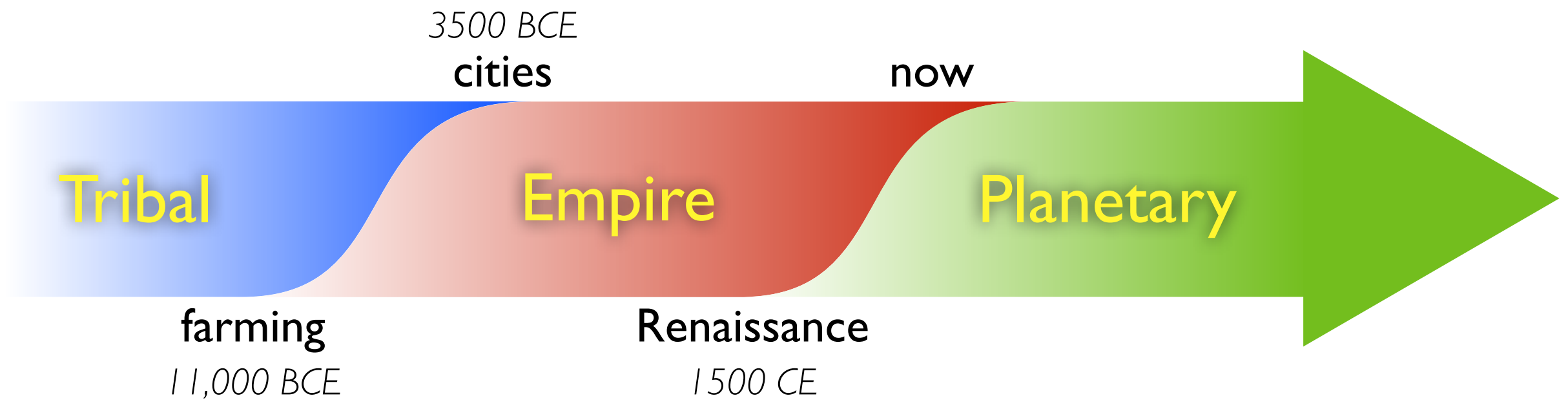
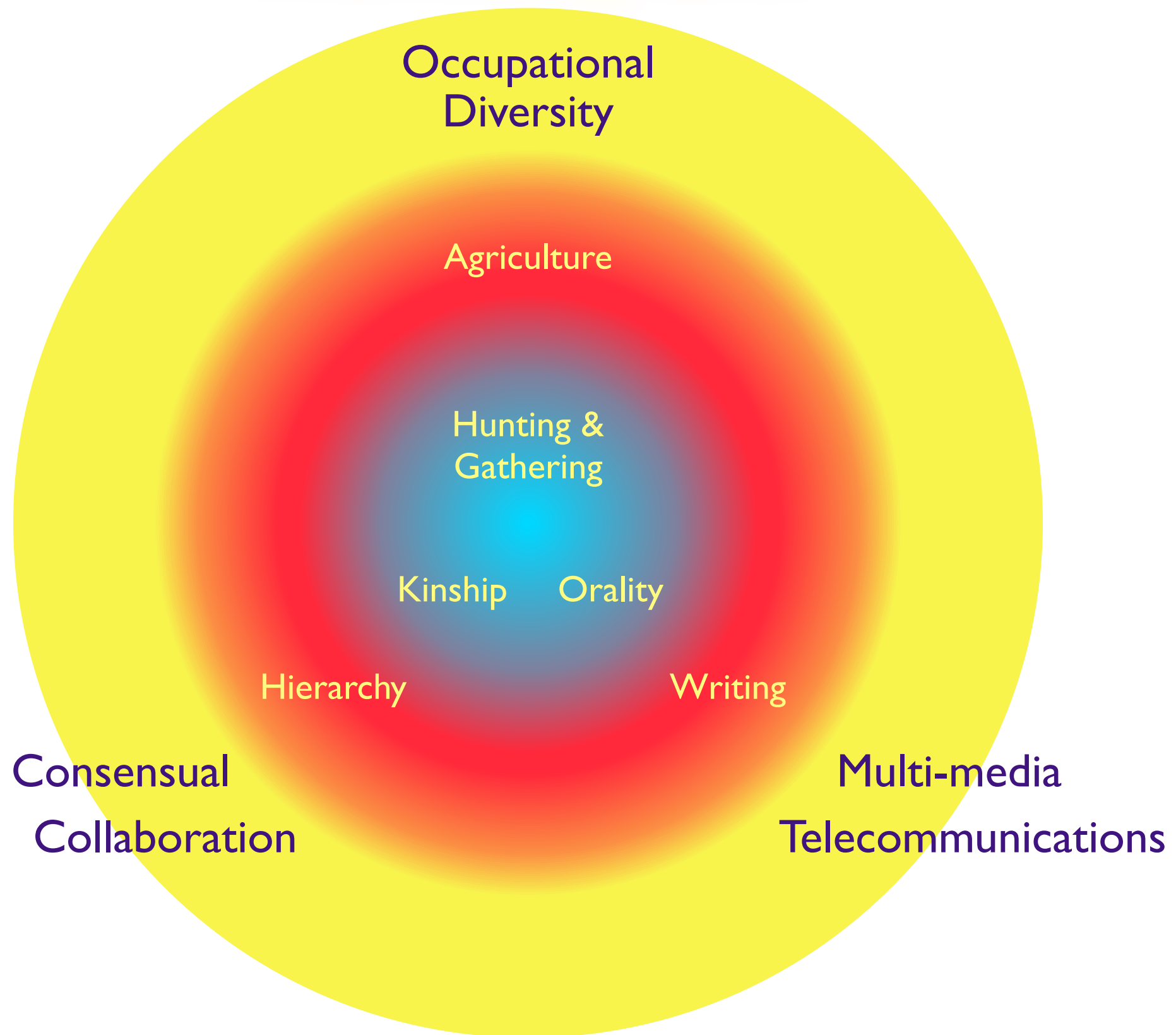


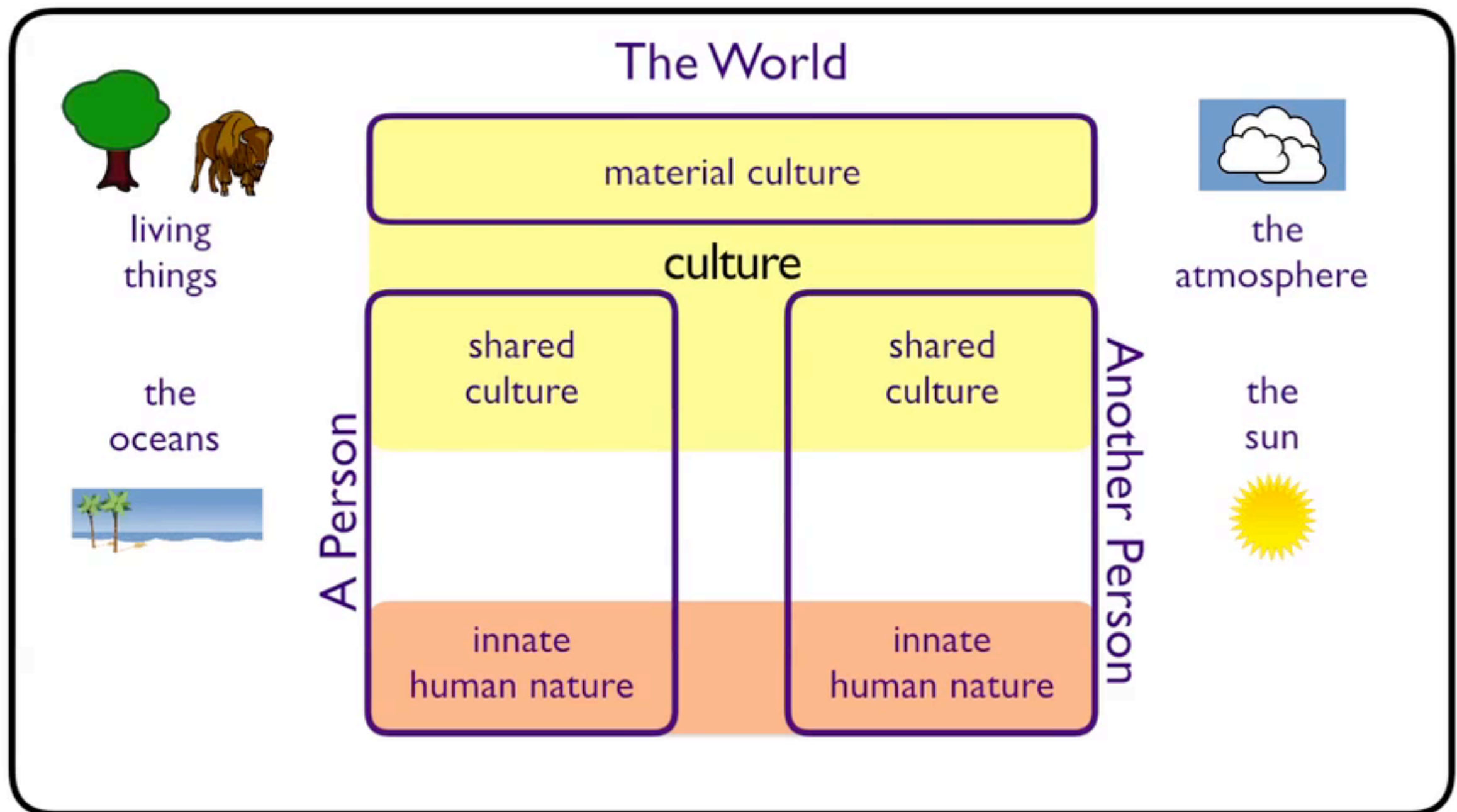
Outline of History



Planetary Era



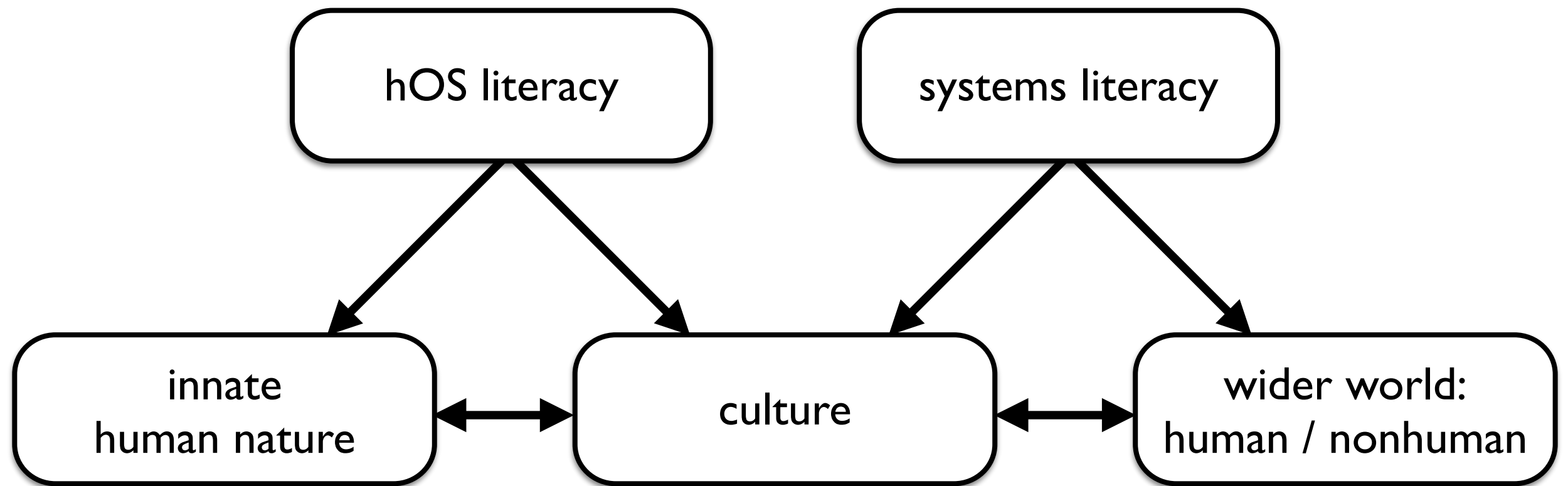
Culture As Interface



Culture As Interface



Two Literacies



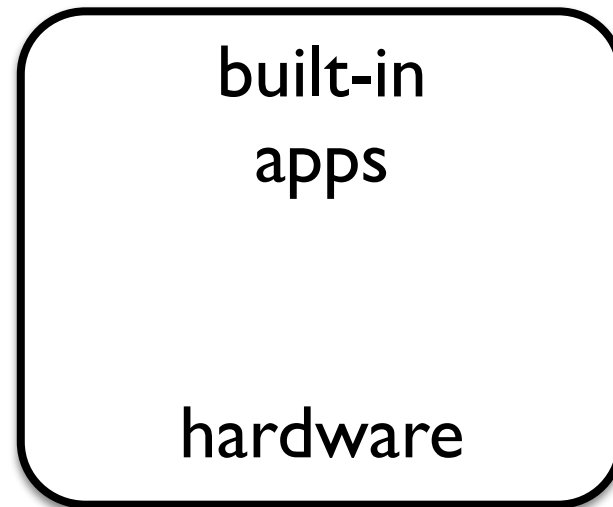
Human Operating System



Feature Phone

Human Operating System

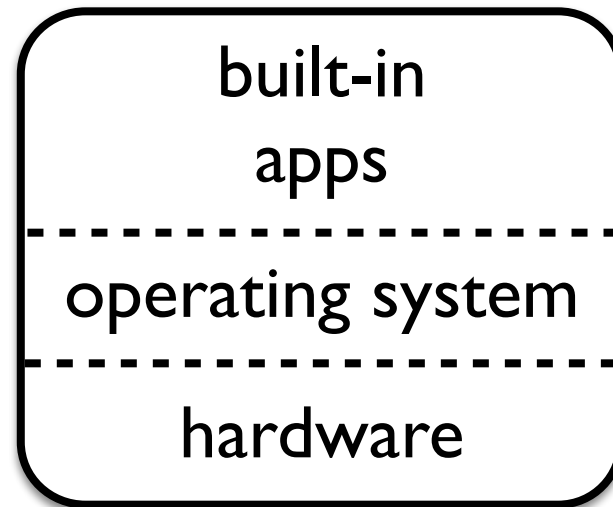
User Point-of-View



Feature Phone

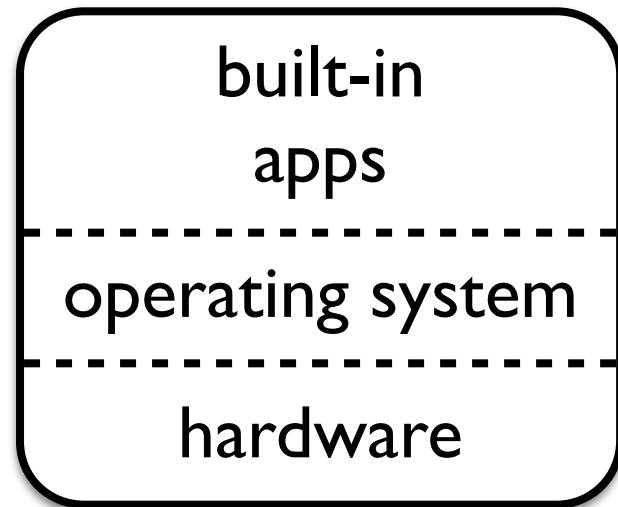
Human Operating System

Developer Point-of-View



Feature Phone

Human Operating System

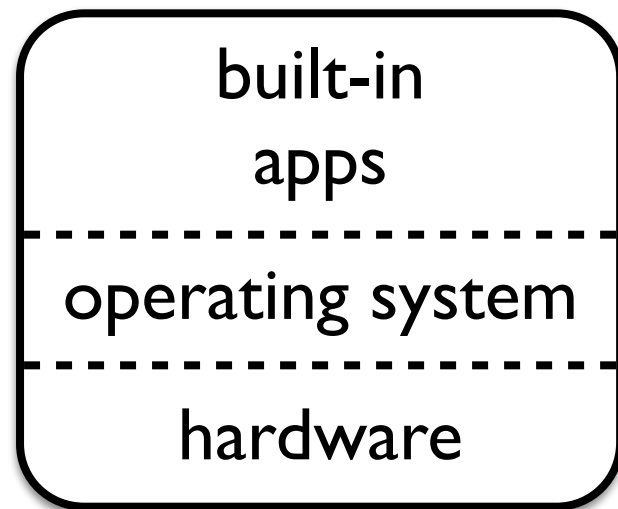


Feature Phone

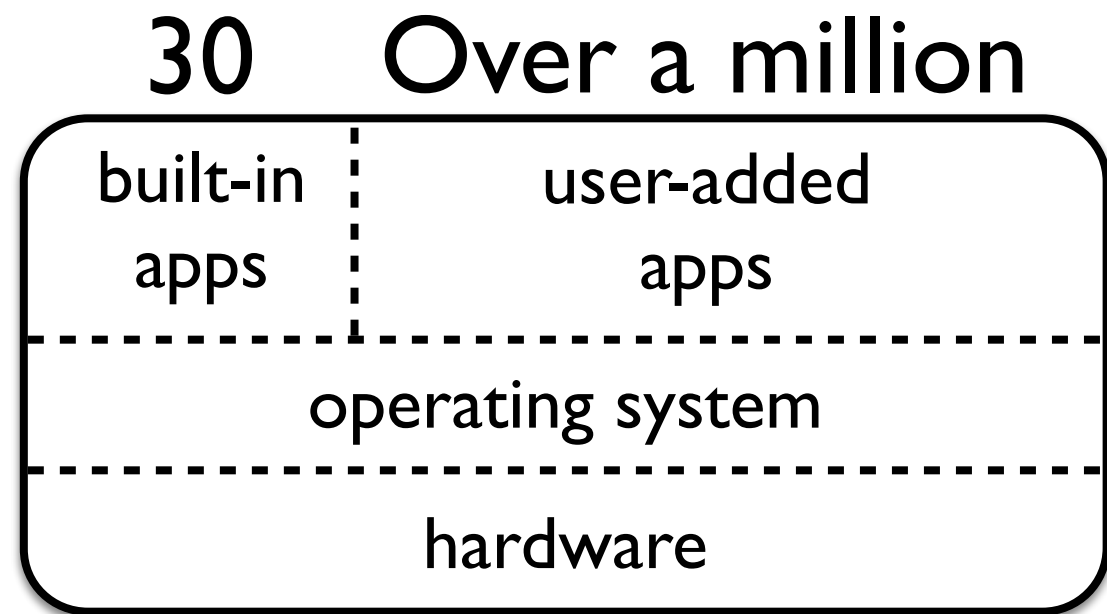


Smart Phone

Human Operating System

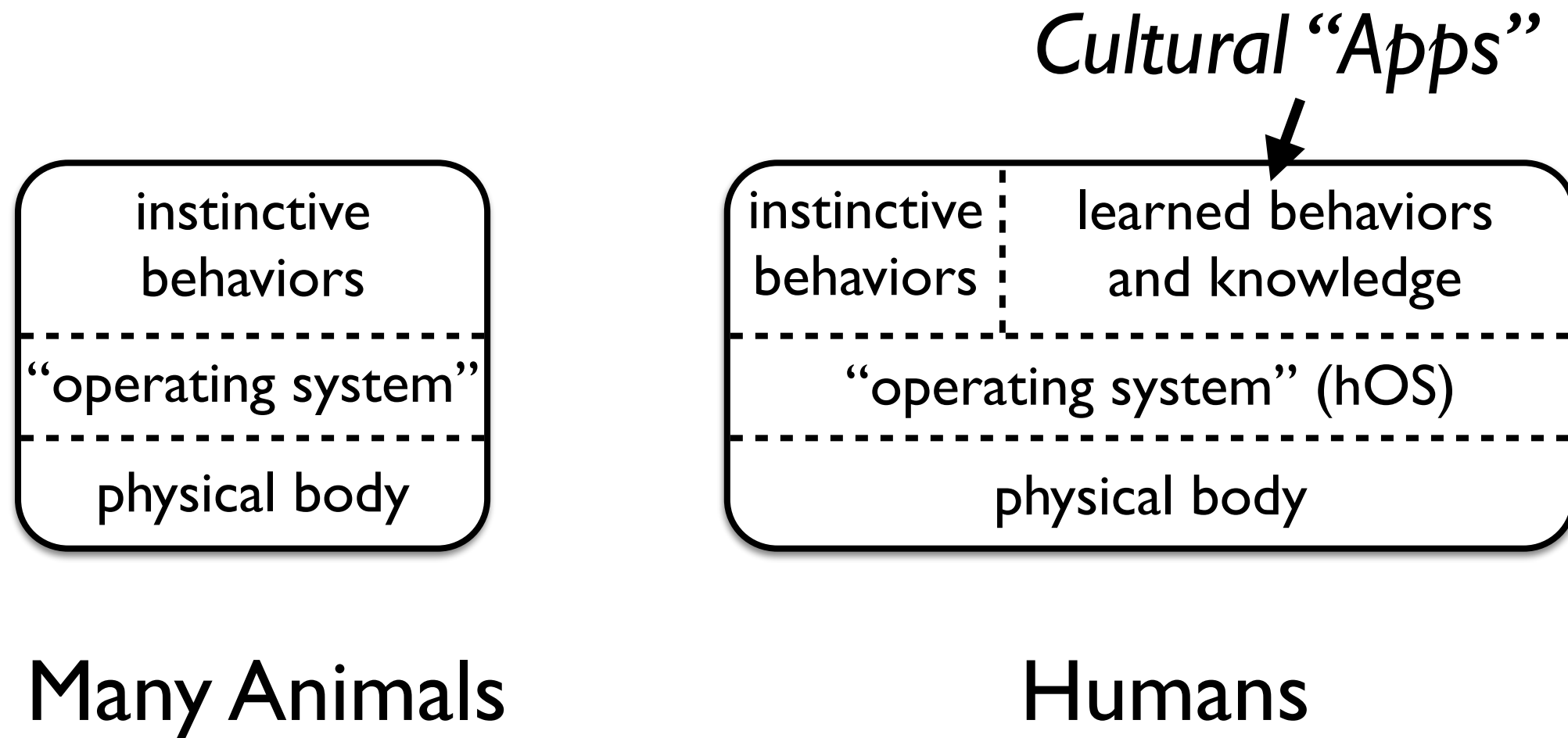


Feature Phone



Smart Phone

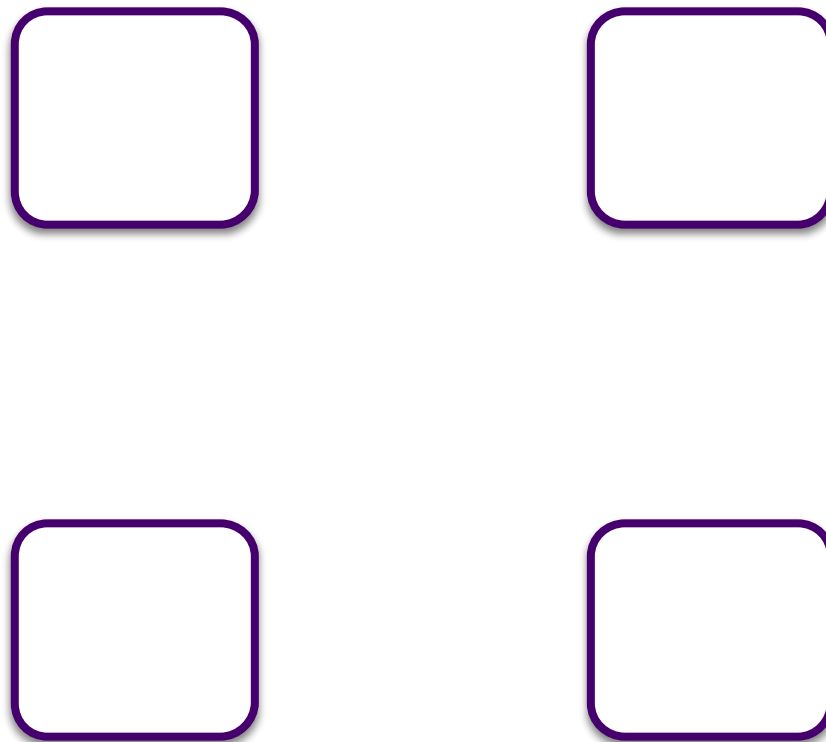
Human Operating System



Working Memory Experience

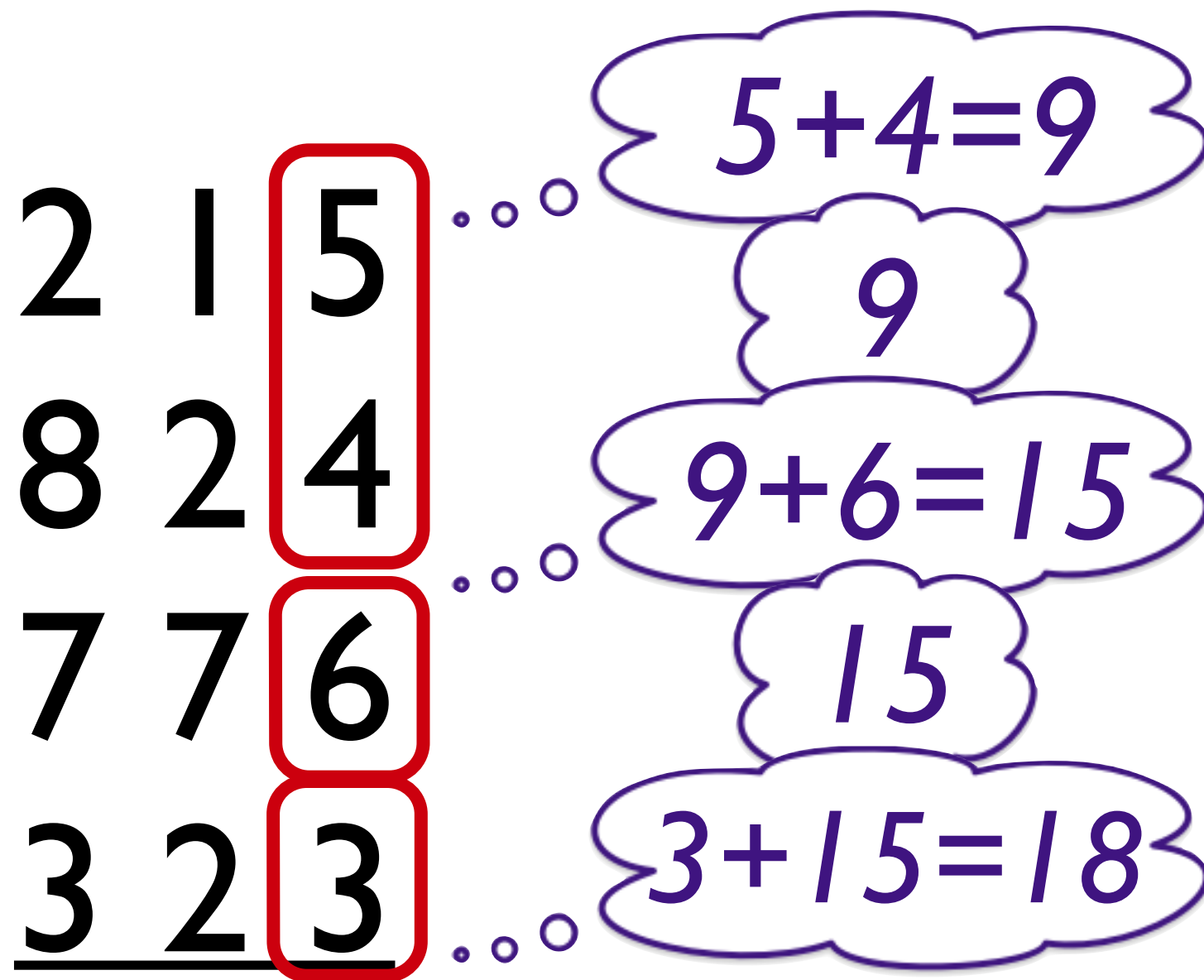
- I'll speak some numbers
- You add them in your head
- Raise your hand to report how hard it was for you:
 - * Easy – raise your hand all the way up
 - * Challenging – part way up
 - * Couldn't do it – don't raise your hand at all

