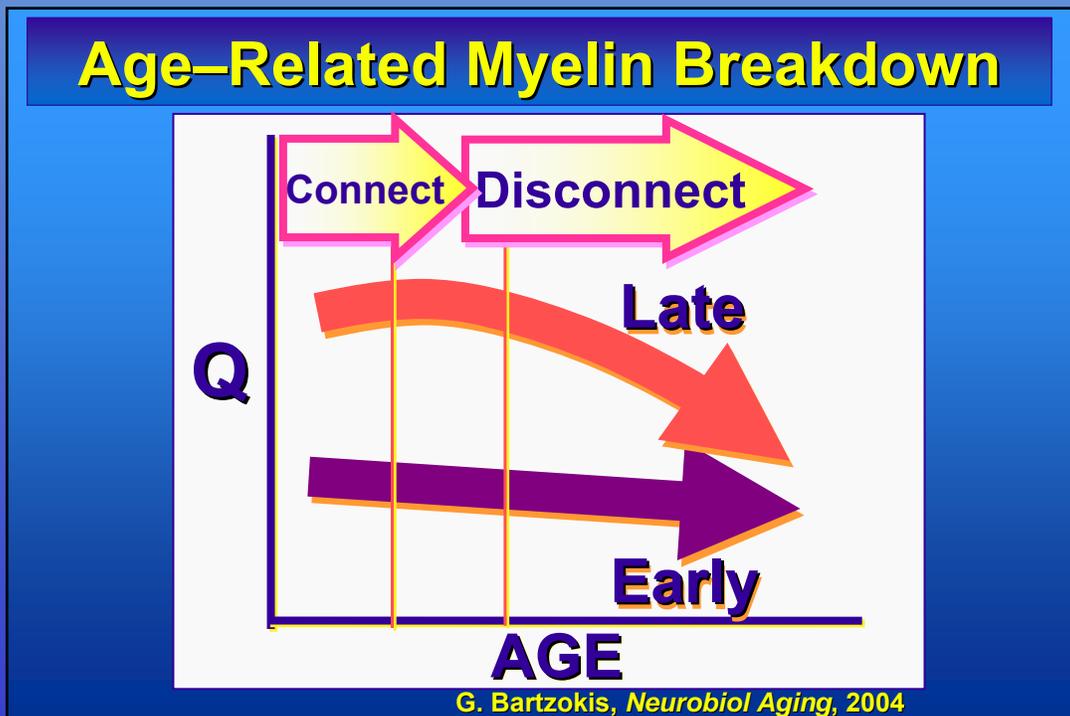
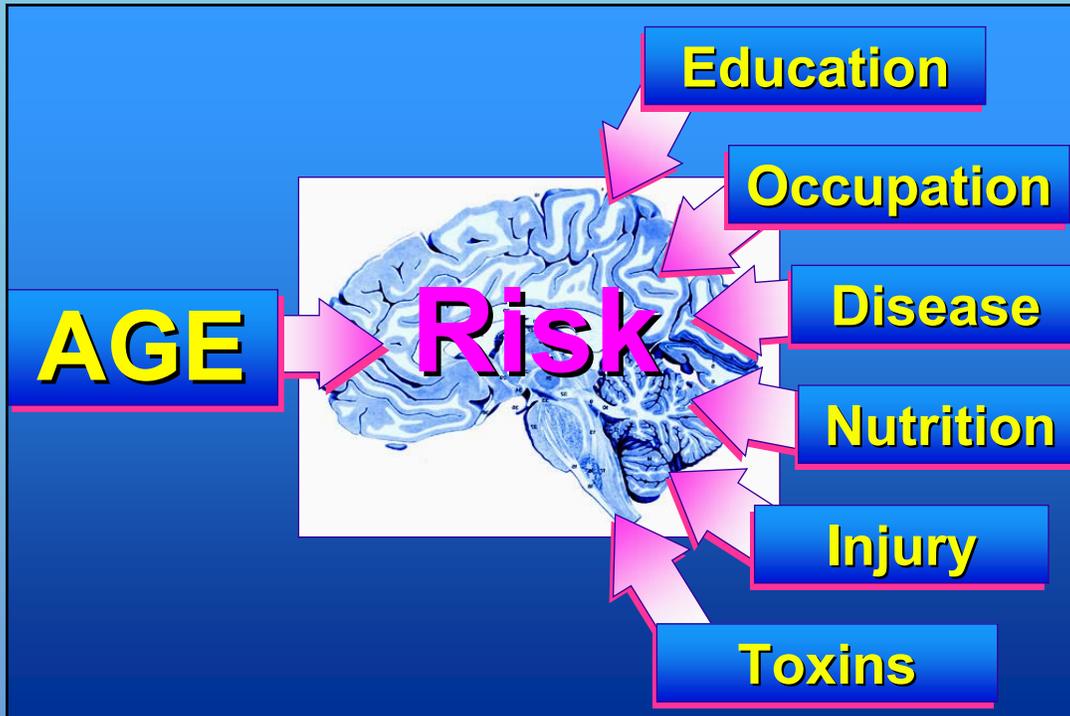
Self-Ref Function

Cognitive Function

Self & Aging

Alzheimer's Disease

A Disconnect!

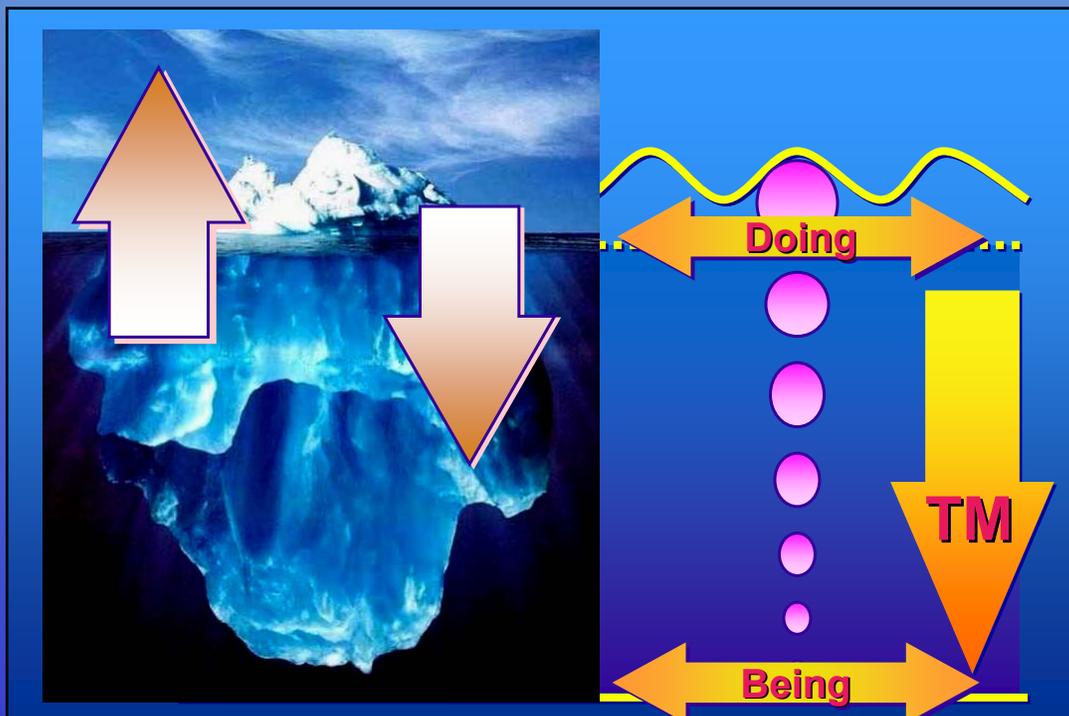
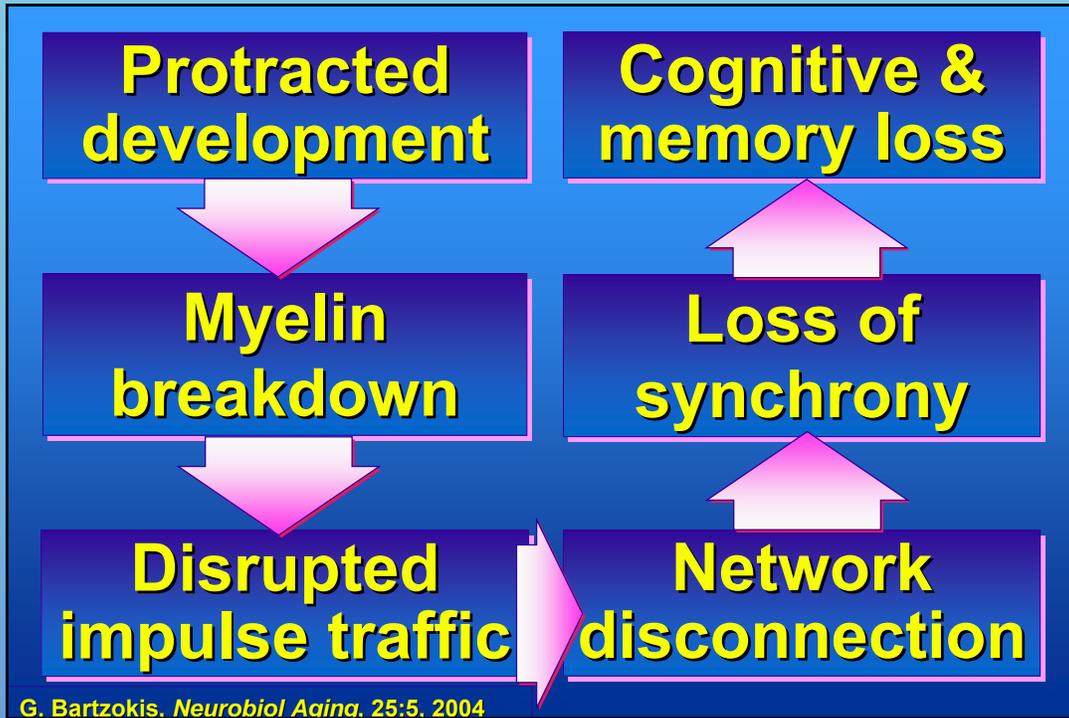


