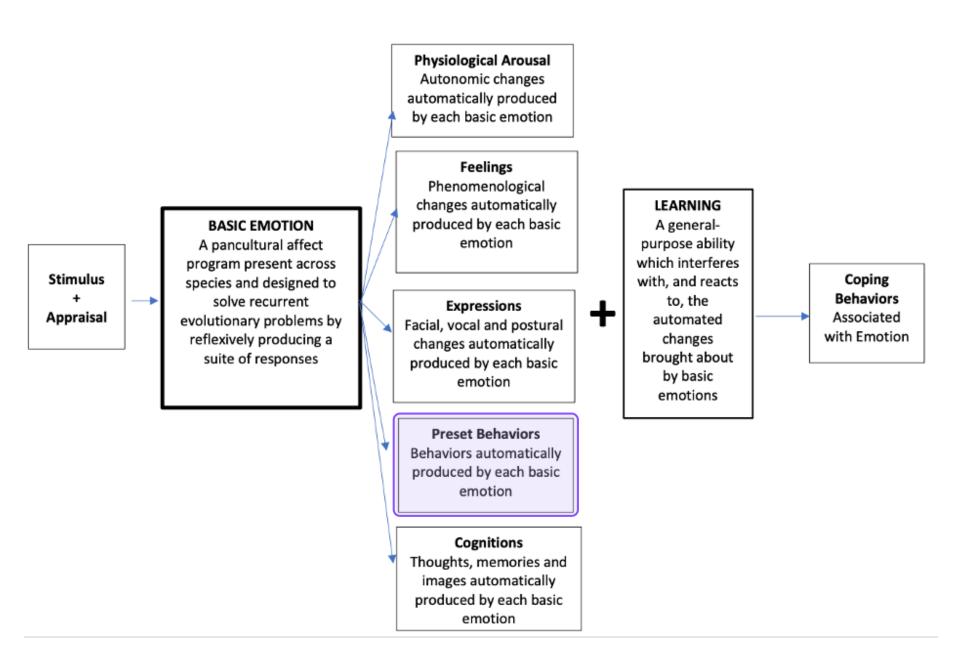
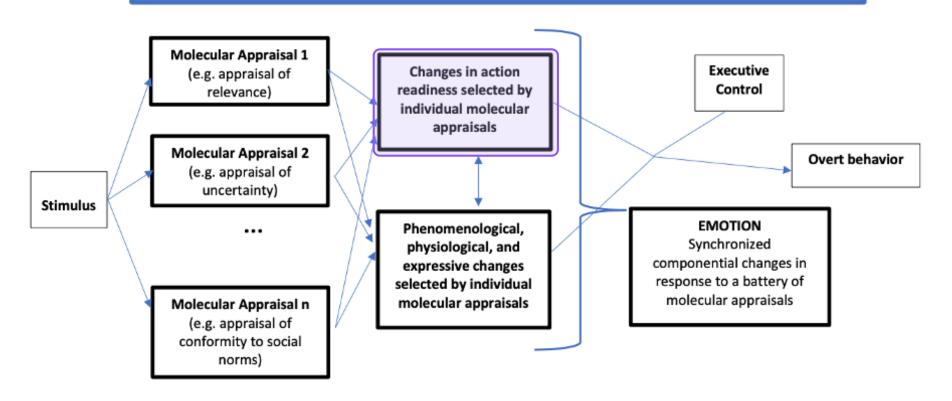


#### **Tomkins-Ekman: Emotions as Programs to Produce Automated Responses**



#### Scherer: Emotions as Synchronized Changes in Components Caused by Molecular Appraisals



## Teorie motivazionali

La funzione centrale delle emozioni è quella di motivare il comportamento

Nico Frijda: le emozioni sono modalità di prontezza all'azione ("modes of action readiness")



- emozione = impulso all'azione, specificato come risultato finale
- le emozioni hanno precedenza di controllo
- l'esecuzione deve essere regolata da altri sistemi

