AFFECTIVE COMPUTING

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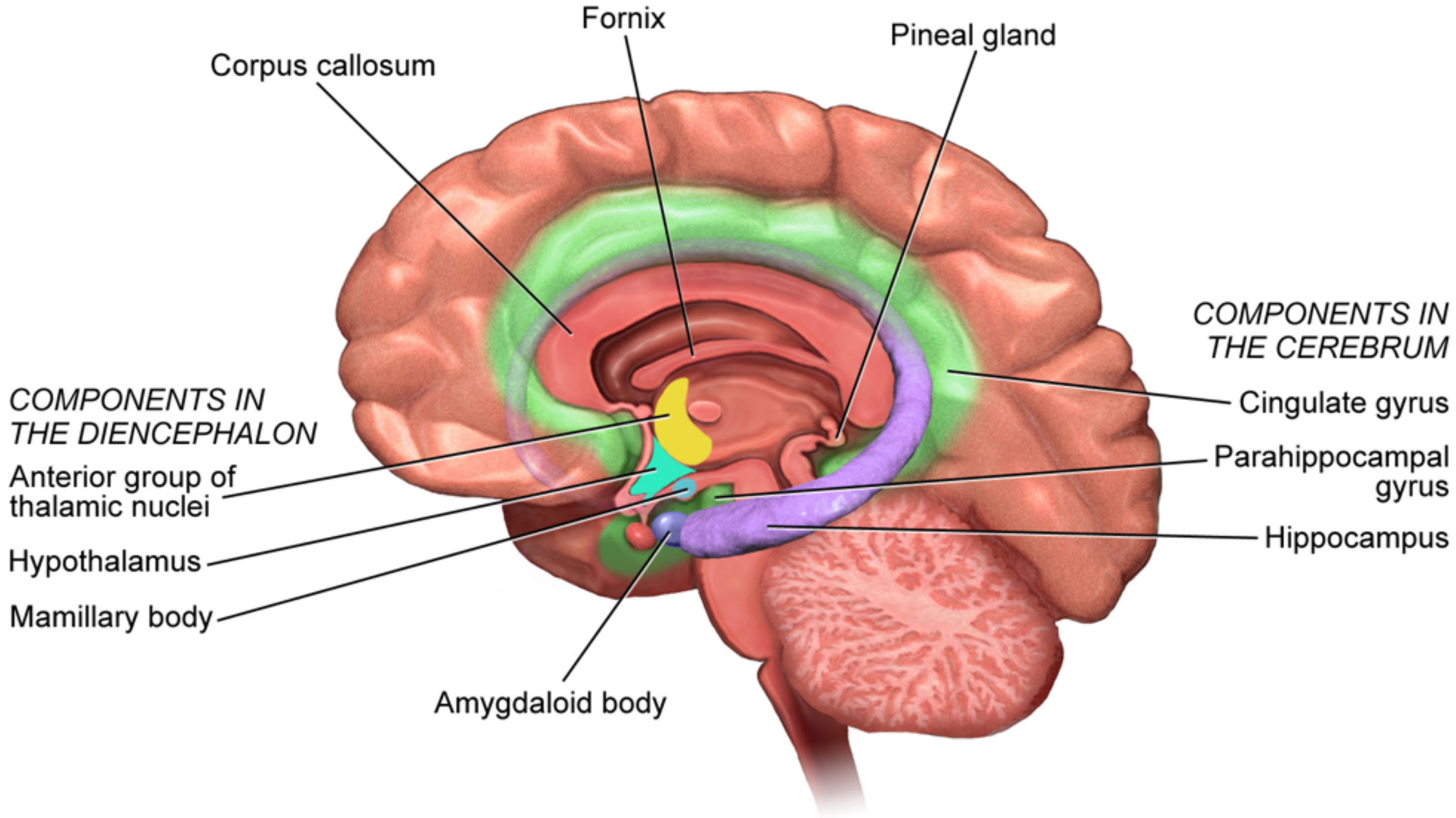
WHAT IS AFFECTIVE COMPUTING?