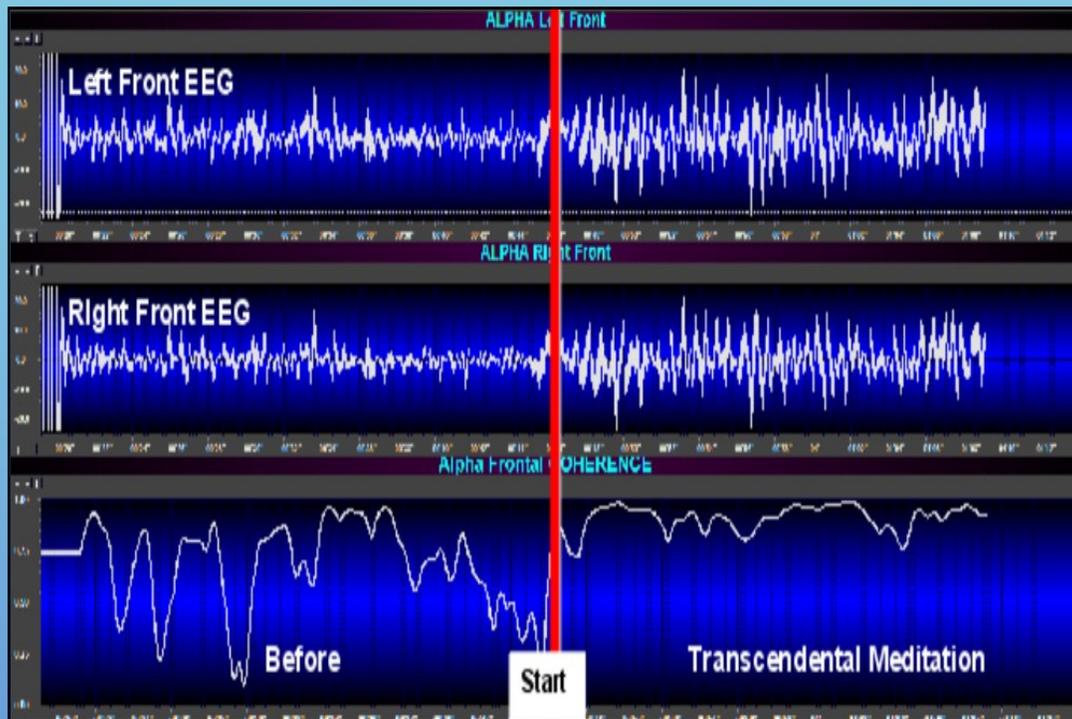
**Prevent
your brain
from
'Drying Up'**



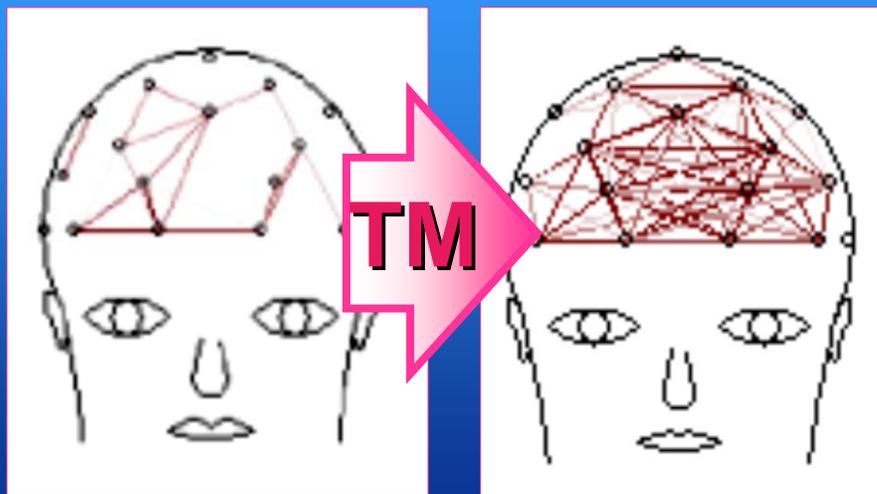
**Alzheimer's
Loss of brain
coherence!**

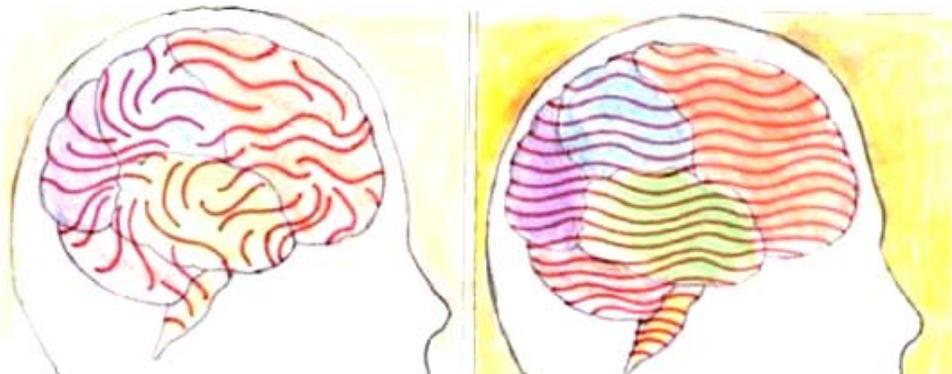
Stam etal...