Es.: rabbia = "tendenza agonistica" Es.: **EMOTION** colpire, minacciare, distruggere... Mode of action readiness with **Behavioral System** control precedence typical of Overt Emotional An evolved each emotion given the appraised Behavior mechanism present stimulus, and produced by the Physical and expressive across species and activation of a behavioral system Stimulus behaviors brought about designed to solve on the basis of the mode recurrent Appraisal of action readiness plus evolutionary regulation problems by Feelings, physiological and producing modes of expressive responses action readiness with Subjective experiences, control precedence REGULATION autonomic changes and facial, General-purpose ability vocal and postural responses Es.: which determines if and typical of each emotion given the "sistema difensivo" how the mode of action appraised stimulus readiness is manifested

#### Scarantino: Emotions as Programs to Produce Prioritized Tendencies to Action

Stimulus
+
Appraisal

Pappraisal

EMOTION
A program selected to solve recurrent evolutionary or cultural problems by producing modes of action readiness with control precedence and with the function

Changes in Action Readiness with Control Precedence typical of each emotion given the appraised stimulus

Phenomenological, physiological, and expressive changes typical of each emotion given the appraised stimulus

#### Overt Emotional Behavior

Physical and expressive behaviors brought about on the basis of the mode of action readiness plus regulation

#### **EXECUTIVE CONTROL**

General-purpose ability which determines if and how the mode of action readiness is manifested

Core Relational **Emotion** (In)action tendency/ Relational Goal action reflex Theme Anger Attacking Removal of obstruction Offense Avoiding One's own safety Fear Danger Undifferentiated Not relating as such Sadness Loss disengagement Open engagement Relating as such Joy Positive Event Removal of object Disgust Expelling Contamination Guilt Repairing relationship Making up for a flawed Moral transgression behavior Disappearing Hiding a flawed self Failure to live up to an Shame ego ideal

of correlating to core

relational themes

### "Compatibility check"

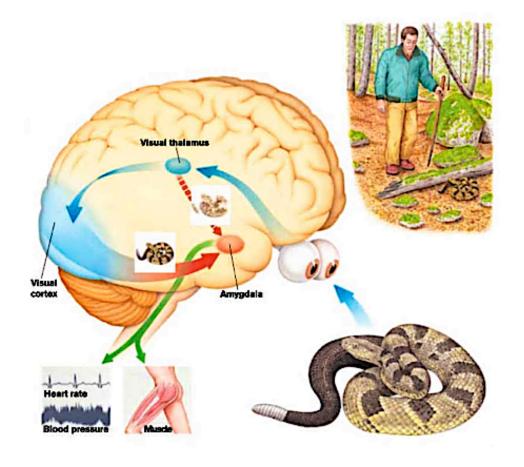
congruenza con gli altri scopi della persona

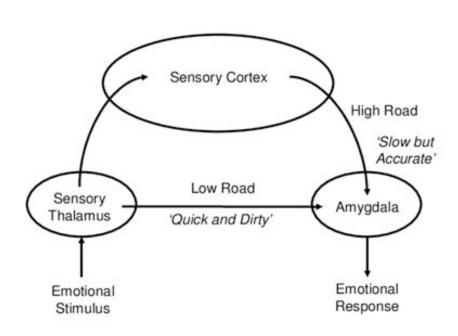
# Contributi dalle neuroscienze



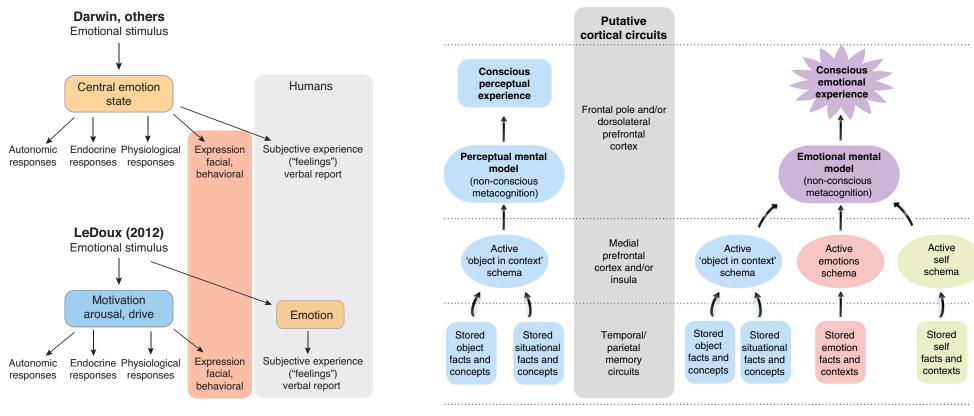
Joseph LeDoux: circuiti di sopravvivenza