Working Memory Experience



4 ± 1 chunks at a time

Working Memory Experience



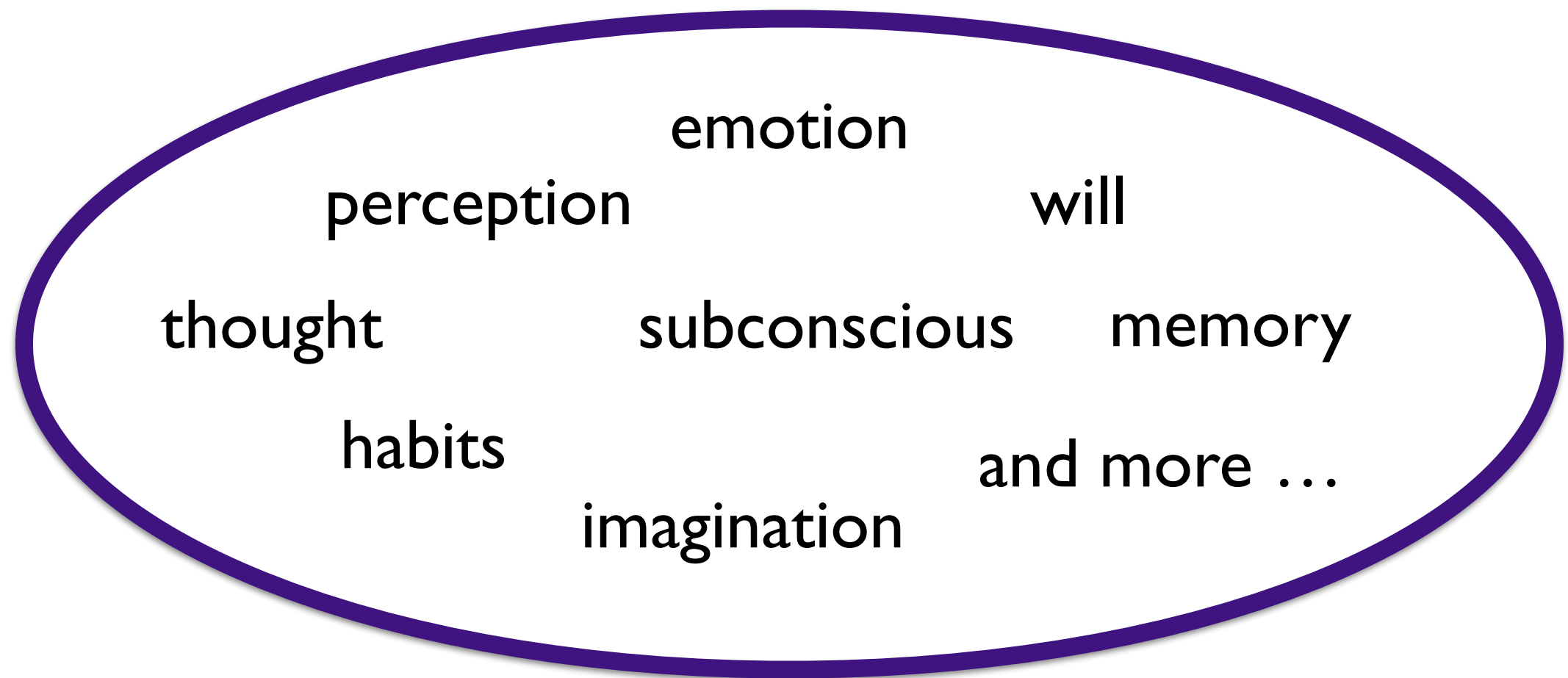
Exploration & Break

Exploring the hOS

- Scope of mind
- Patterns
- Optimal zone

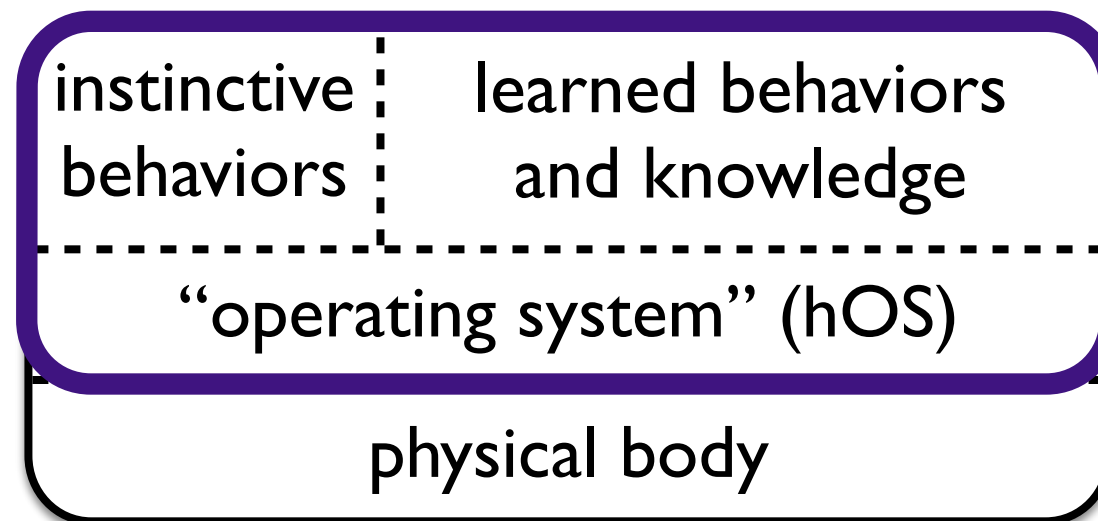
Scope

Mind



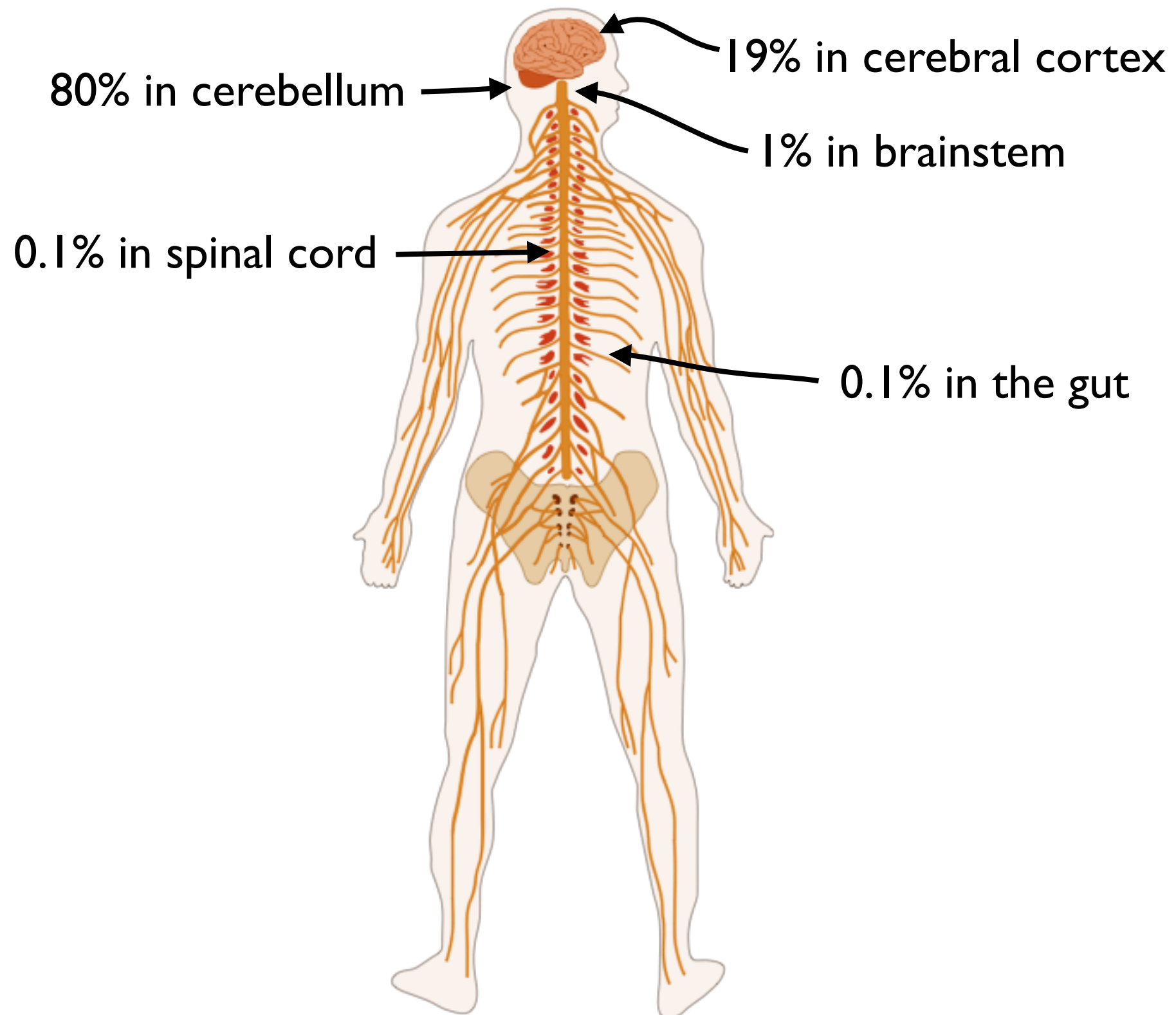
Scope

Mind



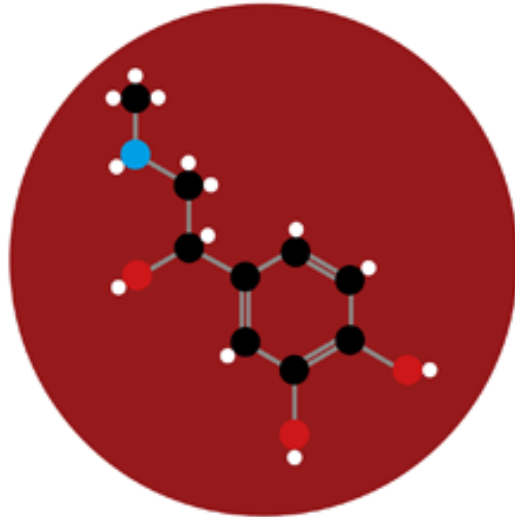
Humans

Biology of Mind – Neurons



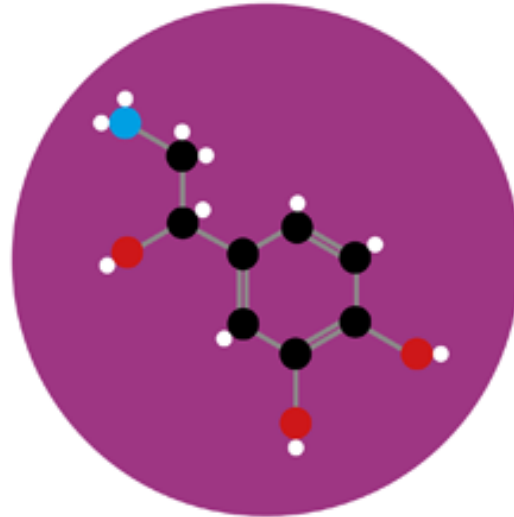
Biology of Mind – Neurotransmitters

ADRENALINE $C_9H_{13}NO_3$
THE 'FIGHT OR FLIGHT' NEUROTRANSMITTER



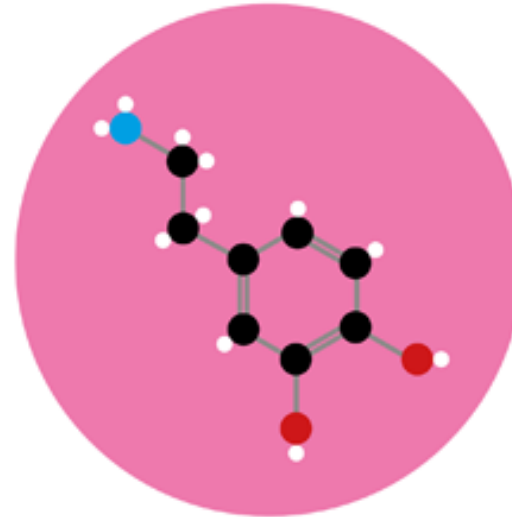
fight or flight

NORADRENALINE $C_8H_{11}NO_3$
THE CONCENTRATION NEUROTRANSMITTER



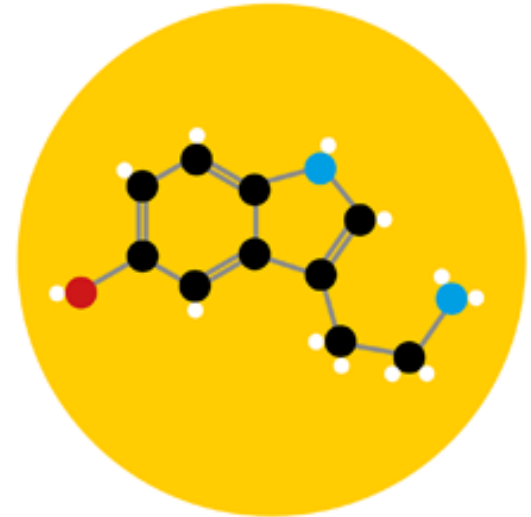
concentration

DOPAMINE $C_8H_{11}NO_2$
THE PLEASURE NEUROTRANSMITTER



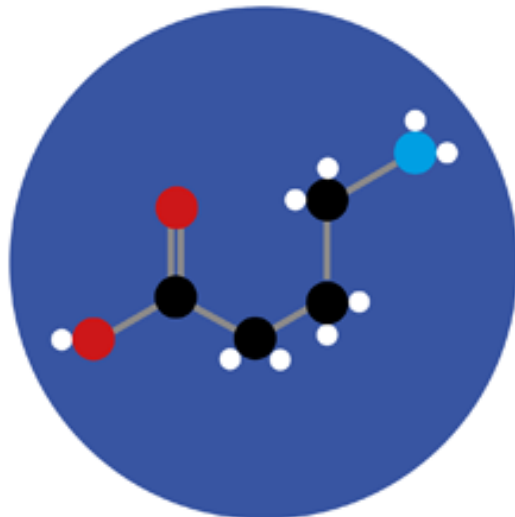
pleasure

SEROTONIN $C_{10}H_{12}N_2O$
THE MOOD NEUROTRANSMITTER



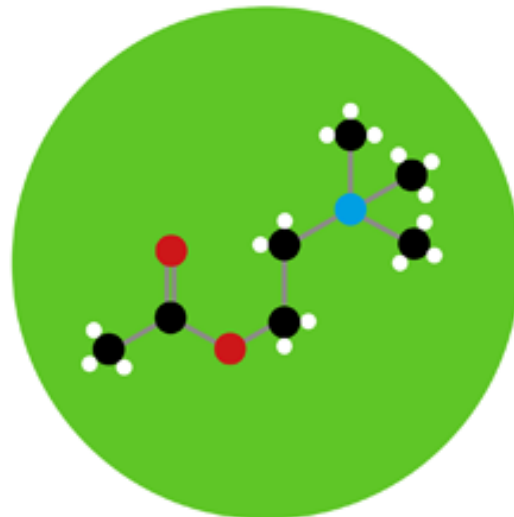
mood

γ -AMINOBUTYRIC ACID $C_4H_9NO_2$
THE CALMING NEUROTRANSMITTER



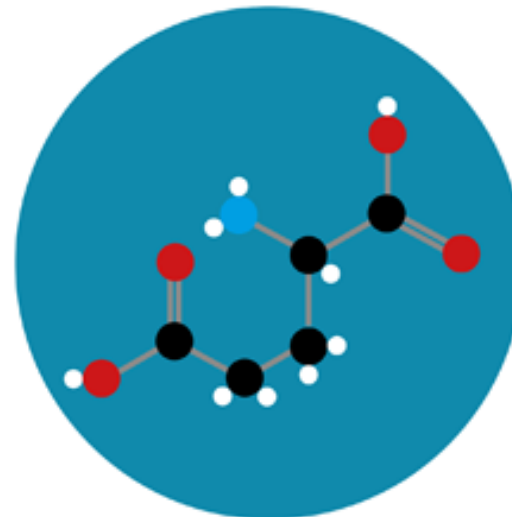
calming

ACETYLCHOLINE $C_7H_{16}NO_2^+$
THE LEARNING NEUROTRANSMITTER



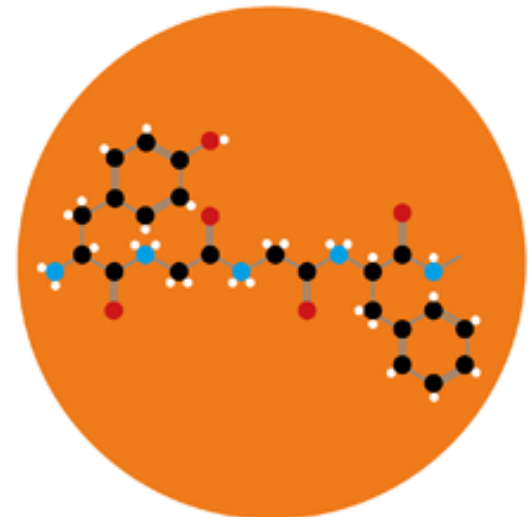
learning

GLUTAMATE $C_5H_9NO_4$
THE MEMORY NEUROTRANSMITTER