COGNITIVE AND PHYSICAL FUNCTIONS

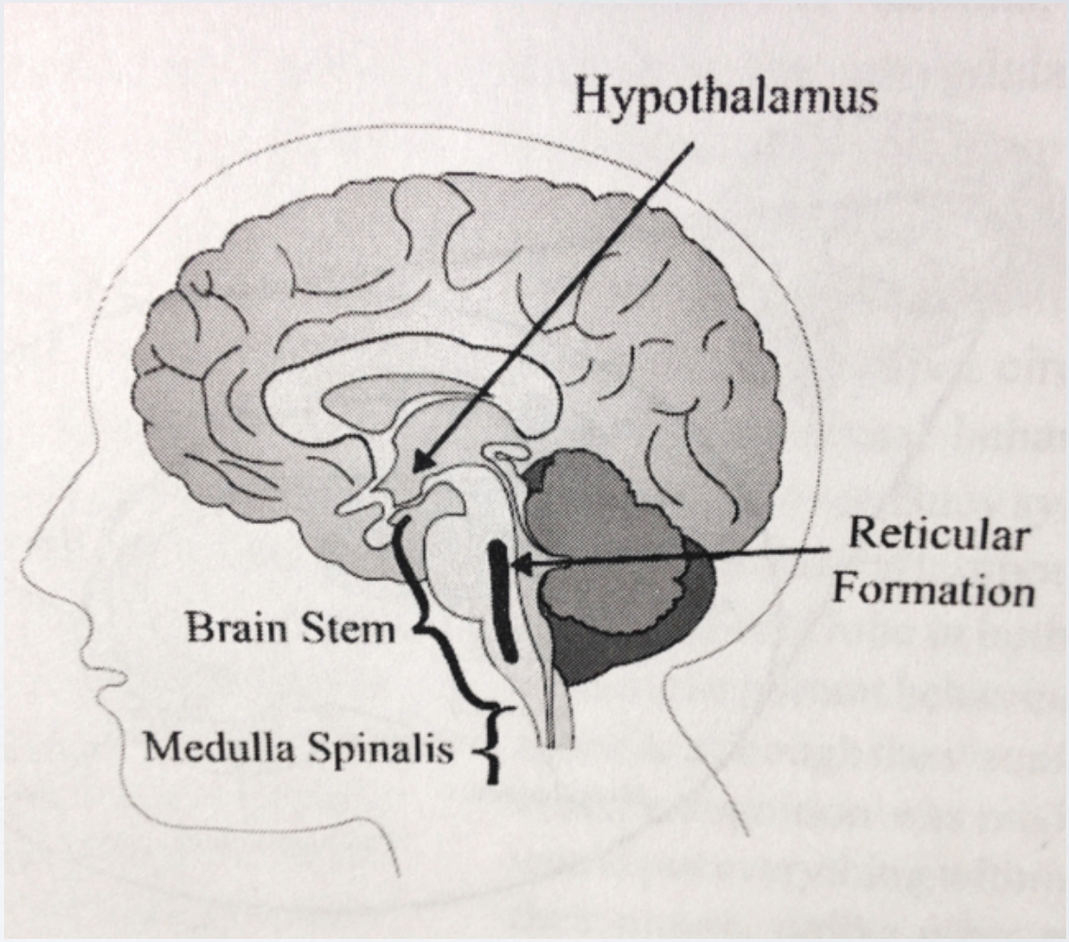
BASIC EMOTIONS

- **Pleasant**
  - Happiness
  - Surprise
- **Unpleasant**
  - Sadness
  - Anger
  - Fear
  - Disgust

The Limbic System



MAIN STRUCTURE FROM THE PHYSICAL SENSATION OF EMOTION



AUTONOMIC NERVOUS SYSTEM

- Sympathetic

- Parasympathetic

AMYGDALA

- Participates in the most part of the behavioral functions, including **attention**, **perception**, and **explicitly memory**

COMPUTATIONAL MODELS

- Emotional computational models have the objective to represent functions and processes of emotion in the human brain, for example, in the **analyze** and **expression** of emotions.

EMOTIONS RECOGNITION

- Inputs
- Pattern recognition
- Reasoning
- Learning
- Outputs

EMOTIONS EXPRESSION

- Inputs
- Intentional vs Spontaneous
- Pathways
- Feedback
- Bias-exclusion
- Social Display Rules
- Outputs

EMOTIONAL EXPERIENCE

- Helps us to better **understand** our own emotions, and also **regulate** its respective reactions.

- It is consisted of: Cognitive Awareness, Physiological Awareness, and Subjective feelings.