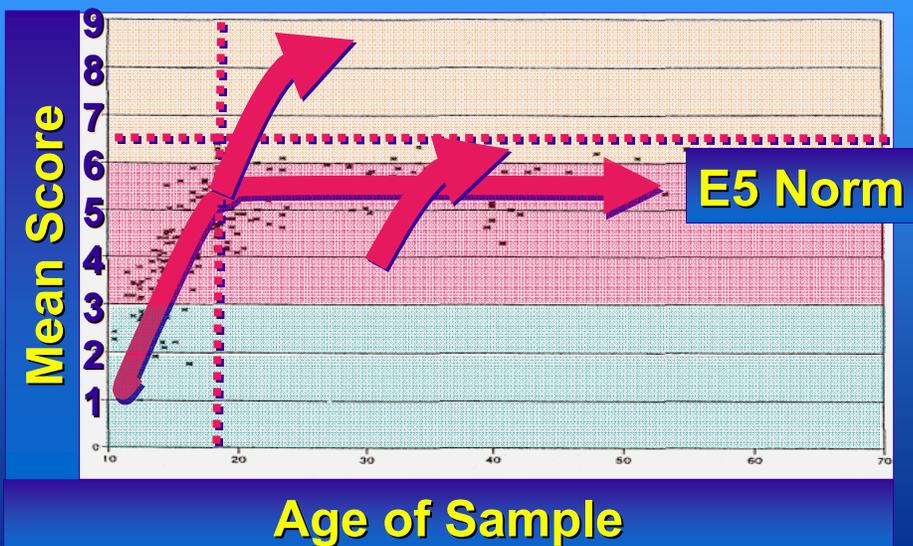
Global Brainwave Coherence



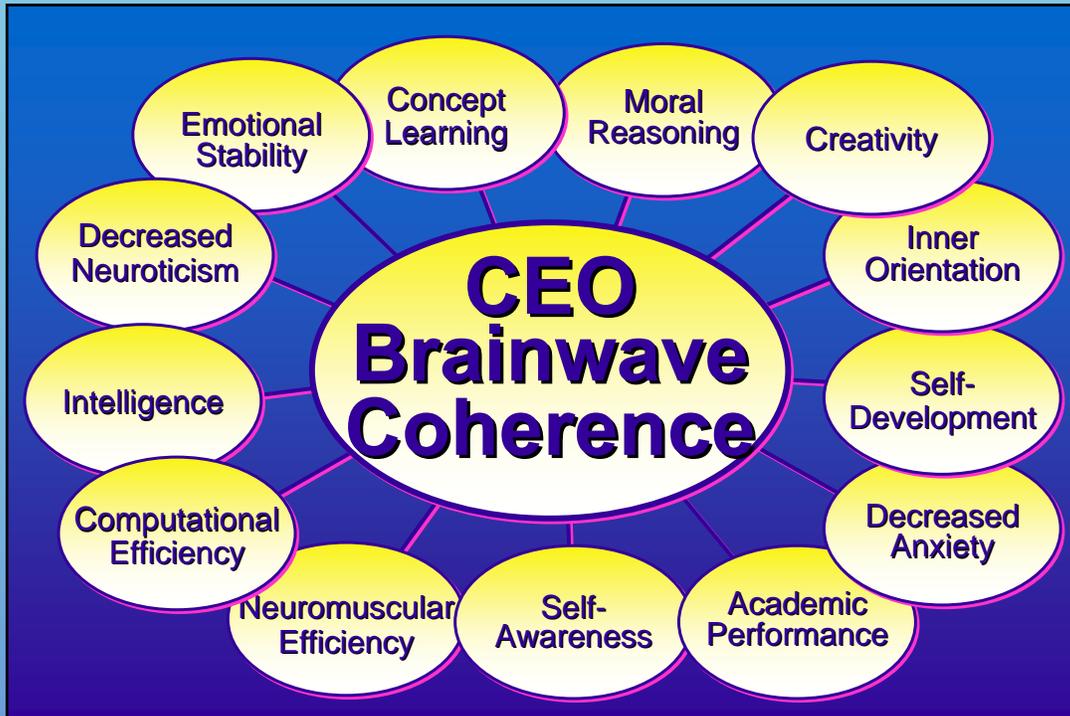


Over 90% of people have not reached their full potential

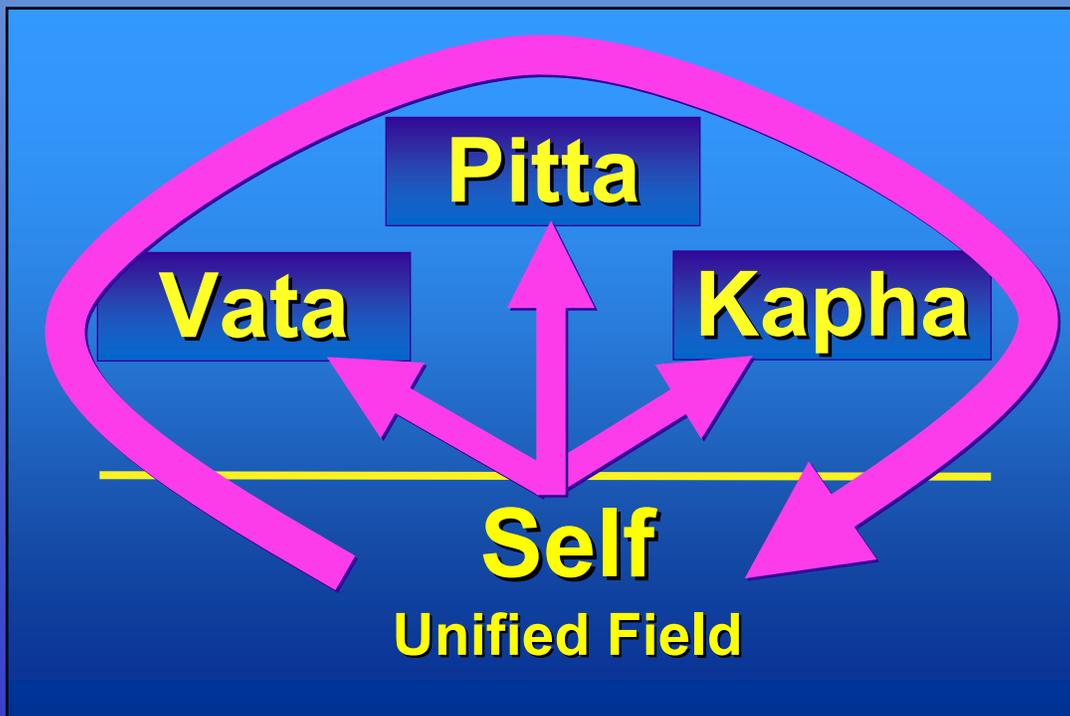
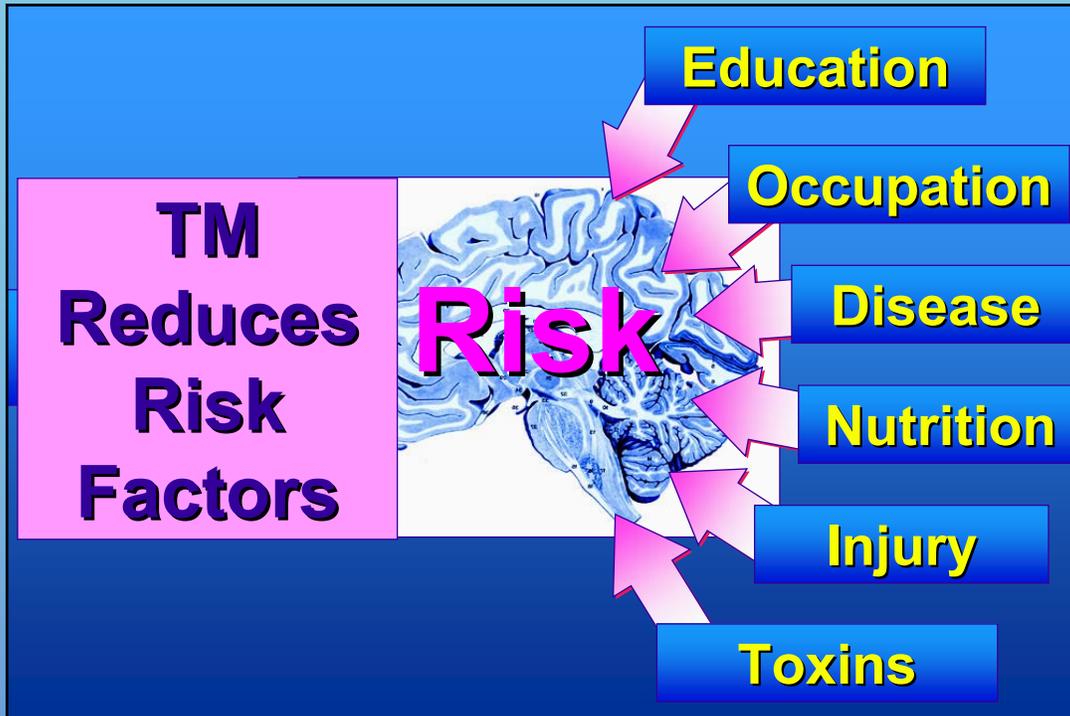
Self Development



Cohn, In *Personality Development*, Westenberg, 1998



**Increase brain
coherence to
reduce risk of
Alzheimer's**



Doshas

Vata

(motion, communication)

Pitta

(transformation, metabolism)

Kapha

(structure, stability)

Aging

Too much Vata!!

Small, dry = shrinkage

Communicate = Disruption

Movement = Agitation

Aging

Too little Kapha!!