- Risposte emotive: la "via alta" e la "via bassa"

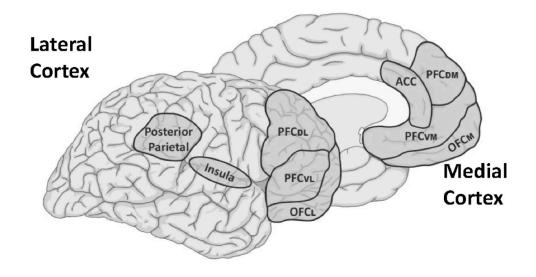




## Distinzione netta tra stati motivazionali (non coscienti) e emozioni (esperienze coscienti)

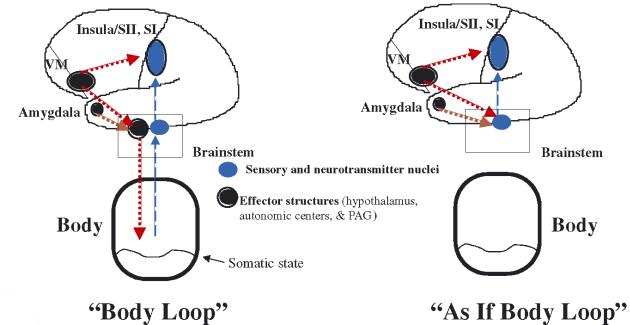


LeDoux (2020)



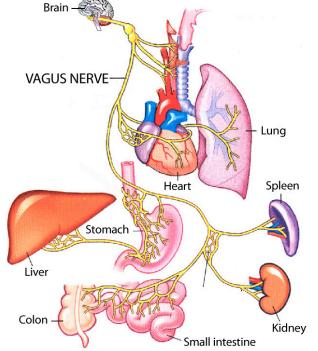


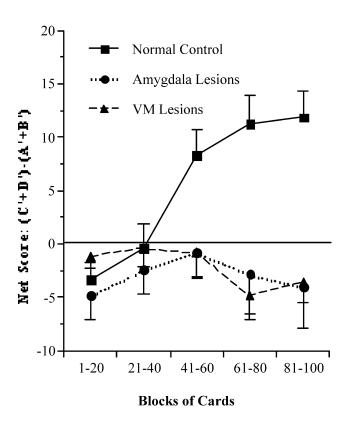
## Antonio Damasio: l'ipotesi del marcatore somatico

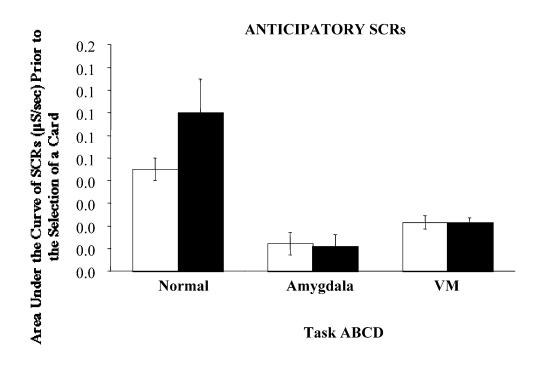


[VM = corteccia prefrontale ventromediale]

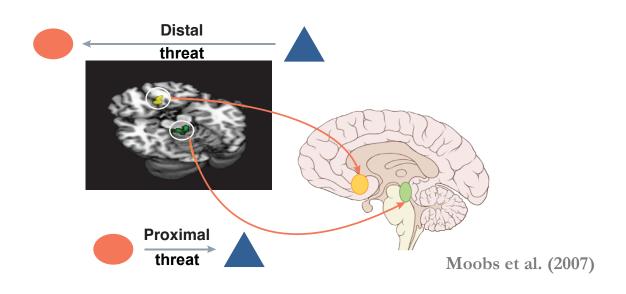
- amigdala: trigger per induttori primari (eventi presenti)
- VM: trigger per induttori secondari (ricordi, immaginazione...)
- VM attiva "pattern somatici" sulla base dell'esperienza
- Nervo vago: ruolo centrale nel "body loop"
- N.B.: insula non solo sensoriale; controllo efferente SNS/PNS



