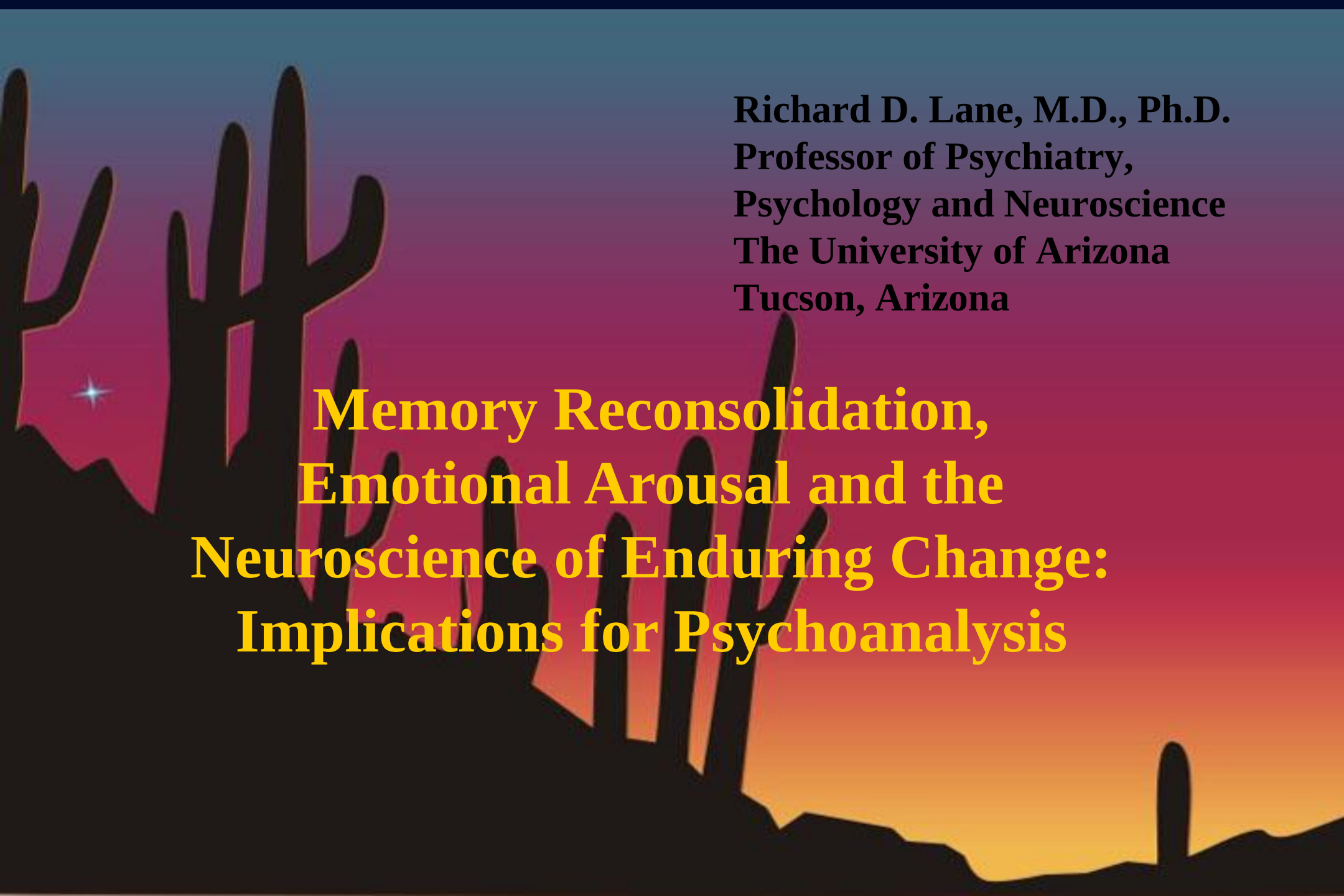

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Tucson, Arizona

Memory Reconsolidation, Emotional Arousal and the Neuroscience of Enduring Change: Implications for Psychoanalysis

fulbrightaustria

sigmund freud museum

Sigmund Freud Privatstiftung
Berggasse 19, 1090 Wien

THE UNIVERSITY OF ARIZONA

MEDIZINISCHE UNIVERSITÄT WIEN

npsa

Lecture #5
Two Different Neural Models of Emotional Experience

- The central importance of emotional experience in psychoanalysis and in life
- Drive and defense and the theory of basic emotions: non-experience of emotion due to active inhibition
- Emotional experiences as learned constructions: non-experience of emotion due to deficits in skill acquisition
- Freud's psa writings support the first model
- Freud's pre-psychoanalytic writing supports the second model

Thought Experiment

Core Claims About the Emotional Mind That Are the Basis for Viewing Psychoanalysis As A Natural Science (Solms)

- Three testable and falsifiable claims

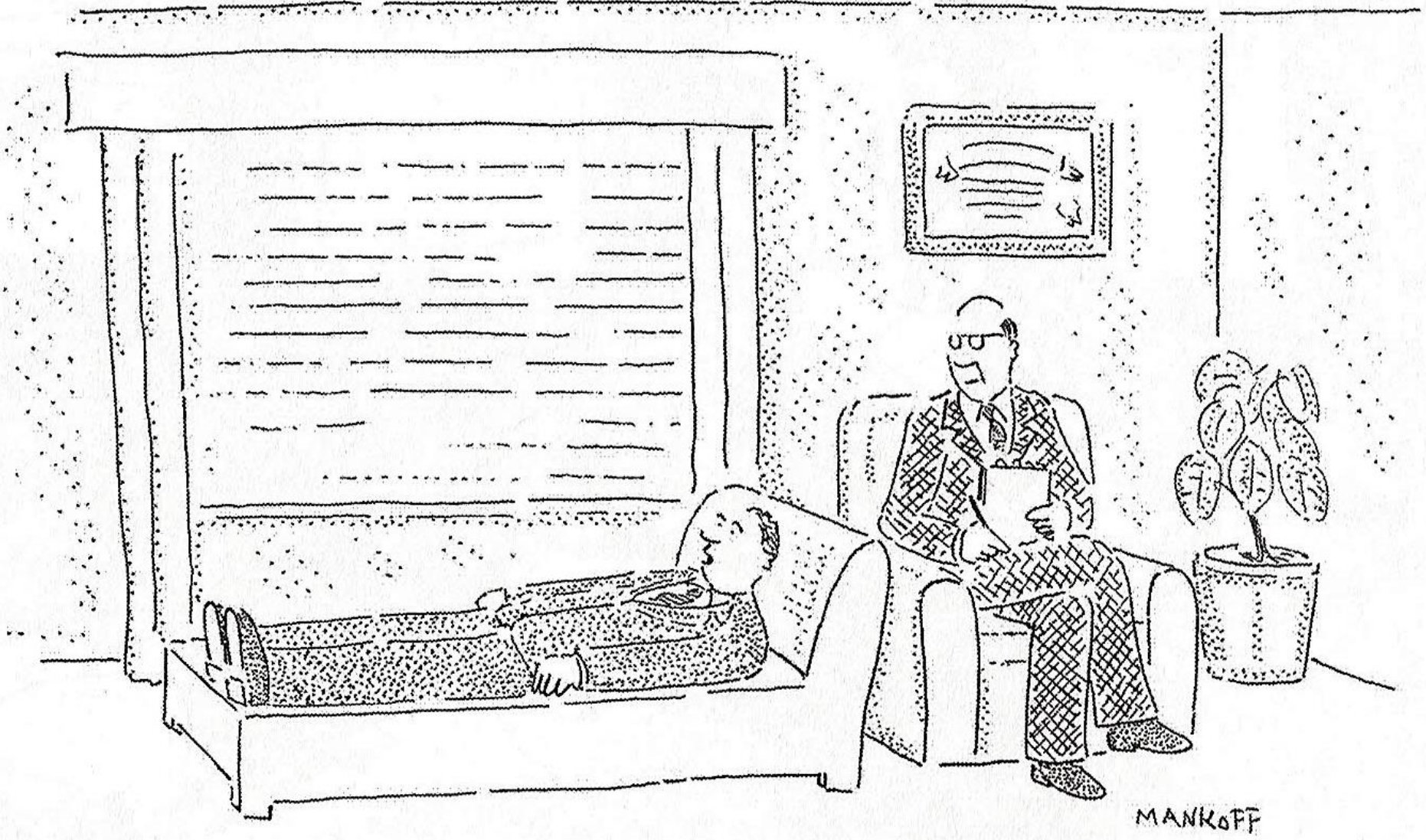
  (1) the human infant is born with a set of innate needs and is not a blank slate;

  (2) mental development involves creating the capacities to meet these needs in the world

  (3) most of the ways humans learn to meet their needs are implemented unconsciously
- Memories and schemas include the learning individuals must do in order to know how best to meet their needs
- The internal working model constitutes the scaffold or framework for meeting emotional needs in one's unique environment

The Central Importance of Emotions in the Origin and Treatment of Recurrent Maladaptive Patterns

- Recurrent maladaptive patterns arise to avoid the experience of intolerable emotions while still meeting needs as well as possible
- Corrective emotional experiences are necessary to transform those patterns (so that the relevant emotions become tolerable and usable) and allow for more adaptive functioning, whereas insight is helpful but not essential



"Look, call it denial if you like, but I think what goes on in my personal life is none of my own damn business."

A 41 year old unmarried woman was hospitalized for work up of abdominal pain. Abdominal ultrasound and endoscopy were negative. A psychiatric consultation was requested. The patient reported that persistent pain had been present for 3 months.

She also stated that 3 months previously her mother died. This was actually her adoptive mother who took her in at the age of 8. Her biological parents were alcohol dependent and physically abusive. She was placed in a series of foster homes until she was adopted. Her mother was a very kind and nurturing person. She

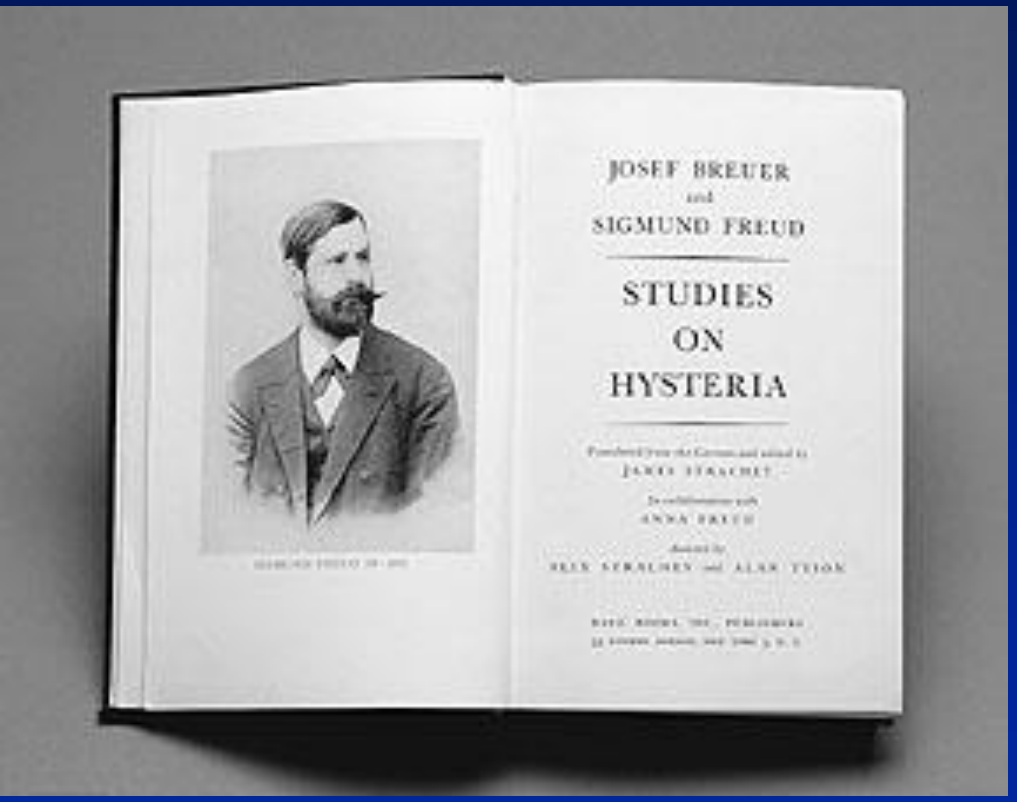
suffered from diabetes and peripheral vascular disease. During the last 5 years of the mother's life the patient cared for her on a daily basis. One week before her death, after a medical setback, the patient contemplated the possibility of her mother's death, and was overwhelmed with a feeling of grief.