memory

ENDORPHINS 20+ TYPES IN THE HUMAN BODY
THE EUPHORIA NEUROTRANSMITTERS

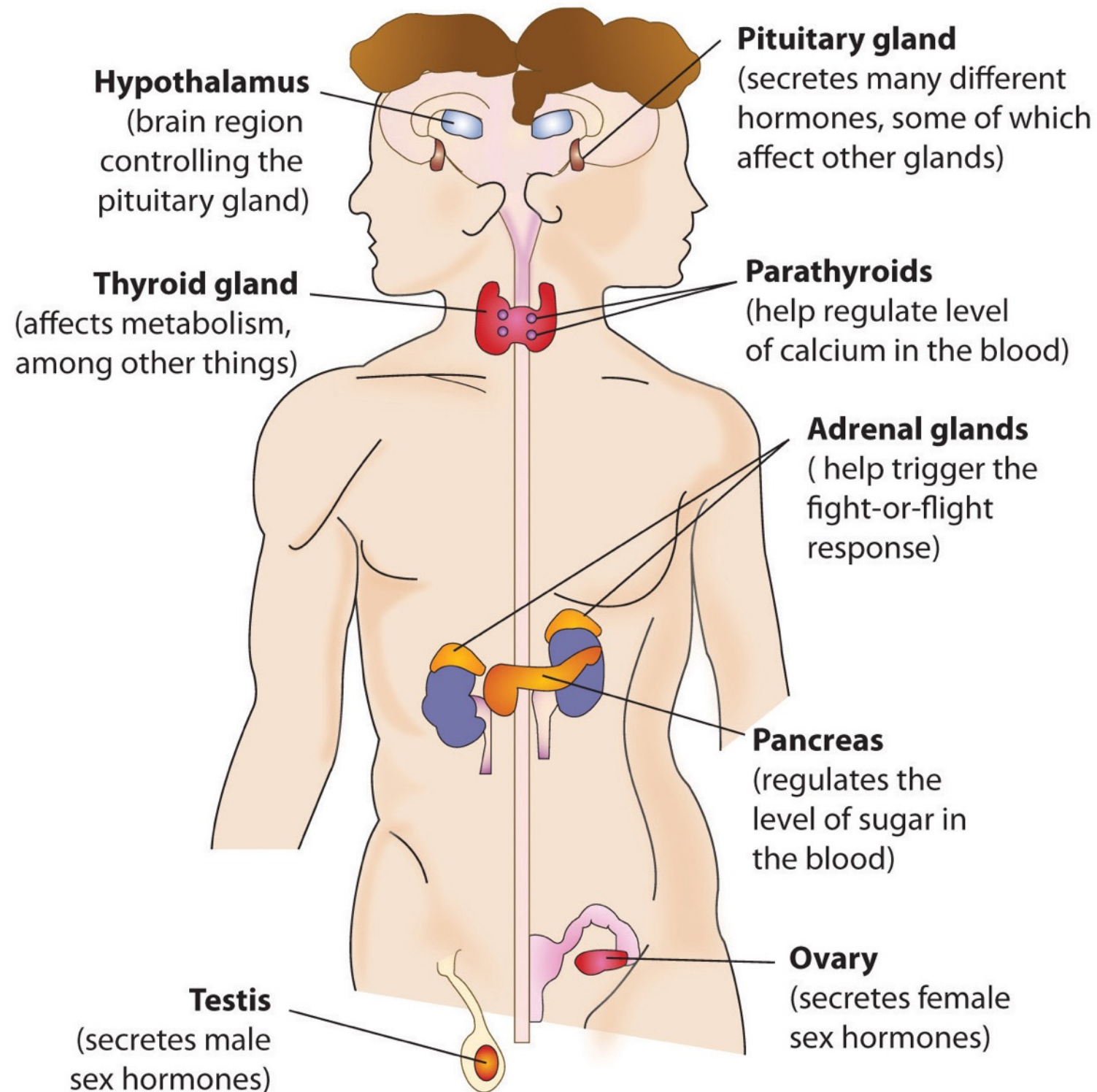


euphoria

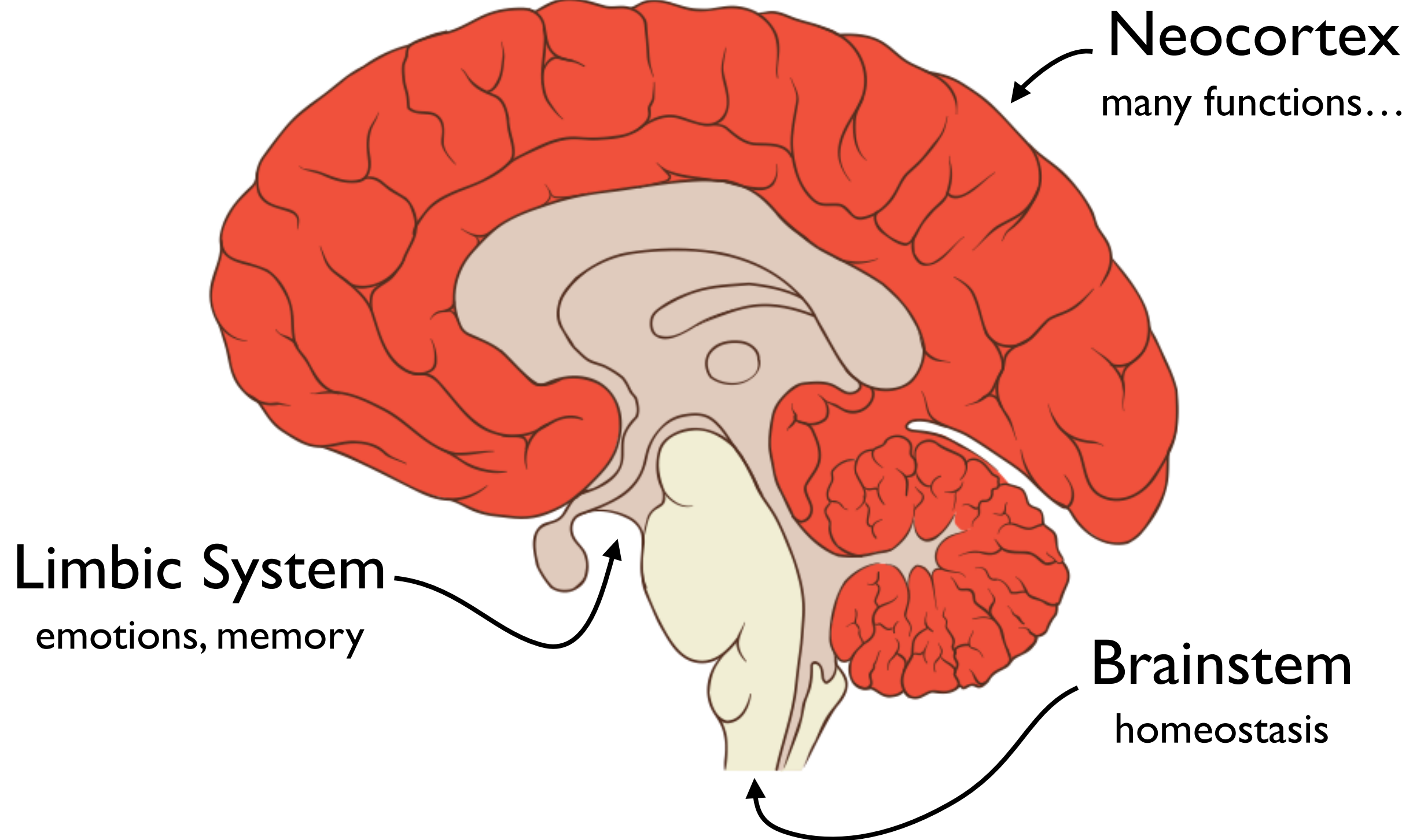
Biology of Mind – Hormones

Male

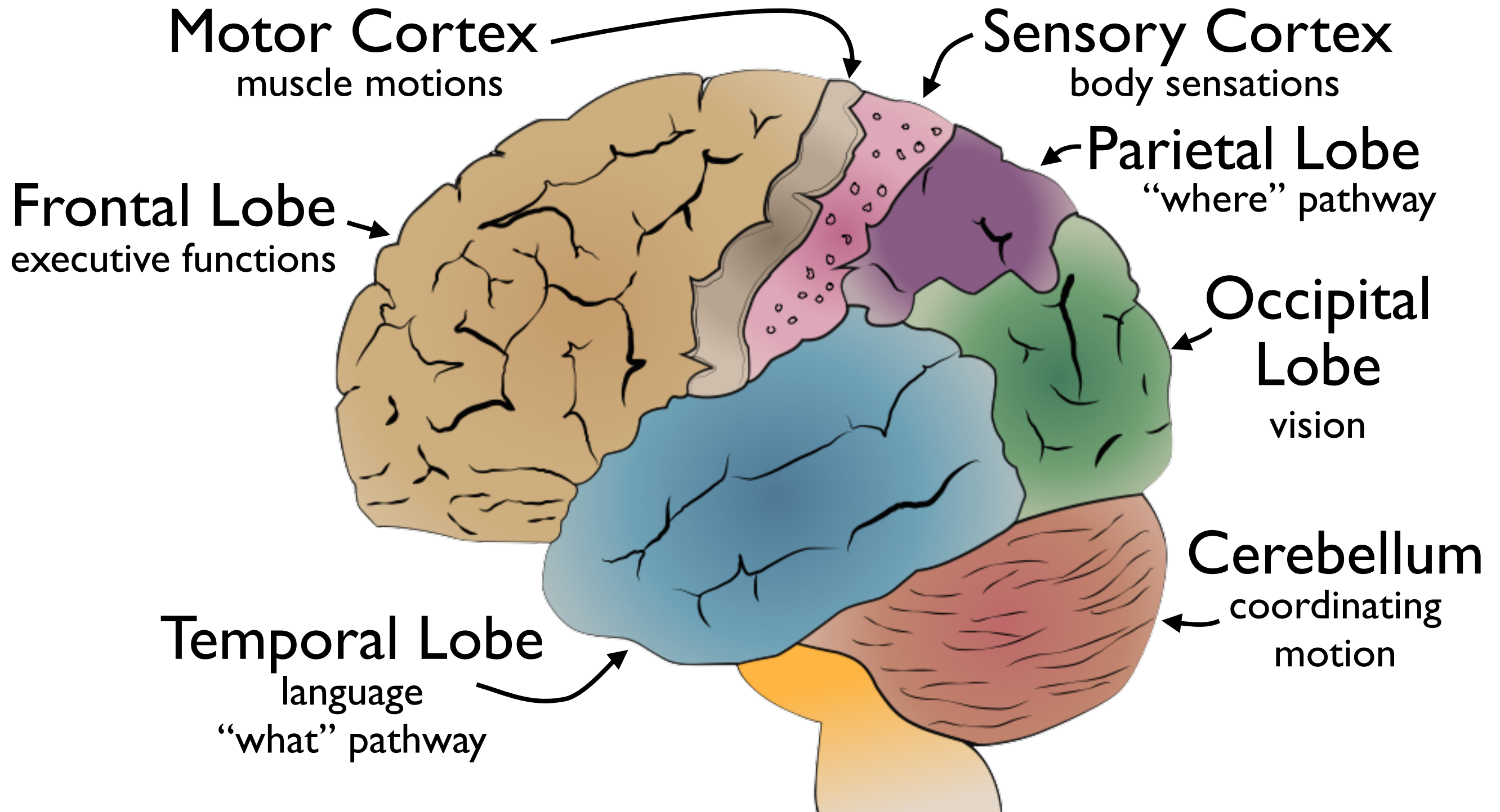
Female



Biology of Mind – Brain



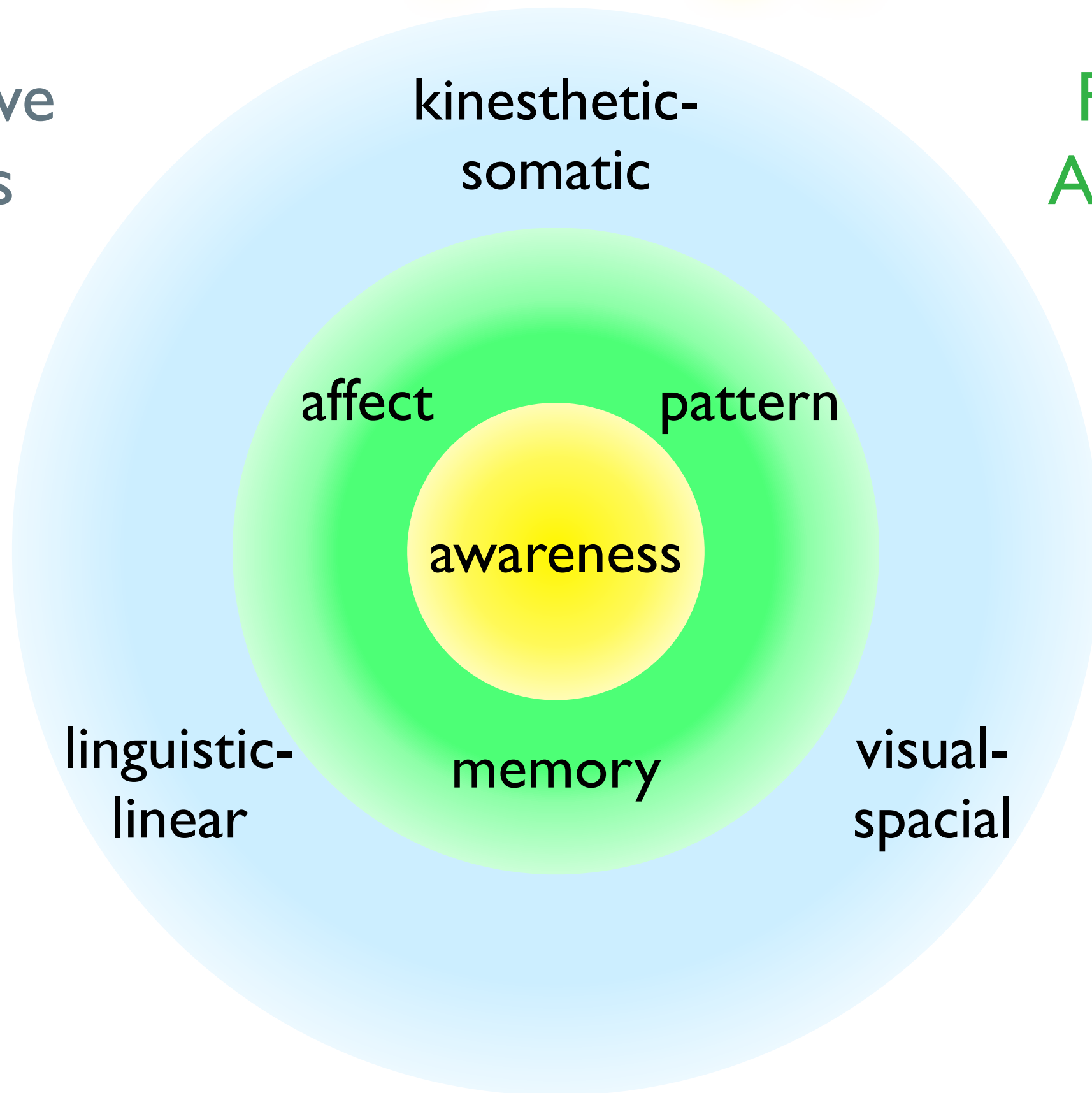
Biology of Mind – Brain



Human Operating System

Cognitive
Modes

Facets of
Awareness



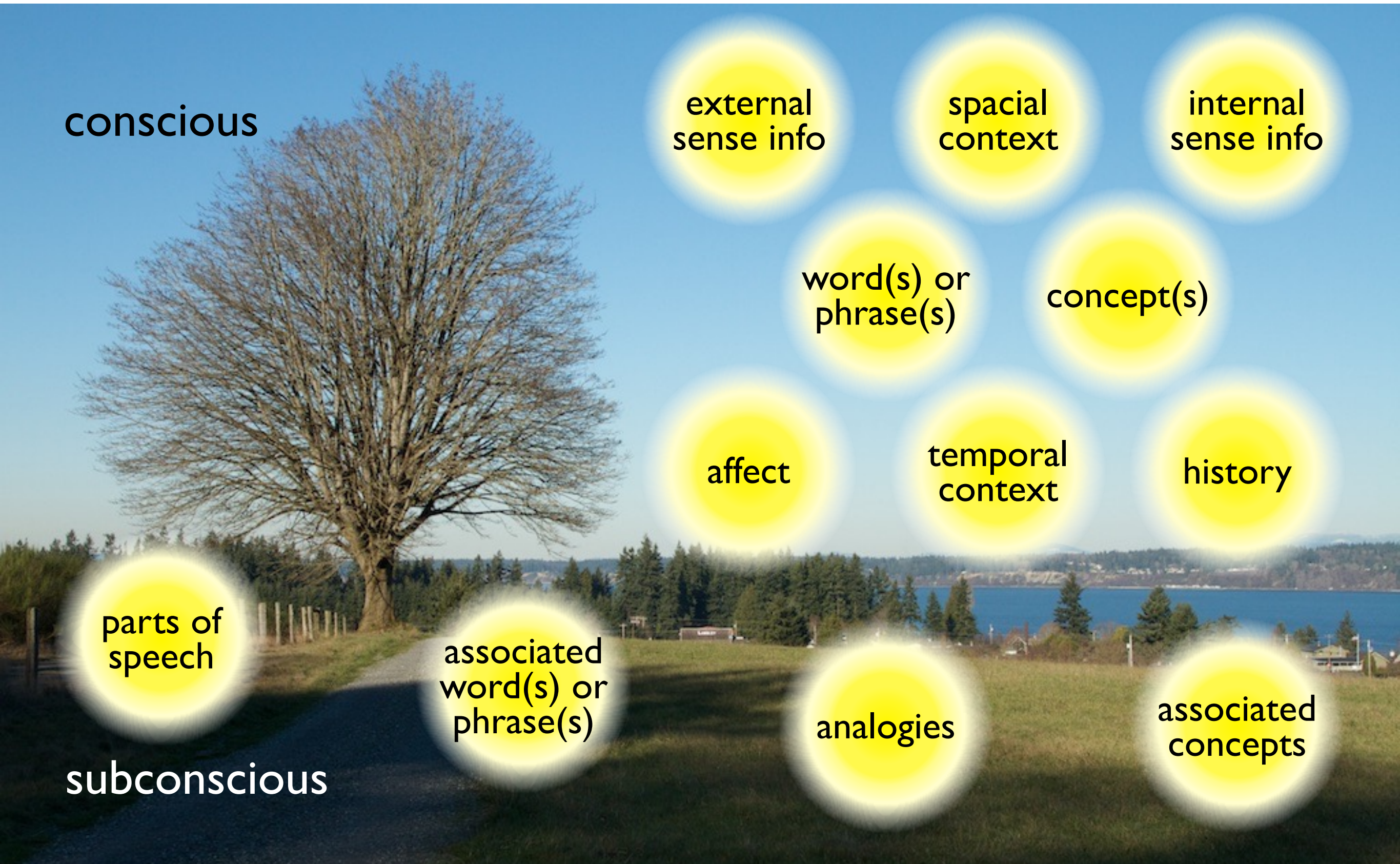
Human Operating System

Self with choice ...



... in space and time

Awareness



Mind-Bundles

external
sense info

spacial
context

internal
sense info

concept(s)

conscious

affect

word(s) or
phrase(s)

temporal
context

history

subconscious

parts of
speech

associated
word(s) or
phrase(s)

analogies

associated
concepts

Conscious and Subconscious

conscious

subconscious

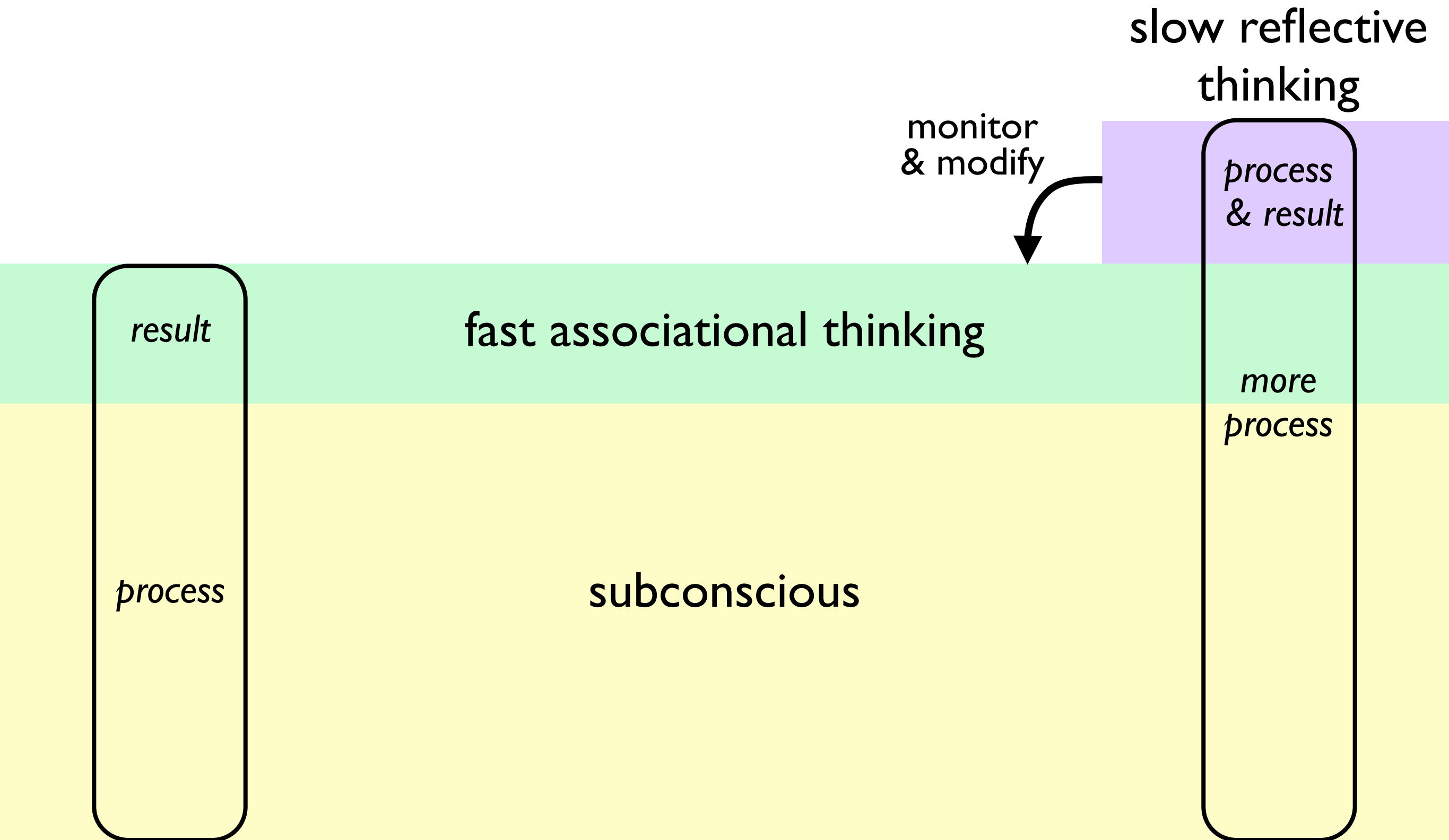
THINKING,
FAST AND SLOW



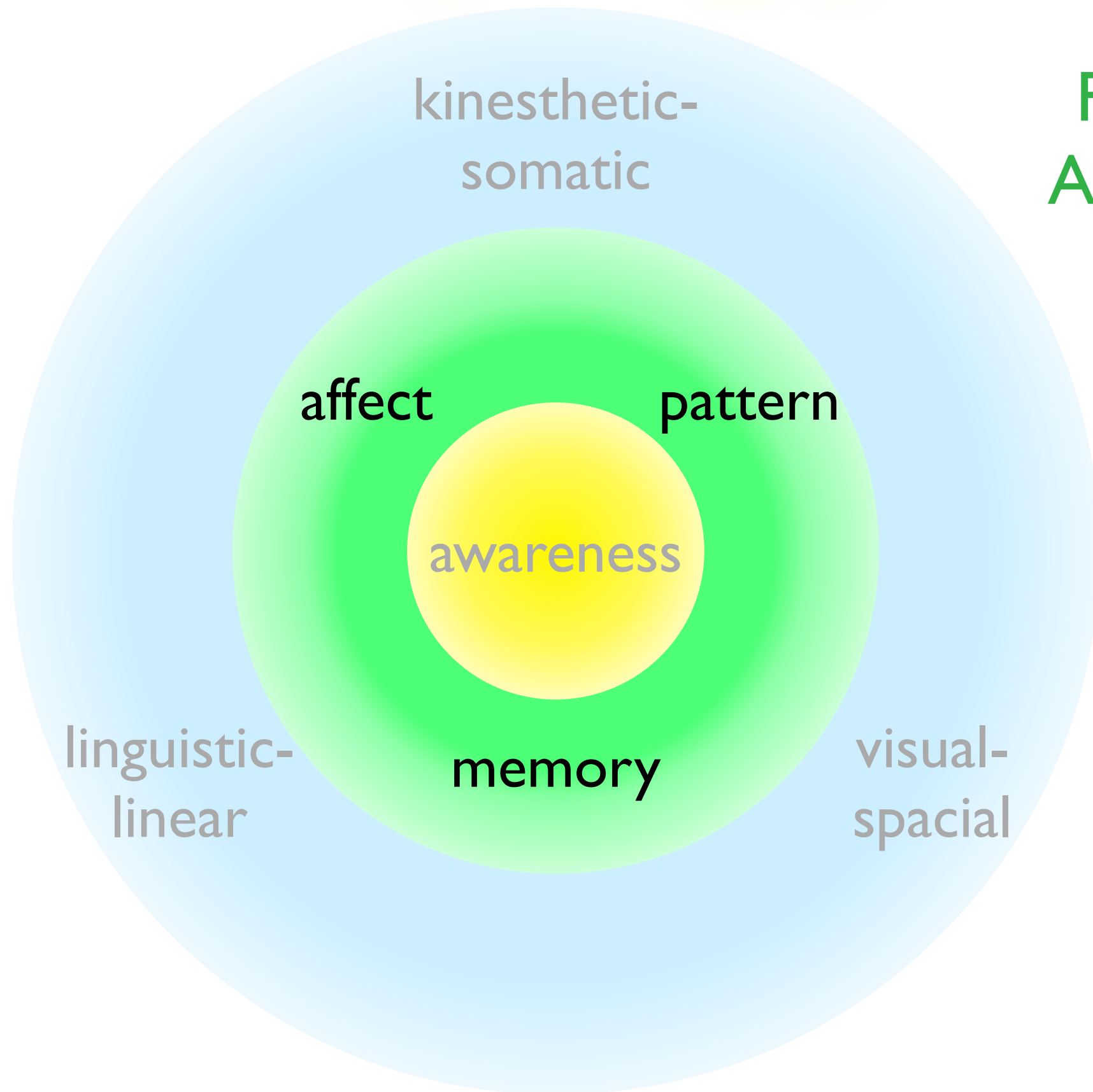
DANIEL
KAHNEMAN

WINNER OF THE NOBEL PRIZE IN ECONOMICS

Thinking, Fast and Slow



Human Operating System



Facets of
Awareness

Affect

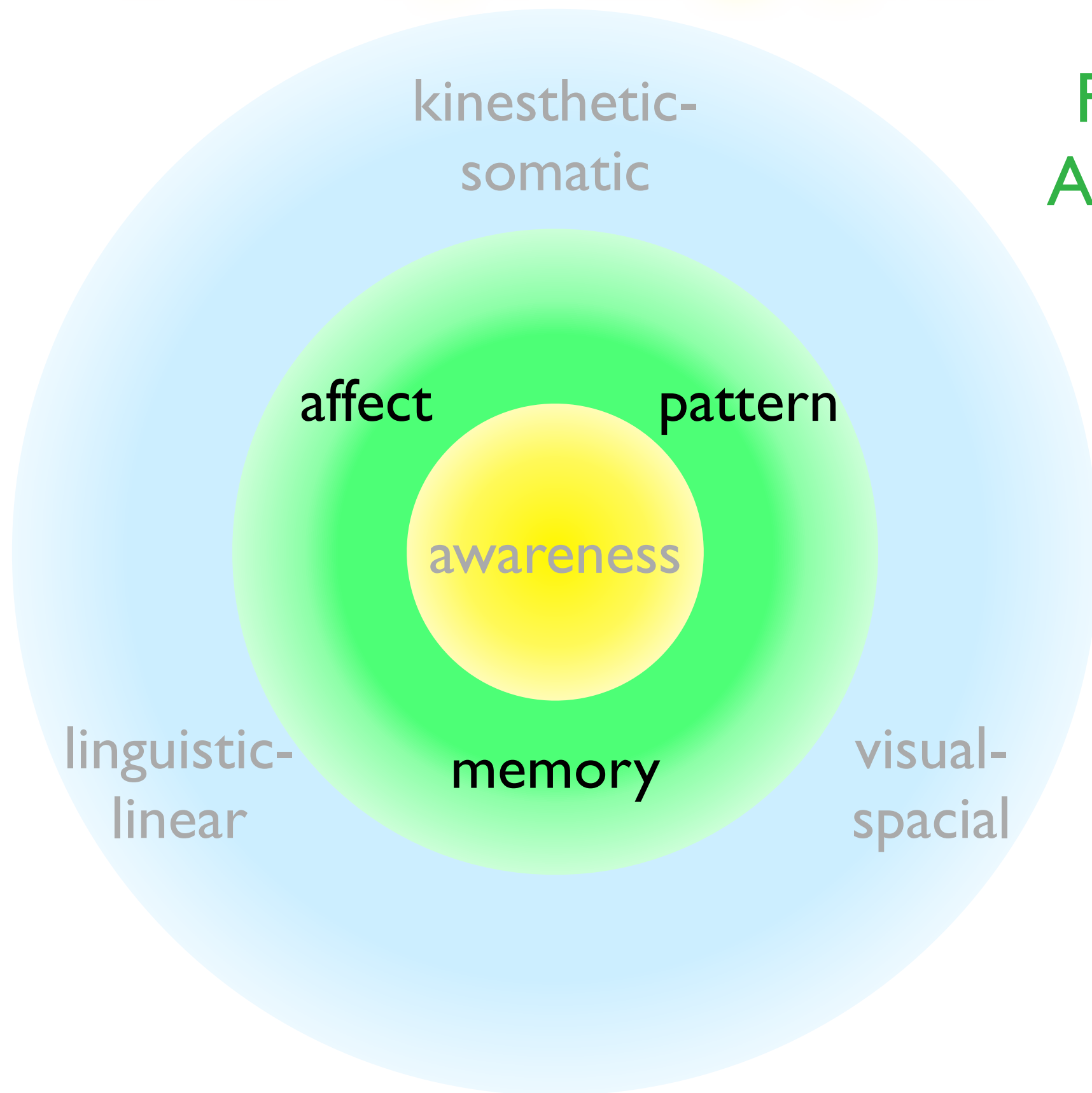
- Territory of emotions and feelings
- Always present
- Diverse
- Motivational
- Changeable