Nourish = Metab dysfunction

Stable = Tangles, plaques

Unctuous = Myelin loss

Sweetness = anxious, anger

Decreased Kapha

Loss of lubrication,
stability, sustaining

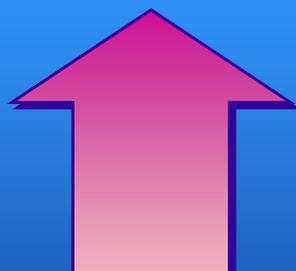
Increased Vata

Too much drying,
agitation, disruption

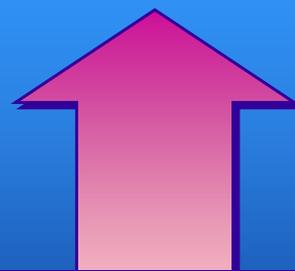
Natural Balancing

- Vitamins (Bs, folate)
- Pepper, brahmi, gotu kola, shankapushpi
- Ghee & Omega FAs
- Mind & Consciousness

Nourish Your Brain & Life



**More
Brain
Coherence**



**More
Happiness &
Success**

Leadership

High Performance



Creative Potential



Brain Plasticity

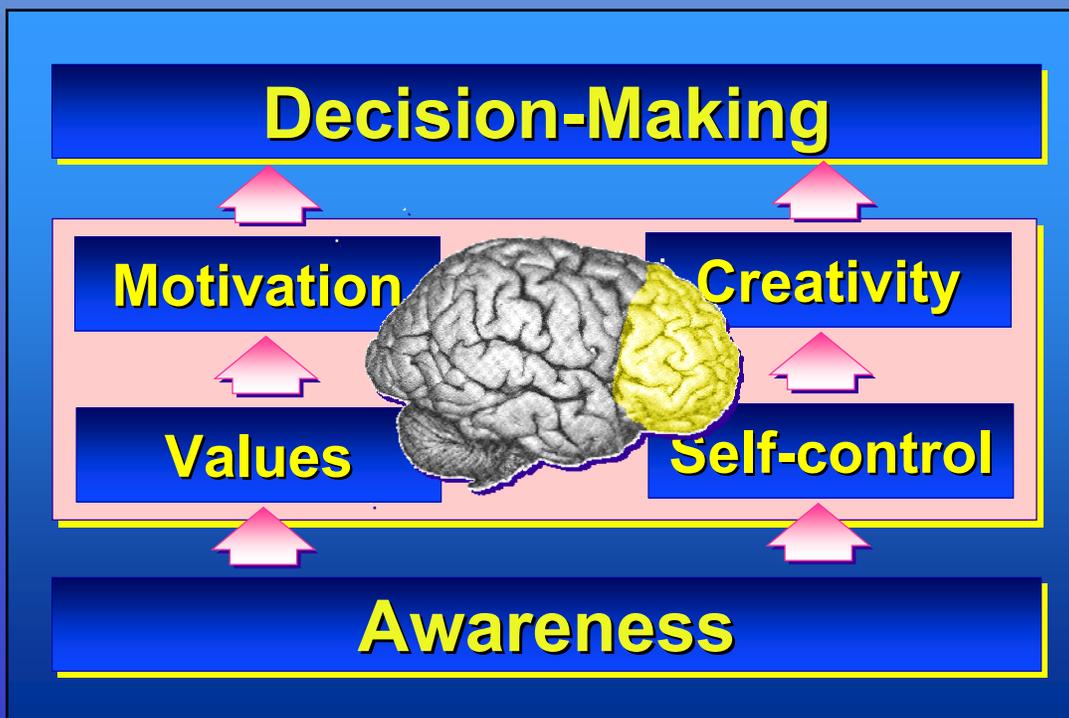


Coherence



Experience

Three Fundamentals of High Performance



Who do you want as a leader?

Conventional

Reactive
Truth (Personal)
Part (Fragmenting)
Control (win/lose)
Efficiency
(do the thing right)
Path-following
Object-Referral

Post-Conventional

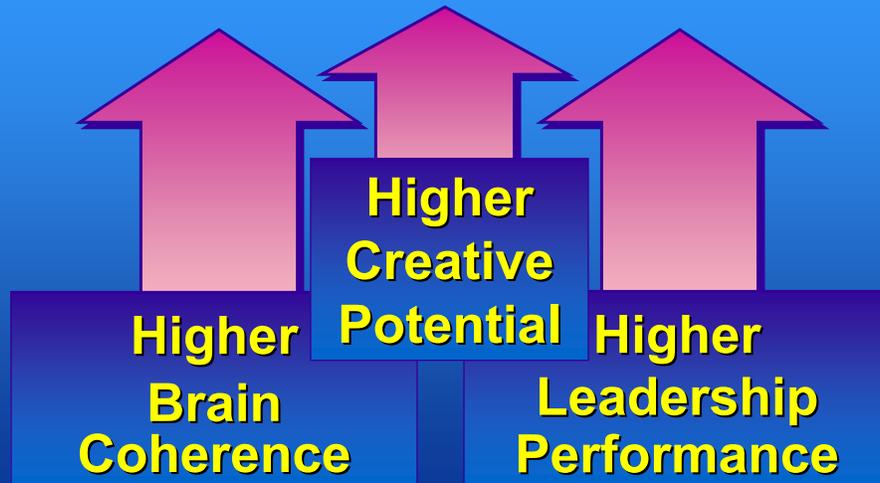
Proactive
Truth (Universal)
Whole (Unifying)
Collaboration (win/win)
Effectiveness
(do the right thing)
Path-finding
Self-Referral

Upgrading the Executive Brain

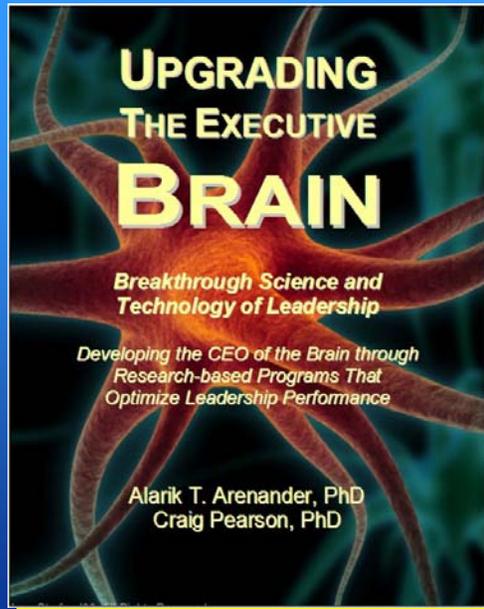
Stage	Aware-ness	Values	Self-Control	Moti- vation	Creat- ivity	Decision -Making
E9						
E8						
E7						
E6						
E5						
E4						



Upgrading the Executive Brain



**Available
Summer
2008**





**Are all
meditations
the same?**

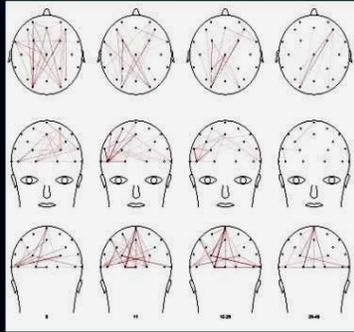
Transcending



Travis and Pearson, *Intern. J. Neuroscience*, 100: 77, 2000

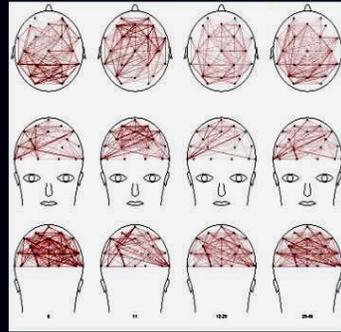
Relative Change in Coherence Pre-Post

Control Group



[—Alpha—] [Beta] [Gamma]

TM Group

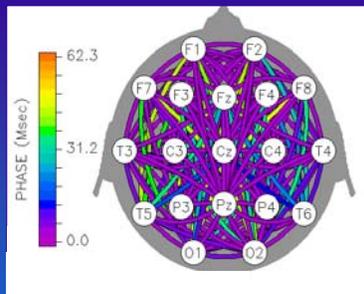


[—Alpha—] [Beta] [Gamma]

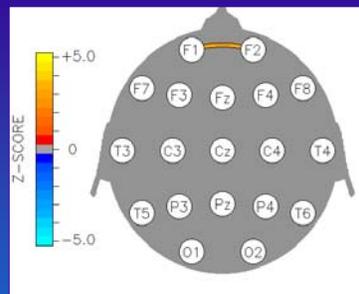
Red = More coherence at post test.