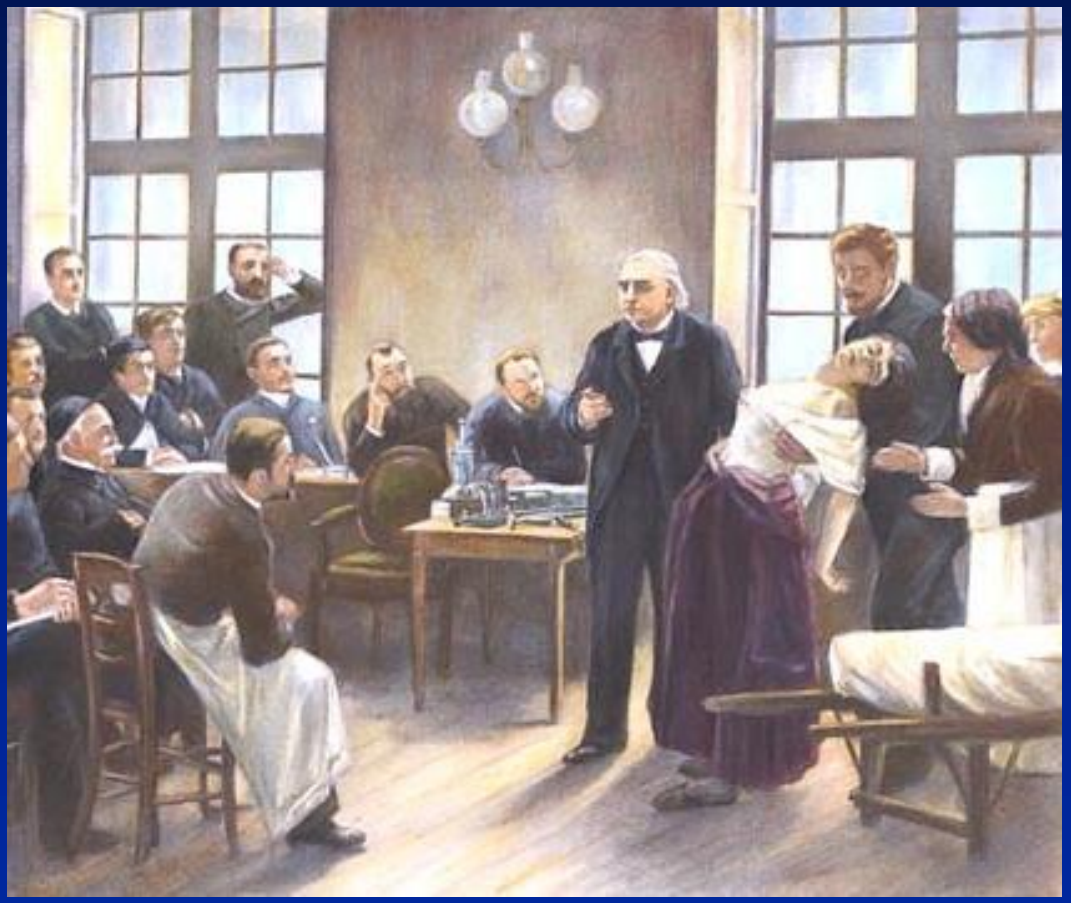
A week later mother died of a GI vascular obstruction. Since her mother's death the patient has experienced no feelings of grief or sadness. In addition to pain, she suffered from anhedonia, had neuro-vegetative symptoms of depression and met criteria for major depressive disorder.

Why Did This Patient Not Experience Grief?

- A weak emotional response
- A strong response is experienced in a differentiated manner but is not put into words or cognitively processed
- The experience can be mentally represented and verbalized as grief but it is unwanted and excluded from consciousness due to defenses (e.g. repression)
- A strong emotional response that is not experienced ("perceived" or "differentiated") or represented because:
  - the state response is too strong (state)
  - this is a trait characteristic of the individual (trait)
  - the individual has a low tolerance (state x trait)

Breuer and Freud 1895
Studies on Hysteria





The "Strangulated Affect" Hypothesis: Conversion of Affect into Bodily Sx

- Affect that was activated during the traumatic event could not be expressed at the time of the trauma.
- Symptoms resulted from this failure to express the emotions associated with the event.
- The unexpressed emotions prevented the memory of the trauma from dissipating.
- The "strangulated" affect was expressed indirectly in a somatic symptom that symbolically represented that which had been repressed.

Freud's Writings on Affect

- Throughout his career Freud only addressed mental contents that had been previously known or represented
- His writings on affect were not comprehensive, systematic or internally consistent
- 3 phases of his writings on affect
  - Affect as quantifiable substance (hydraulic model); affect was the conscious manifestation of instinct; pleasure due to discharge; unpleasure from build-up
  - Affect as safety valve (e.g. if helpless, could attach to a wish)
  - Affect as information; signal theory of anxiety; affect signals impending danger to the ego, which is then avoided

Freud on Unconscious Emotion (The Unconscious, 2015)

It is surely of the essence of an emotion that we should be aware of it, i.e. that it should become known to consciousness. Thus the possibility of the attribute of unconsciousness would be completely excluded as far as emotions, feelings and affects are concerned. But in psycho-analytic practice we are accustomed to speak of unconscious love, hate, anger, etc., and find it impossible to avoid even the strange conjunction, 'unconscious consciousness of guilt', or a paradoxical 'unconscious anxiety'. . . . In every instance where repression has succeeded in inhibiting the development of affects, we term those affects (which we restore when we undo the work of repression) 'unconscious.' Thus it cannot be denied that the use of the terms in question is consistent; but in comparison with unconscious ideas there is the important difference that unconscious ideas continue to exist

Freud on Unconscious Emotion (The Unconscious, 2015)

after repression as actual structures in the system *Ucs.*, whereas all that corresponds in that system to unconscious affects is a potential beginning which is prevented from developing. Strictly speaking, then, and although no fault can be found with the linguistic usage, there are no unconscious affects as there are unconscious ideas. But there may very well be in the system *Ucs.* affective structures. . . . In the present state of our knowledge of affects and emotion we cannot express this difference more clearly (pp. 177–178).

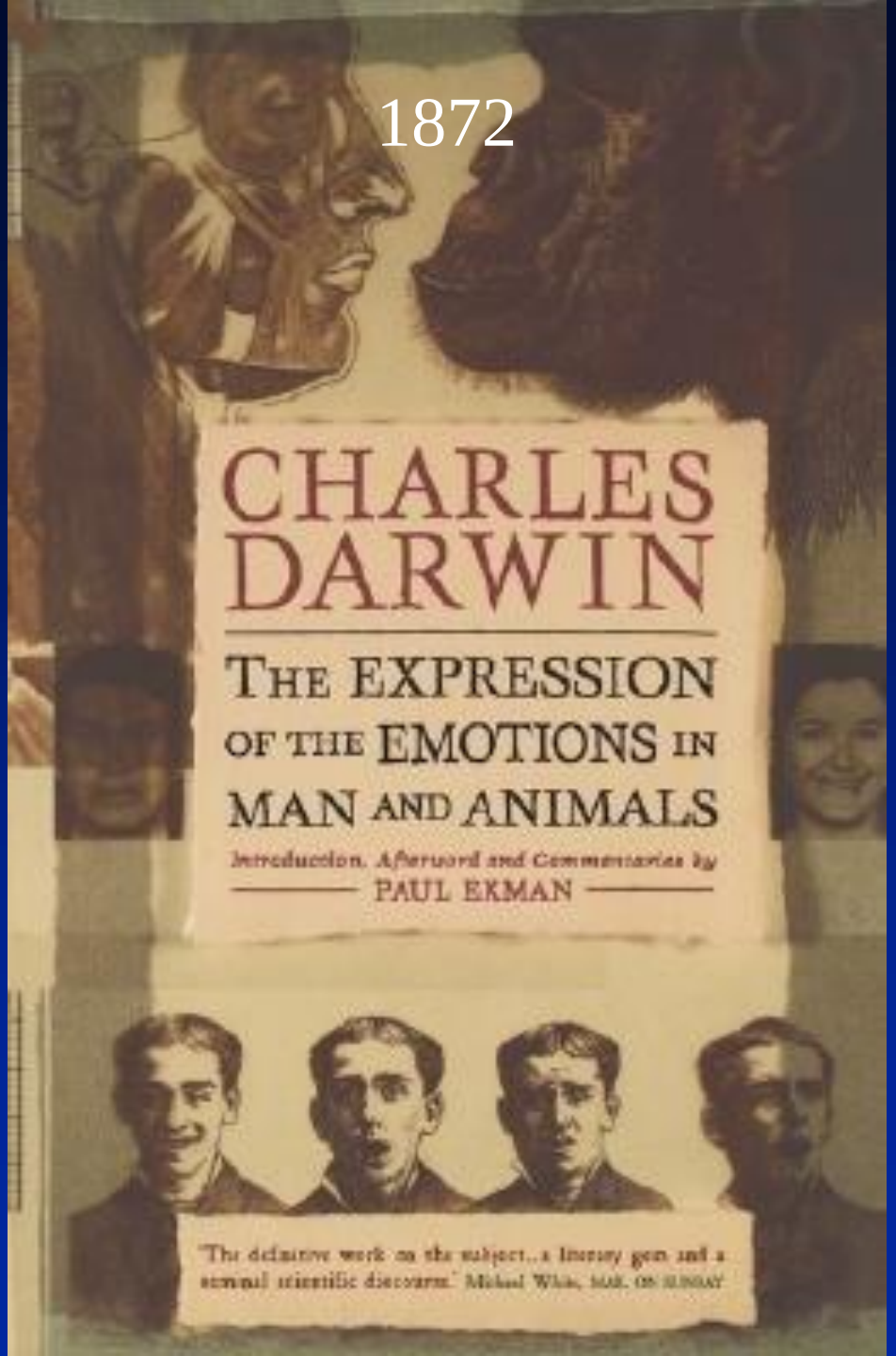
Additional Comments By Freud
The Ego and the Id (1923)

"We then come to speak, in a condensed and not entirely correct manner, of 'unconscious feelings', keeping up an analogy with unconscious ideas which is not altogether justifiable. Actually, the difference is that, whereas with *Ucs. ideas* connecting links must be created before they can be brought into the *Cs.*, with *feelings*, which are themselves transmitted directly, this does not occur. In other words: the distinction between *Cs.* and *Pcs.* has no meaning where feelings are concerned; the *Pcs.* here drops out—and feelings are either conscious or unconscious" (pp. 22–23).

Conclusions About Freud's Writings on Affect

- Freud viewed emotion as an expression of instinct that sought discharge and needed to be controlled (through defenses)
- Unlike thoughts, emotions did not involve preconscious processing
- He viewed emotion as either conscious or not manifested
- Unconscious emotions, when they occurred, were due to repression
- He did not have a concept of emotion as adaptive or as an expression of a drive to attach to other people (as we do today)
- Emotions enable connection, interaction and communication
- Similarly, we now view genes as highly regulated by interaction with the environment, not autonomous blueprints for biological processes independent of life circumstances

1872


CHARLES
DARWIN
THE EXPRESSION
OF THE EMOTIONS IN
MAN AND ANIMALS
Introduction, Afterword and Commentaries by
PAUL EKMAN