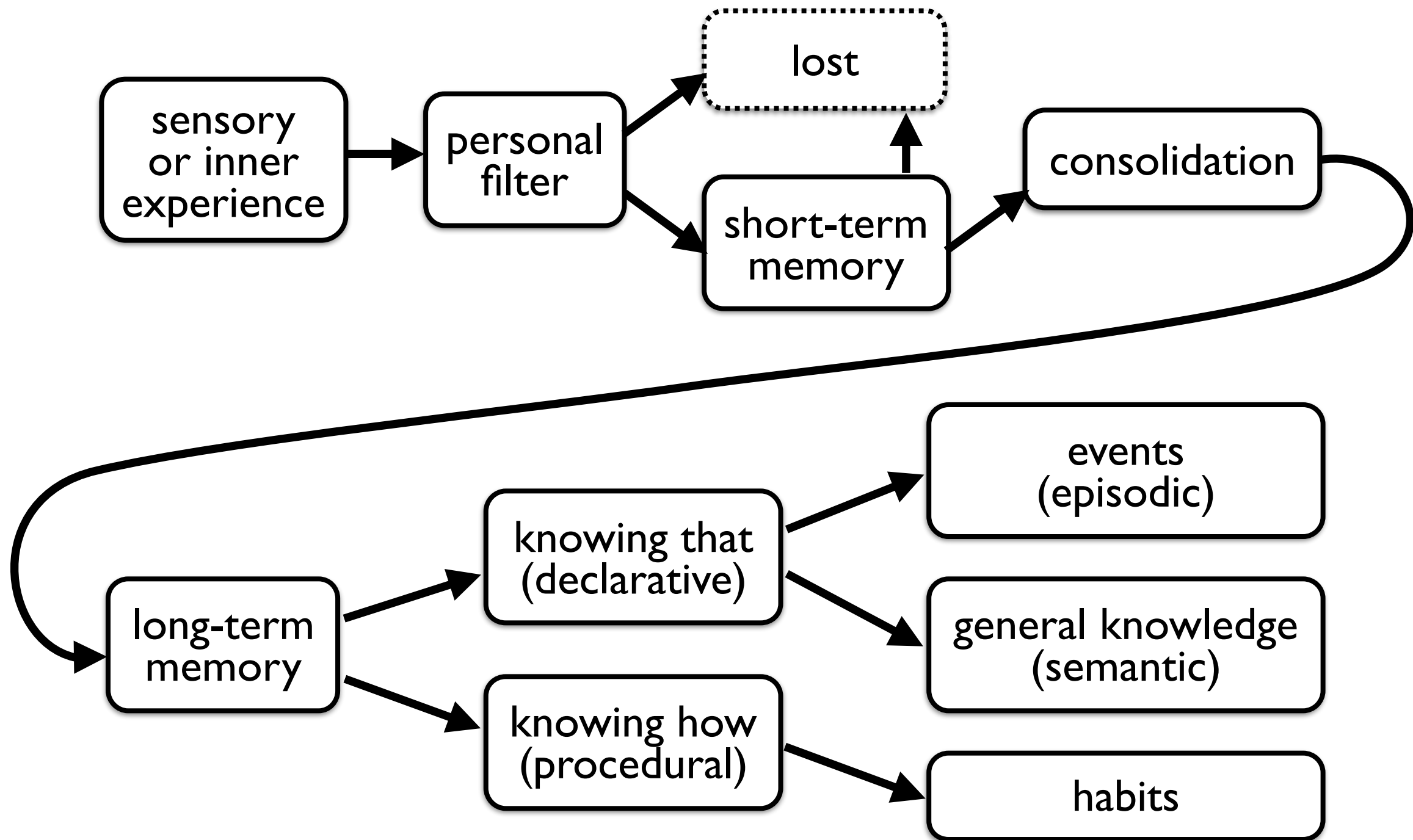
Drives



Human Operating System



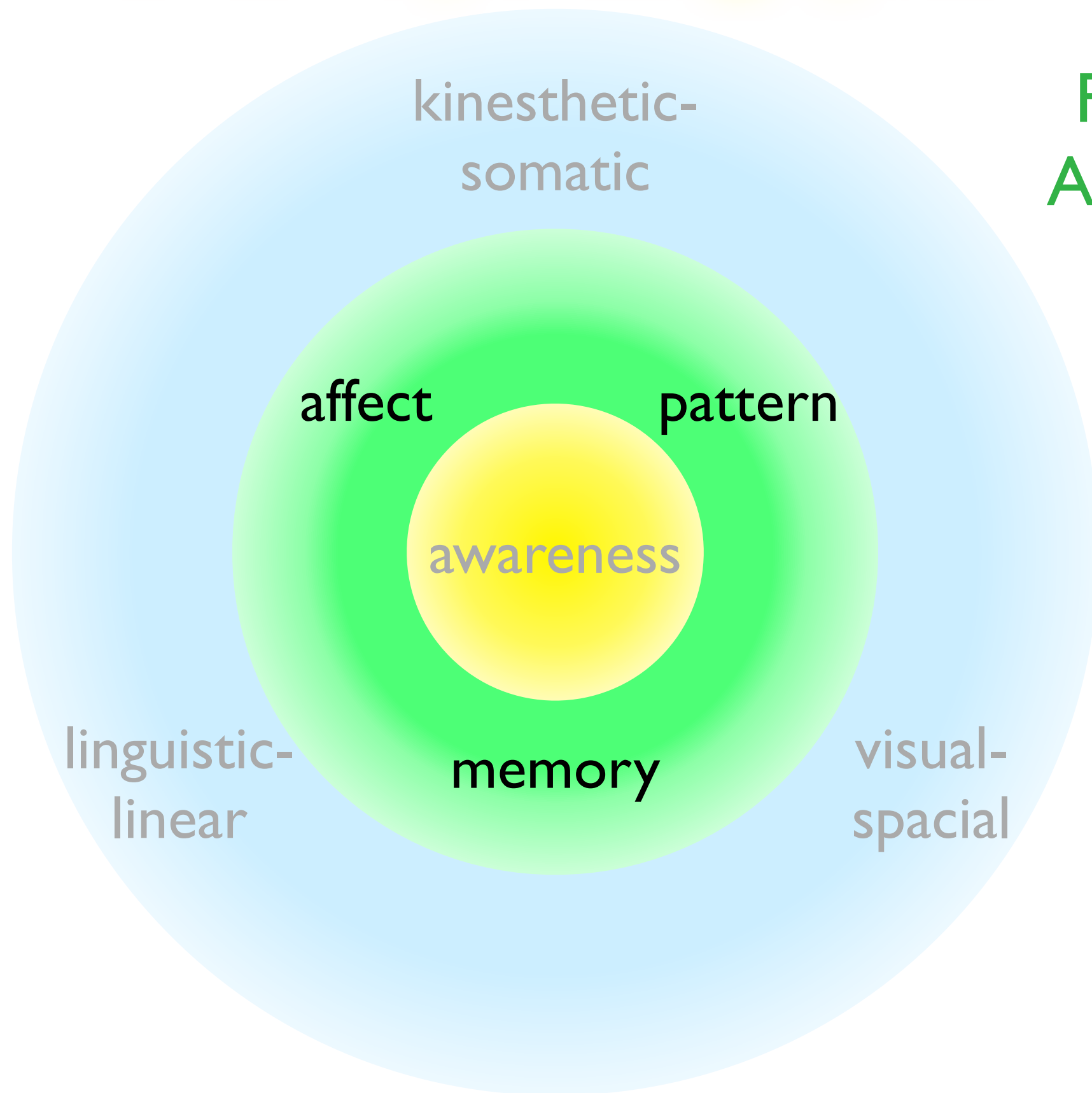
Memory - Storage



Memory - Recall

- Triggered by association
- Activates same parts of brain as original
- “Imagining the past”
- Less accurate than we think

Human Operating System



Facets of
Awareness

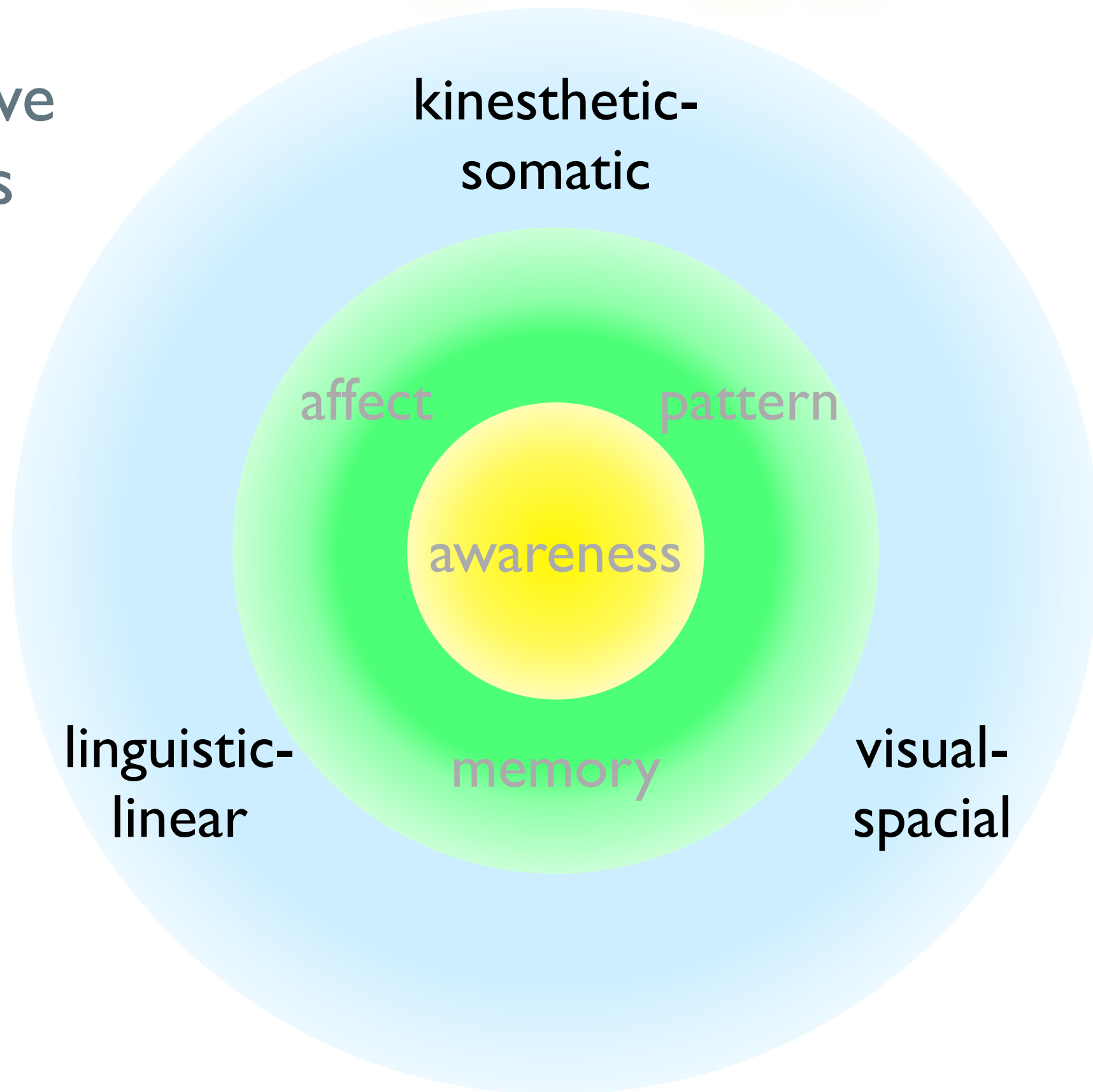
Pattern

- Just like memory, there are:
 - * Temporal patterns – scenarios, if *this* then *that*
 - * Semantic patterns – definitions, meaning
 - * Procedural patterns – habits, action steps



Human Operating System

Cognitive
Modes



kinesthetic-
somatic

affect

pattern

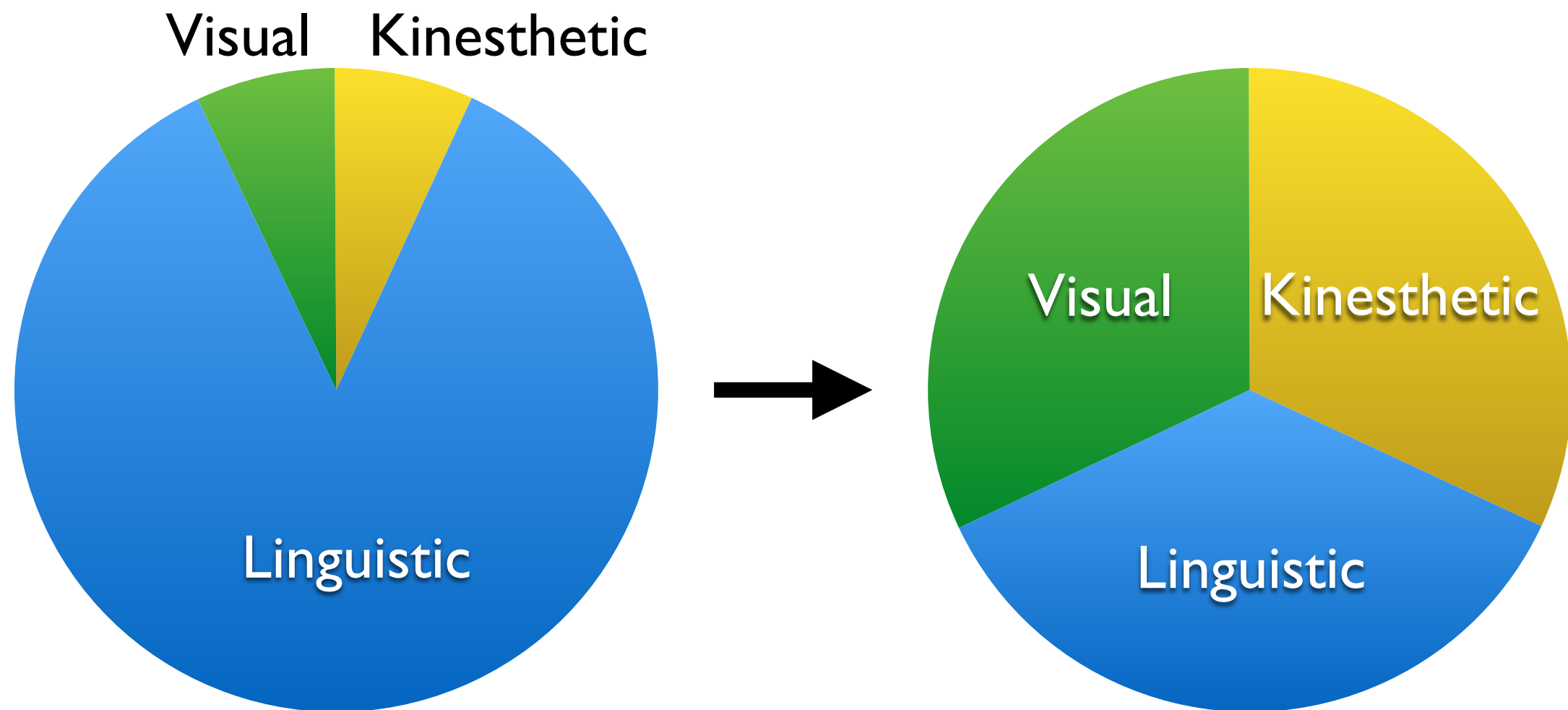
awareness

memory

linguistic-
linear

visual-
spacial

Empire to Planetary



Linguistic-Linear

Oc fulico þhu nadra uuar luzzio þanne alle the oðru dior the God zeuuarhta oðar erðun . endi þhu nadra quad to themu uiibe . Huui farbad God u that zi ne atin fan eozehuueþrumu bome innan Paradisium? That uiif anduuoþrida . Fan theþo bomo uuastume the sind in Paradisium uui etað, endi fan thes bomes uuastume . the is an middie zardun . God bebad us that uui ne atin, mhuueþhar uui thena bom ne andþrum the uui ruultin . Tho quad þhu nadra eft to themu uiibe . Ne sin zi zapolico dod . thoh the zi fan themu bome eten . Ac God uuet zuuiffo that uuare ozun sind zeopanod in so huulicumu dage so zi etað fan themu bome . endi þanne zi sind engilum zelico . uuitandi eozehuuedar ze zod ze uþil . Tho zerah that uiif that the bom uuar zod to etanne . bi themu the iþu þuhcti . endi from to ozum endi lurtizo to zerihte . endi tho zenam fan thes bomes uuastume endi zeat endi salda iþu uueþe . he at tho. Endi iþo beþþro ozun uuþdun zeopanod . iþu andþundun tho that iþu nacod uuarun . endi ruuidun in ficloþ endi uuarhtun in brocoþ .

Eft tho God quam endi iþu zehoridun is ftemna . þhar he zeniz in zardun oðar middage . tho hudda Adam ma . endi is uiif oc so deda . fram Godes zerihte an middie theþo bomo zardun . God heht Adam endi quad . Adam . Huuar biþt þhu? He quad . Thina ftemna ik zehorida . liof . in zardun . endi ik andþed m an þhu the ic biuim nacod . endi ik hudda m . God quad . Huue fazda thi that þhu nacod uuari . Ef þhu ne atiz fan themu bome the ik thi bebad that þhu fan ne atiz? Adam quad . That uiif that þhu m farzabi to zeforþanne . salda m fan themu bome . endi ic at

Linguistic-Linear

- Strengths: orderly, easy, quick, flexible, good for everyday communications
- Weaknesses: linear, 4 chunks, low-resolution, categorical thinking, symbolic representation leads to miscommunication
- Time as a sequence of events; works for long time-spans

Visual-Spatial



Visual-Spatial

- Strengths: easy to receive, huge simultaneous info, gradations, relationships
- Weaknesses: more effort to create, no story
- Time as a sequence of images; works for short time-spans

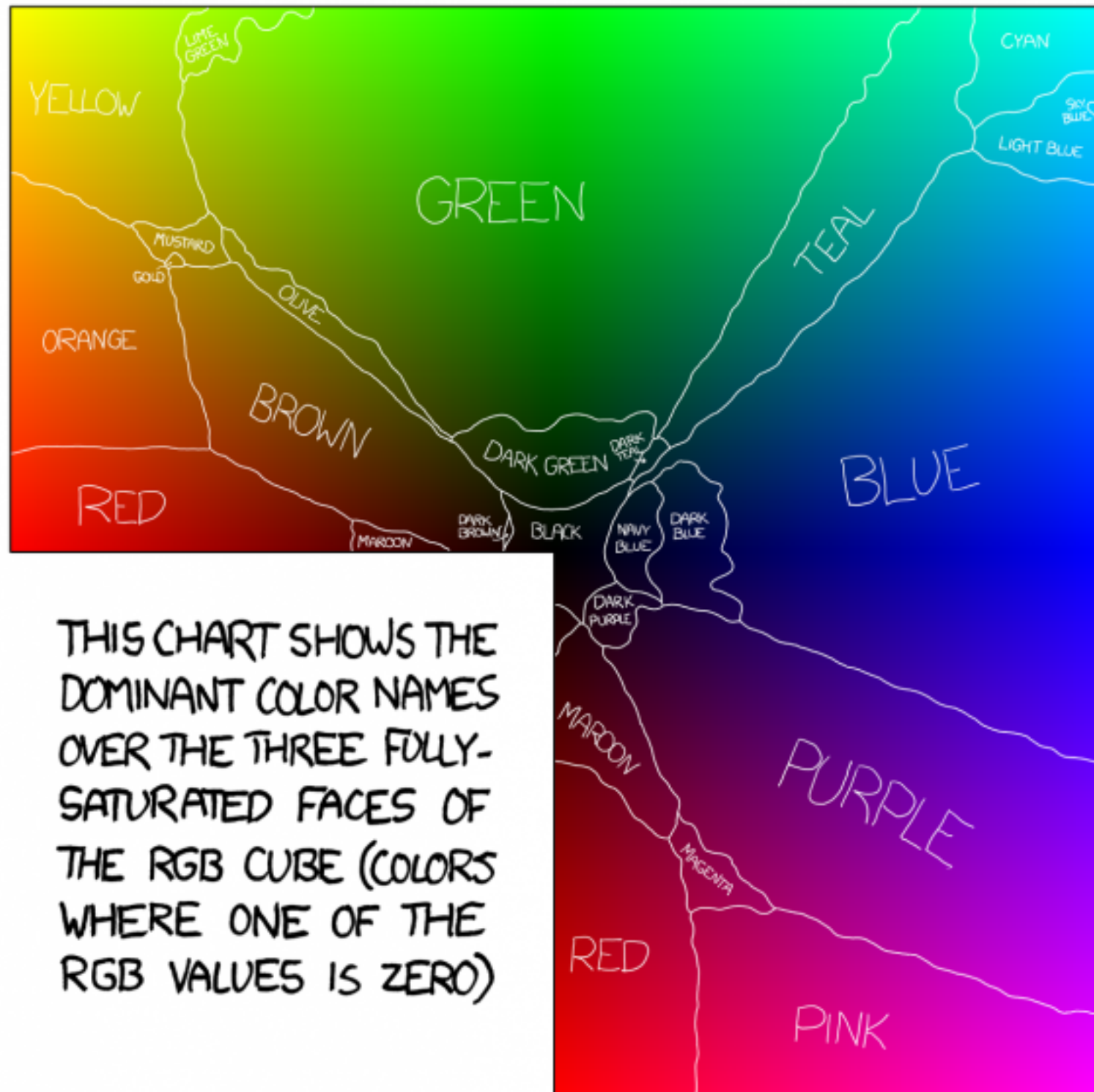
Kinesthetic-Somatic



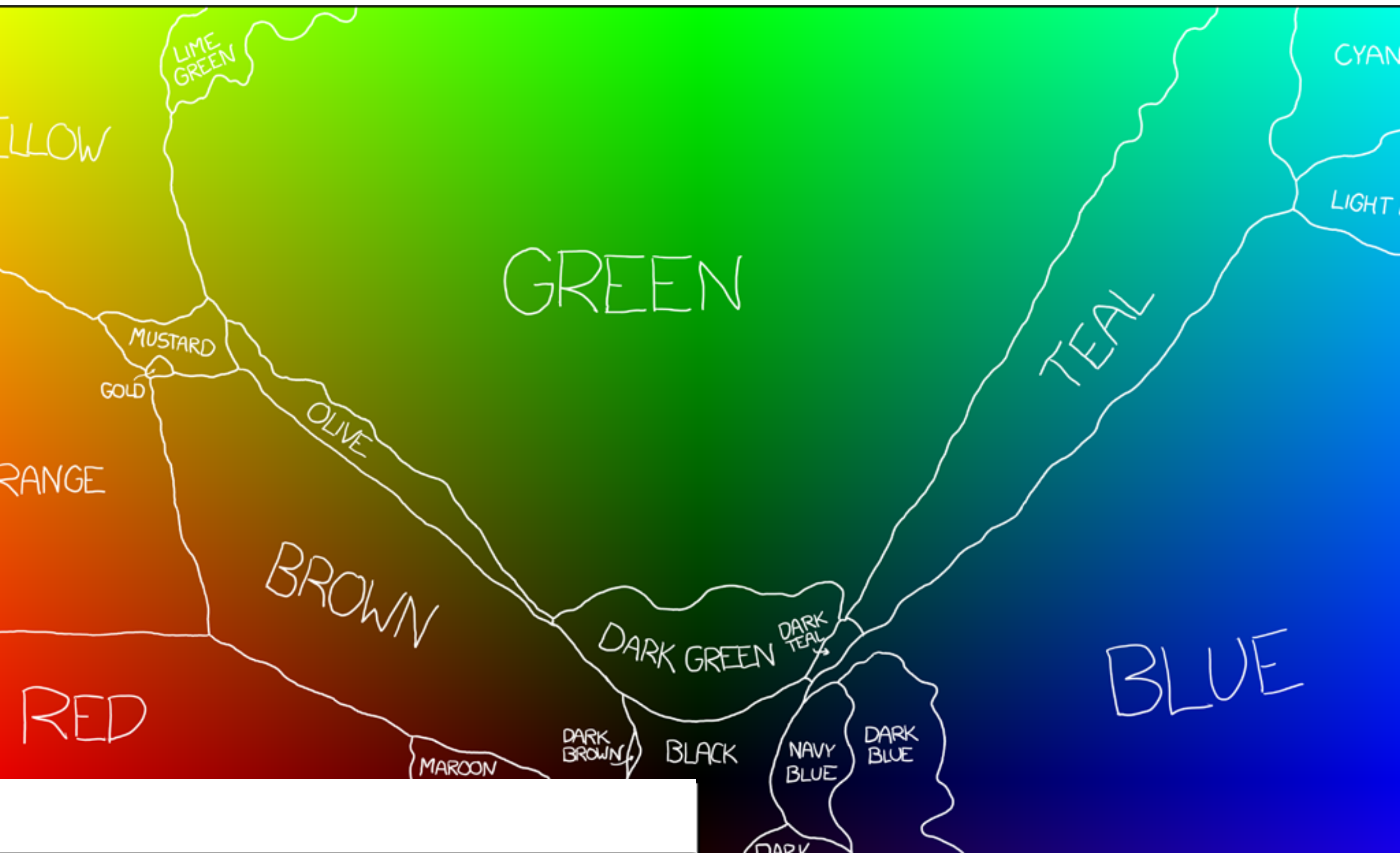
Kinesthetic-Somatic

- Strengths: easy access to habits and affect, great support for other modes, source for basic metaphors
- Weaknesses: hard to translate into words and categories
- Time as embodied rhythm and flow

