**Michael Brown**

# Emotions

*Emotional engagement at school is the non-cognitive factor that most directly correlates with academic achievement.* Gallup Education Report 2014

# Emotions

# Triune Brain Theory

Triune Brain Theory **CLASSICAL VIEW**

| Reptilian | Mammal | Human |
|---|---|---|
| 250m years ago | 150m years ago | 50-20m years ago |
| Basic emotions: fight, flight, f… | Emotions, memories, habits | Language, abstract thought, |
| Autopilot | Decision | Reasons |



Triune Brain Theory

| Lizard Brain | Mammal Brain | Human Brain |
|---|---|---|
| Brain stem & cerebelum | Limbic System | Neocortex |
| Fight or flight | Emotions, memories, habits | Language, abstract thought, imagination, consciousness |
| Autopilot | Decisions | Reasons, rationalizes |

The Triune Brain in Evolution, Paul MacLean, 1960

# Emotions

- **Are emotions really our inner beast?**
  - ➡ Two broad approaches to emotions
  - ➡ Our brain and how we create emotions

- **How to become more Emotionally Intelligent**
- **Broaden and Build Theory**

# EMOTIONS
# &
# PERMA

# Emotions & our brain
# What does our brain do?



- The brain keeps us **alive**.
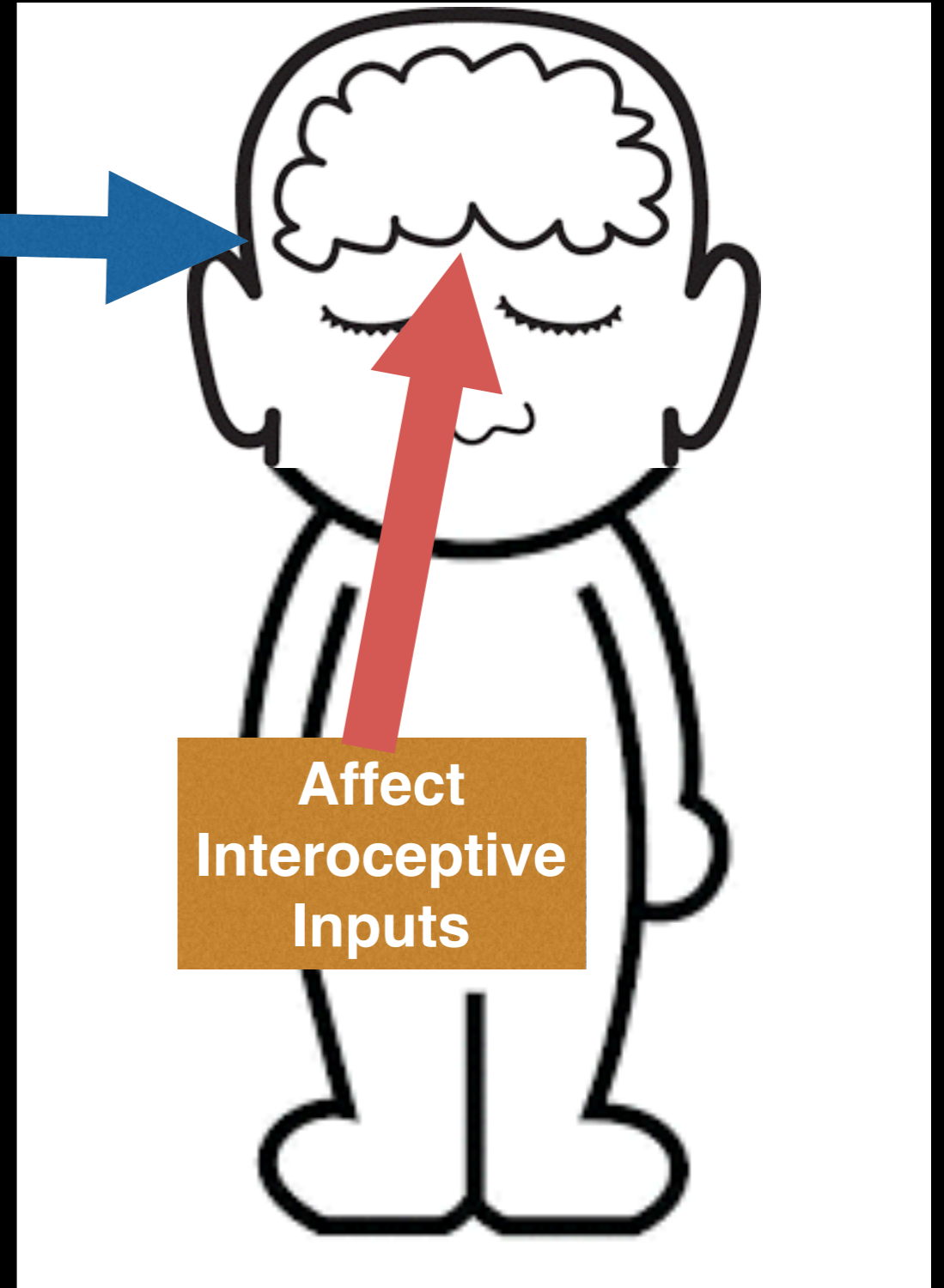- Inside & outside worlds
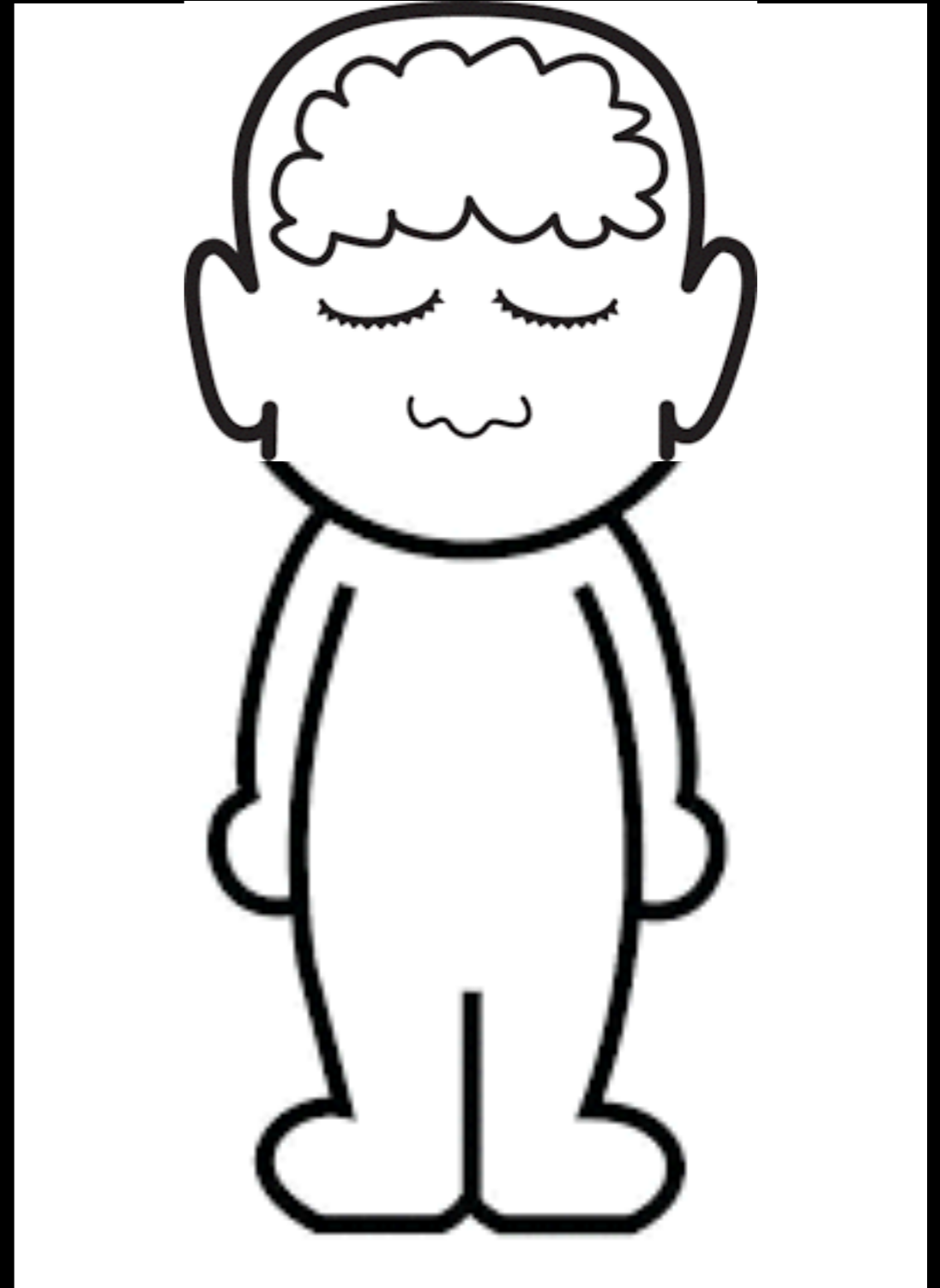
# What does our brain do?