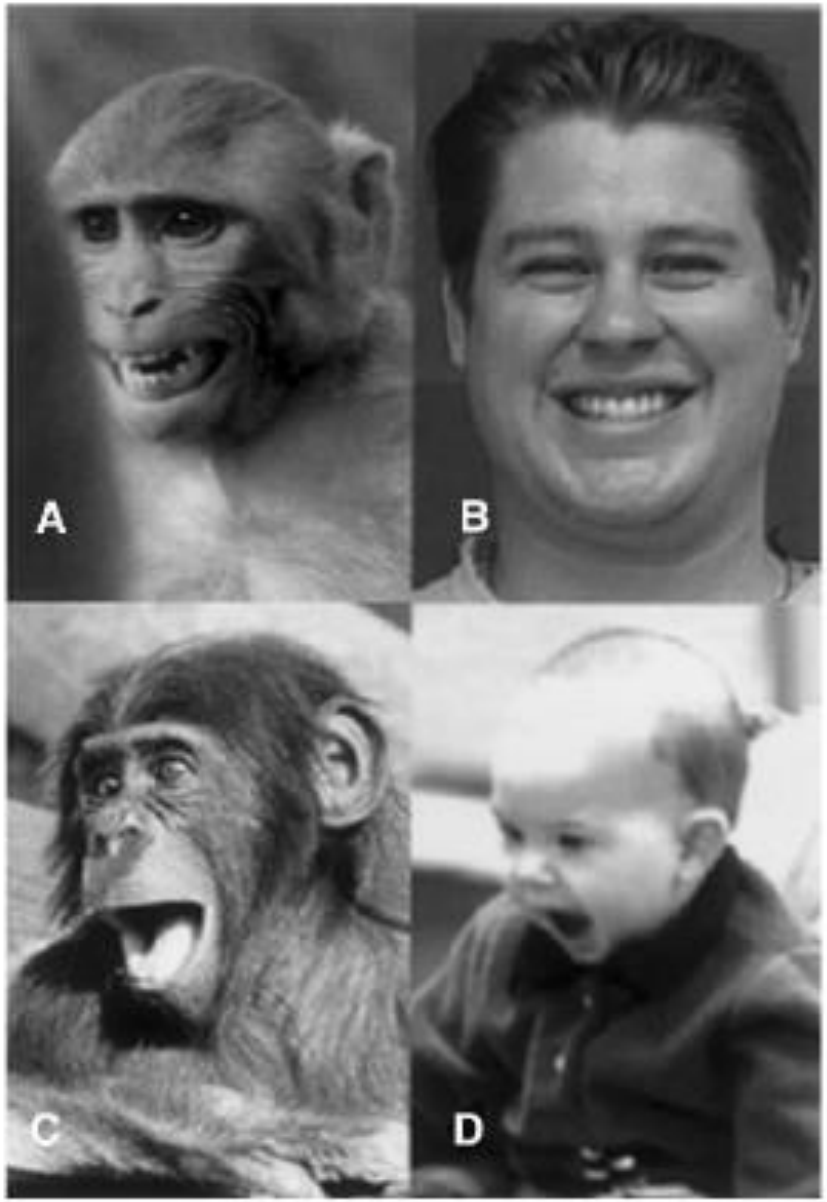
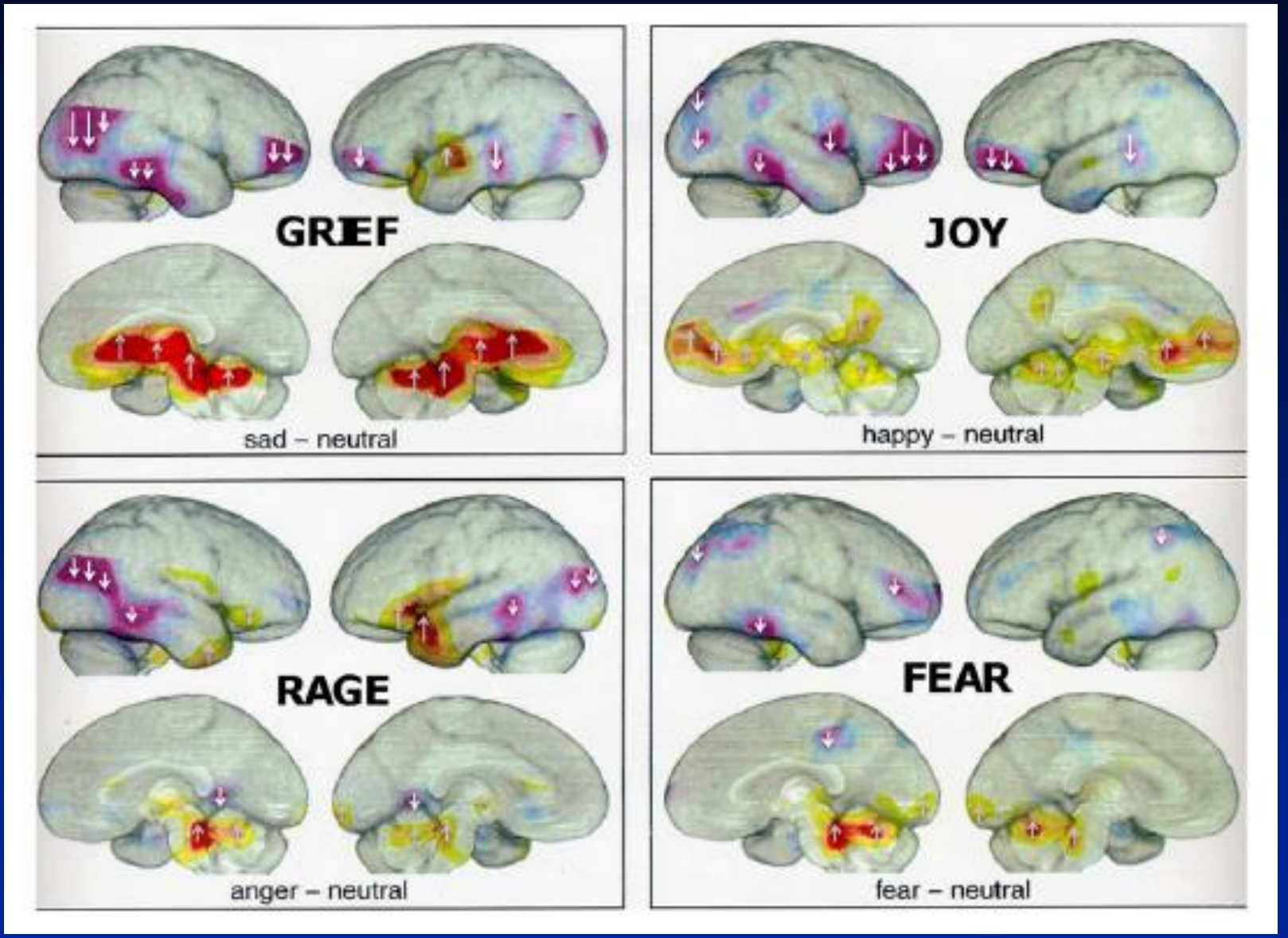


Fig. 1. Homologous displays in human and nonhuman primates. *A*, Rhesus macaque submissive display (photograph by Frans DeWaal, 1969; silent, bared-teeth display); *B*, human smile (from Kanade and others 2000; silent, bared-teeth display); *C*, Bonobo play face (photograph by Frans DeWaal, 1966; relaxed, open-mouth display); *D*, human play face (from Forbes and others 2000; relaxed, open-mouth display). Reproduced with permission from Figure 6 in Schmidt and Cohn (2001).

Basic Emotional Systems	Key Brain Areas	Key Neuromodulators
General Pos. Motivation **SEEKING**/ Expectancy System	Nucleus Accumbens – VTA Mesolimbic and mesocortical outputs Lateral hypothalamus – **PAG**	**DA (+)**, glutamate (+), opioids (+), **neurotensin (+)**, **orexin (+)**, Many other neuropeptides
RAGE/ Anger	Medial amygdala to Bed Nucleus of Stria Terminalis (BNST). Medial and perifornical hypothalamic to **PAG**	**Substance P (+)**, Ach (+), glutamate (+)
FEAR/ Anxiety	Central & lateral amygdala to medial hypothalamus and dorsal **PAG**	Glutamate (+), **DBI**, **CRF**, **CCK**, **alpha-MSH**, **NPY**
LUST/ Sexuality	Cortico-medial amygdala, Bed nucleus of stria terminalis (BNST) Preoptic hypothalamus, VMH, **PAG**	Steroids (+), **vasopressin**, & **oxytocin**, **LH-RH**, **CCK**
CARE/ Nurturance	Anterior Cingulate, BNST Preoptic Area, VTA, **PAG**	**oxytocin (+)**, **prolactin (+)** dopamine (+), **opioids (+/-)**
PANIC/ Separation	Anterior Cingulate, BNST & Preoptic Area Dorsomedial Thalamus, **PAG**	**opioids (-)**, **oxytocin (-)** **prolactin (-)**, **CRF (+)** glutamate (+)
PLAY/ Joy	Dorso-medial diencephalon Parafascicular Area, **PAG**	**opioids (+/-)**, glutamate (+) Ach (+), **cannabinoids**, TRH?

Figure 5. Overview of key neuroanatomies and neurochemistries of the primary-process emotional networks.
doi:10.1371/journal.pone.0021236.g005



Damasio, A. R., Grabowski, T. J., Bechara, A., Damasio, H., Ponto, L. L., Parvizi, J., & Hichwa, R. D. (2000). Subcortical and cortical brain activity during the feeling of self-generated emotions. *Nature neuroscience*, *3*(10), 1049-1056.

Table 1. Defense mechanisms: hierarchy of mature/cognitively oriented and immature/emotionally driven mechanisms of defense according to psychoanalytic theory

Mature/cognitively oriented mechanisms of defense	
Intellectualization	Dealing with emotional stressors by excessive use of abstract thinking or complex explanations to control or minimize disturbing feelings.
Rationalization	Dealing with emotional stressors by inventing a socially acceptable or logical reason to justify an already taken unconscious emotional action.
Repression	Moving thoughts unacceptable to the ego into the unconscious, where they cannot be easily accessed.
Displacement	Dealing with emotional stressors by redirecting emotion from a 'dangerous' object to a 'safe' object.
Isolation	Dealing with emotional stressors by splitting off the emotional components from a difficult thought. The mechanism of isolation is commonly overutilized by people with obsessive-compulsive personalities.
Reaction formation	Dealing with emotional stressors by converting an uncomfortable feeling into its opposite.
Identification	Occurs in various stages of development, in particular in its role as an intrinsic part of object relationships. Serves the function of structure building and makes it possible to deal with separations from loved objects. Plays a role in some types of conversion.
Identification (with the aggressor)	By becoming an aggressor towards others, one avoids becoming a victim of aggression.
Idealization	Dealing with emotional stressors by overestimating the desirable qualities and underestimating the limitations of a desired object.
Introjection	Dealing with emotional stressors by internalizing the values or characteristics of another person; usually someone who is significant to the individual in some way.
Projection	The opposite of introjection. Attributing one's own emotions or desires to an external object or person.
Immature/emotionally driven mechanisms of defense	
Somatization	Dealing with emotional stressors by physical symptoms involving parts of the body innervated by the sympathetic and parasympathetic systems.
Derivatives of self/nonself loss of boundaries	
Dissociation	Temporary and drastic modification of one's self-image to avoid emotional distress. Disconnection from full awareness of self, time and/or external circumstances. Often connected with childhood trauma and posttraumatic stress disorder.
Projective identification	Repeated cycle of projection and introjection: hateful impulses are projected onto the significant other who becomes the bad object. Some of the bad impulses are still retained in the self; they are reinforced by taking into one's self, introjecting, what has originally been projected onto the object.
Psychotic introjection	Psychotic internalization of the object to overcome overwhelming anxieties of loss.
Psychotic projection	Hallucinatory and paranoid externalization of inaccessible thoughts and their connected affects.
Splitting	Splitting off and rejecting parts of the object image and/or of one's own body.
Fragmentation	Reflects a primitive stage in psychic development, preceding the formation of part self and part object images. Breaking up of the self or the object image into components which may operate independently.
Denial	Dealing with emotional stressors by failing to recognize obvious implications or consequences of a thought, act or situation.
Catatonia	Psychomotor syndrome showing a specific constellation of affective, behavioral and motor symptoms. Sensorimotor regression reflecting an immature mechanism against the uncontrollable overflow of anxieties.
Autism	Extreme withdrawal and avoidance of contact and interpersonal relationships to overcome overwhelming anxieties of losing one's own self when near the object.

Affect. Observations about the patient's emotional states provide a gold mine of information about defense mechanisms. After all, the management of affect is perhaps the most important function of defenses. Patients who describe extraordinarily painful events in their lives without being moved in the least may be employing intellectualization. Hypomanic patients who assert that they always are in a good mood and are unusually jocular with the examiner may be using denial to defend against feelings such as grief and anger. Borderline patients who express contempt and hostility toward the key figures in their lives may be employing splitting to ward off any integration of good and bad feelings toward others. Mood, a subcategory of affect involving a sustained, internal feeling tone, should also be assessed. Exploration of moods with a patient often reveals that they are linked with significant self- and object-representations.

Gabbard GO. Psychodynamic Psychiatry in Clinical Practice. The DSM IV Edition. American Psychiatric Press, 1994.