Colors and Modes



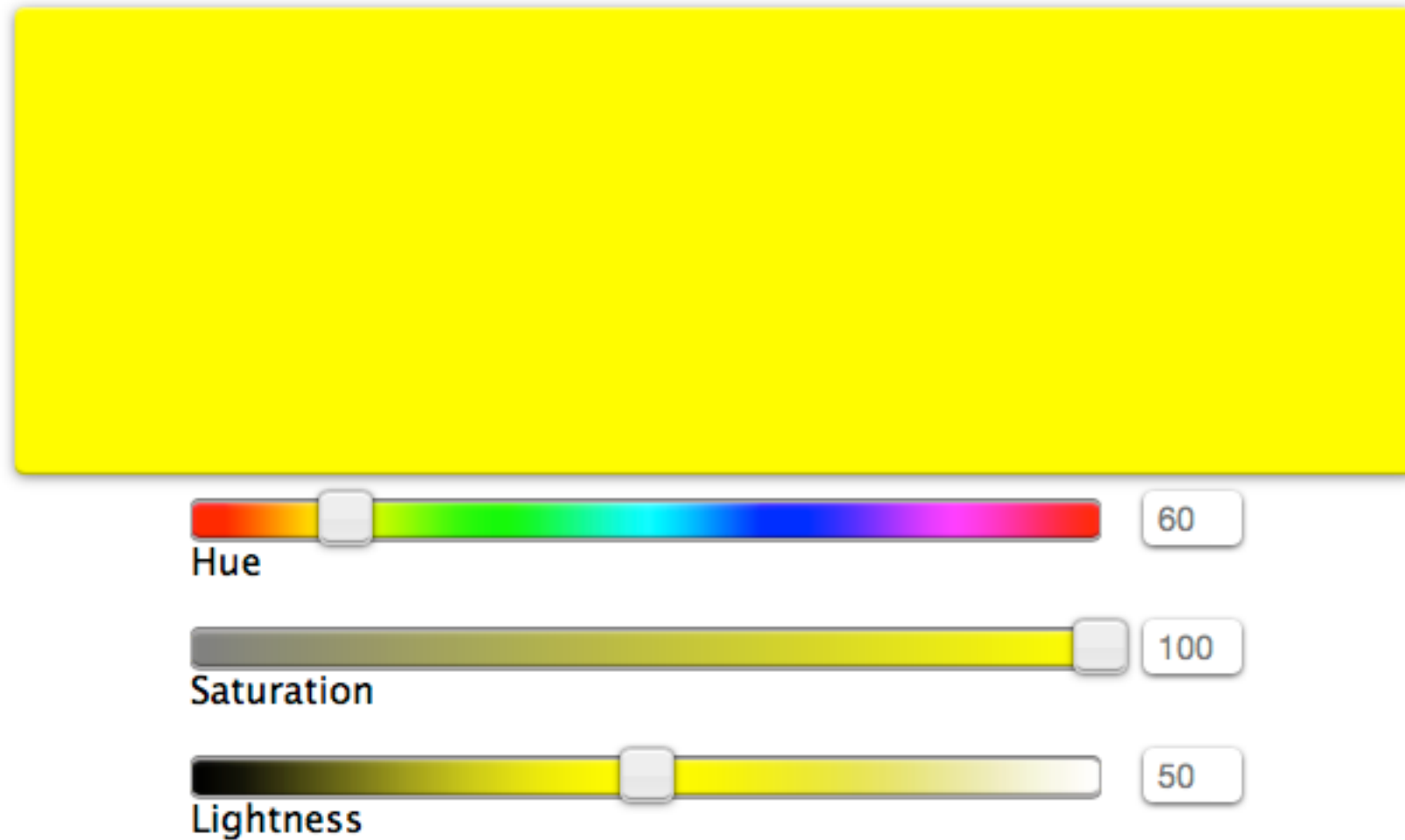
Colors and Modes



Colors and Modes



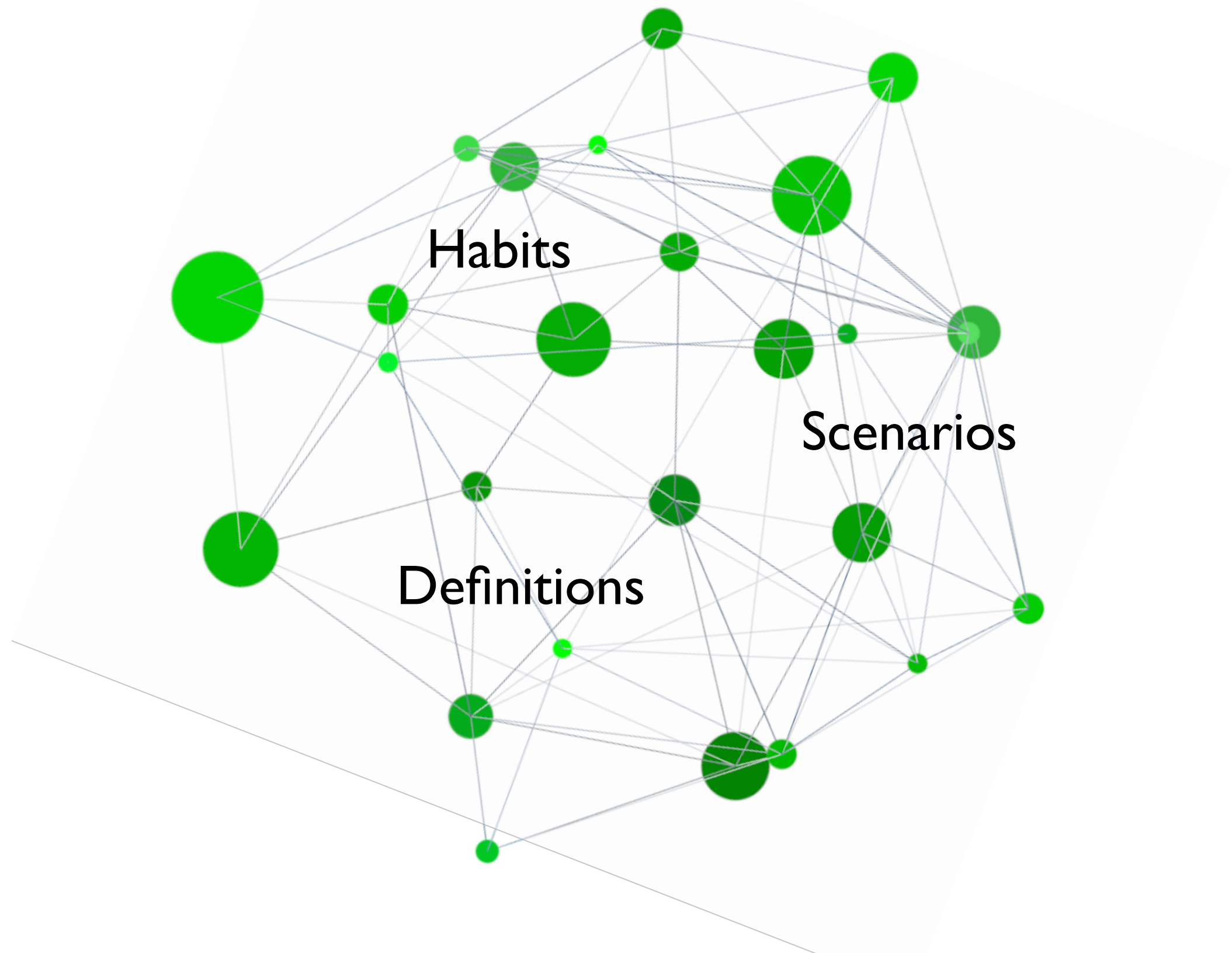
Colors and Modes



colorslider

Exploration & Intermission

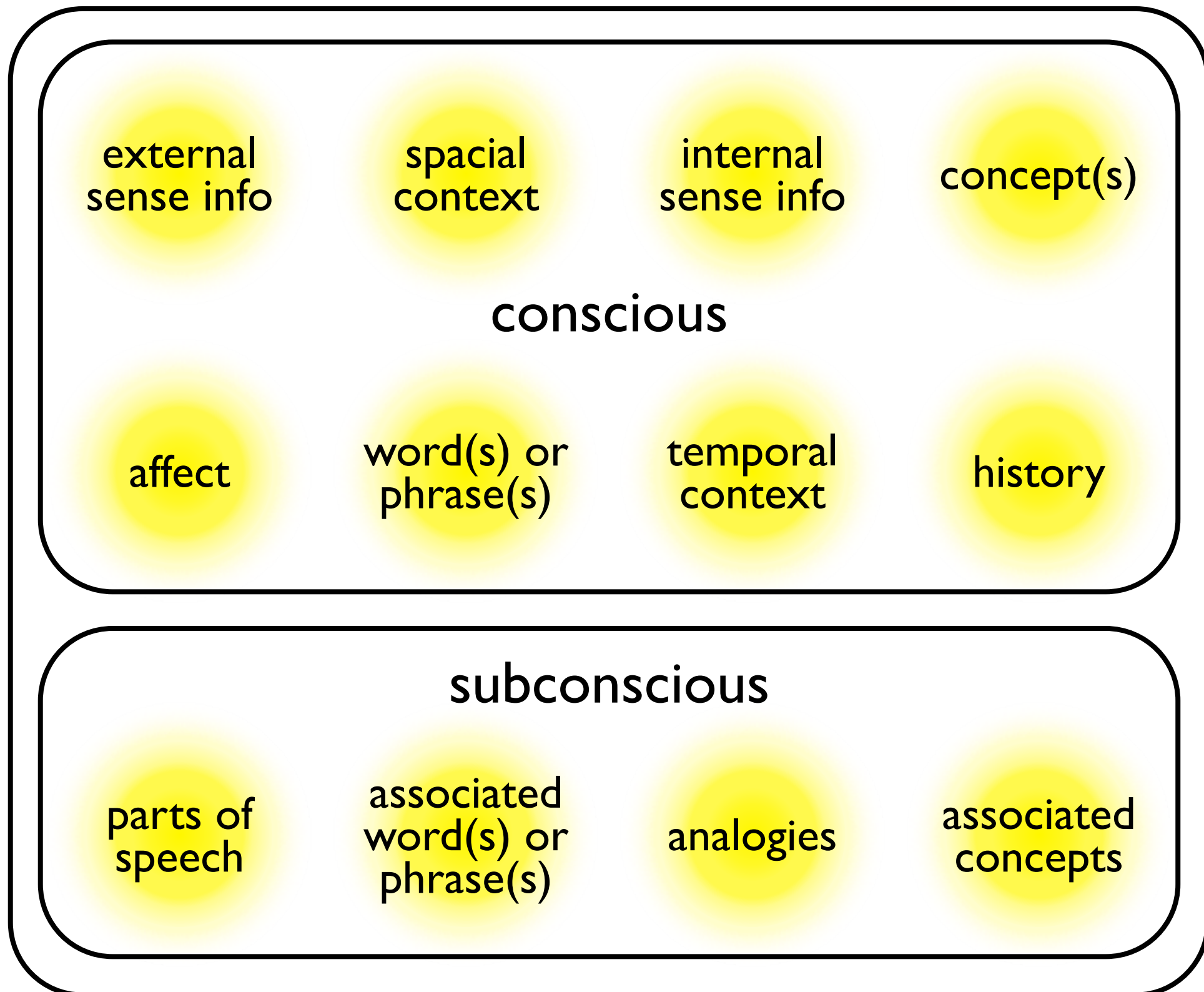
Patterns



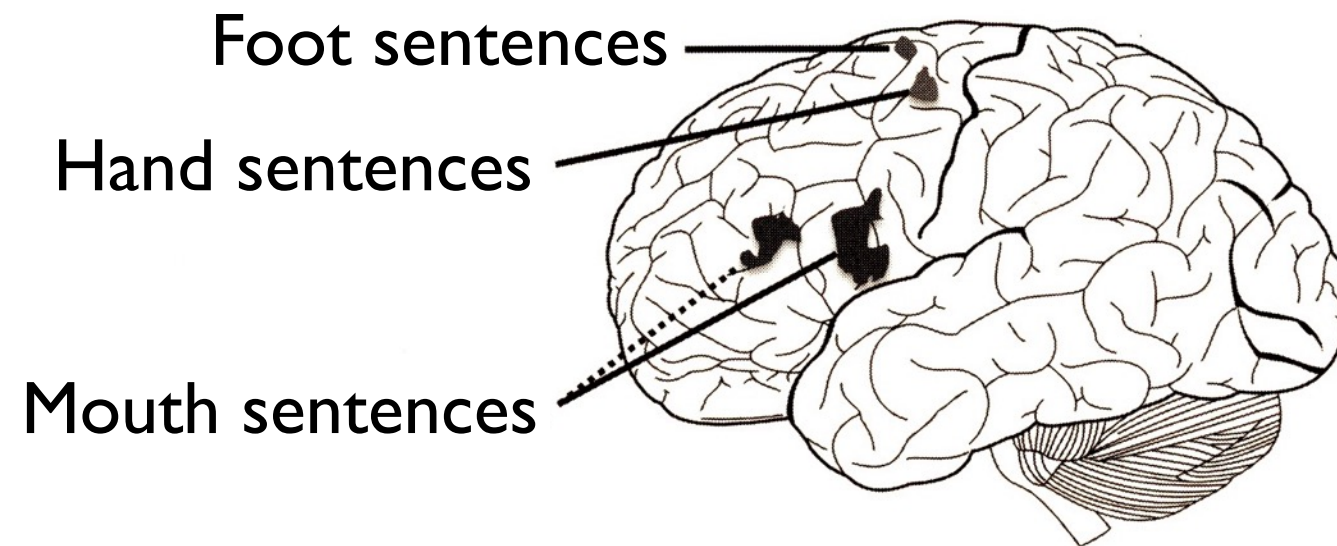
Patterns

- The water we swim in and don't see
- Perception recognizes familiar patterns and creates new ones
- Memories are stored as patterns
- Thinking is exploring and modifying patterns of ideas
- Habits are patterns of action

Patterns – Based On Experience



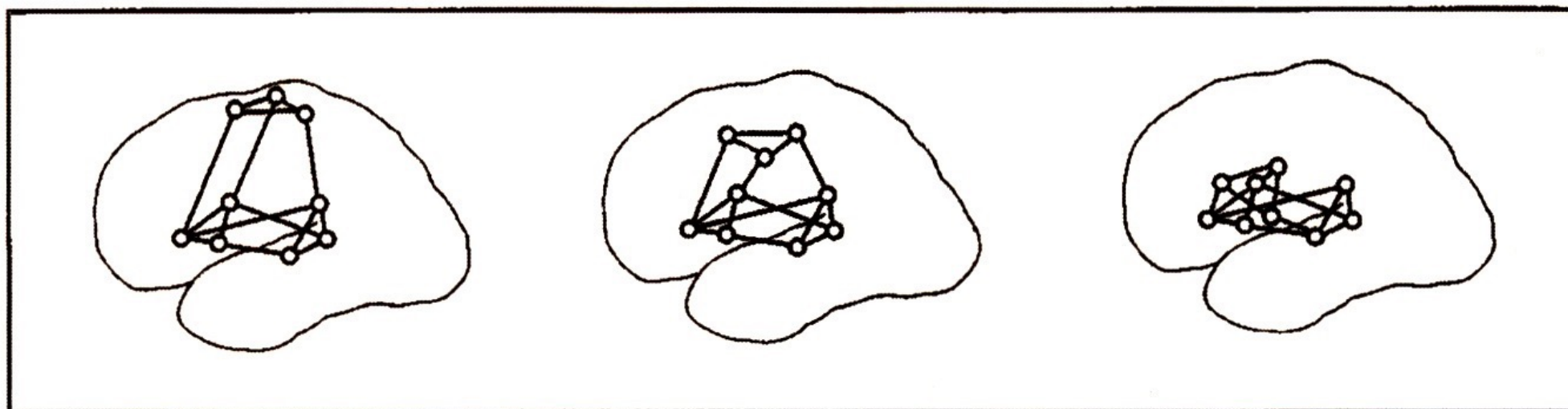
Patterns – Based On Experience



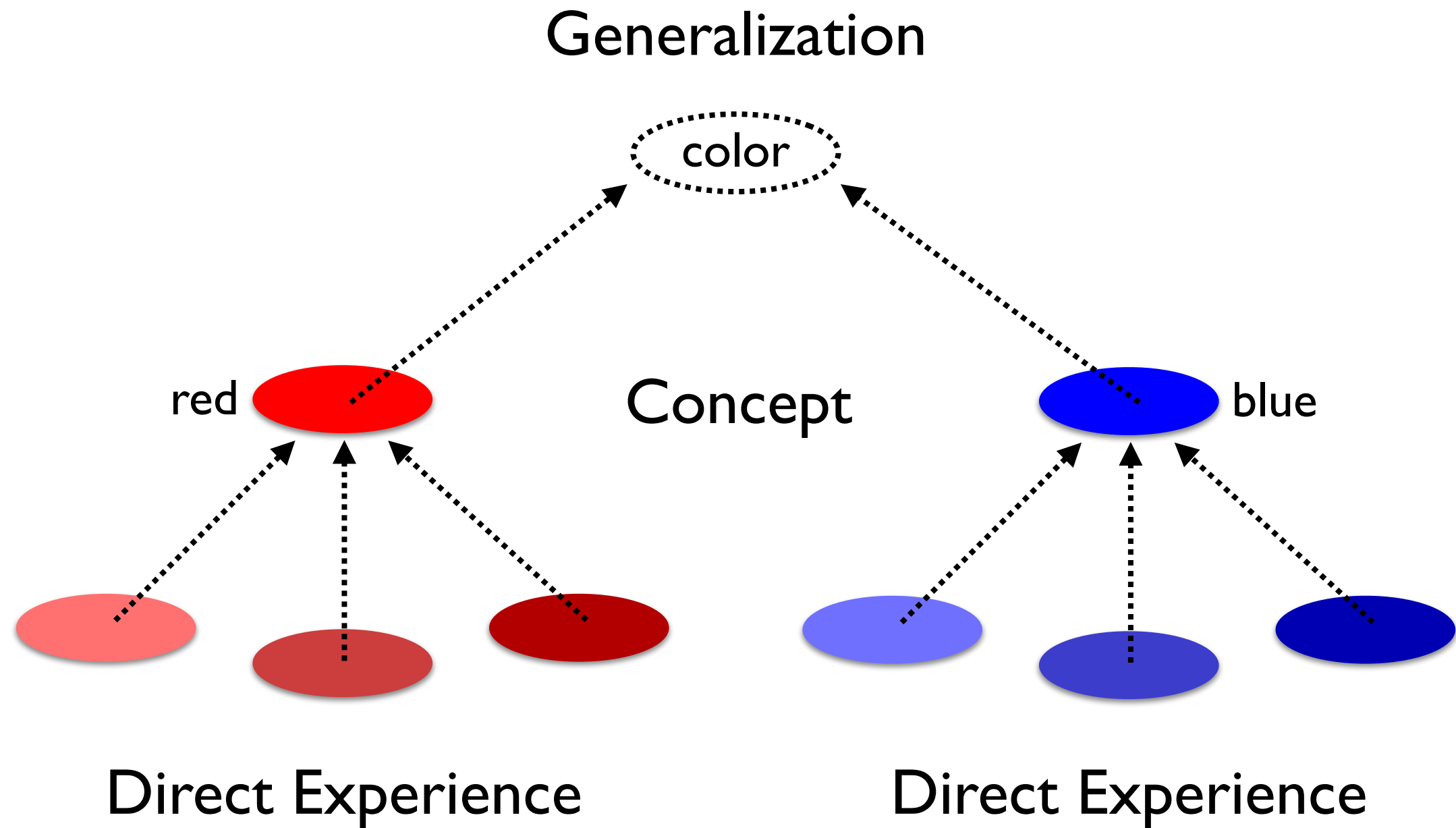
leg-related word

arm-related word

face-related word

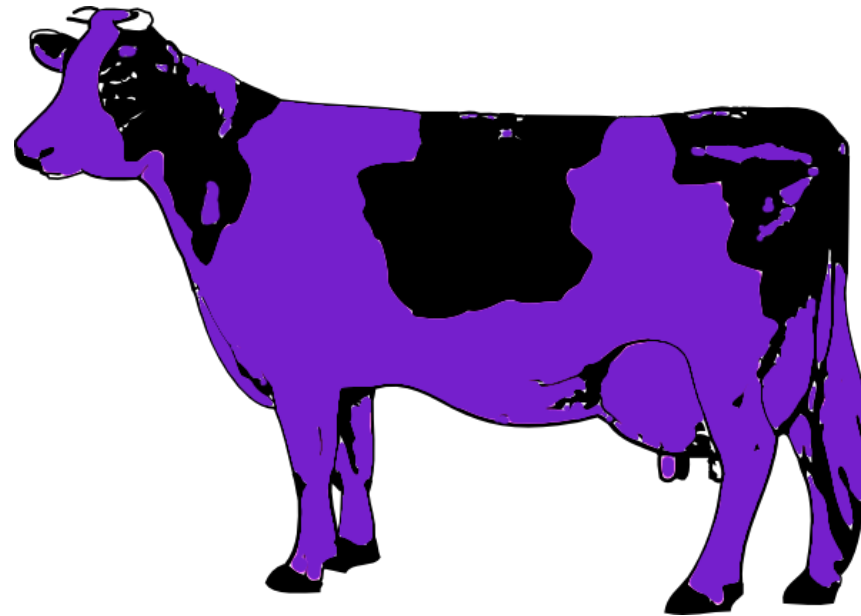


Patterns – Based On Each Other

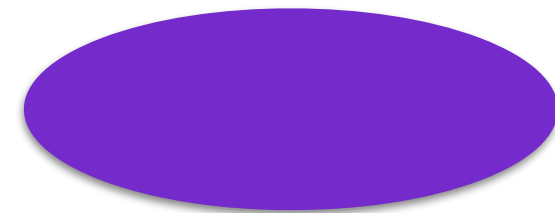
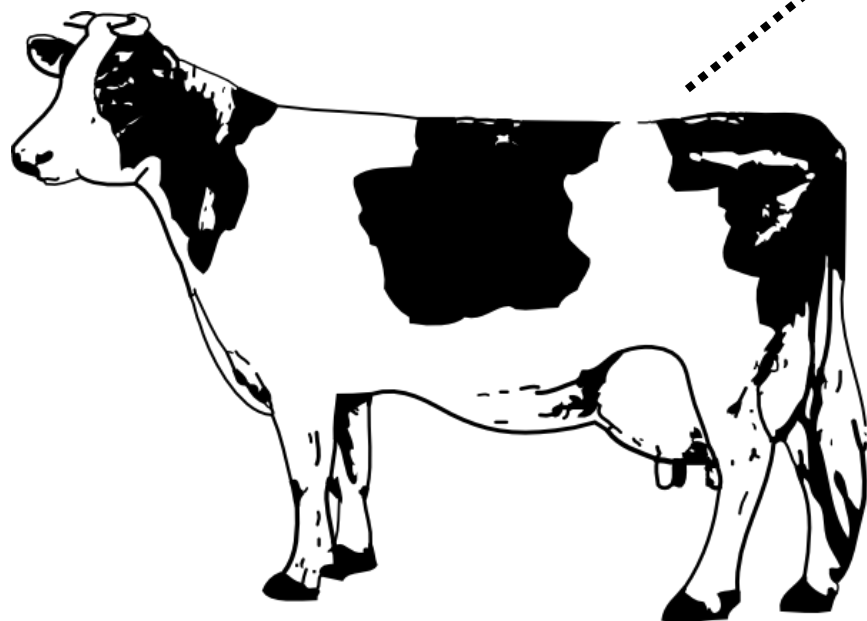