**Inns**
*Five senses*

- The brain keeps us **alive**.
- Sees the world thru inputs.
- Uses **Survival circuits**-deal with internal and external worlds
- The brain needs to make sense of these inputs

**Affect Interoceptive Inputs**

# What does our brain do?

- The brain derives meaning via **affect** - *feeling*
- Orientation Reflex - Four **F**s

**FIGHT**

**FLEE** or **Freeze**

**FOOD**

**MATE**

# What does our brain do?

- The brain conveys meaning via **affect** - *feeling*

**Unpleasant** ———————————————— **Pleasant**

*Valence*

# What does our brain do?

- The brain conveys meaning via **affect** - *feeling*

*Arousal*

**High arousal**

**Unpleasant** ──────────┼────────── **Pleasant**

*Valence*

**Low arousal**

# What does our brain do?

- The brain conveys meaning via **affect** - *feeling*

*Arousal*

*Unpleasant valence*
*High Arousal*
*Anger - distress*

*Pleasant valence*
*High Arousal*
*Elated - Thrilled*

**Unpleasant** ———————————————— **Pleasant**

*Valence*

*Unpleasant valence*
*Low Arousal*
*Lethargic - Depressed*

*Pleasant valence*
*Low Arousal*
*Serene - calm*
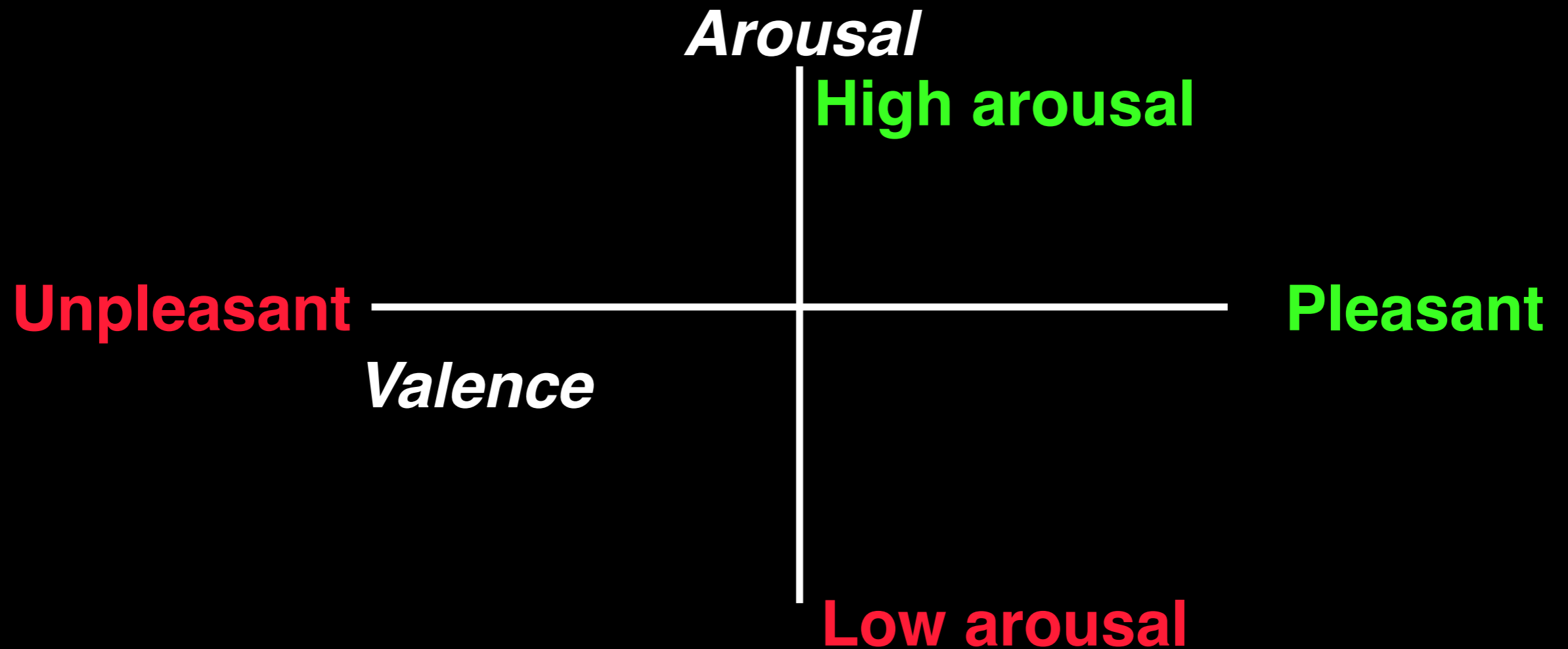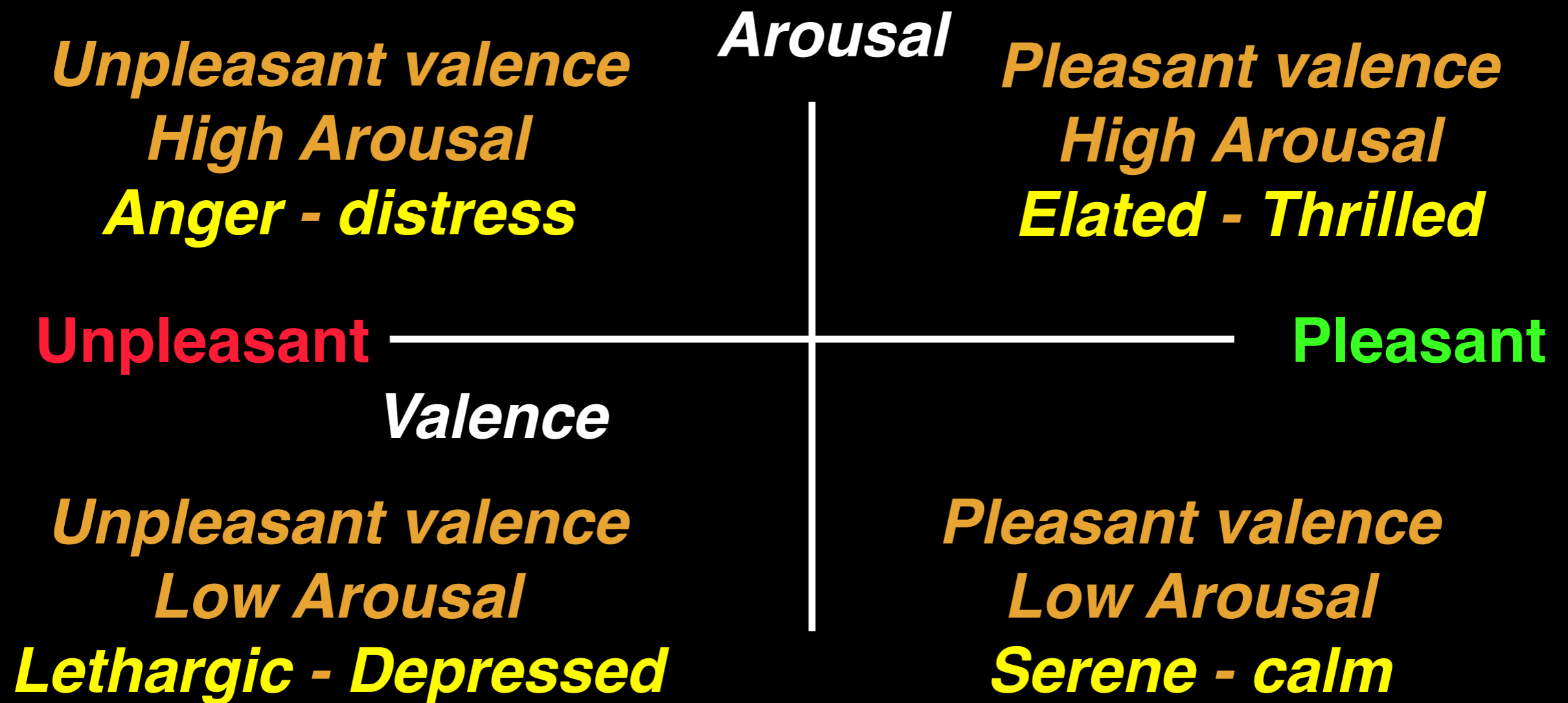
**Interoception**
*"The brain's model of the body"*