Defenses

Conscious Emotion Processing

Emotion: Automatic *Assessments* and Adaptive *Responses* to Important Recurring *Situations*

- Function of Emotions: enhancing adaptation to environment by learning from experience in interaction with it – in mammals

- Automatic (unconscious) assessment of whether needs, goals & values are met in interaction with environment → Emotional responses

- Emotional responses → automatic resetting of:
  - physiology (e.g. heart rate increase)
  - behavior (e.g. avoidance behavior)
  - thought (e.g. more alert)
  - feeling (e.g. feeling afraid)

→ enables higher organisms to rapidly adapt to changing circumstances

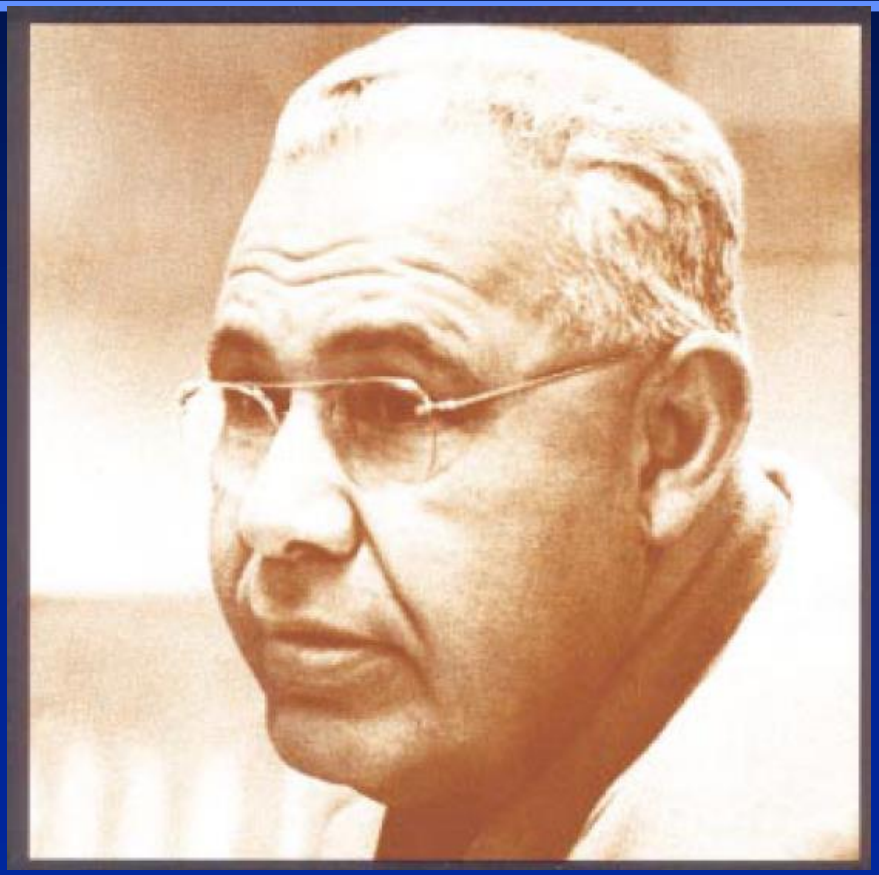
Repertoires of Emotion Concepts Vary Across Individuals

8 pack	+8 = 16 pack	+8 = 24 pack
Red	Carnation Pink	Violet Red
Orange	Red Orange	Scarlet
Yellow	Yellow Orange	Dandelion
Green	Yellow Green	Green Yellow
Blue	Blue Green	Cerulean
Violet (purple)	Blue Violet	Indigo
Brown	Red Violet	Apricot
Black	White	Gray

Interference with the Experience or Expression of Emotional States is Pathogenic

The "Magic Seven" Psychosomatic Disorders (1950)

- Essential Hypertension
- Duodenal Peptic Ulcer
- Bronchial Asthma
- Rheumatoid Arthritis
- Ulcerative Colitis
- Neurodermatitis
- Thyrotoxicosis



Franz Alexander, M.D.
Founder, Chicago Institute for Psa

Specificity Theory (1950): Each Disorder Associated with a Specific Unconscious Conflict

Examples of unconscious conflict

Hypertension: seeks to control the expression of hostile, aggressive feelings to avoid losing the affection of others; tends to be overly compliant

Peptic Ulcer: the wish for nurturance and support is renounced to promote independence and self-assertion

All core conflicts were associated with repression of emotion.

Alexithymia (1972): Lacking Words for Feelings or Lacking Feelings?

Nemiah and Sifneos, 1970: “…these patients manifested either a total unawareness of feelings or an almost complete incapacity to put into words what they were experiencing.”

Consensus Definition of Alexithymia From Heidelberg Conference in 1976

A (lacking) lexi(words) thymia (emotion)

- Difficulty identifying feelings
- Difficulty describing feelings
- Externally oriented thinking
- (Little dreaming, daydreaming or fantasy)

Alexithymia is considered a deficit, not a defense

The Infantile Personality: Forerunner of the Alexithymia Concept

A deficit or developmental arrest in the capacity for symbolic mental representation of emotion was the core problem in patients with psychosomatic disorders. "Tension must be expressed through action or through organs."

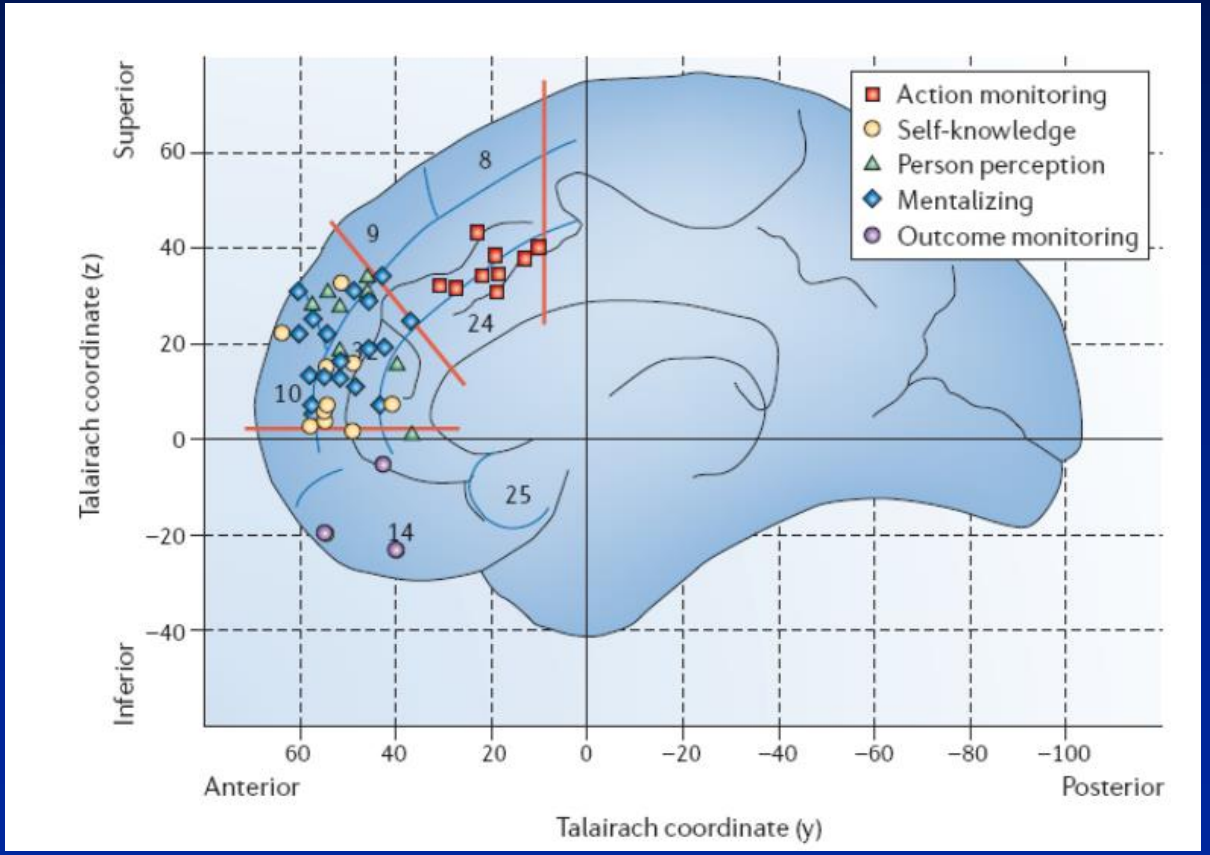
Ruesch J. The Infantile Personality: The core problem of psychosomatic medicine. Psychosomatic Medicine 1948; 10:134-144.

David Premack & Guy Woodruff. Does the chimpanzee have a theory of mind? Behavioral and Brain Science 1978; 1: 515-526.

Sally

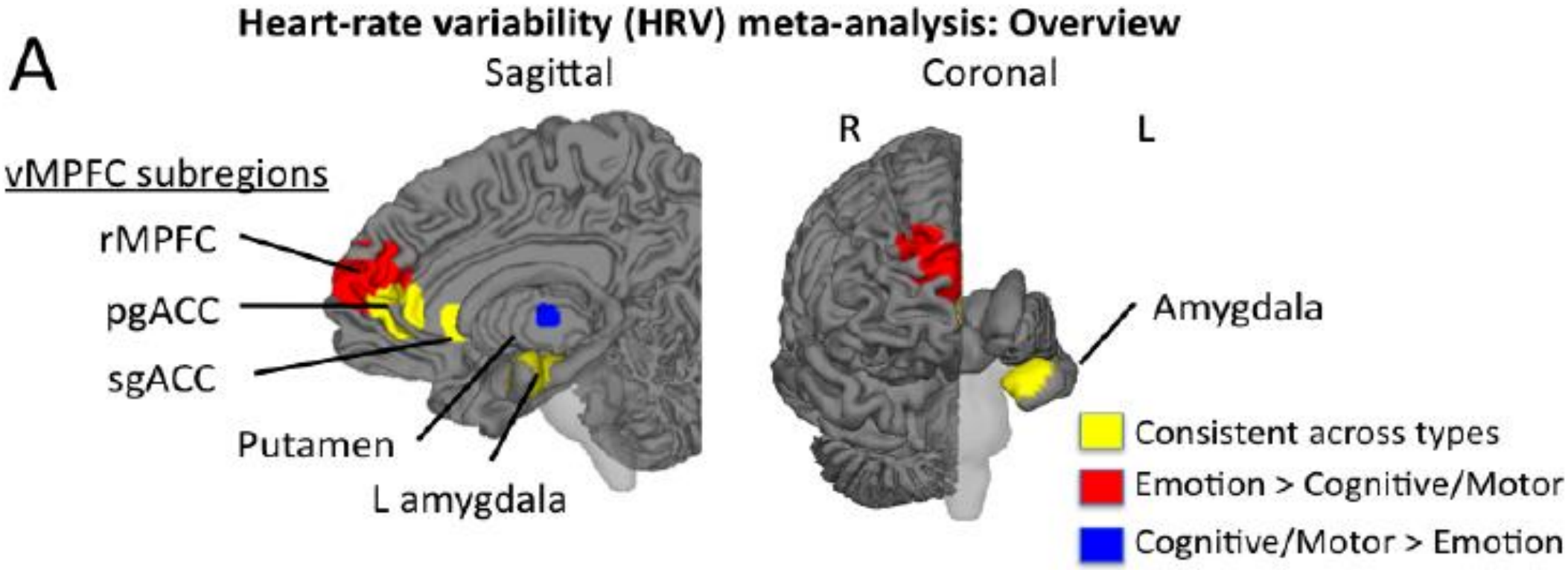
Anne

Theory of Mind / Mentalizing



Amodio DM, Frith CD. Nature Reviews Neuroscience 7:268-77, 2006.

Medial Prefrontal Cortex Participates in Regulating Vagal Tone (HRV) Meta-Analysis of 12 studies



Thayer JF, Åhs F, Fredrikson M, Sollers J, Wager TD. Neuroscience & Biobehavioral Reviews 2012: 36(2): 747-756.

Neuroscience and Biobehavioral Reviews 69 (2016) 216–238

Contents lists available at ScienceDirect

Neuroscience and Biobehavioral Reviews

journal homepage: www.elsevier.com/locate/neubiorev

Unconscious emotion: A cognitive neuroscientific perspective

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- Antonio Damasio: Emotion vs. feeling
  Descartes' Error (1994).

- Joseph LeDoux: Defense responses vs. fear experiences
  LeDoux, J. E., & Brown, R. (2017). A higher-order theory of emotional consciousness. *PNAS* 201619316.