Patterns – Based On Each Other

Combination



Concept



Metaphors and Frameworks

- They are the super-nodes in the network of patterns
- Metaphorical sources tend to be concrete experiences
- “Frameworks” include belief systems, mental models, ideologies, sets of working hypotheses, paradigms, etc.
- A framework is a set of concepts that explains “how things work”

Metaphors and Frameworks

- Many patterns get interpreted through metaphors or frameworks
- Especially important in scenarios and creating expectations
 - * negotiations are like battles vs.
negotiations are like journeys
- Changes in metaphors and frameworks can have profound ripple effects

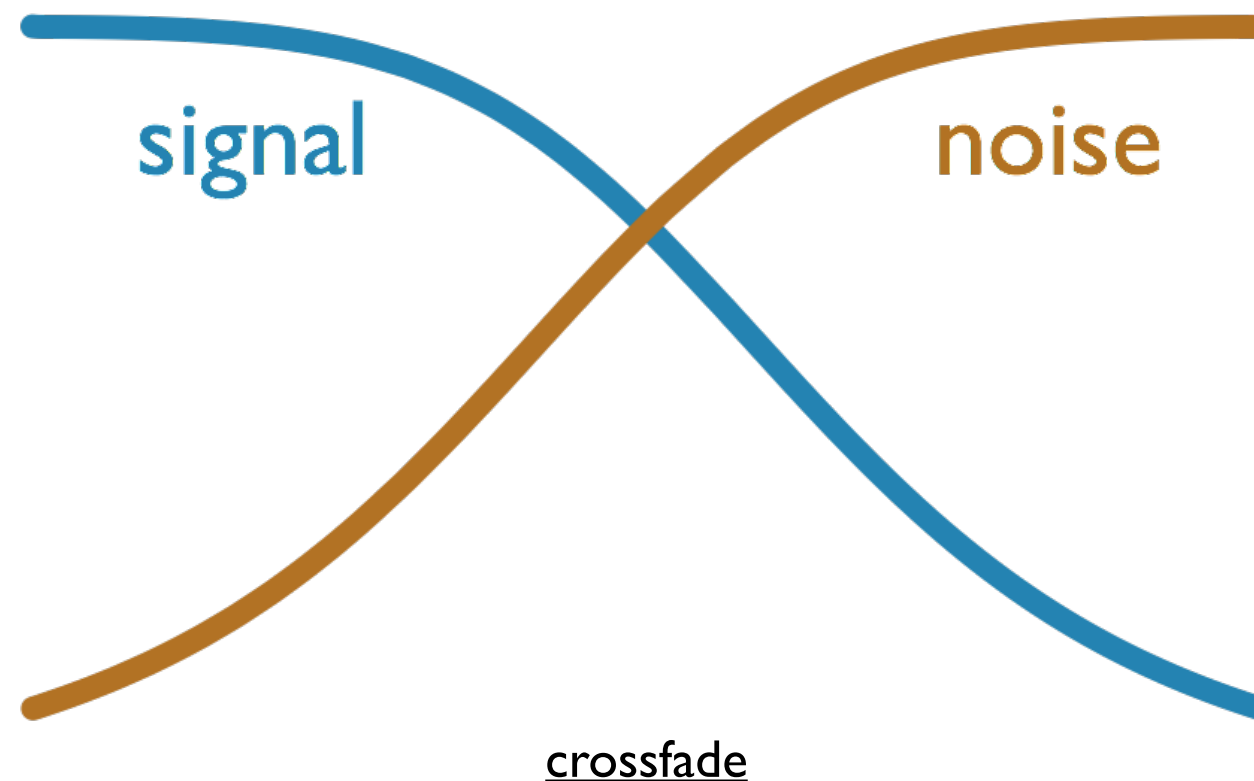
Metaphors and Frameworks

Categorical Thinking



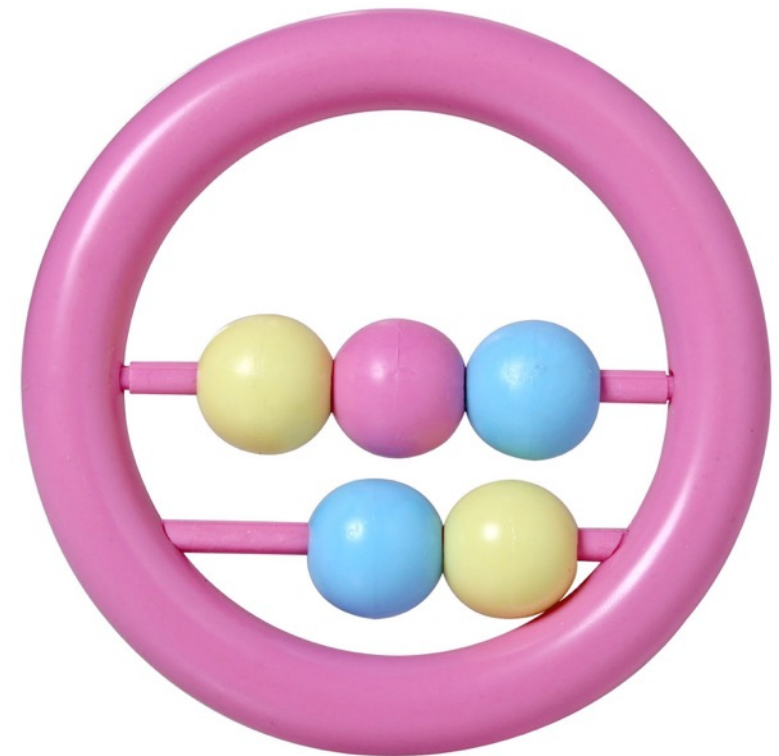
vs.

Continuum Thinking



Patterns – Objects

- Persons and things
- Early and important
- Hardwired for it



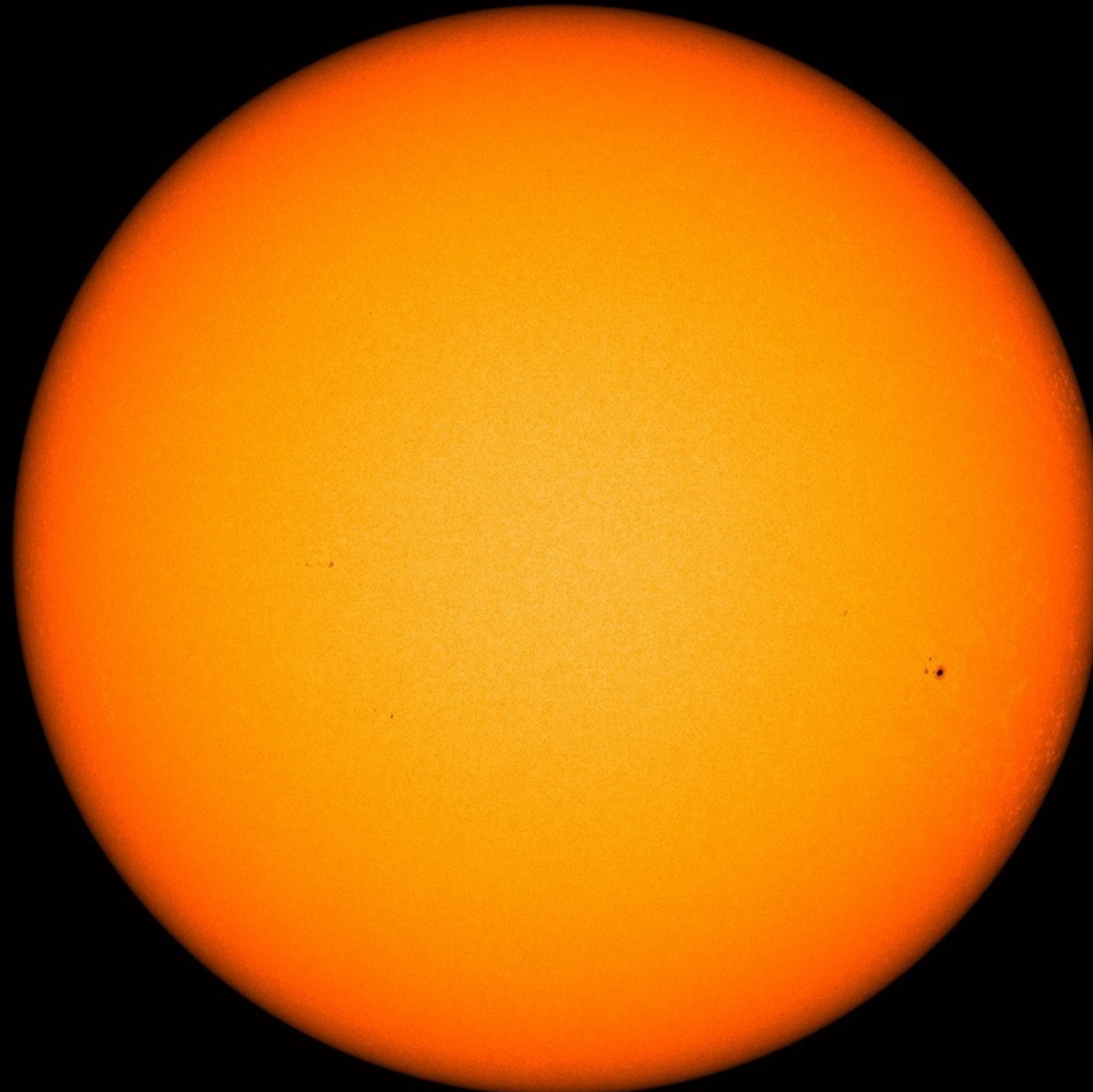
Patterns – Objects

- Metaphorical source for nouns
- Defined in space, independent of context
- Creates subconscious confusion with non-object nouns – networks, patterns, systems, abstract nouns, etc.
- Biases us against seeing relationships and their importance