F.Travis, et al, in press, 2007

Long-Range Alpha Synchronization



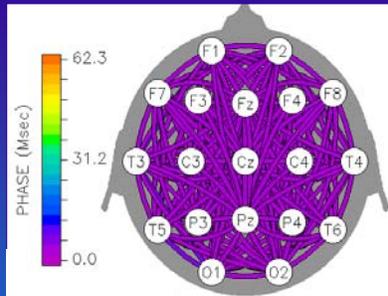
Control Subject
 Eyes-Closed Rest
 Global distribution of alpha
 zero phase-lag synchrony



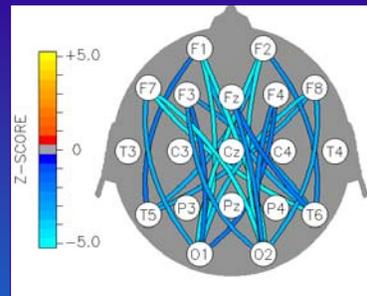
Comparison of alpha
 synchrony with normative
 database

Herbert, etal *NeuroReport*, 2006

Long-Range Alpha Synchronization



Meditator
TM practice
Global distribution of alpha
zero phase-lag synchrony



Comparison of alpha synchrony
with normative database. Note,
significant deviations are all
long distance pairings.

Herbert, etal *NeuroReport*, 2006

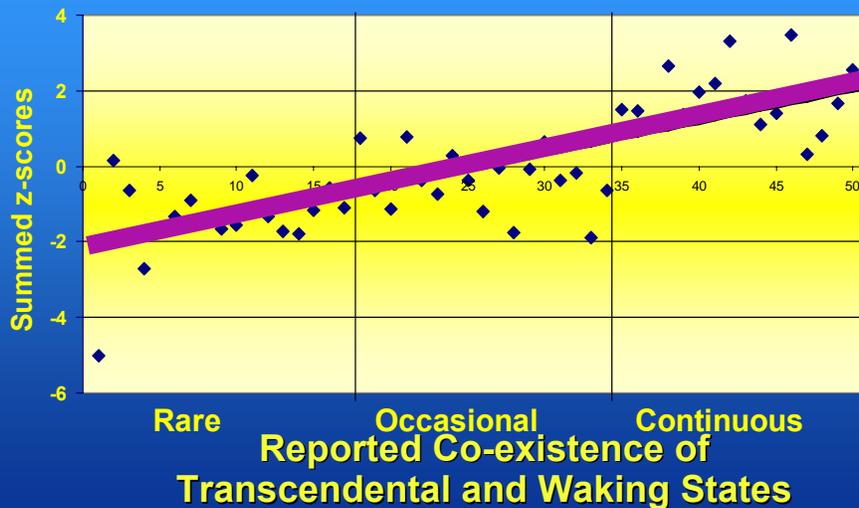
A Fifth State of Consciousness Enlightenment

Silent, inner awareness (Self)

co-existing with

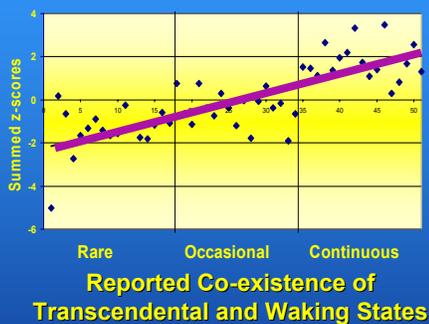
Active outer awareness (Waking)
or
Loss of outer awareness (Sleep)

Human Development



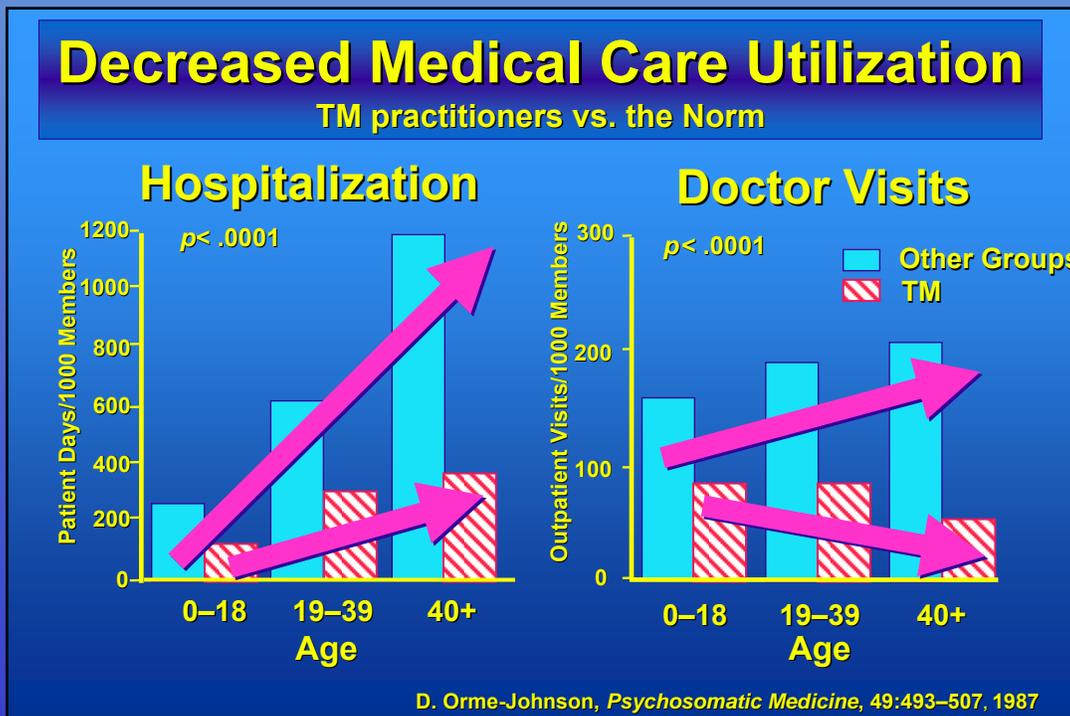
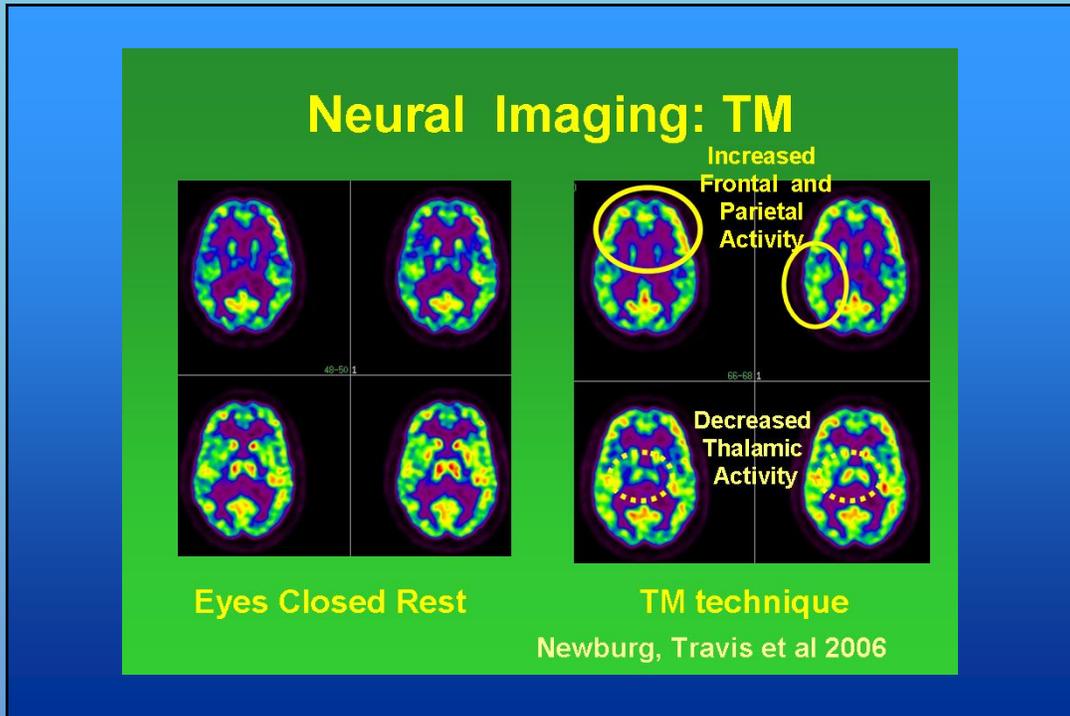
F.Travis, et al, *Biol Psych*, 2002

Brain-based Integration Scale



- ❖ PFCX Broad-Band EEG Coherence
- ❖ Global Theta-Alpha EEG Amplitude
- ❖ Global Simple-Choice CNV Difference Scores