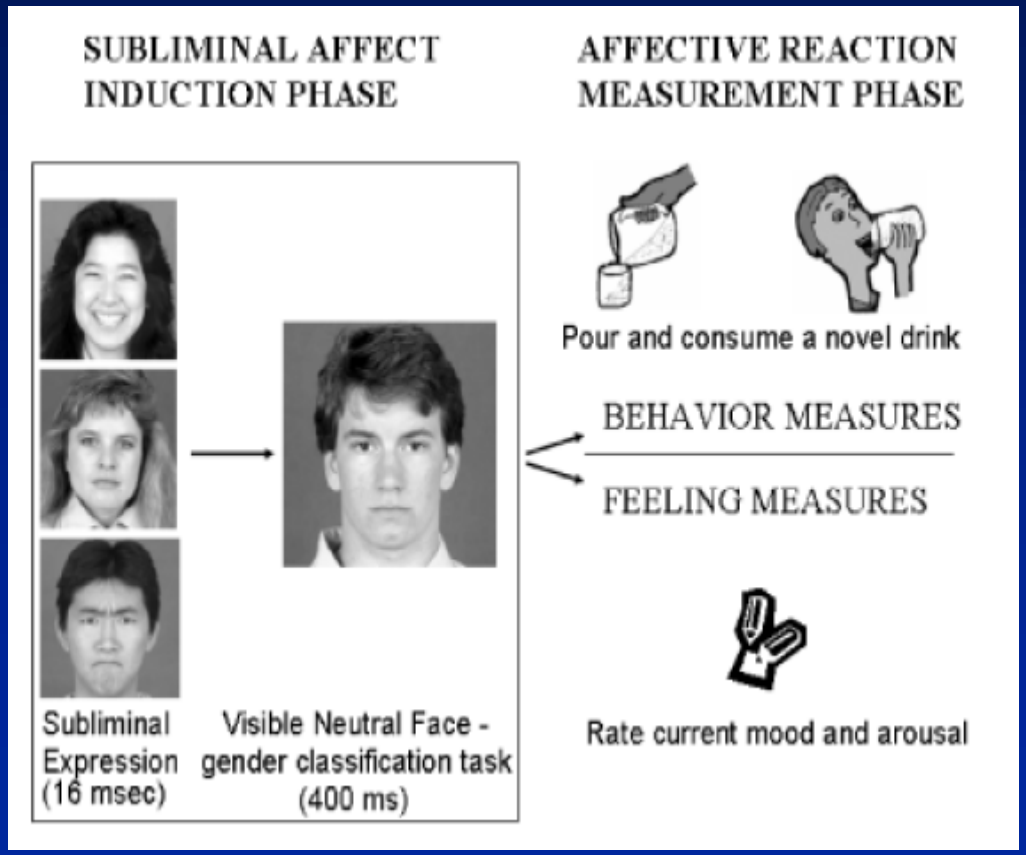
- Lisa Feldman Barrett: Core affect vs. constructed emotional experiences.
  How Emotions Are Made (2017).

CURRENT DIRECTIONS IN PSYCHOLOGICAL SCIENCE

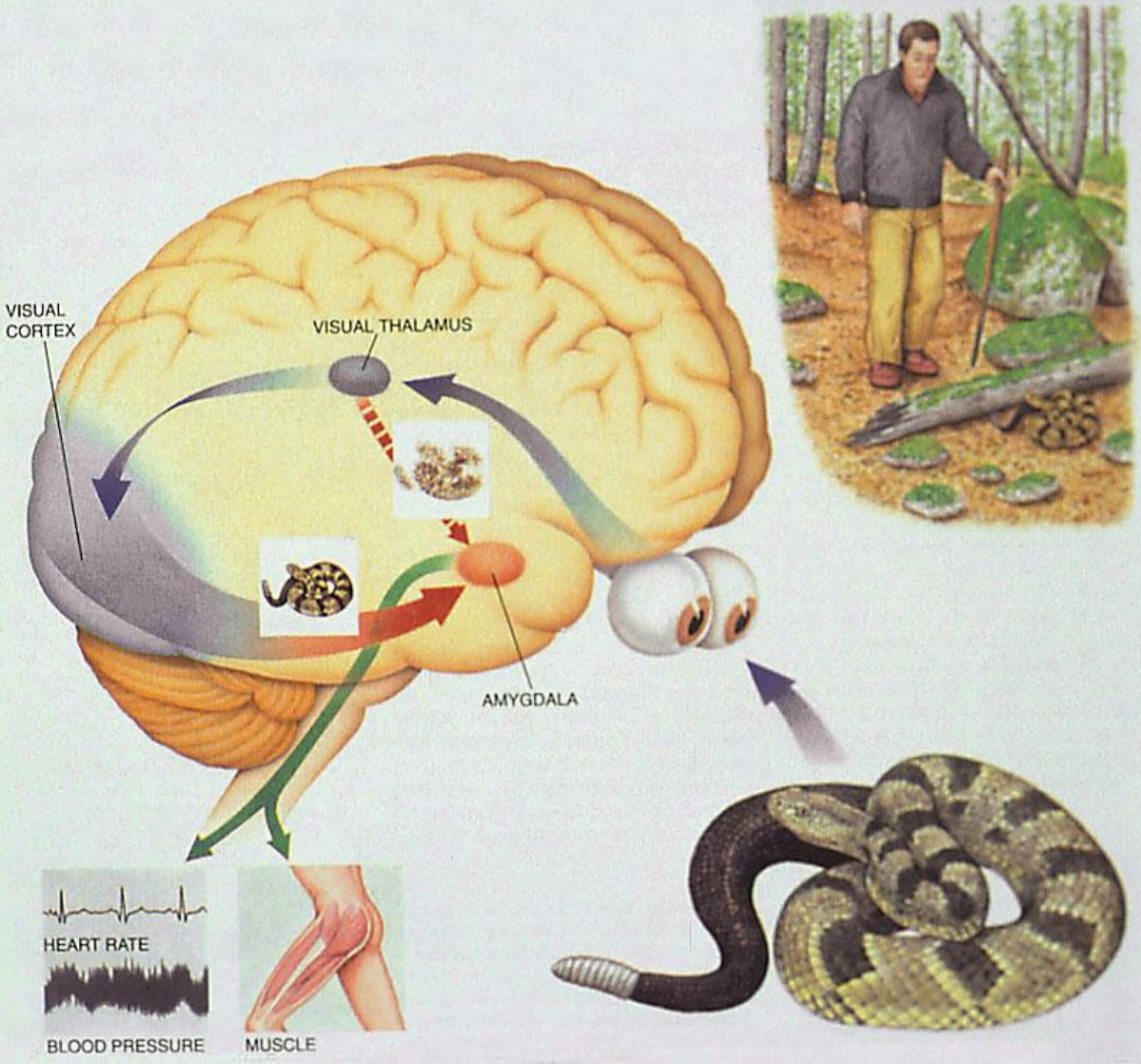
Unconscious Emotion

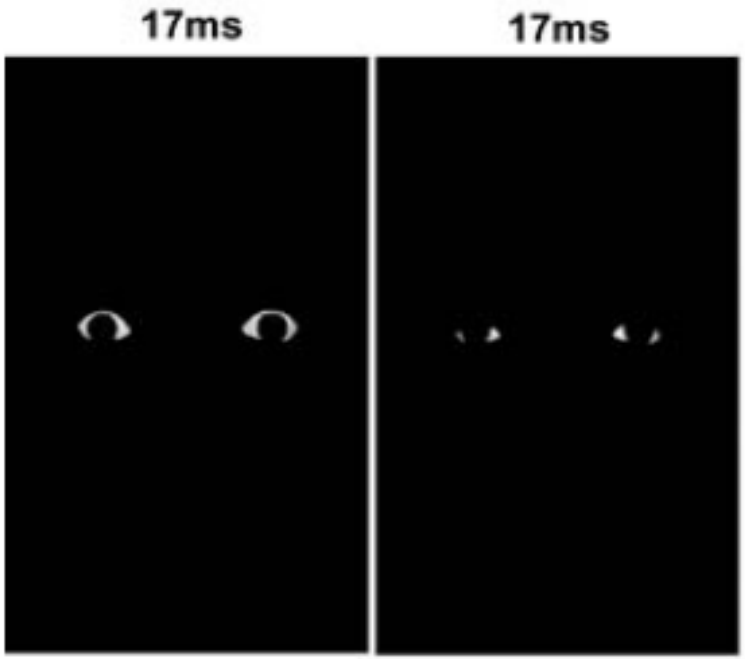
Piotr Winkielman[1] and Kent C. Berridge[2]

[1]University of California, San Diego, and [2]University of Michigan



Current Directions in Psychological Science 2004; 13(3): 120-3


VISUAL CORTEX
VISUAL THALAMUS
AMYGDALA
HEART RATE
BLOOD PRESSURE
MUSCLE



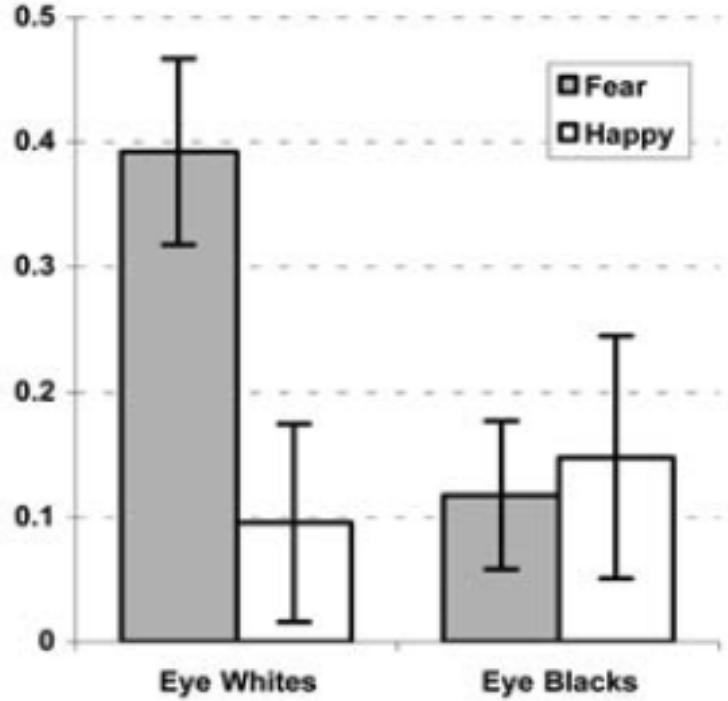
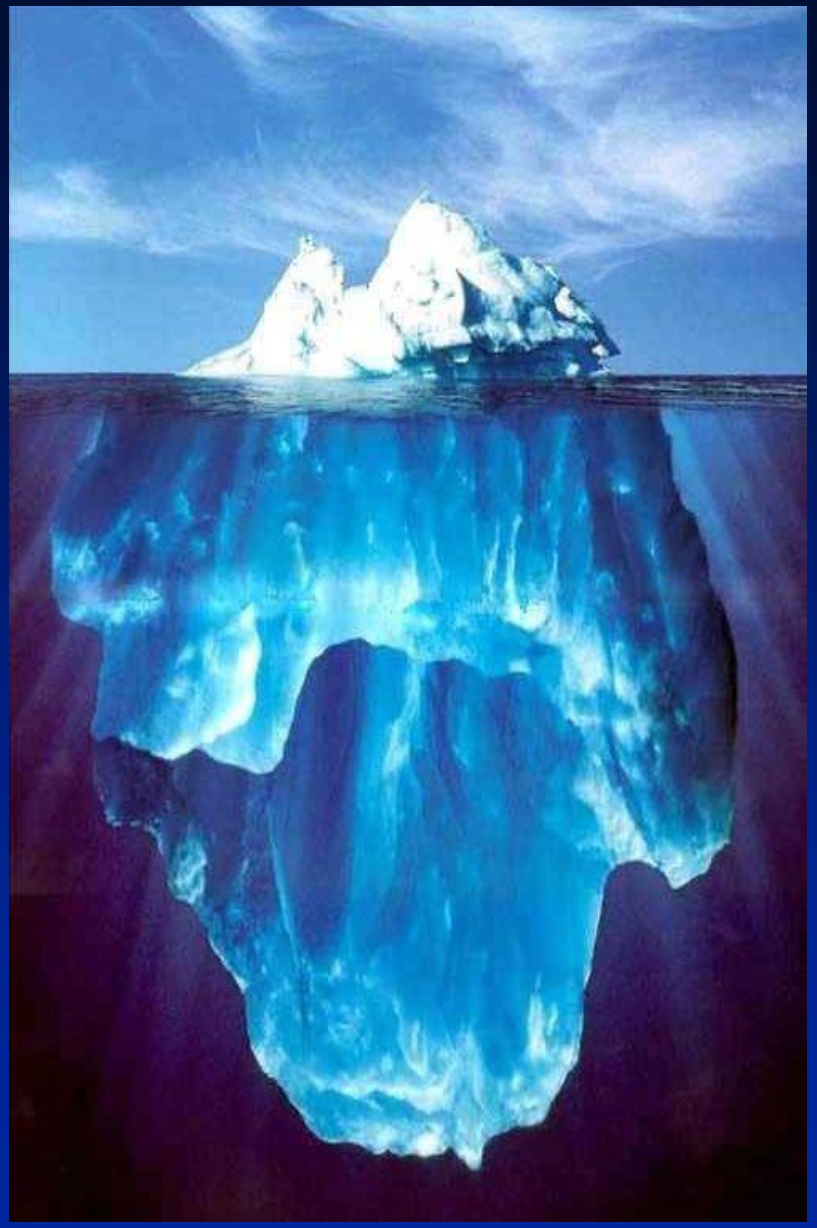