Patterns & Reality

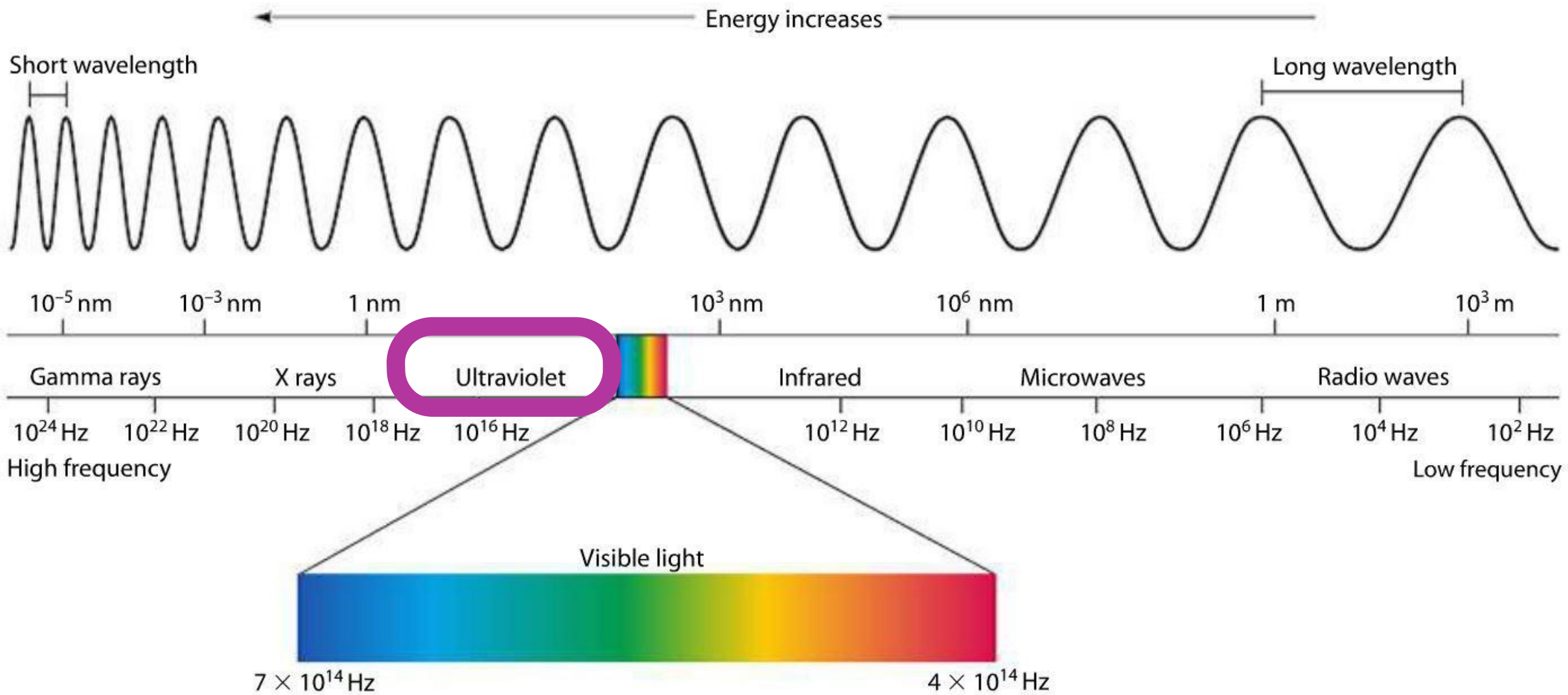


Patterns & Reality

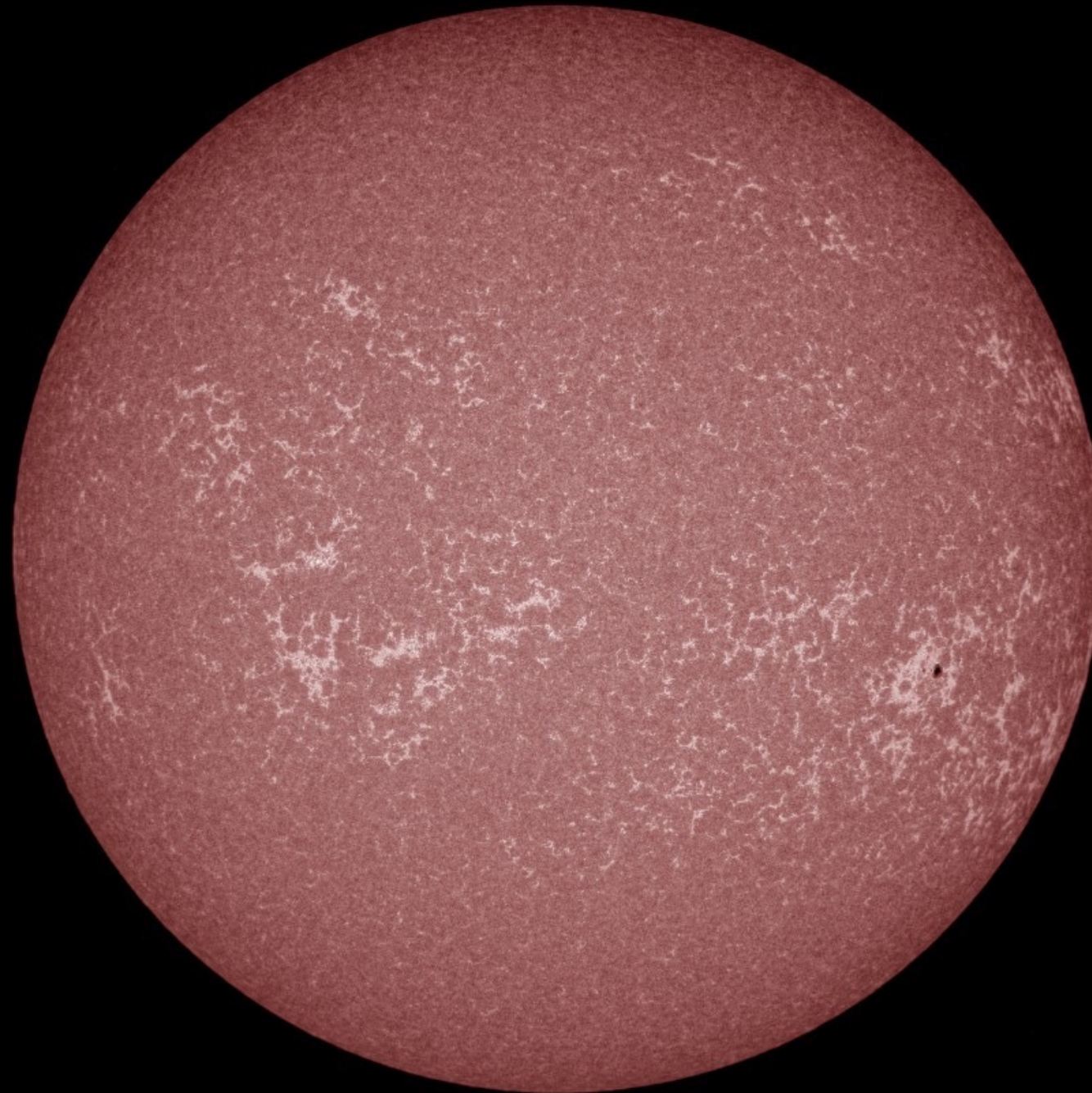


SDO/HMI Quick-Look Continuum: 20150117_210000

Patterns & Reality

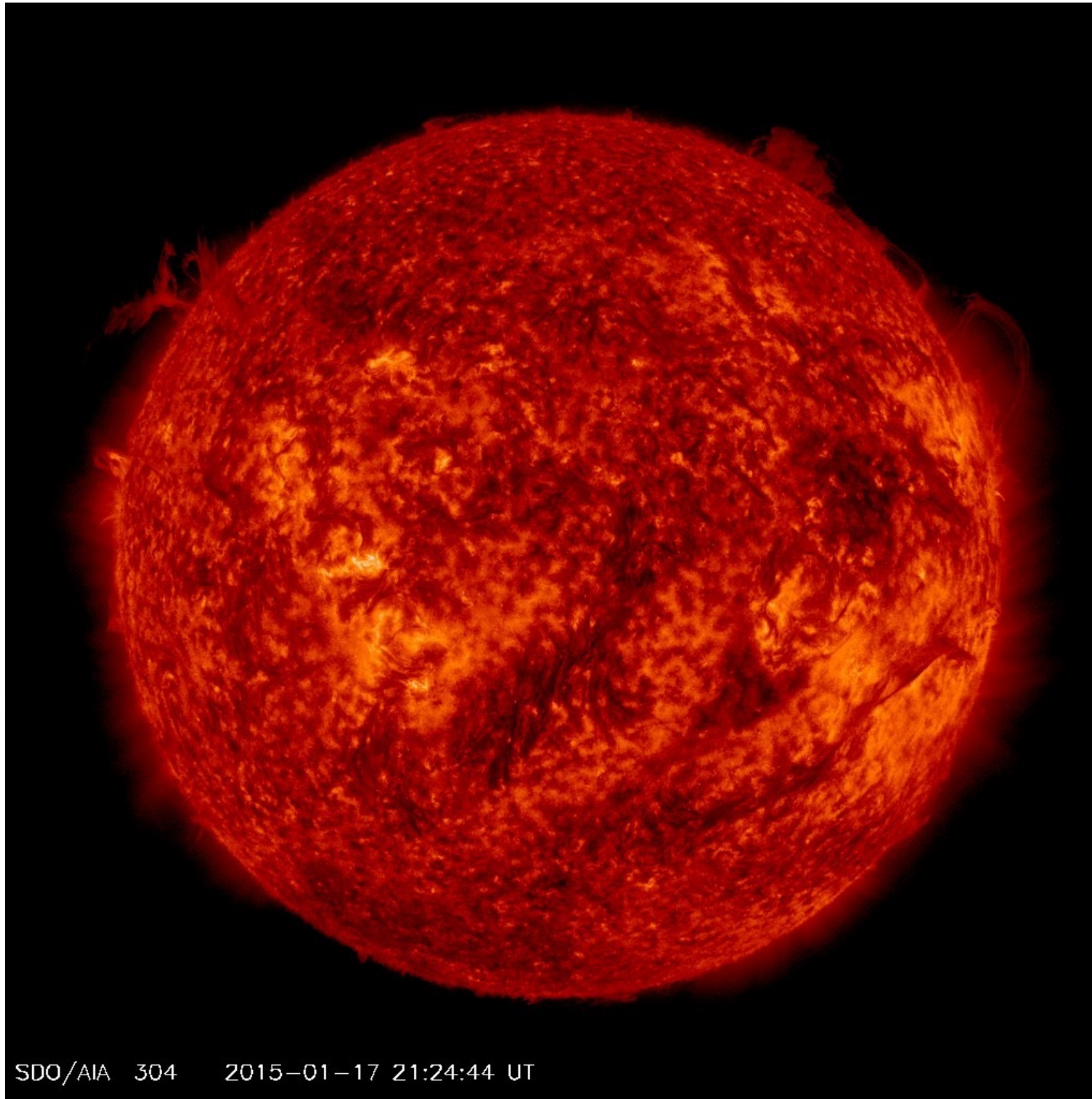


Patterns & Reality



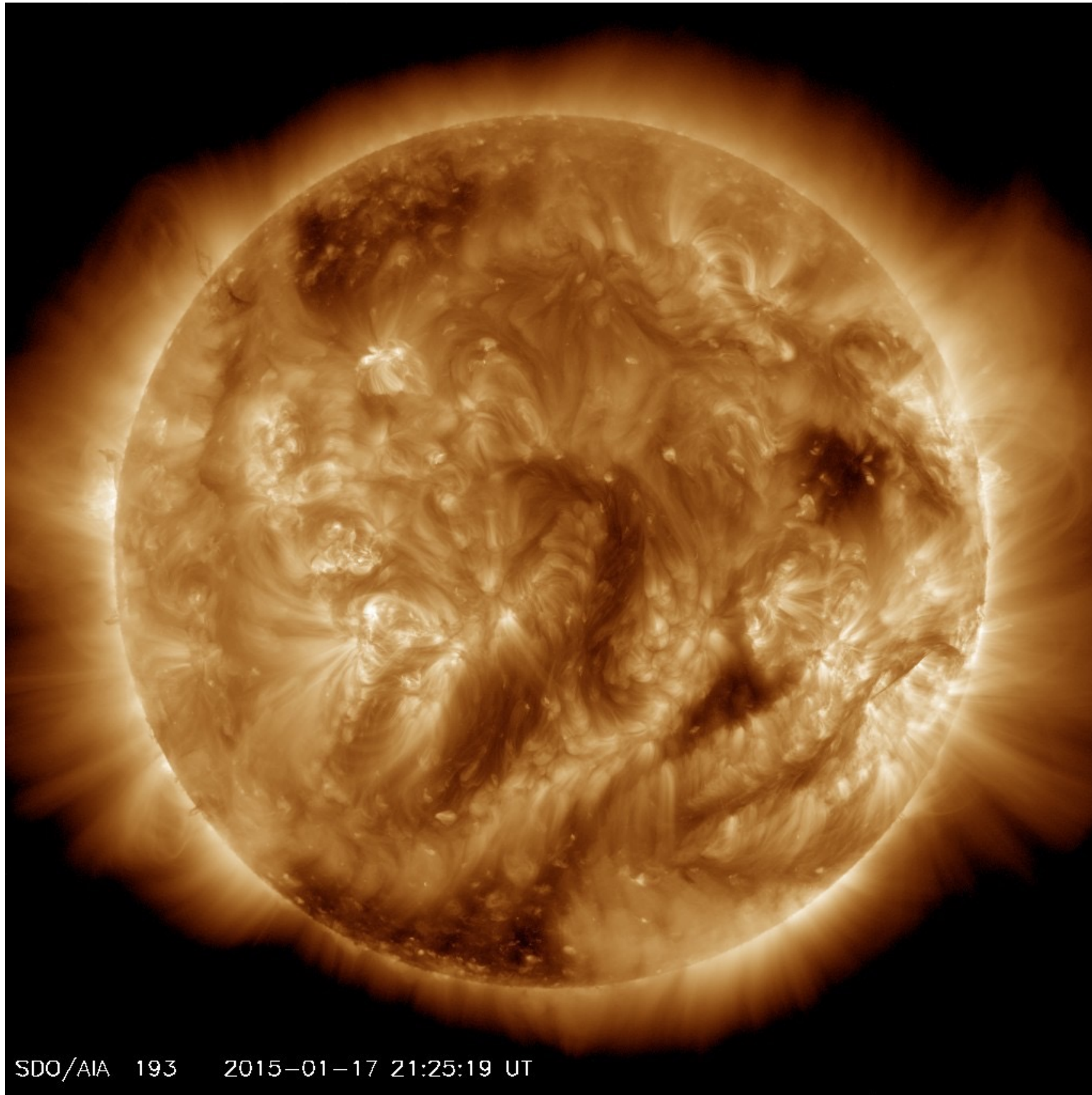
SDO/AIA 1700 2015-01-17 21:18:31 UT

Patterns & Reality



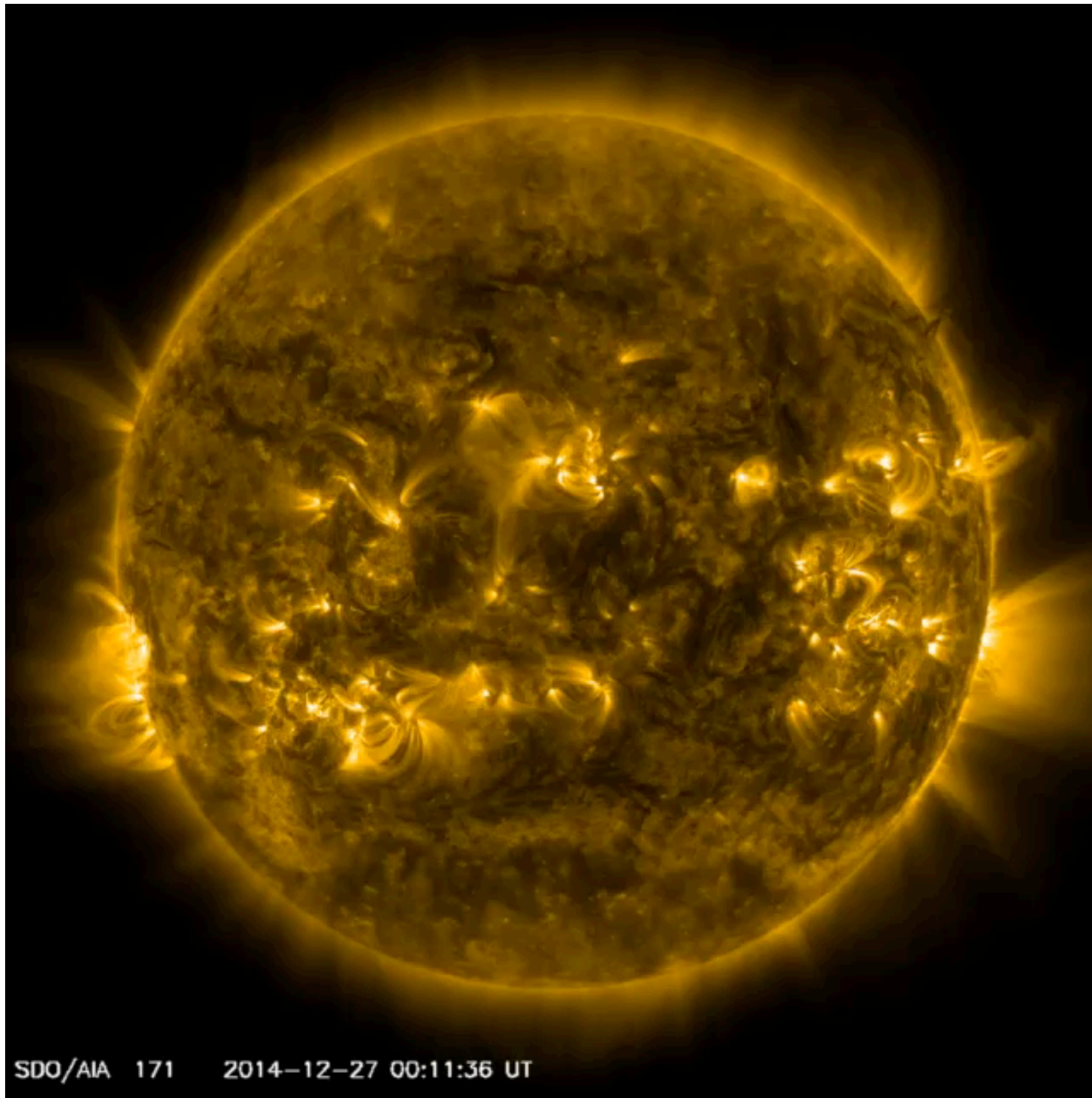
SDO/AIA 304 2015-01-17 21:24:44 UT

Patterns & Reality



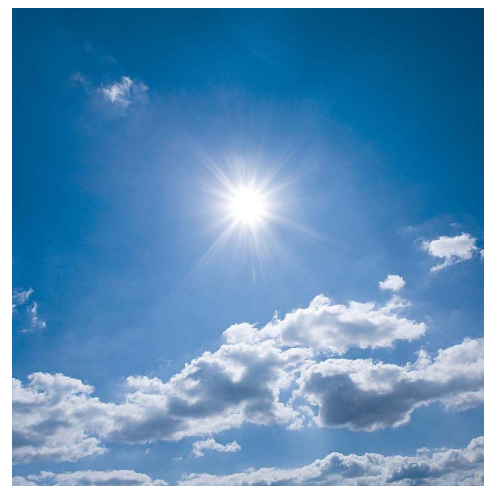
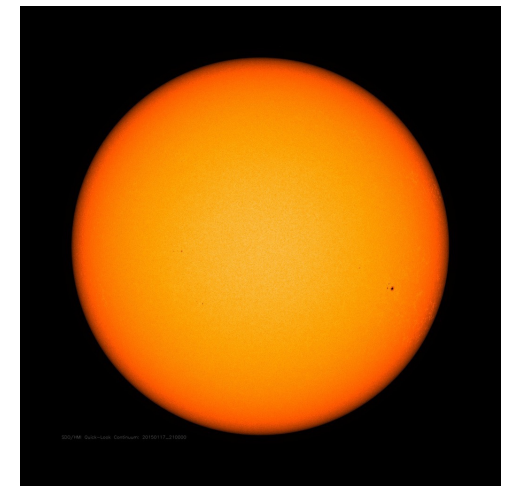
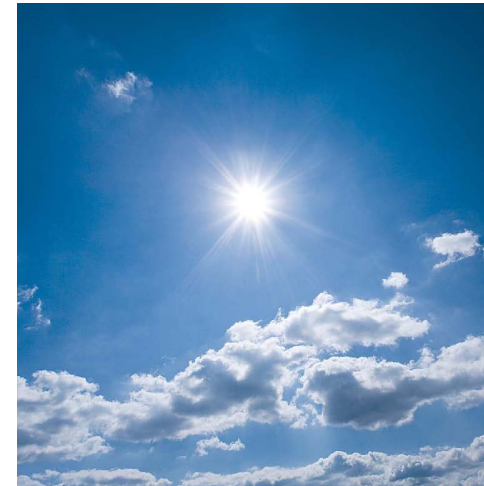
SDO/AIA 193 2015-01-17 21:25:19 UT

Patterns & Reality

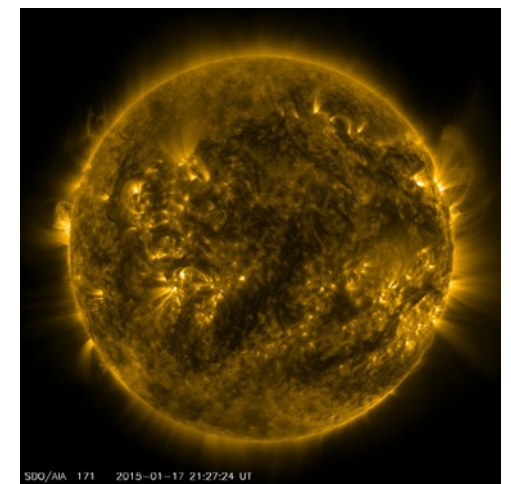
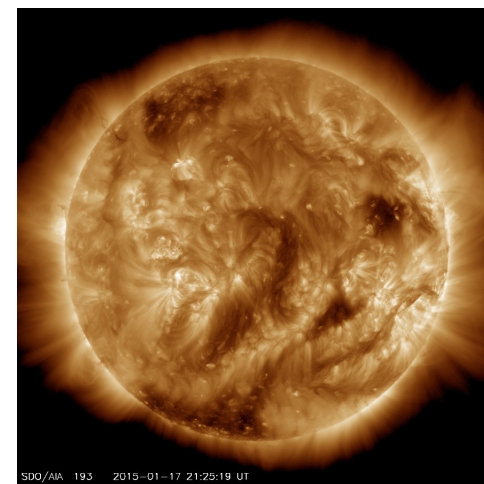
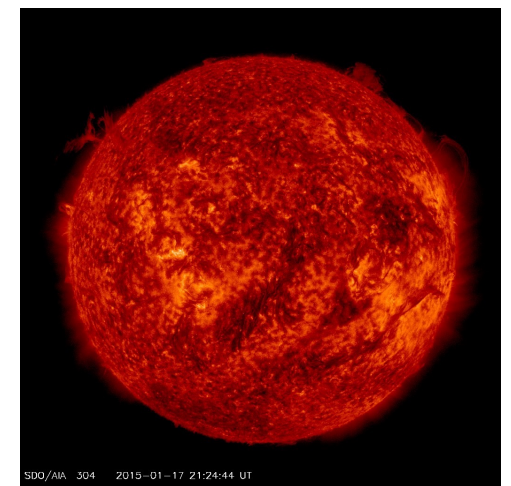
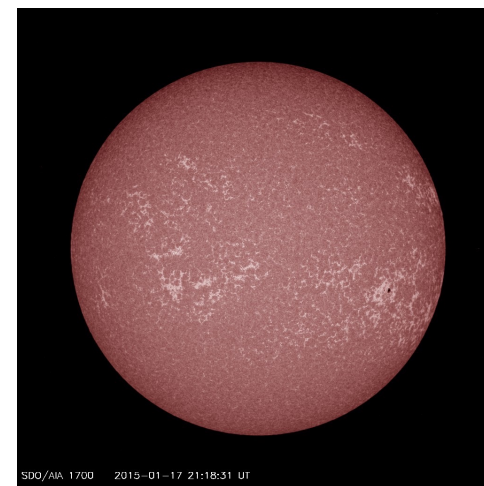


SDO/AIA 171 2014-12-27 00:11:36 UT

Patterns & Reality

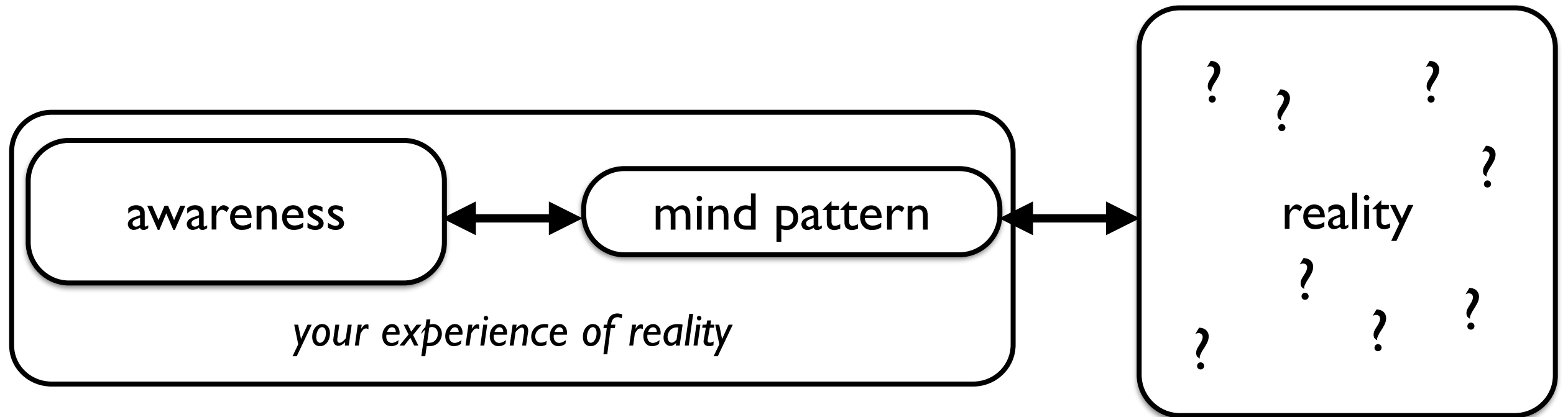


Vs.

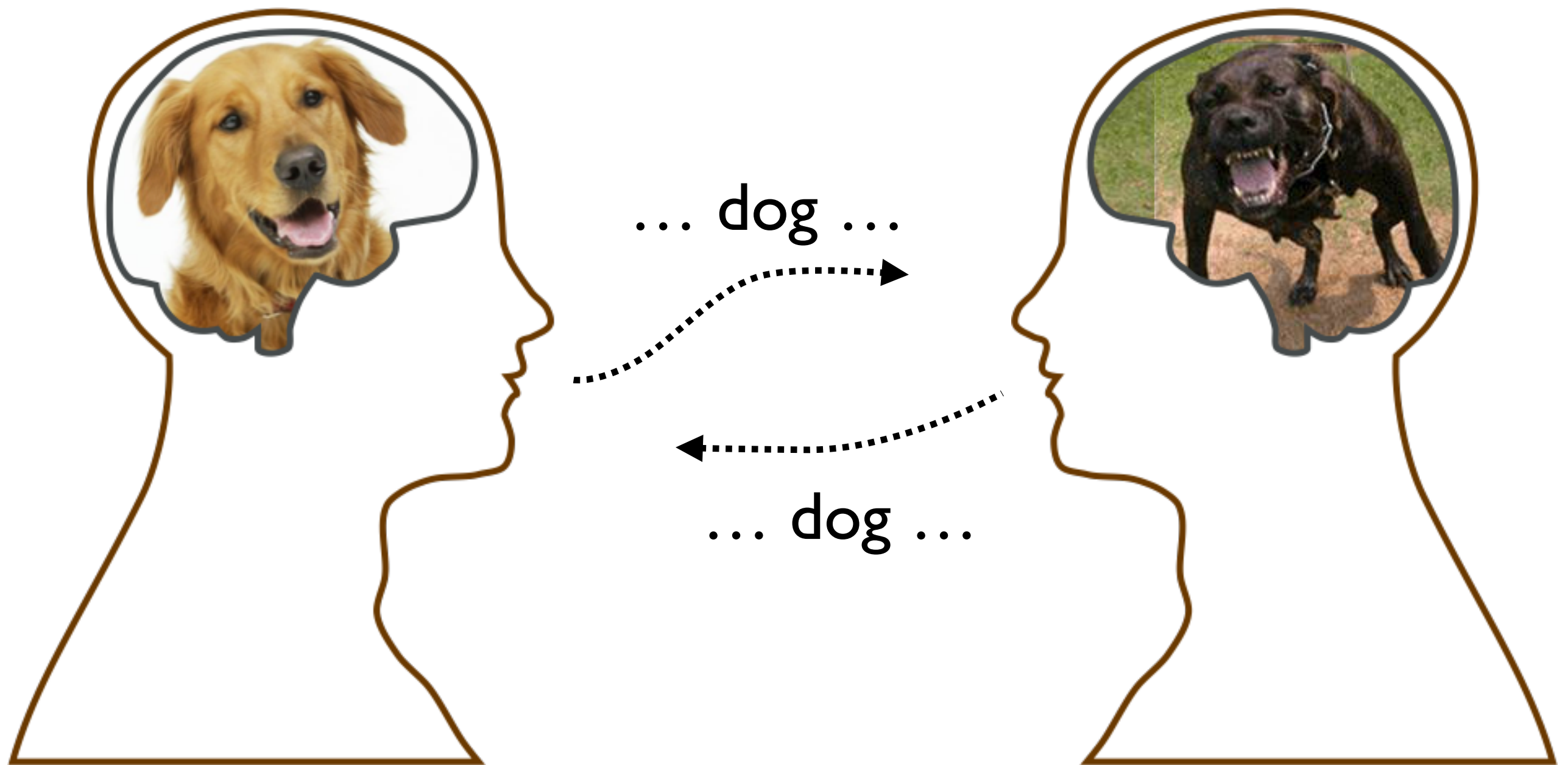


Patterns & Reality

- Patterns about reality are partial, selective and provisional
- There is always more to learn
- Your experience is personal and unique