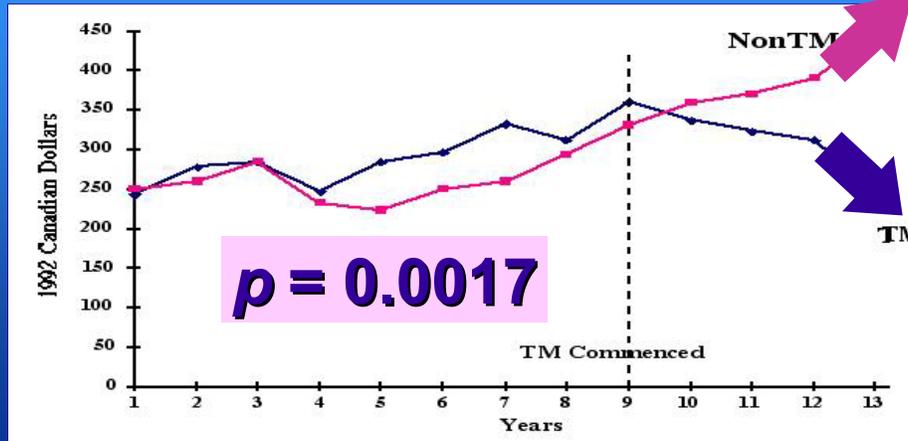
F.Travis, Tecce, Arenander, et al, *Biol Psych*, 2002



Reduction in Health Care Cost

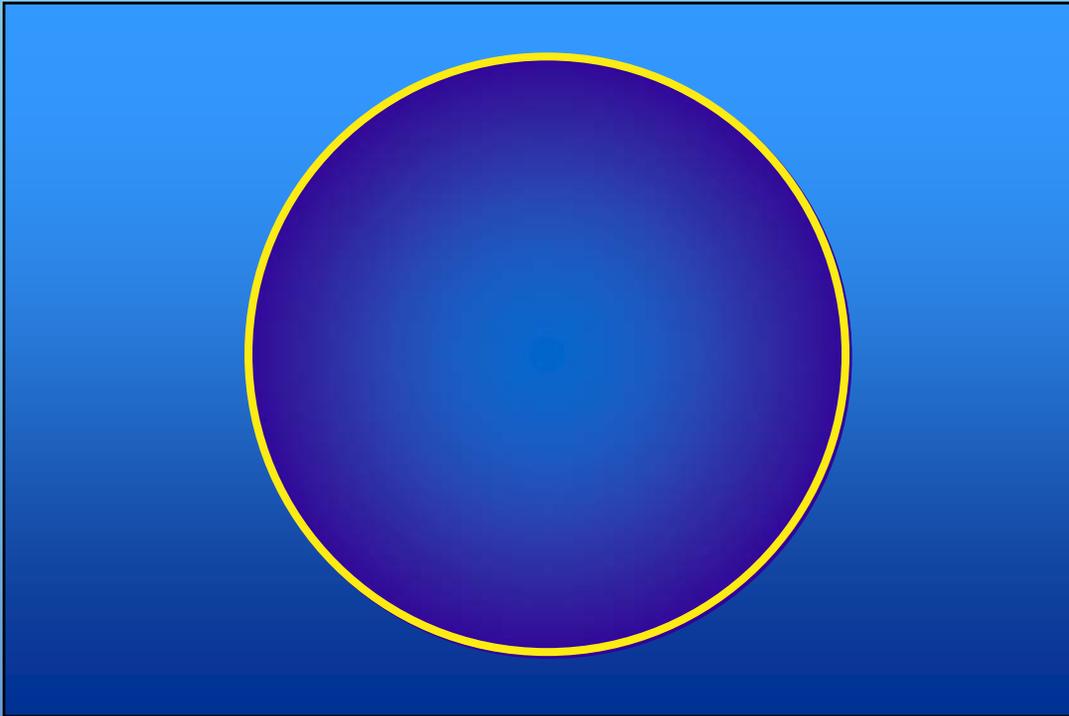
Annual inflation-adjusted payments to private physicians for treatment

Canada, >65 yrs age; all settings; N=163



R. Herron, etal, *J. Soc Behav Personality*, 2001

Vastu



VĀSTU

**Perfection of Natural
Law at the Inception**

- **Orientation**
- **Placement**
- **Proportion**
- **Building elements,**
- **Site elements**
- **Slope and shape of land**
- **Exposure to rising sun**
- **Elements in the environment**

Your Cognitive Map

- **Space-time framework**
- **Timeline of life**
- **Memory context**
- **Identity construct**

Constructing a model or map of the Self

Creating reality
Creating space-time

Place

(spatial location, 1971)

Head Direction

(internal compass, orientation, 1984)

Grid

(path integration, 2004)



'Grid' Cells

Establish Field

Rishi Value

'Grid' Cells

Path Integration

**Crystalline triangular
grid pattern that covers
the entire environment**

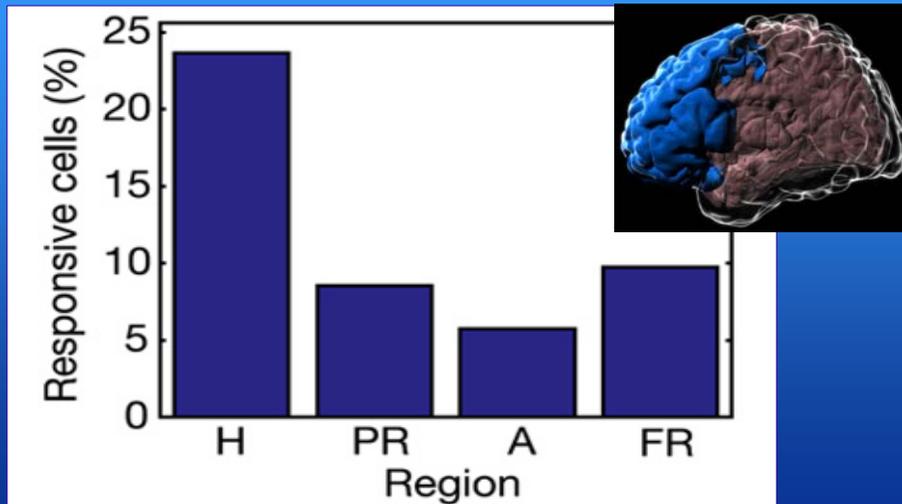
Head Direction Cells

Flow of Attention
Devata Value

Place Cells

Point
Chhandas Value

Human Place Cells



Invincibility

- Brain designed to remember experience across all states of consciousness
- Register and store experience of TC

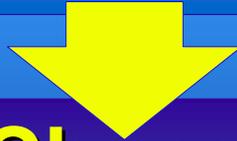
Invincibility

During Transcending, Grid cells would have alternative firing pattern corresponding to increasing degrees of SR and decreasing values of OR (space-time) configuration

PFC

- Spatial firing patterns related to non-spatial values: goals, reward...
- PFC neurons phase-locking to the hippocampal theta rhythm; working memory