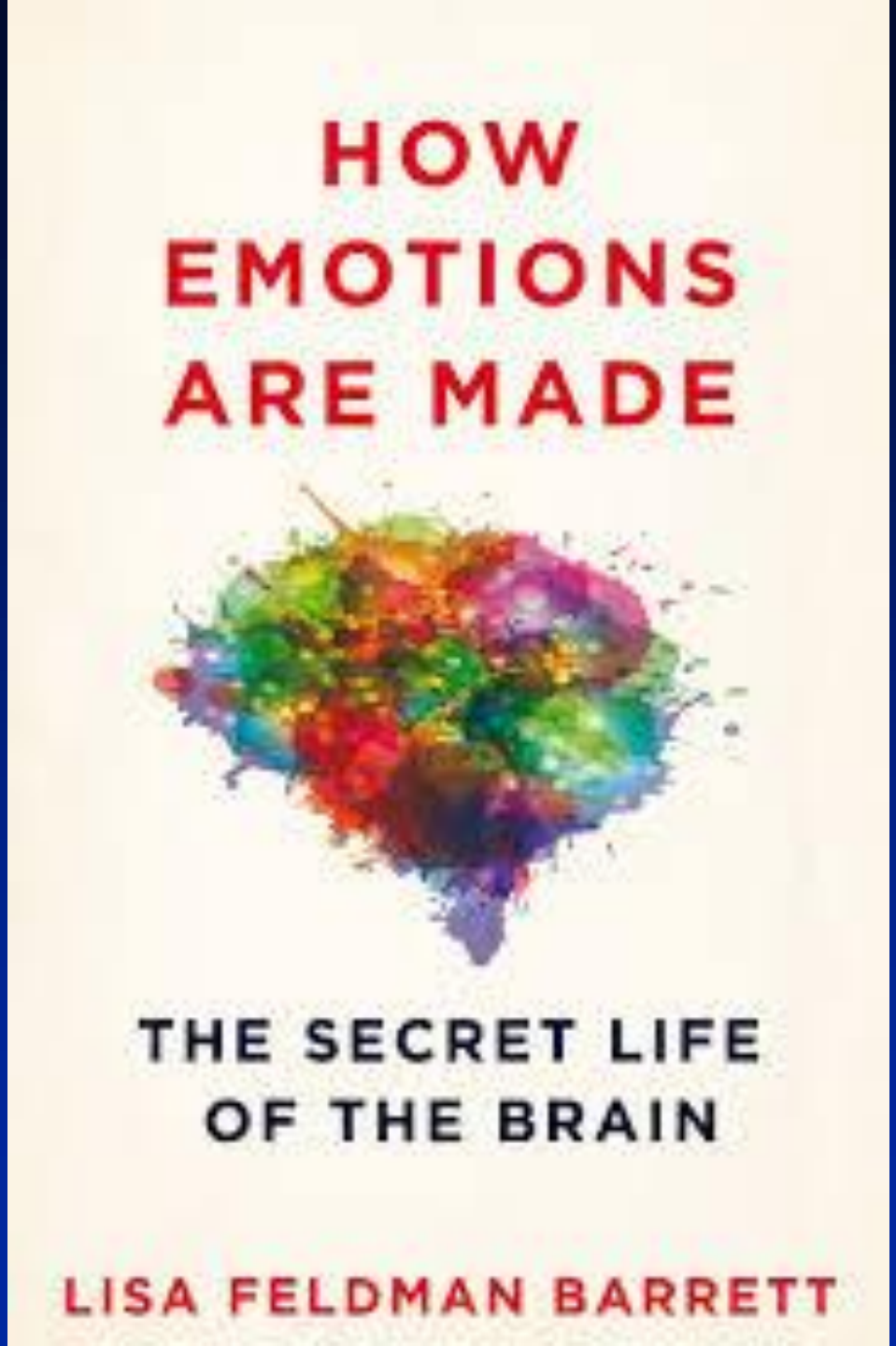
Fig. 1. (**Left**) Examples of the eye-white stimuli. (**Right**) Greater signal increases in the left ventral amygdala occurred to fearful eye whites than to happy eye whites, fearful eye blacks, and happy eye blacks (fig. S1) (*11*). The *y* axis shows the percent signal change from fixation.

Whalen P et al. Science 2004; 306: 2061



99% of cognition is implicit or unconscious

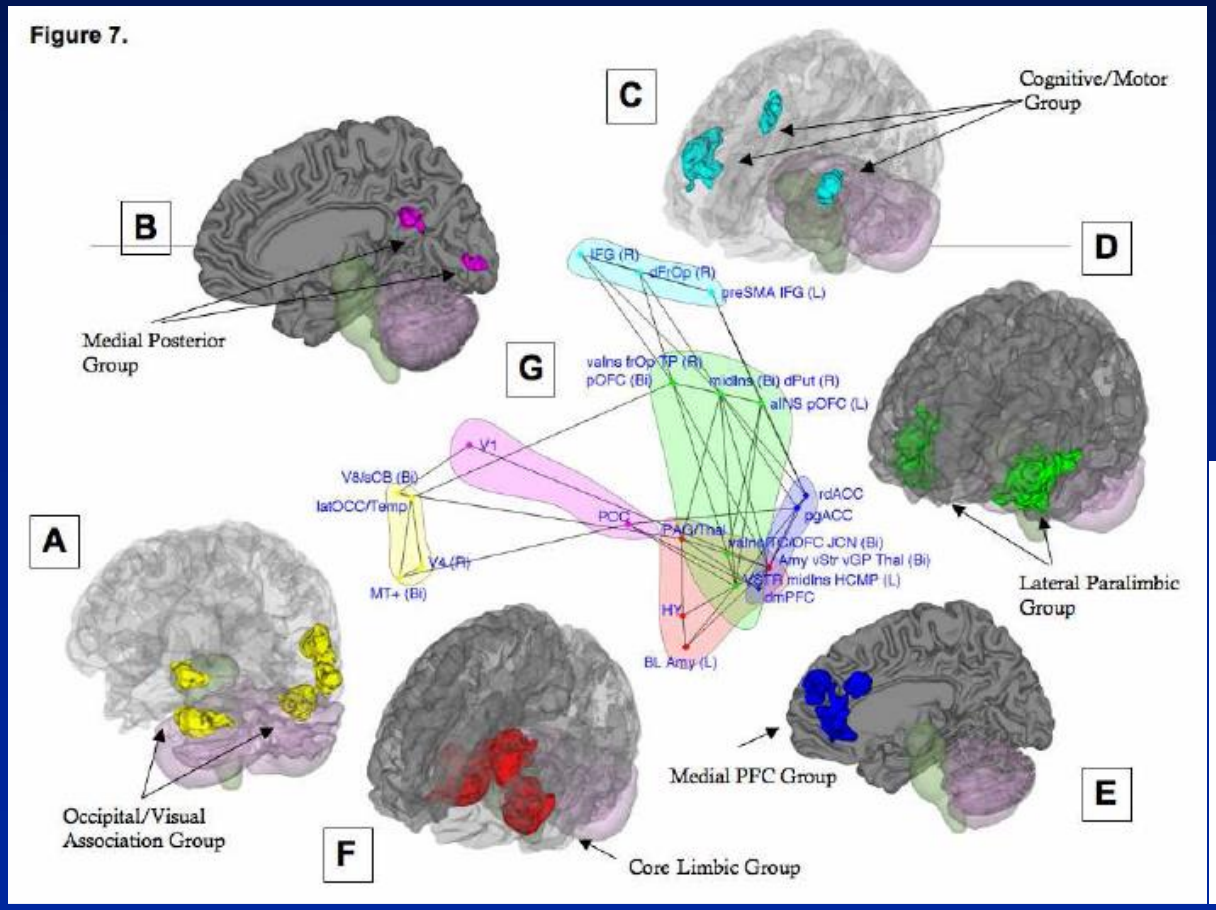
The same may be true for emotion



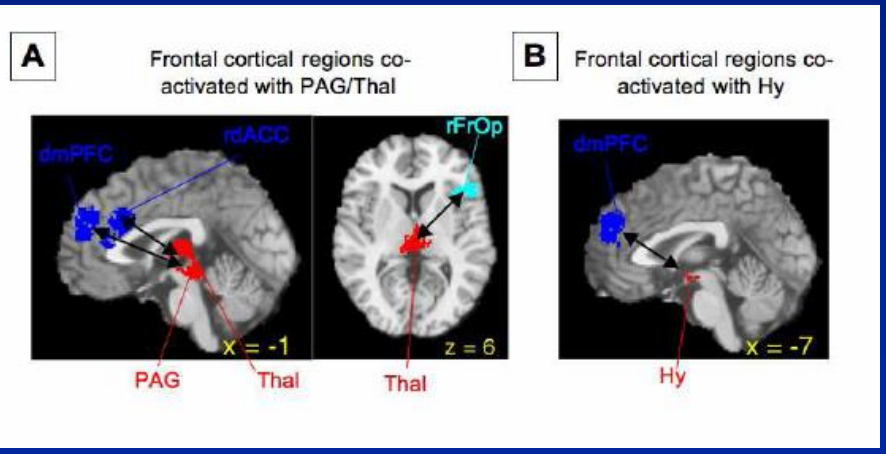
Emotional Feelings Are Constructed

Language helps constitute the experience

Meta Analysis of 162 Imaging Studies of Emotion



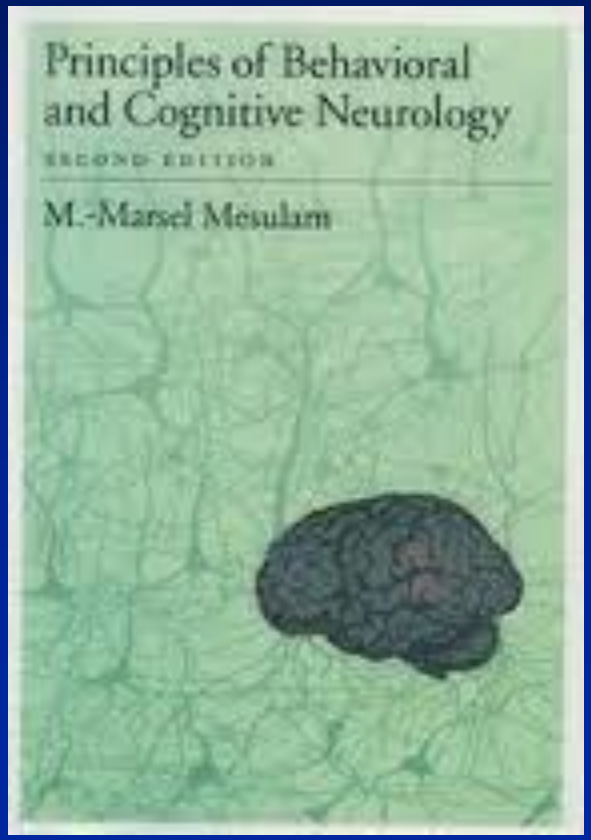
A – visual processing/attn
B – rep of context/spatial attn
C – behavioral expression
D – ventral striatum/motivation
E - generation & regulation
F - autonomic/physiol regulation



Kober H et al. Neuroimage 42:998-1031, 2008.