# Emotions dissected

- **Embodied feelings -** *our brain's prediction of what the body needs in the next moment.*
- **The brain's way of making meaning.**
- **Emotions are normal, natural and our learned way of interpreting the world.**
- **Can be created mentally**
- **Replicate into the next moment**
- **Contagious**
- **Broadcast - hence we can perceive emotions in others (beware of cultural differences)**
- **Emotions are goal directed - come with action urges**
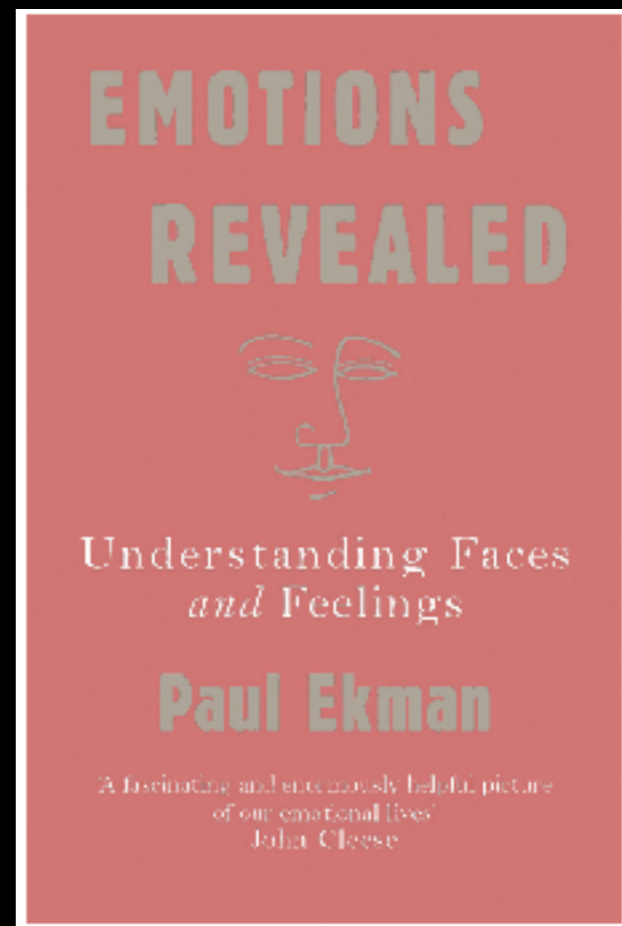- **contextual**