**Change brain
activity**



**Change
connection to self
and the world**

**Maharishi Sthapatya
Veda®**

**Connecting individual
life with Cosmic Life
Individual intelligence
with Cosmic Intelligence**

Invincibility

Invincibility

**Maintain identity,
integrity, stability
in midst of change**

Invincibility

**Ability of the system to
resist disorder based
on coherent collective
functioning**

Invincibility

**Handle change
by handling
nonchange**

Invincibility

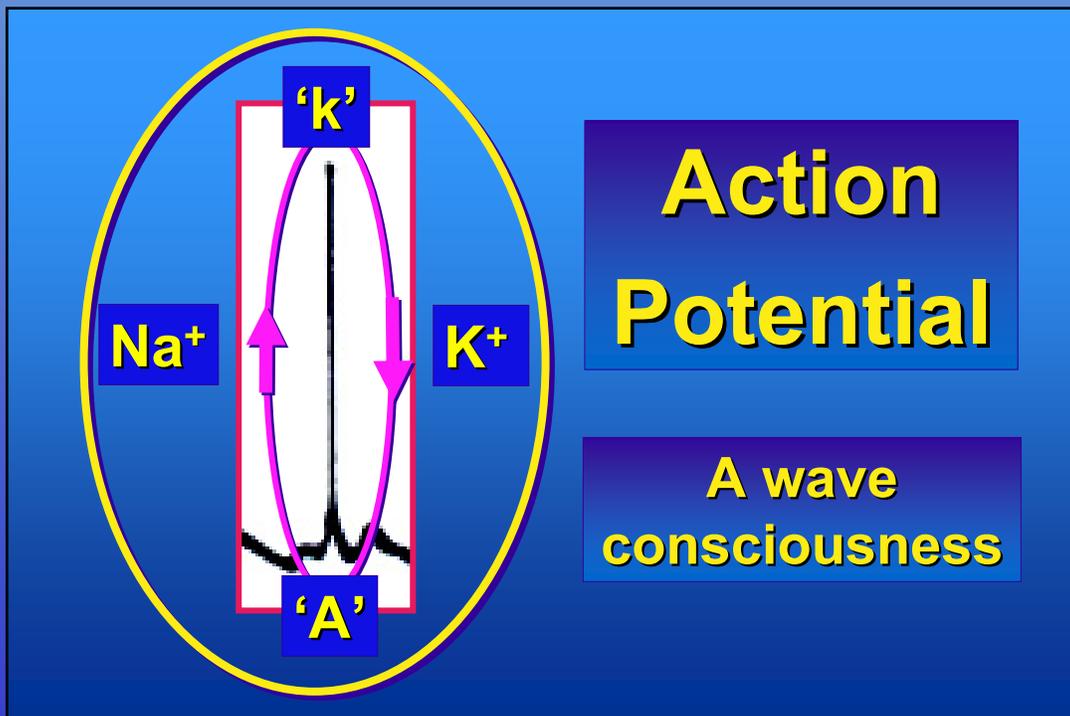
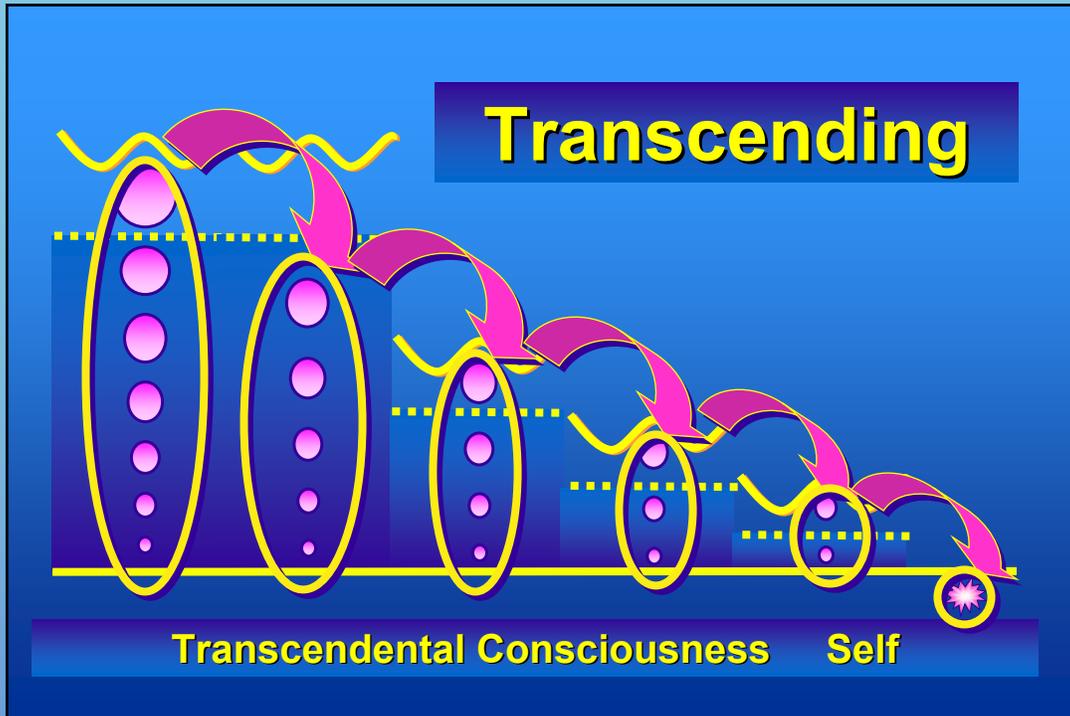
Self-Referral Consciousness

प्रकृतिं स्वामवष्टभ्य विसृजामि पुनः पुनः
भूतग्राममिमं कृत्स्नमवशं प्रकृतेर्वशात्

*Prakṛitiṃ svām avashtabhya visṛijāmi punaḥ punaḥ
bhūta-grāmam imaṃ kṛitsnam avashaṃ prakṛiter
vashāt*

Curving back upon My own Nature, I create again and again—creation and administration of creation, both are a natural phenomenon on the basis of My self-referral consciousness.