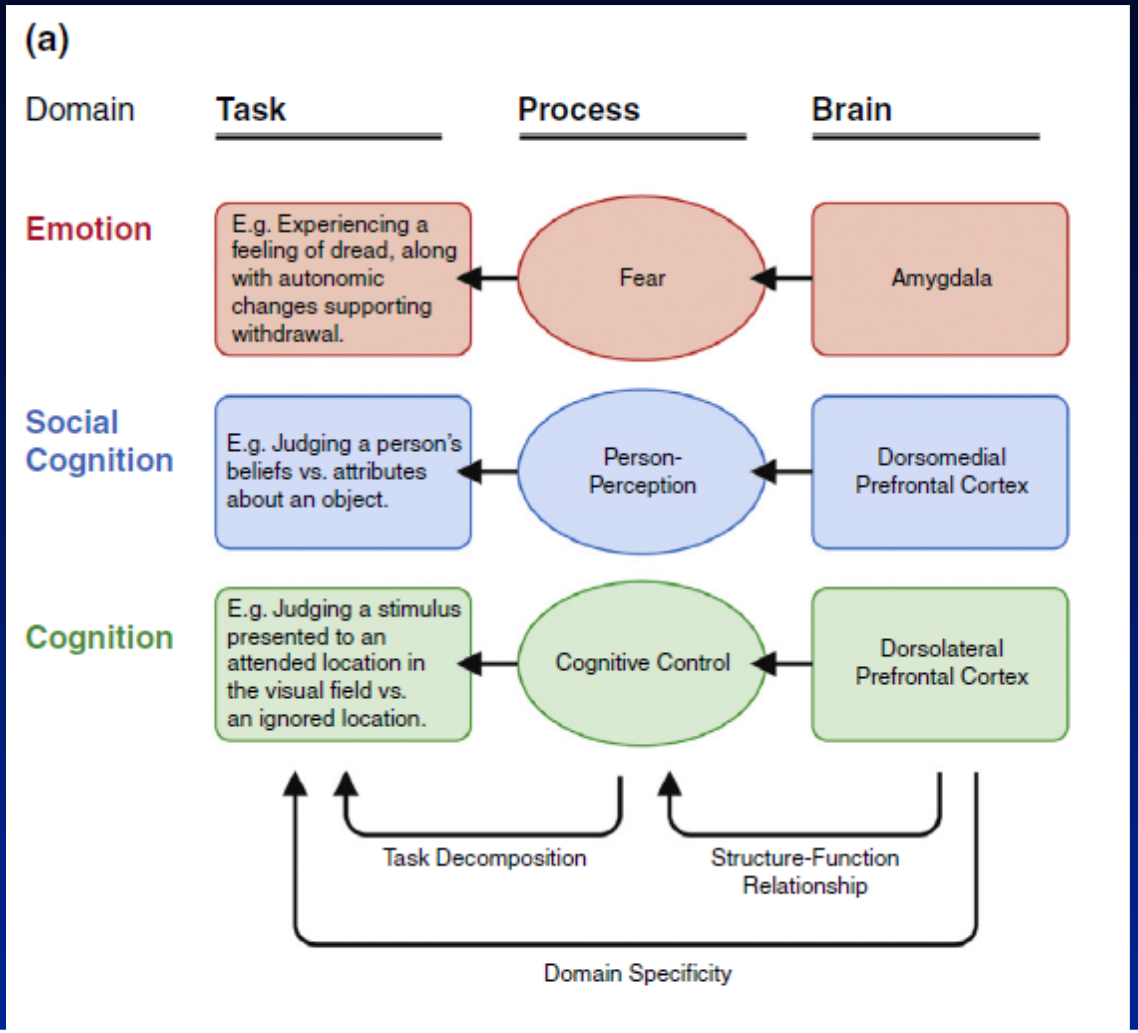
Conclusions From Recent Emotion Research

- It is impossible to determine what emotion is activated in a person based on objective measurements
- There are no autonomic signatures that differentiate specific emotions using peripheral physiological monitoring
- There is no functional neuroanatomy that distinguishes between specific emotions using functional neuroimaging
- There are no brain structures exclusively devoted to emotion or cognition
- Complex cognitive and emotional functions are mediated by interacting brain networks

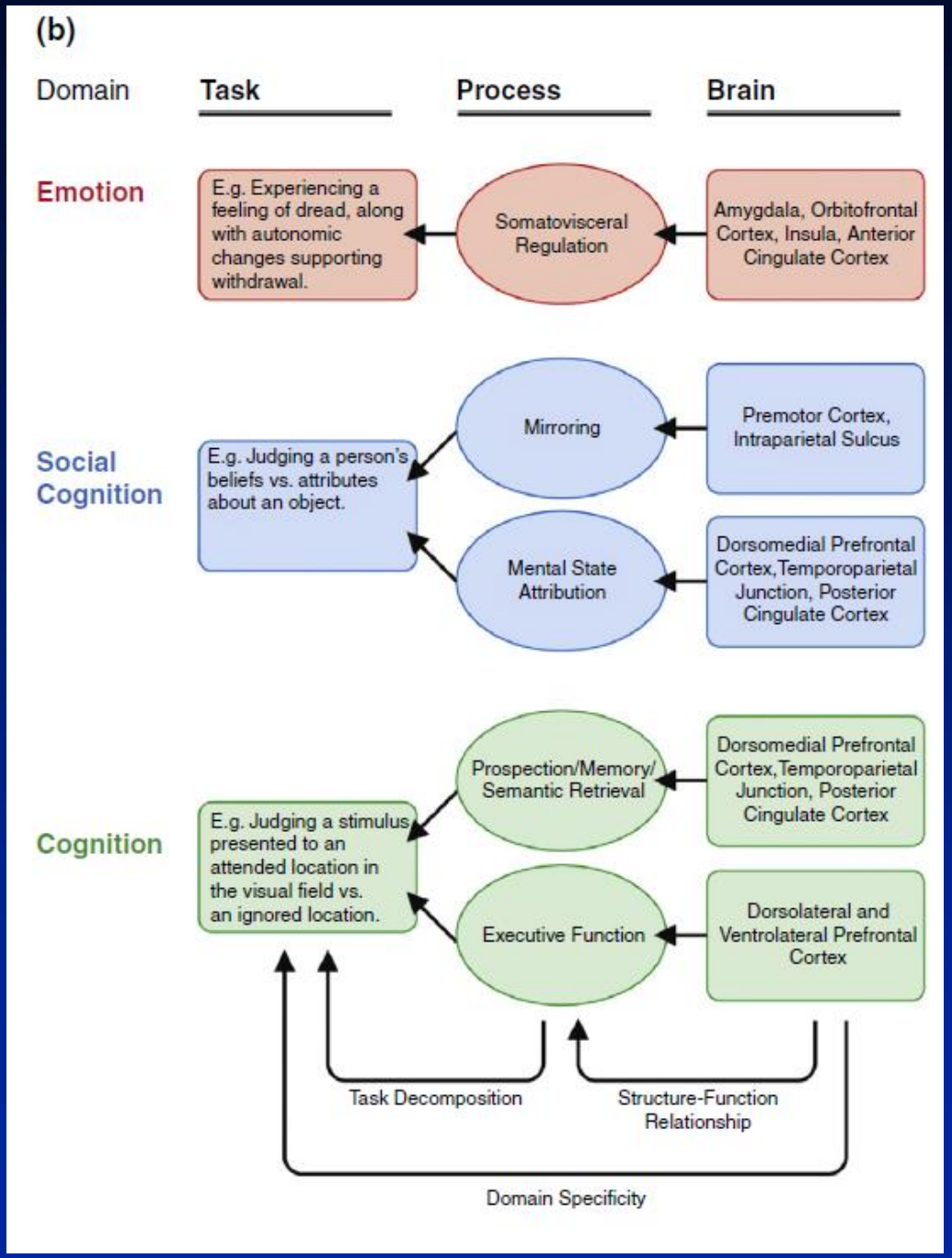


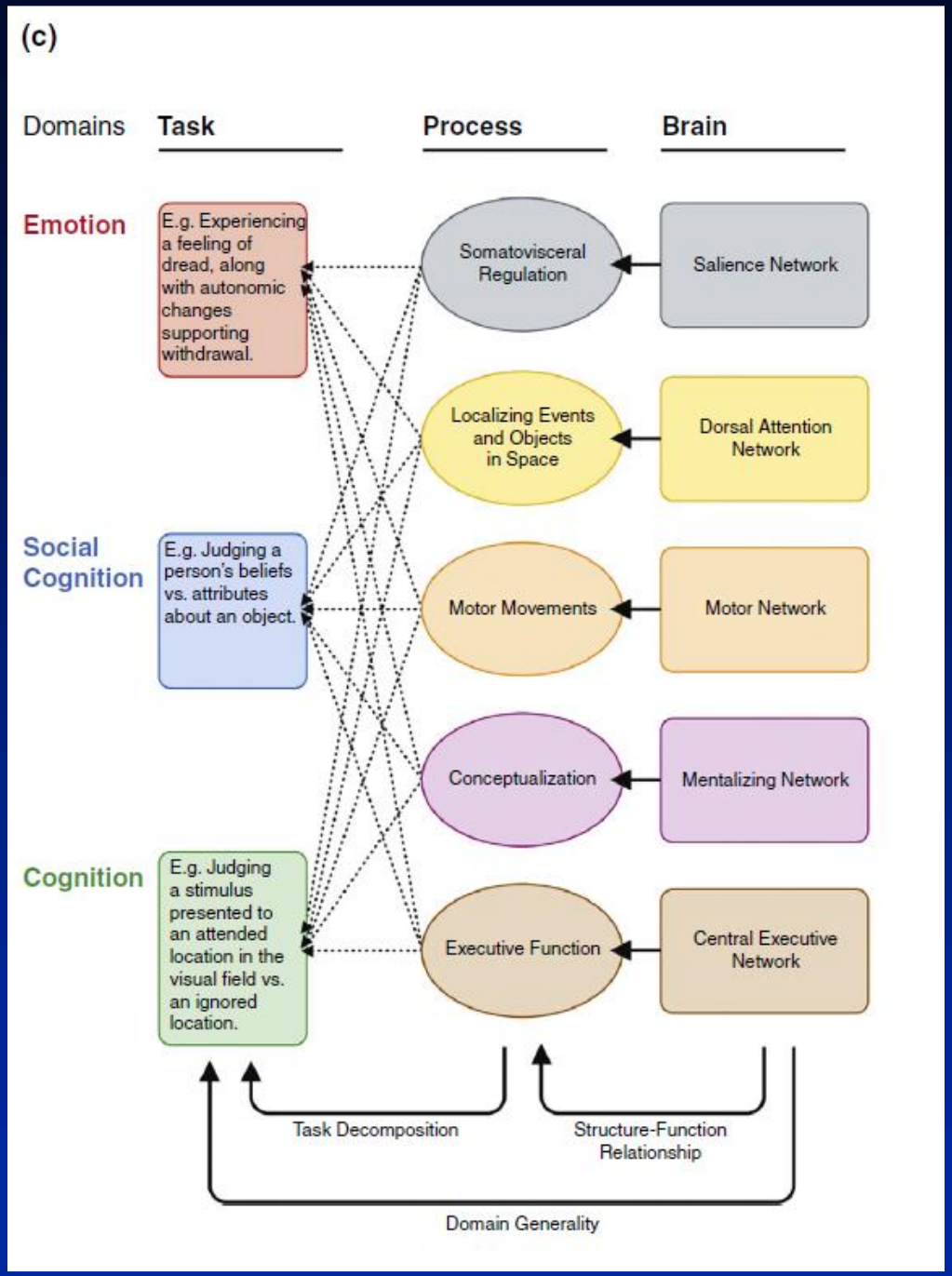
"The reason fMRI has been so phenomenally successful is that it measures brain function on the same spatial scale as complex mental states (e.g. cognitive and emotional functions) are actually mediated in the brain."

Talairach Lecture
Organization for Human Brain Mapping
Sendai, Japan
June 2002



The progression from a faculty psychology/modular approach towards a constructionist/distributed structure approach to brain-function inferences. In **(a)**, individual brain regions specifically compute a domain-specific psychological faculty that could be isolated with a domain-specific behavioral task. In **(b)**, domain-specific brain networks interact to produce responses within domain-specific tasks. **(c)** Functional motifs within domain-general intrinsic brain networks interact to produce a wide variety of tasks; dotted lines indicate that every network is not necessary engaged to support every task response. Constellations of subprocesses likely underlie each higher order functional description (e.g. 'motor movements' can be broken down into layers of motor selection, involving lateral inhibition, etc.). We utilize the higher order process descriptions in this figure to highlight the point that even at a higher order of description, the processes comprising 'somatovisceral regulation' are domain-general processes that are not specific to emotion, the processes comprising 'mentalizing' are not specific to social cognition, and so on.