# Theories about Emotions



- **Classic views**
- **Constructionist**

# Theories about Emotions



Sad
Happy
Disgust
Anger
Fear
Surprise

**Classic view**



EMOTIONS
REVEALED

Understanding Faces
*and* Feelings

**Paul Ekman**

A fascinating and enormously helpful picture
of our emotional lives
John Cleese

# What emotion is being experienced here?

**Six basic emotions:**

- Fear
- Happiness
- Sadness
- Anger
- Disgust
- Surprise

# What emotion is being experienced here?

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**Six basic emotions:**

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- Surprise

# What emotion is being experienced here?

**Six universal emotions:**

- Fear
- Happiness
- Sadness
- Anger
- Disgust
- Surprise

# What emotion is being experienced here?

**Six basic emotions:**

- Fear
- Happiness
- Sadness
- Anger
- Disgust
- Surprise

# Disgust



Eyes: Narrow and eyebrows pull down and in

Nose: Wrinkles at bridge

Mouth: Upper lip rises and mouth opens, tongue sticks out

# What emotion is being experienced here?

**Six basic emotions:**

- Fear
- Happiness
- Sadness
- Anger
- Disgust
- Surprise

# Dr Robert Plutchik's Wheel of Emotions

# But!

- New borns don't show differentiated adult like expressions
- No area of the brain associated with emotions - amygdala reacts to novelty
- e.g. **degeneracy,** the brain can create an instance of 'fear' in many ways
- People vary tremendously in how they differentiate emotional experiences
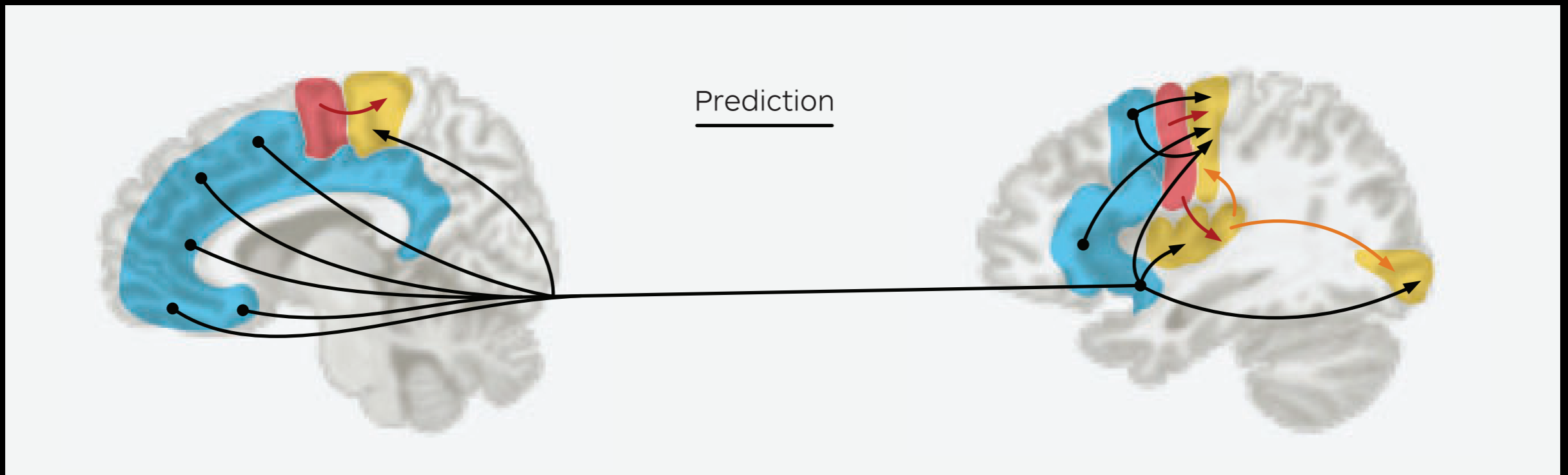- Emotional expressions vary by culture