Bhagavad-Gītā 9.8



Two Modes

Burst

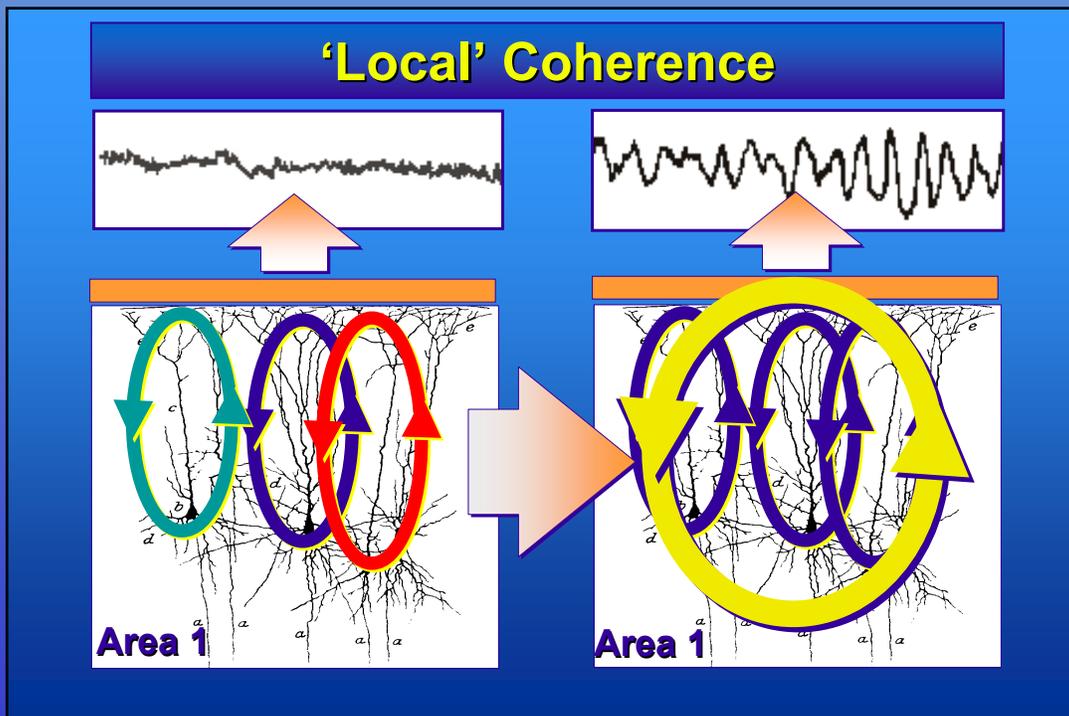
Silent

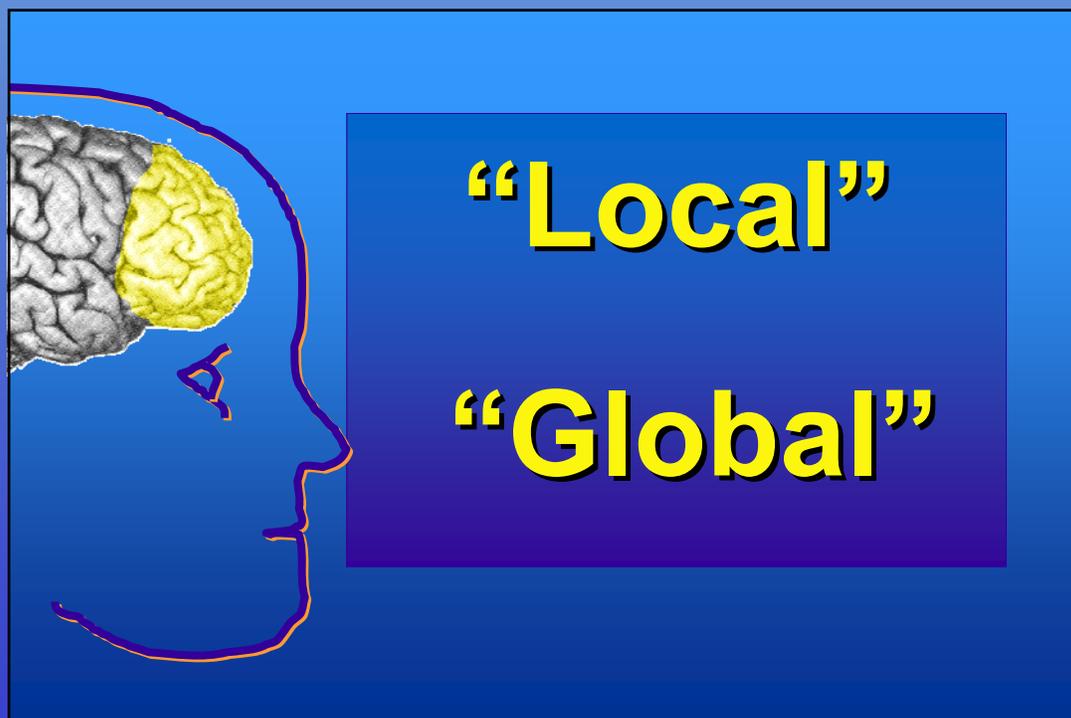
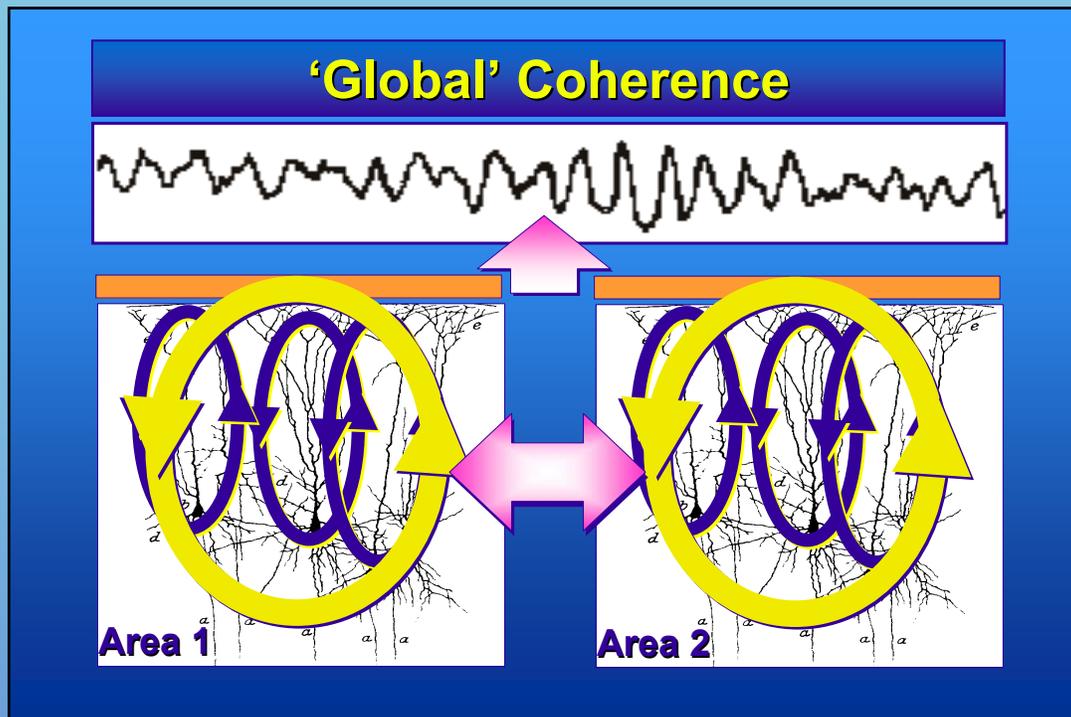
'A'

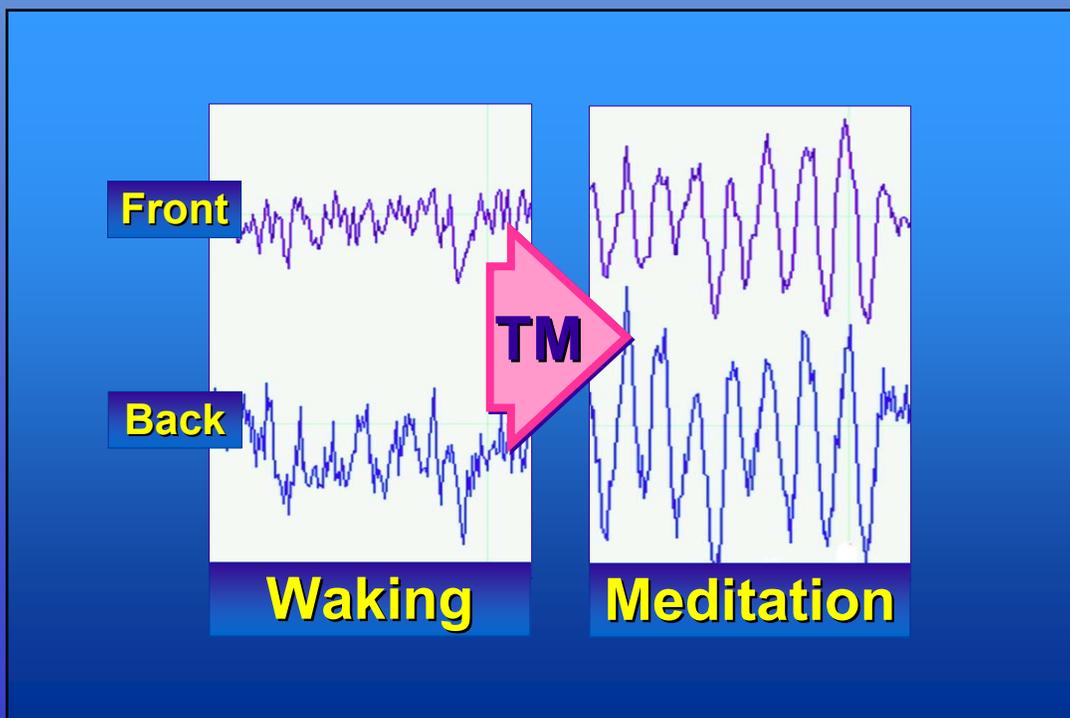
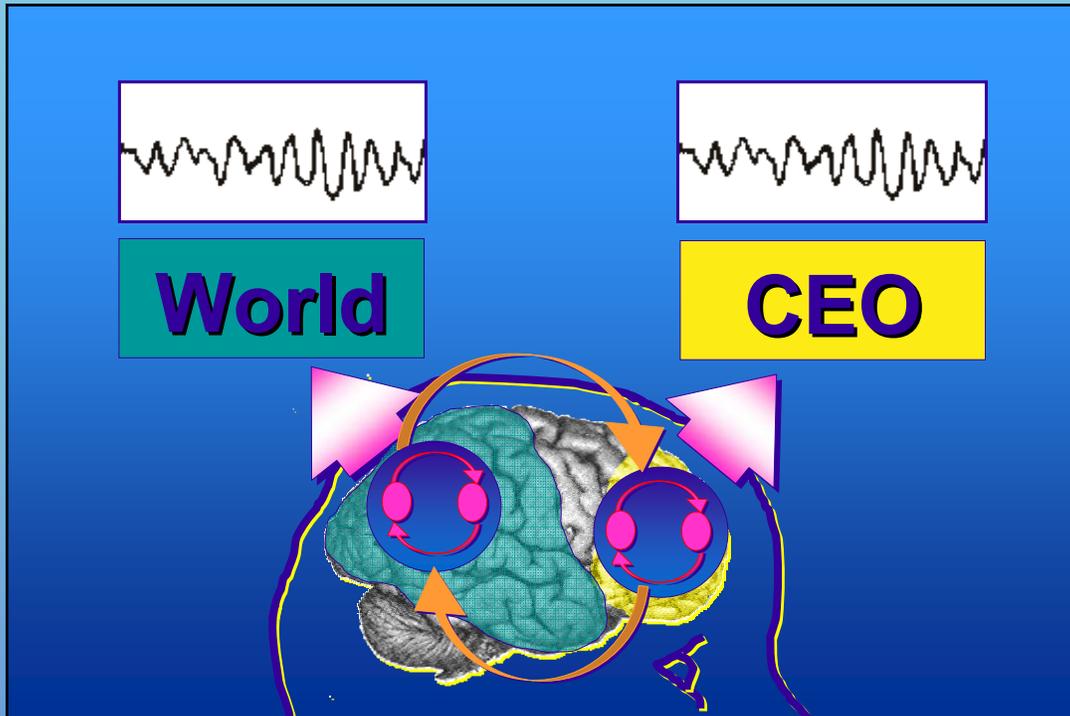
Relay

Dynamic

'k'







शिवं शान्तमद्वैतं चतुर्थं मन्यन्ते स आत्मा स विज्ञेयः

*Shivam shāntam advaitam chaturtham manyante sa Ātmā
sa vi gñeyah*

The peaceful, the blissful, the undivided is thought to be the fourth;
that is the Self. That is to be known.

Nrisimhottar atāpanīya Upanishad 1