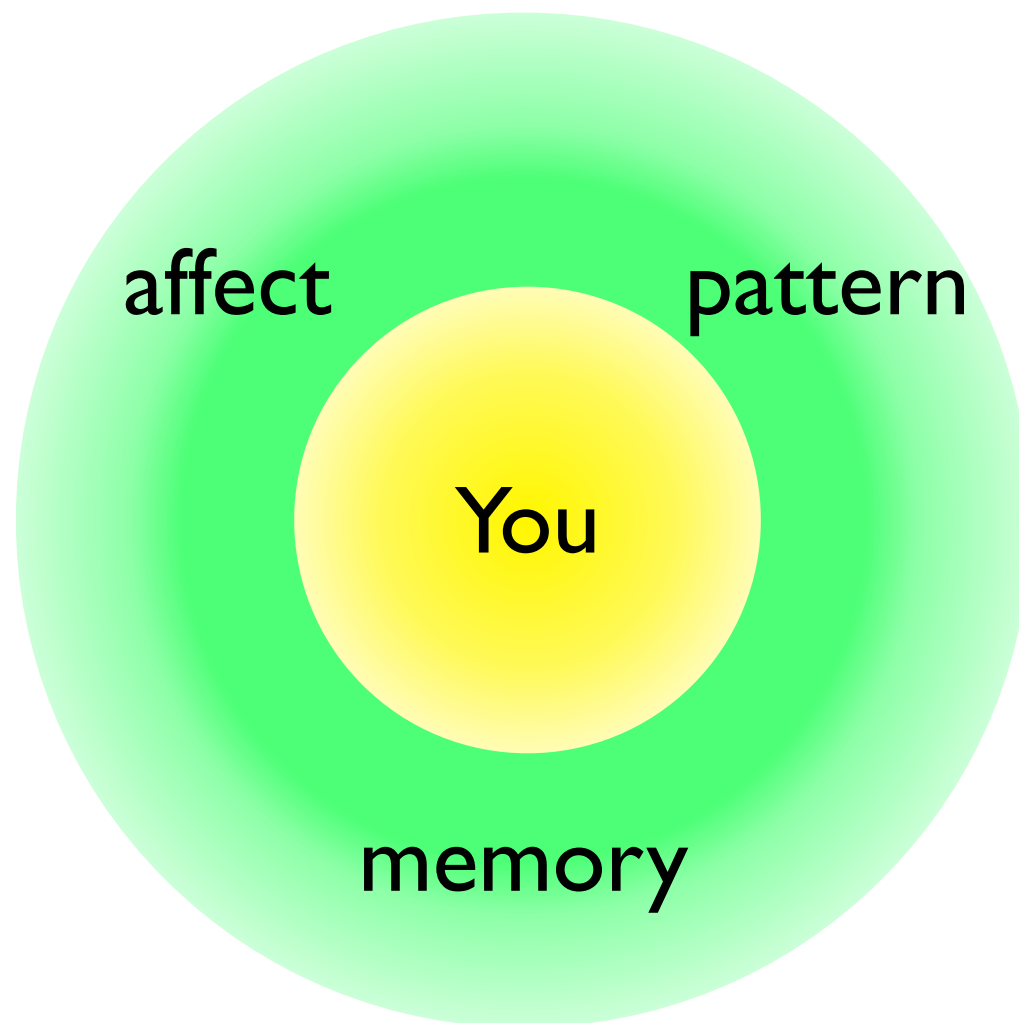


Patterns & Reality



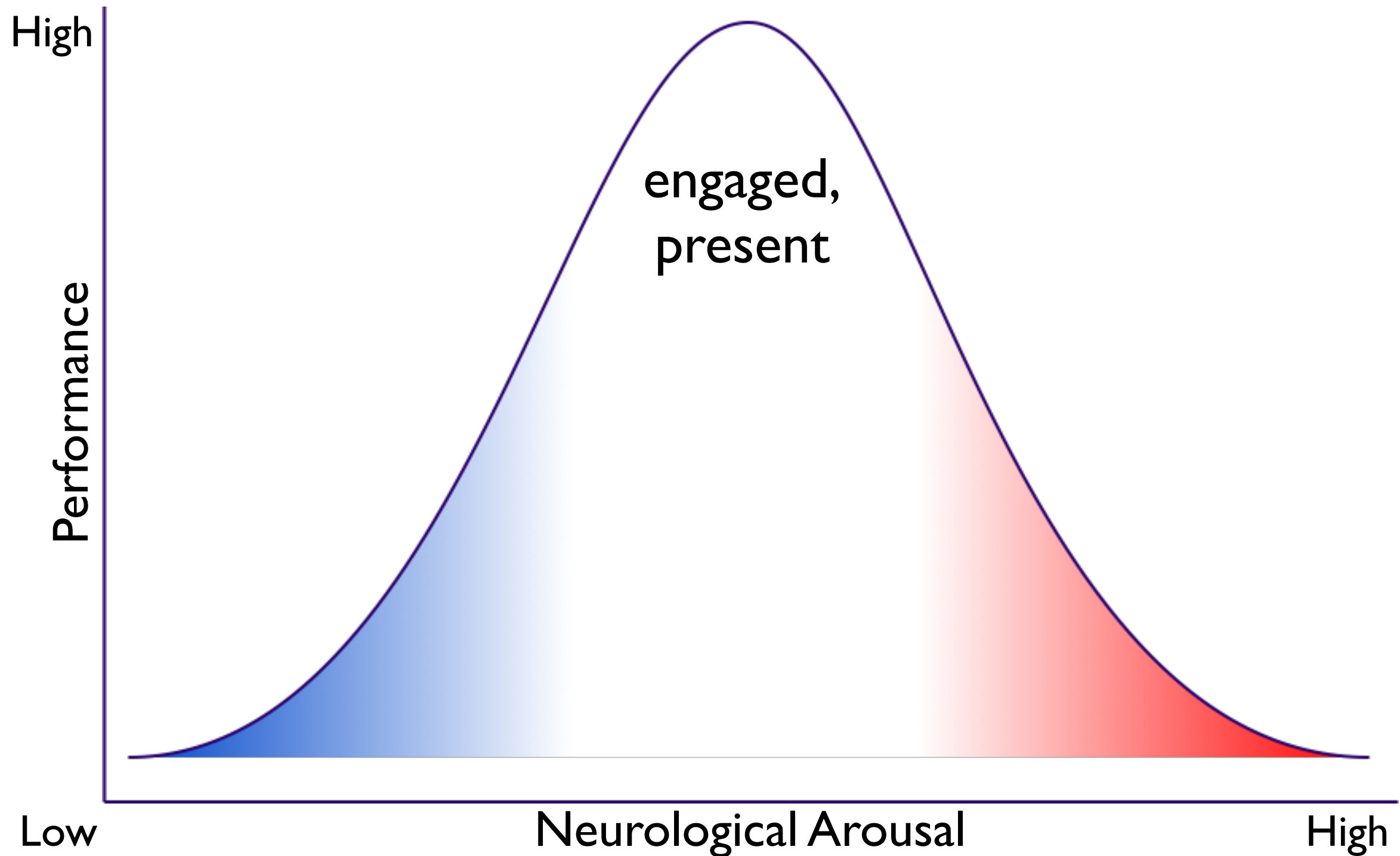
Exploration & Break

Optimal Zone



Integration and Synergy

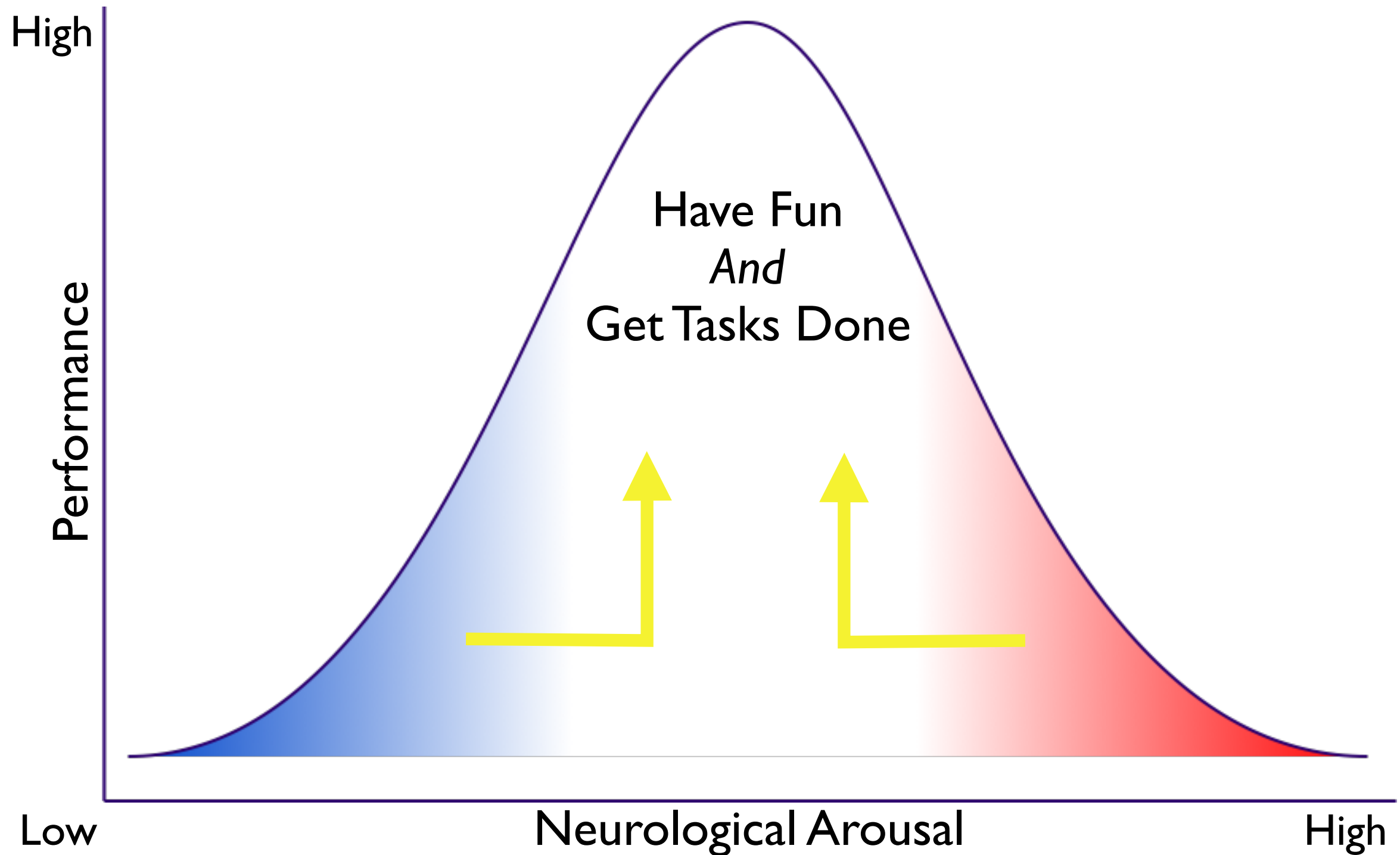
Optimal Zone



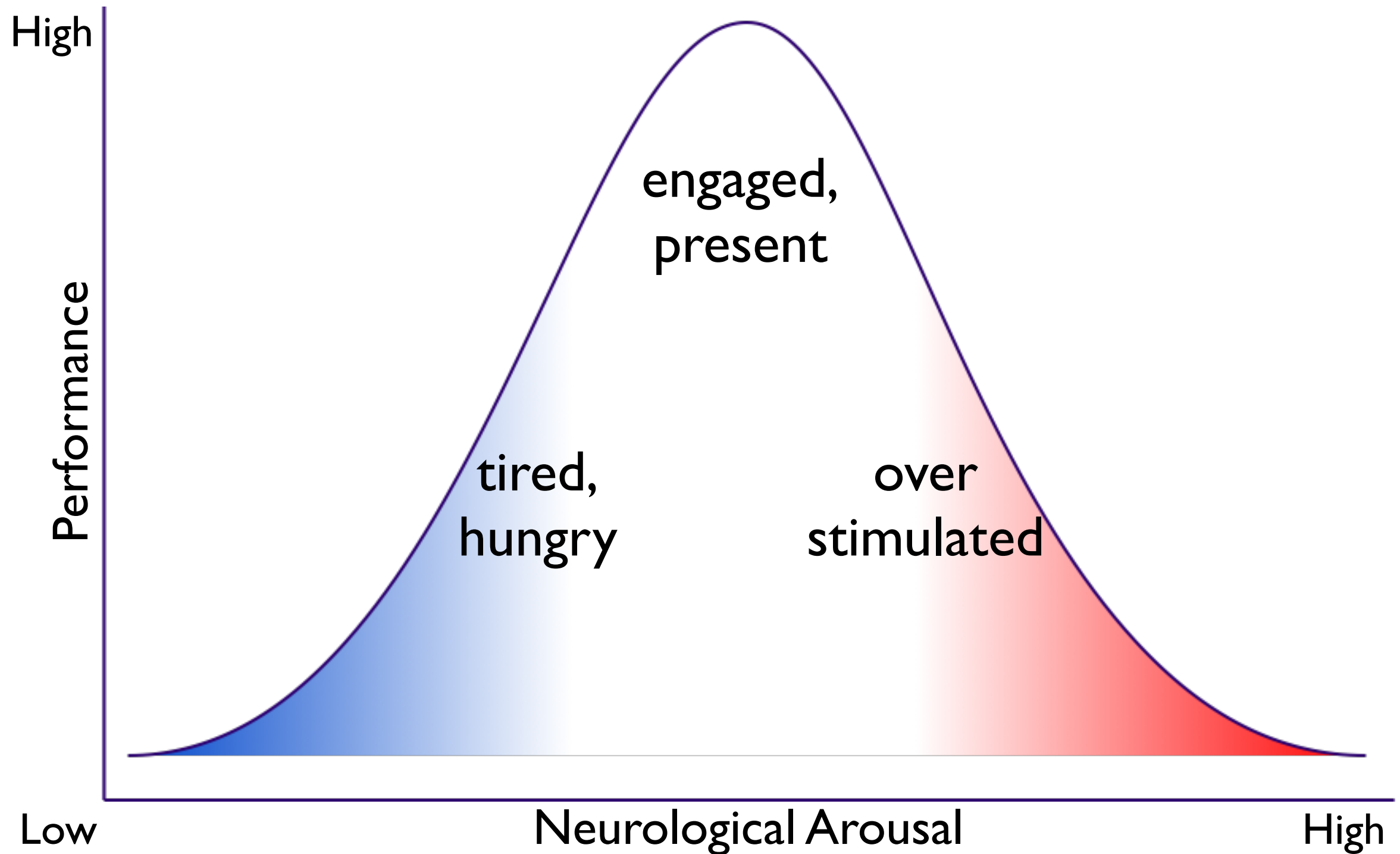
Optimal Zone

respectful
engaged
appreciative
tolerant
playful
creative
generous
resourceful
at-ease
forgiving
empathetic
peaceful
honest
open
skillful
accepting
self-aware
enthused
curious
productive
integrated
present

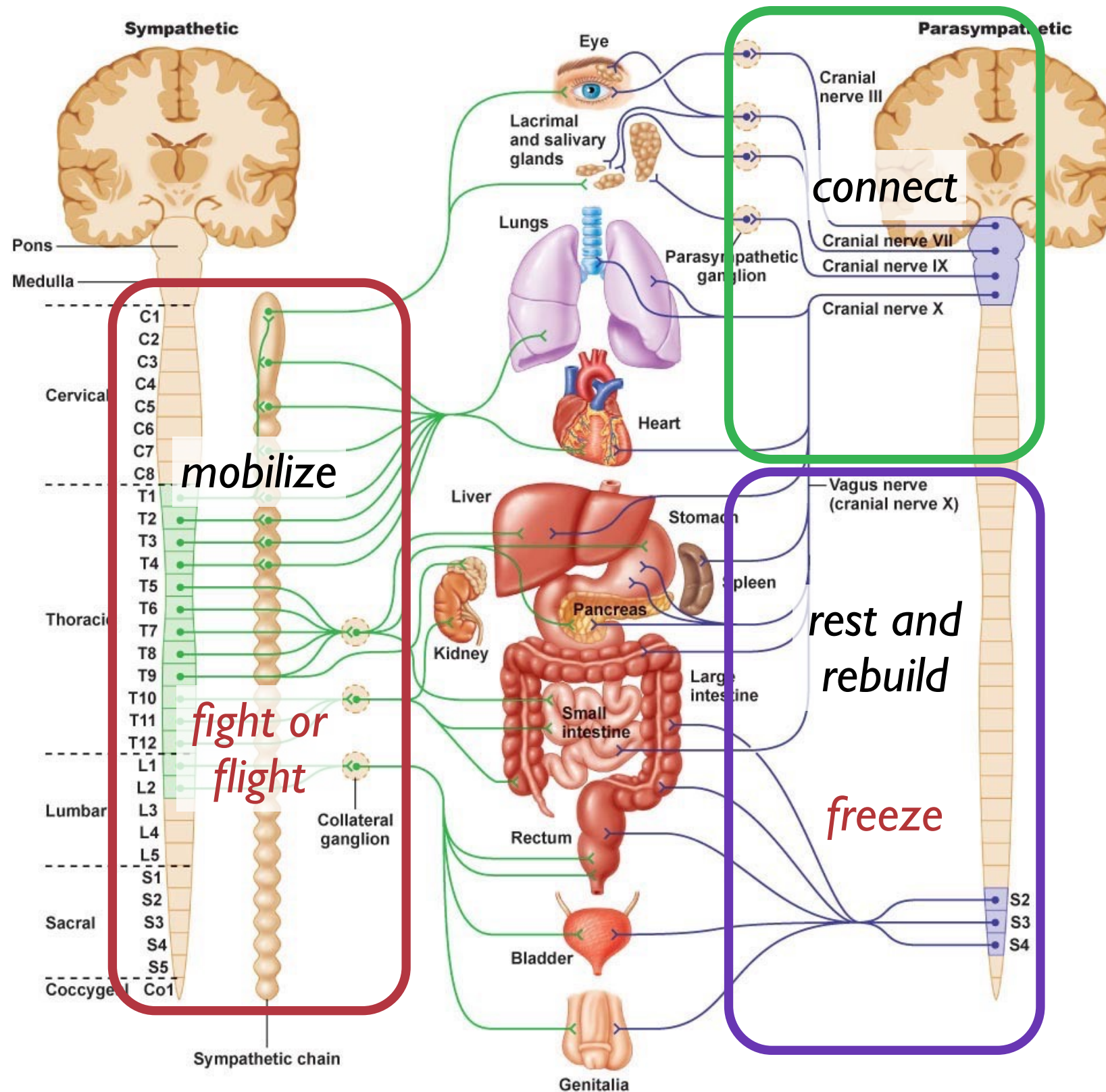
Optimal Zone



Optimal Zone



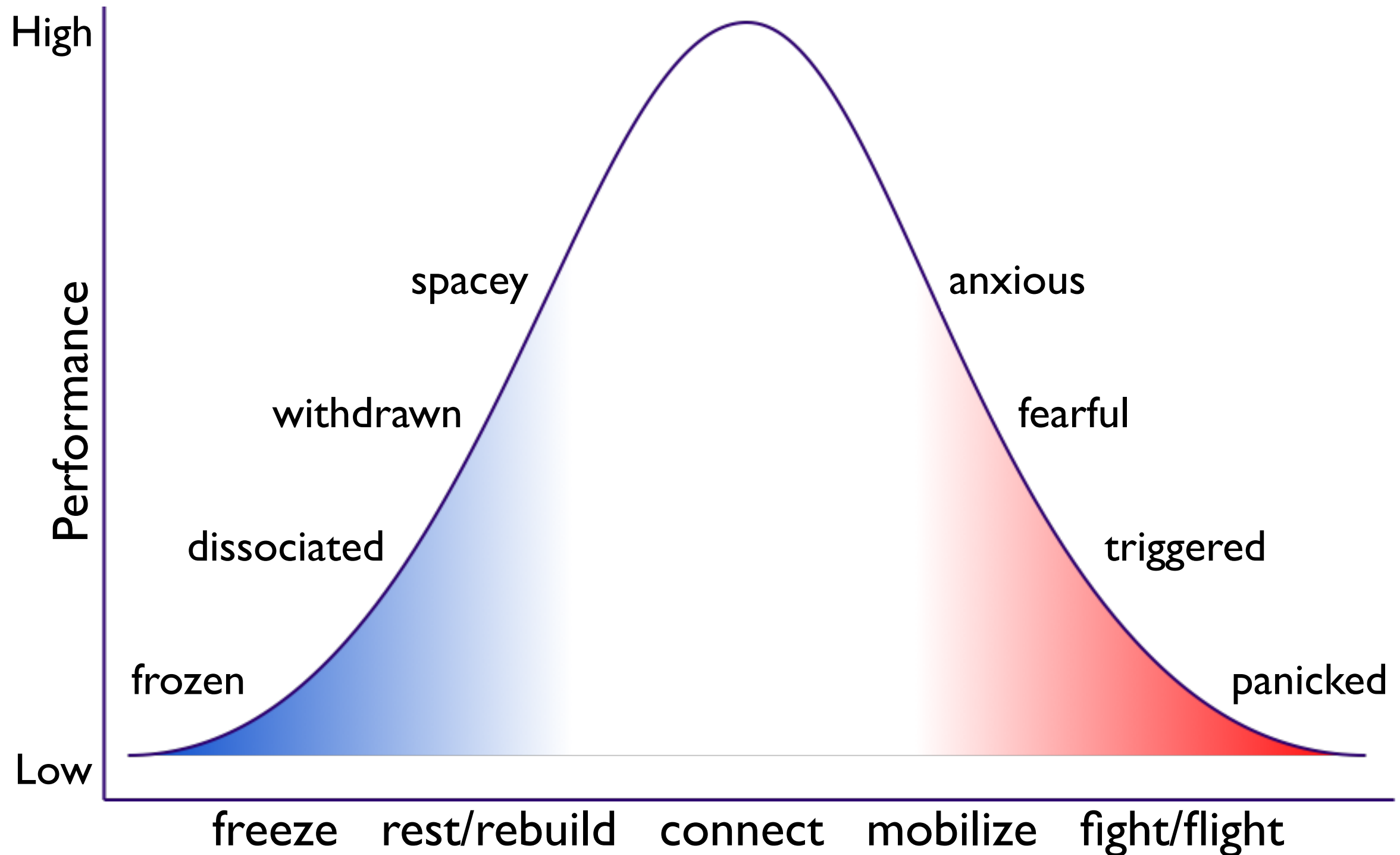
Sympathetic-Parasympathetic



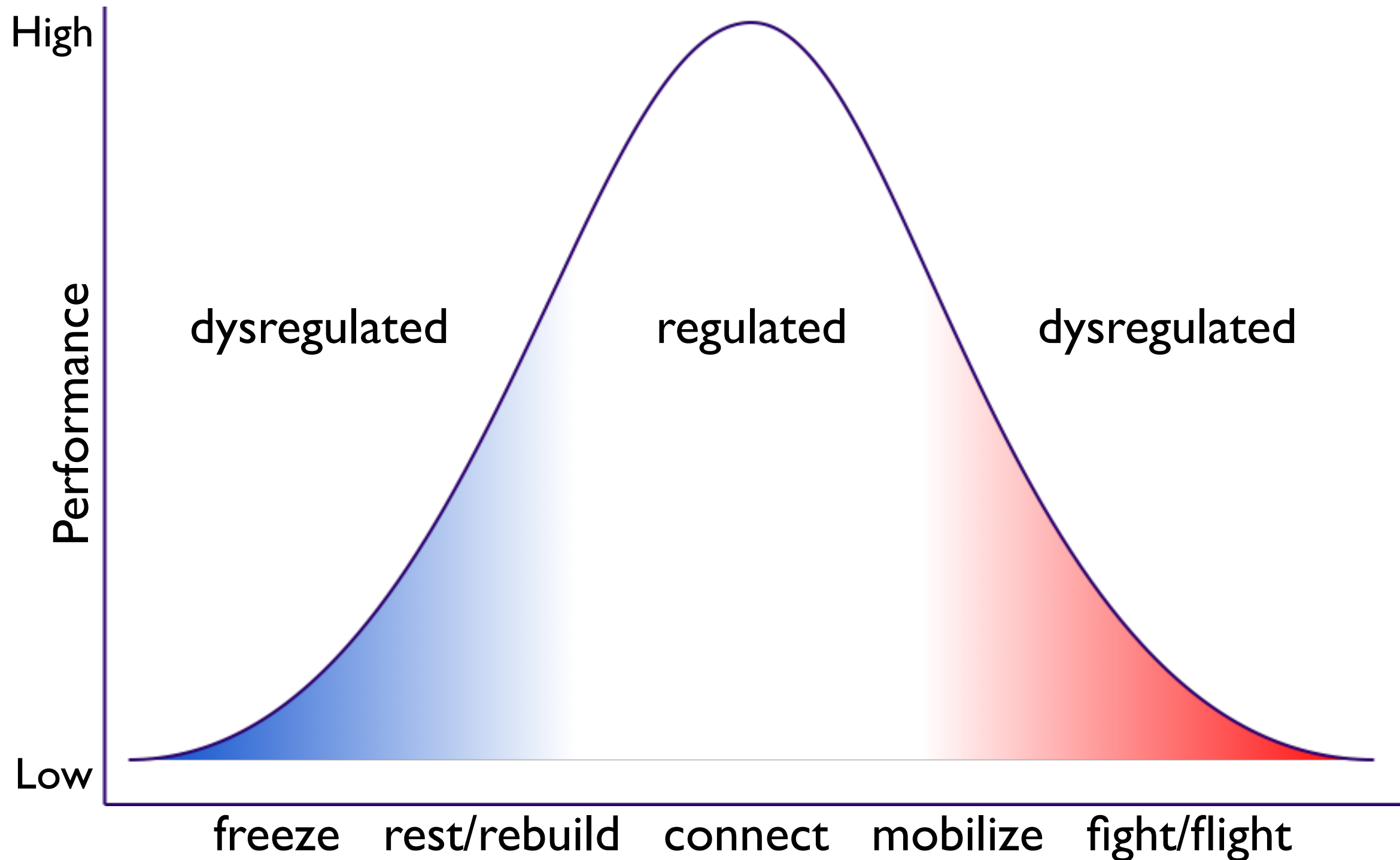
Connection and Affinity

- Hardwired in
- Deep framework for safety
- Guide to decision-making
- Will die for

Optimal Zone



Optimal Zone



Regulation in Infants



Regulation in Infants

Caregiver is	Infant response	Child develops	Kind of attachment	Approx % of adults
responsive	has needs met	self-regulation & empathy	secure	60%
erratic	tries harder	urgency & distrust	anxious-resistant	20%
non-responsive	withdraws	distance & distrust	anxious-avoidant	15%
fearful or abusive	circuits jammed	confusion	disorganized /disoriented	5%

Trauma

- Neurological overload
- If unresolved, leads to habitual defenses
- Persistent defense patterns re-groove the trauma and inhibit resolution
- Even minor stress contributes
- Defenses trigger out-of-proportion reactions, dysregulation

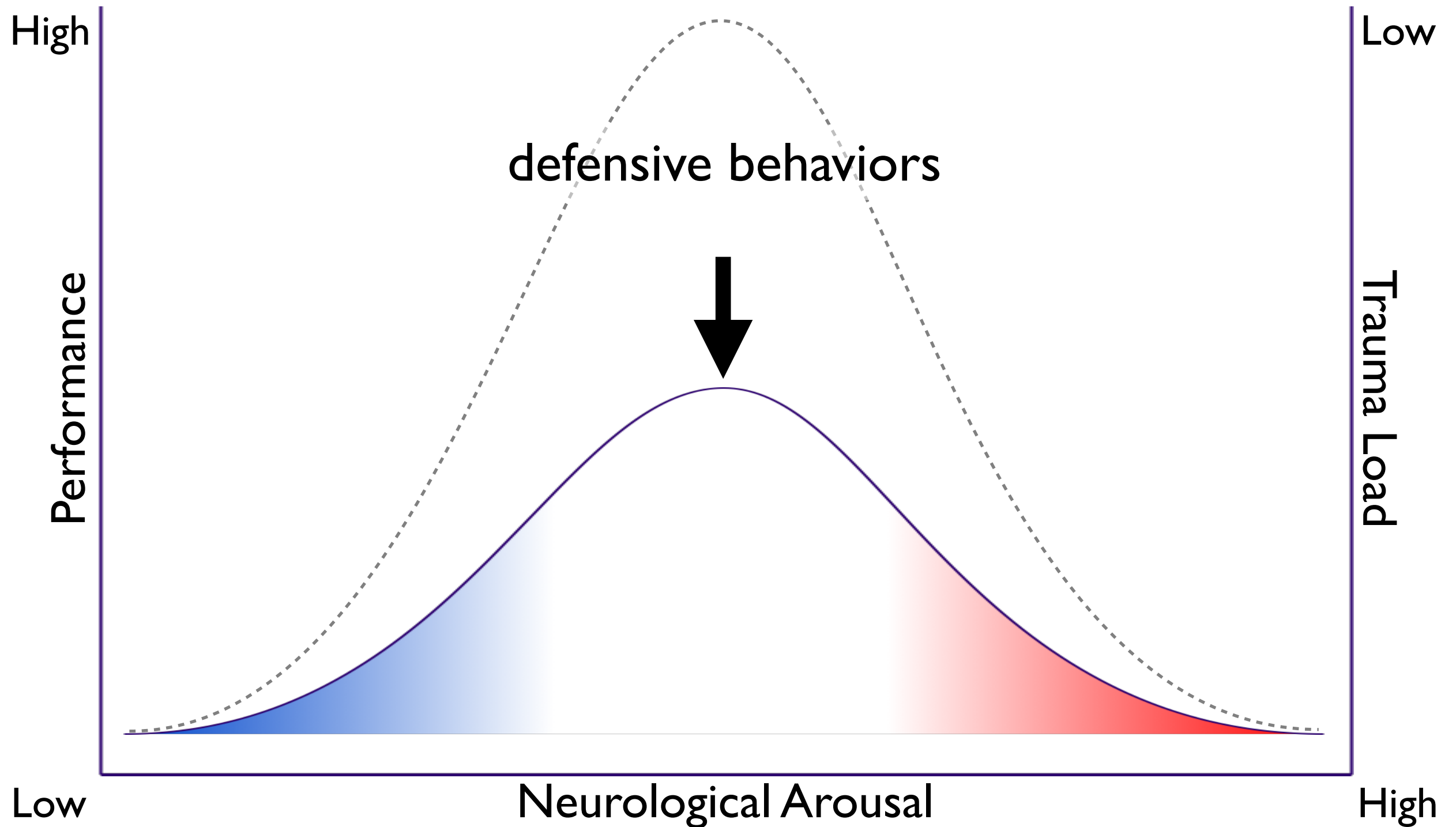
Defensive Behaviors

A word cloud of defensive behaviors. The words are arranged in a roughly circular shape, with 'Projection' and 'Compensation' being the largest and most central. Other words like 'Transference', 'Displacement', 'Repression', 'Denial', 'Hyper-vigilance', 'Rationalization', and 'Regression' are also prominent. The colors range from dark brown to bright yellow.

Defensive Behaviors

- Projection
- Compensation
- Transference
- Displacement
- Repression
- Denial
- Hyper-vigilance
- Rationalization
- Regression
- Acting Out
- Dissociation

Optimal Zone



Optimal-Zone Hygiene

- Name it to tame it
- Shake it off
- Breathe deep
- Wiggle your nose, lift your cheeks, laugh
- Choose kindness
- Hug, appropriate touch
- Eat or rest if needed
- Anything that releases held stress

Optimal-Zone First-Aid

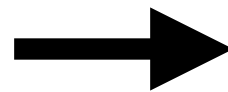
- Get agreement and shared understanding in a relationship or a group beforehand
- Train before you need it
- Center yourself first, slow down, breathe
- Acknowledge the signal in the trigger and commit to coming back to it
- Connect through empathy, kindness
- Return the focus to the present through breathing, body sensing, contact

Optimal-Zone Healing

- Deeper work benefits from skilled guides
- Needed if you are going to access more of your optimal-zone potential
- Somatic *and* cognitive
- Changes your relationship with your past, present and future

Empire to Planetary

Trauma
Based



Trauma
Resilient

Standard of Ur (war side)



Standard of Ur (hierarchy side)



Optimal Zone