# Theory of Constructed Emotions

## Constructionist



HOW EMOTIONS ARE MADE

THE SECRET LIFE OF THE BRAIN

LISA FELDMAN BARRETT
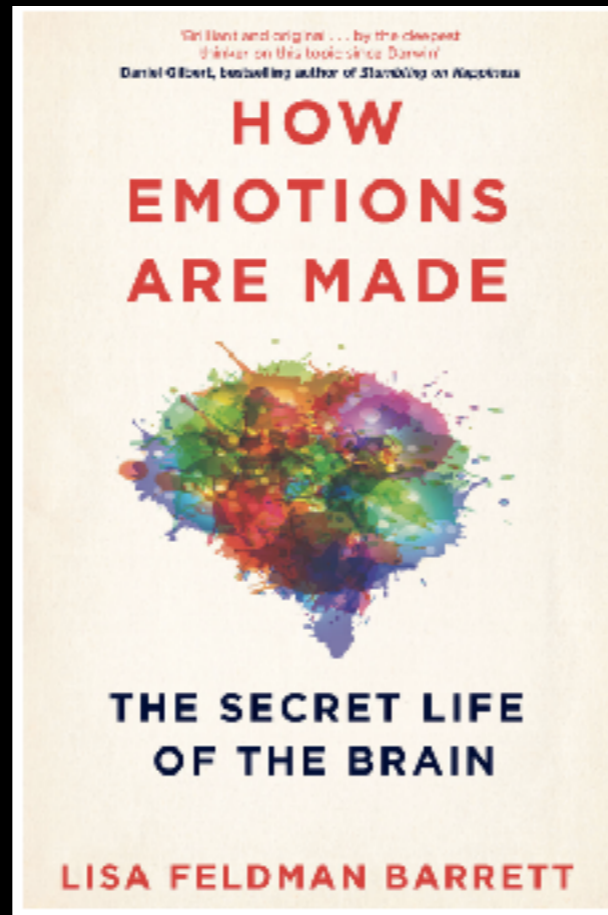
# How the brain works

- The brain is a **prediction** processor. It is constantly predicting. Our 86 billion neutrons are constantly stimulating each other.



Prediction

# Abstract Concepts

- **Concepts** help the brain make sense of **inputs**.

# Concepts

- Brain doesn't react to the world - it predicts
- The brain uses **concepts** to guide our future actions, make meaning of upcoming sensory inputs.

**Collection of objects events, actions grouped**

**Category Concepts**

**Mentally similar things - trees, cars, birds, singing, running**

# Concepts

- The brain uses **concepts** to guide our future actions, make meaning of upcoming sensory inputs.

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**Humans can think abstractly and have non-concrete categories**

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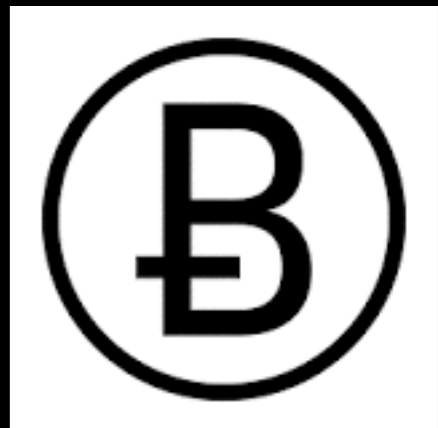
# Concepts

- The brain predicts and simulates using **concepts** to guide our future actions, make meaning of upcoming sensory inputs.