(b)
Domain
Task
Process
Brain
Emotion
E.g. Experiencing a feeling of dread, along with autonomic changes supporting withdrawal.
Somatovisceral Regulation
Amygdala, Orbitofrontal Cortex, Insula, Anterior Cingulate Cortex
Social Cognition
E.g. Judging a person's beliefs vs. attributes about an object.
Mirroring
Premotor Cortex, Intraparietal Sulcus
Mental State Attribution
Dorsomedial Prefrontal Cortex, Temporoparietal Junction, Posterior Cingulate Cortex
Cognition
E.g. Judging a stimulus presented to an attended location in the visual field vs. an ignored location.
Prospection/Memory/ Semantic Retrieval
Dorsomedial Prefrontal Cortex, Temporoparietal Junction, Posterior Cingulate Cortex
Executive Function
Dorsolateral and Ventrolateral Prefrontal Cortex
Task Decomposition
Structure-Function Relationship
Domain Specificity


(c)
Domains
Task
Process
Brain
Emotion
E.g. Experiencing a feeling of dread, along with autonomic changes supporting withdrawal.
Somatovisceral Regulation
Salience Network
Localizing Events and Objects in Space
Dorsal Attention Network
Social Cognition
E.g. Judging a person's beliefs vs. attributes about an object.
Motor Movements
Motor Network
Conceptualization
Mentalizing Network
Cognition
E.g. Judging a stimulus presented to an attended location in the visual field vs. an ignored location.
Executive Function
Central Executive Network
Task Decomposition
Structure-Function Relationship
Domain Generality

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Review

Affective agnosia: Expansion of the alexithymia construct and a new opportunity to integrate and extend Freud's legacy

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Is Alexithymia An Anomia or Agnosia?

- Alexithymia – "lacking words for emotion"
- Anomia - knows what an object is but can't name it
- Agnosia - can't recognize an object,
  and therefore can't name

Agnosia

"Something with teeth."

Did you know what it was
but couldn't name it (anomia)
or did you not know what it was and therefore
couldn't name or describe it (agnosia)?

Agnosia – A recognition failure – perception is intact – results from a breakdown in the link between perception of an object and stored knowledge about it.

First Use of the Term "Agnosia"
Sigmund Freud, 1891

I am using the term asymbolia in a different sense from that given to it by Finkelnburg[2] because "asymbolic" seems more appropriate a designation for the relationship between the word and the idea of the object than for that between the object and its idea. For disturbances in the recognition of objects, which Finkelnburg called asymbolia, I should like to propose the term "agnosia". It is quite possible that agnostic disturbances which occur

[1] J. S. Mill: *Logic*, I, Chap. III, and "An examination of Sir William Hamilton's philosophy".

[2] Quoted from Spamer: *Ueber Aphasie und Asymbolie, nebst Versuch einer Theorie der Sprachbildung* (On aphasia and asymbolia; with a tentative theory of the development of speech). Archiv. f. Psychiatrie, VI, 1876.

On Aphasia, 1891

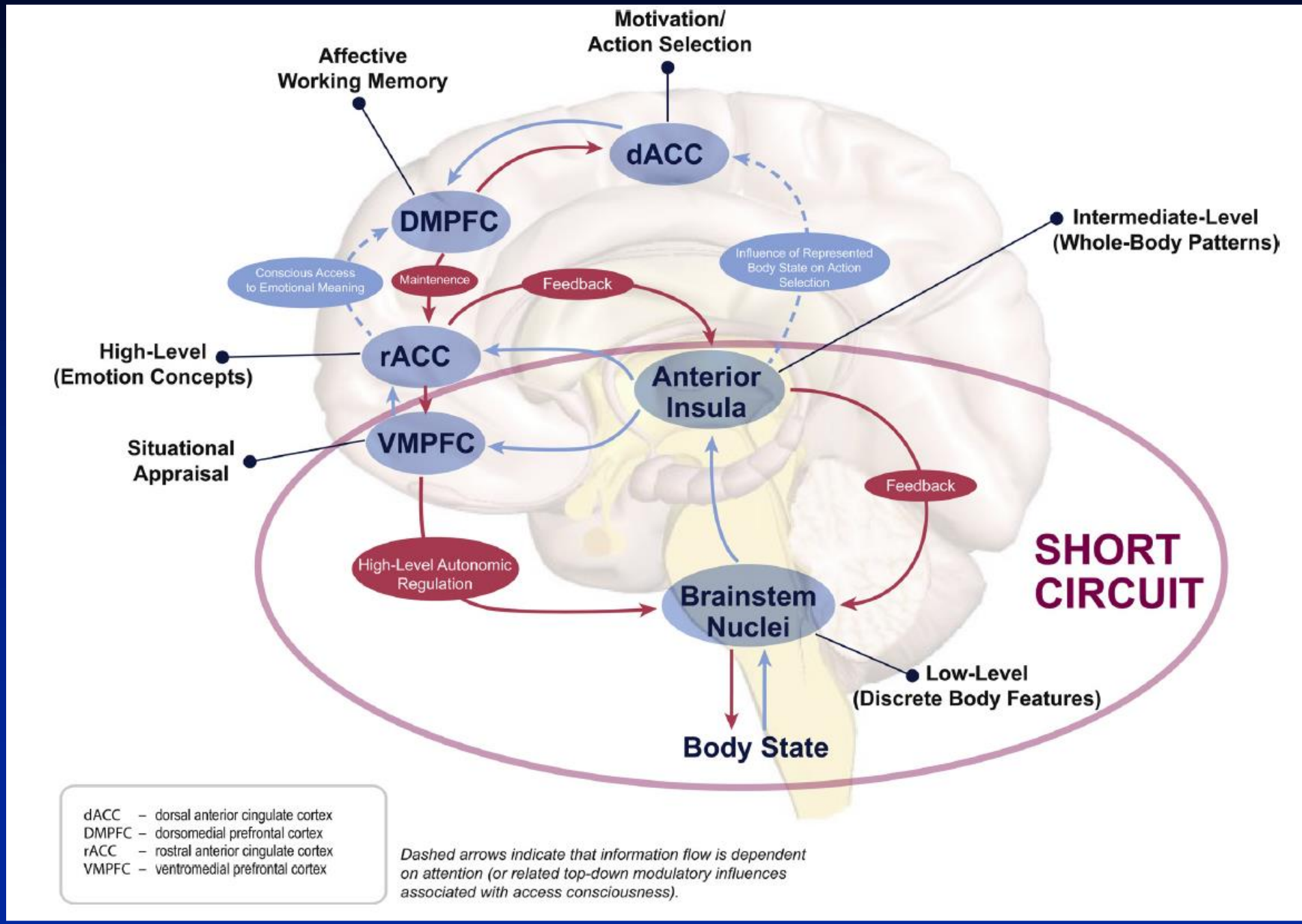
Freud's Concept of Agnosia

Anomia Model of Alexithymia

In the domain of emotion, the "perceptual stimulus" is interoceptive: the implicit (visceromotor/behavioral) emotional response. It can be mentally represented, experienced and known. Alexithymic individuals have difficulty describing (cognitively elaborating upon) what they perceive, experience and know.

Agnosia Model of Alexithymia

In Affective Agnosia a failure to mentally represent an implicit emotional response would be associated with deficits in experiencing, knowing and describing one's own emotions.


Motivation/
Action Selection
Affective
Working Memory
dACC
DMPFC
Intermediate-Level
(Whole-Body Patterns)
Conscious Access
to Emotional Meaning
Maintenence
Feedback
Influence of Represented
Body State on Action
Selection
High-Level
(Emotion Concepts)
rACC
Anterior
Insula
VMPFC
Situational
Appraisal
Feedback
SHORT
CIRCUIT
High-Level Autonomic
Regulation
Brainstem
Nuclei
Low-Level
(Discrete Body Features)
Body State
dACC – dorsal anterior cingulate cortex
DMPFC – dorsomedial prefrontal cortex
rACC – rostral anterior cingulate cortex
VMPFC – ventromedial prefrontal cortex
Dashed arrows indicate that information flow is dependent
on attention (or related top-down modulatory influences
associated with access consciousness).

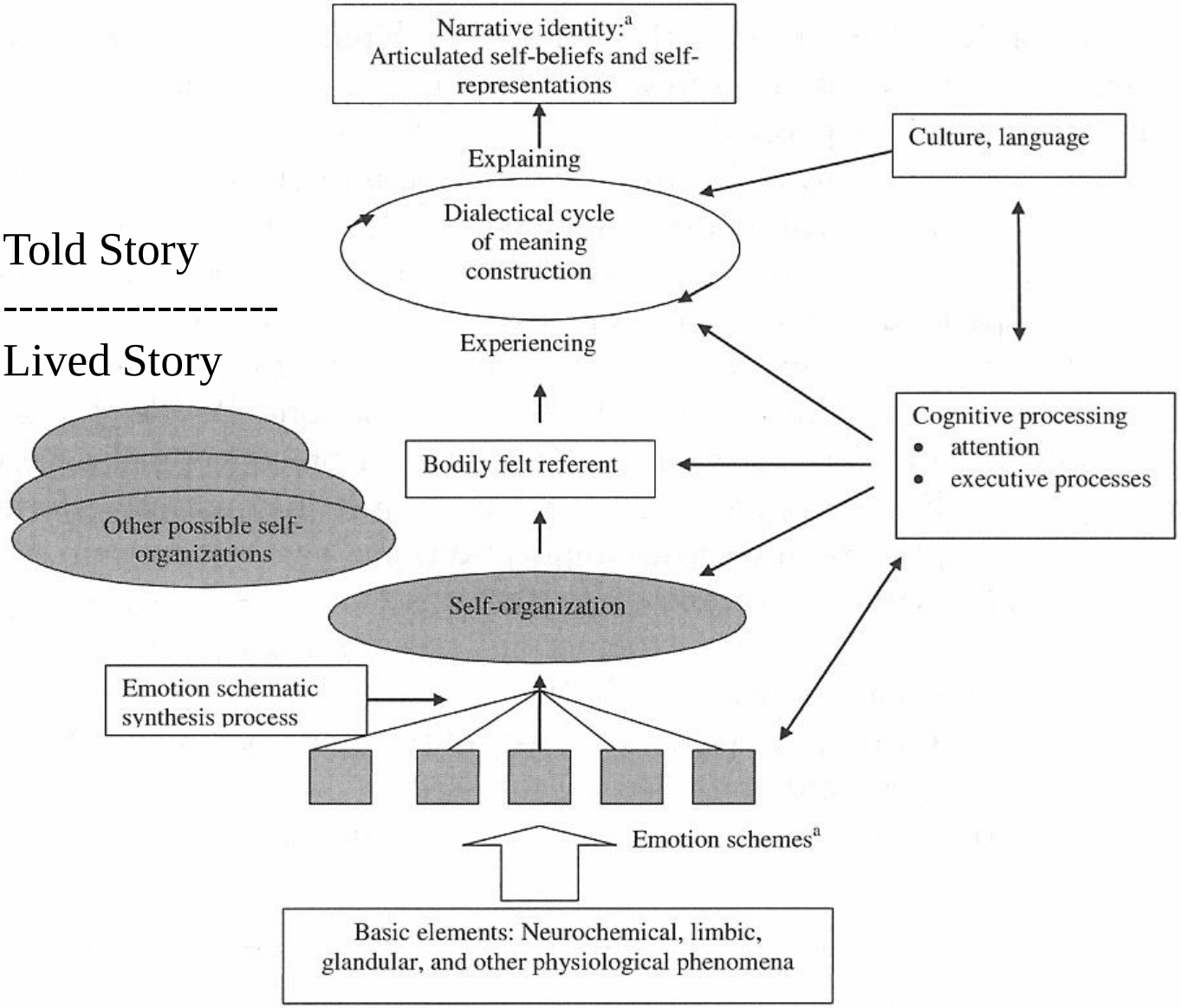


Figure 3.1. The dialectical construction of the self.
[a]These are also influenced by interactions with others, making self-construction both an intrapersonal and interpersonal process.

Mental Representation of Experience

↓↑

Felt Experience

Les Greenberg, Ph.D.
York University (Toronto)
Emotion-Focused Psychotherapy

Conclusions

- Psychoanalysis has placed primary emphasis on emotions as threatening and dangerous and defenses as controlling them
- It is assumed that if defenses are overcome, emotions will be experienced.
- A broader view of emotions as adaptive and providing useful information about needs has emerged from more recent research.
- Current evidence suggests that differentiated emotional experiences are learned concepts; bodily emotional responses without feeling are actually common

Conclusions

- For some patients, particularly those with early life trauma, overcoming defense is not sufficient to experience emotion but can require assistance in formulating emotion for the first time
- Although Freud never applied the concept of agnosia (lack of mental representation) to psychoanalysis, the concept fits the phenomenon of unmentalized emotion rather well, consistent with current knowledge about the functional neuroanatomy of constructed emotional experiences.