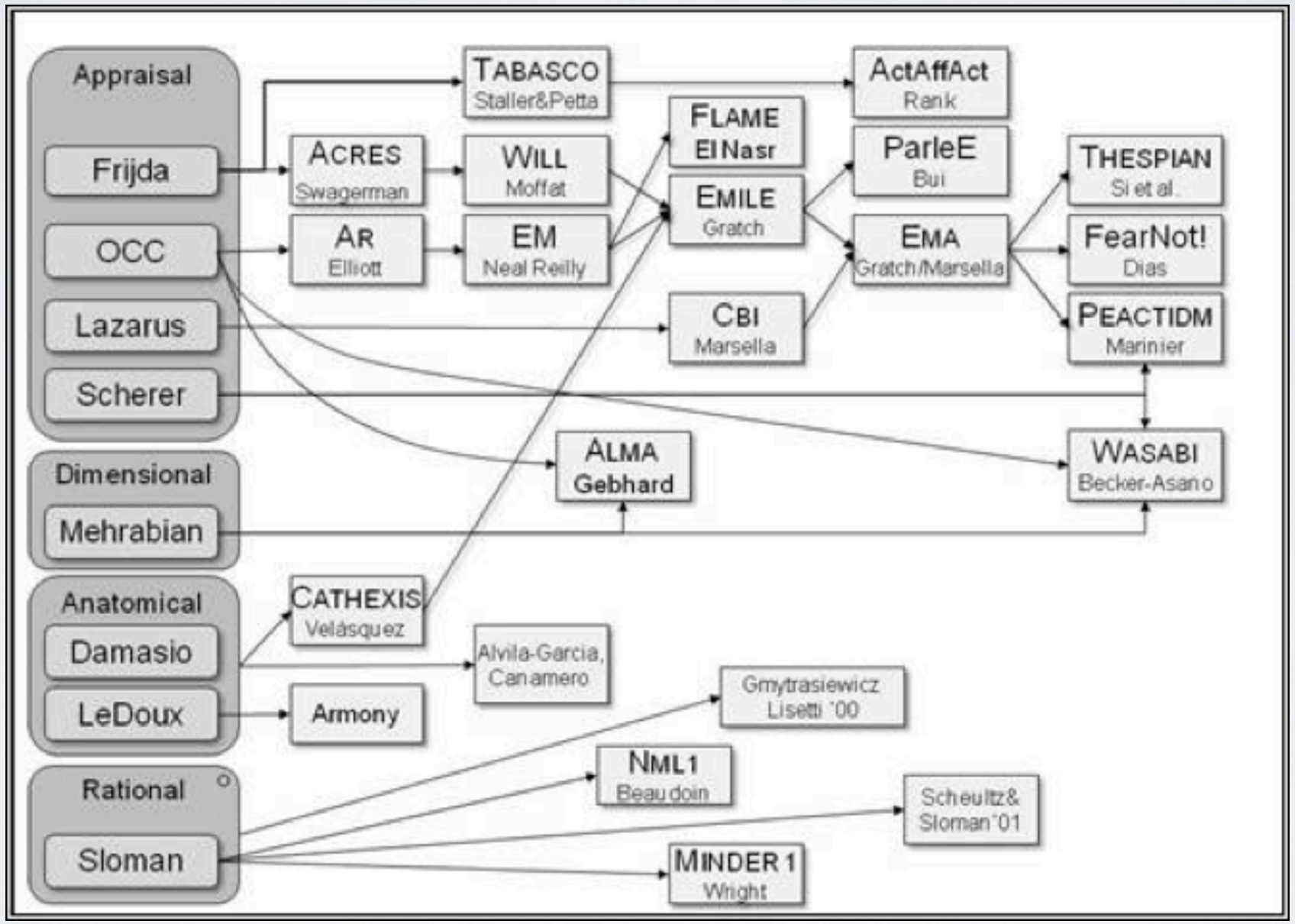
EMOTIONAL INTELLIGENT APPLICATIONS

- What is the relevant set of emotions for this application?

- How can these best be recognized/expressed/developed?

- How should the computer respond to the user given this information?

EMOTIONAL COMPUTATIONAL MODELS



EXAMPLE OF APPLICATION

- Affective mirror
- Beyond Emoticons
- Text to Speech
- Consumer Feedback
- Agents that Learn your Preferences

CONCLUSION