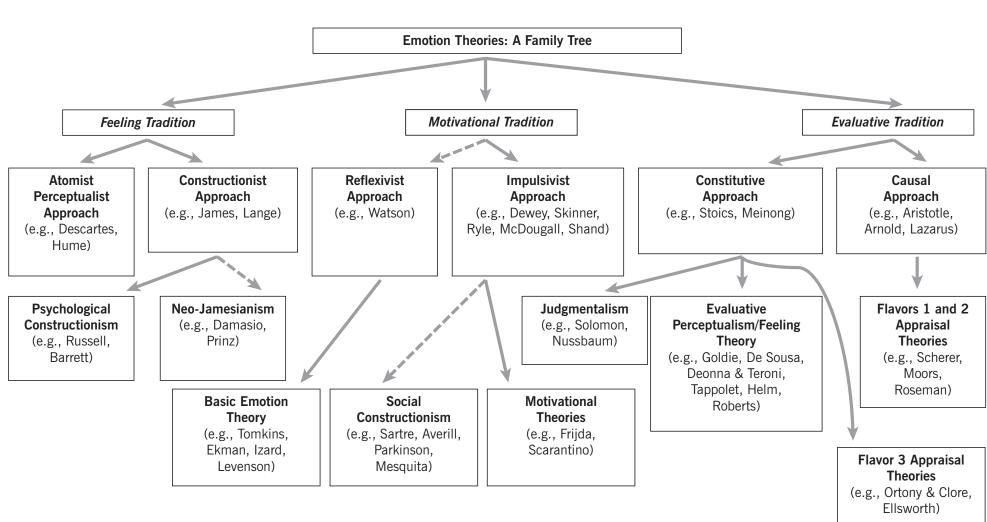


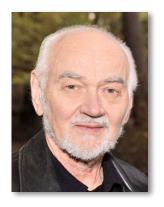


Bechara & Damasio (2005)







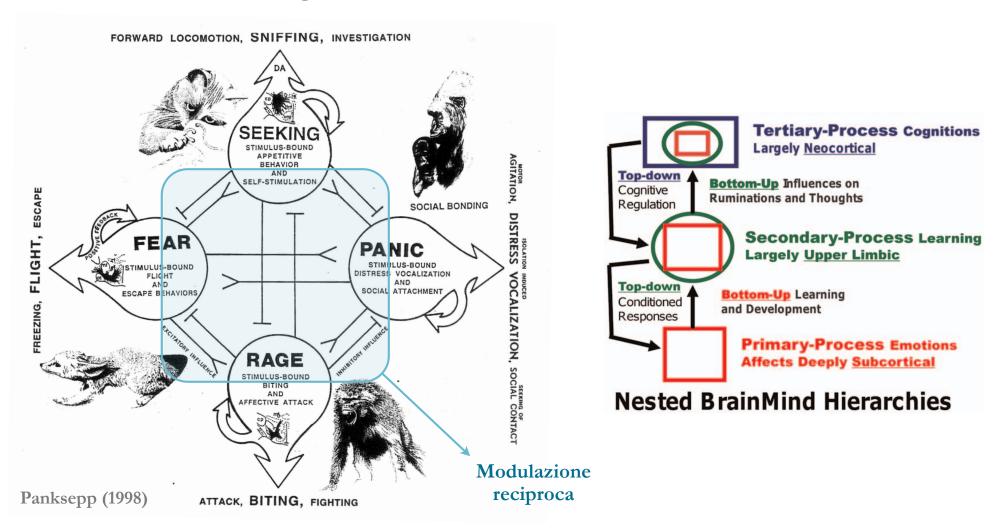


## Jaak Panksepp: sistemi affettivi di base

7 circuiti sottocorticali innati che generano stati affettivi primari:

SEEKING, RAGE, FEAR, PANIC (separation panic; sadness), CARE (nurturance), PLAY (joy), RAGE (anger), LUST

- identificati tramite studi farmacologici e di stimolazione elettrica
- filogeneticamente antichi e condivisi da tutti i mammiferi



Basic Emotional Systems	Key Brain Areas	<b>Key Neuromodulators</b>
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?