**Collection of objects events, actions grouped**

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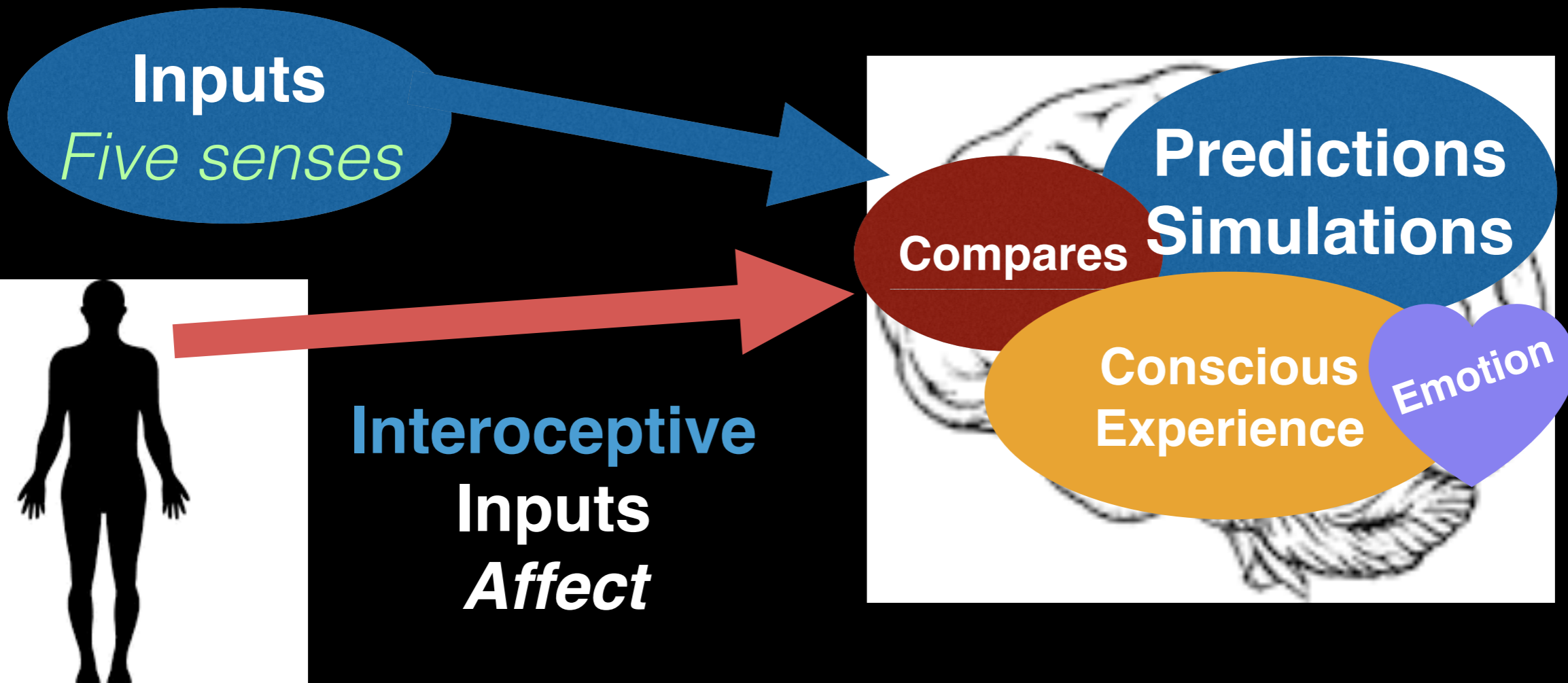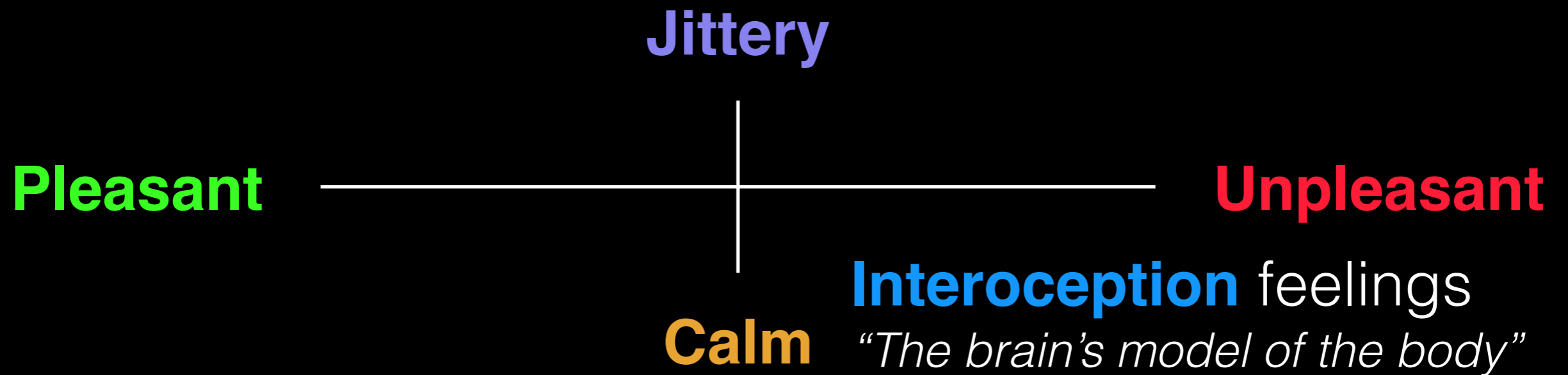**Humans can think abstractly and have non-concrete categories**

**Words**

**Emotions**

# Brain Inputs

Jittery

Pleasant           Unpleasant

**Interoception** feelings

Calm    *"The brain's model of the body"*

**Inputs**
*Five senses*

**Predictions Simulations**

**Compares**

**Conscious Experience**

**Emotion**

**Interoceptive Inputs** *Affect*
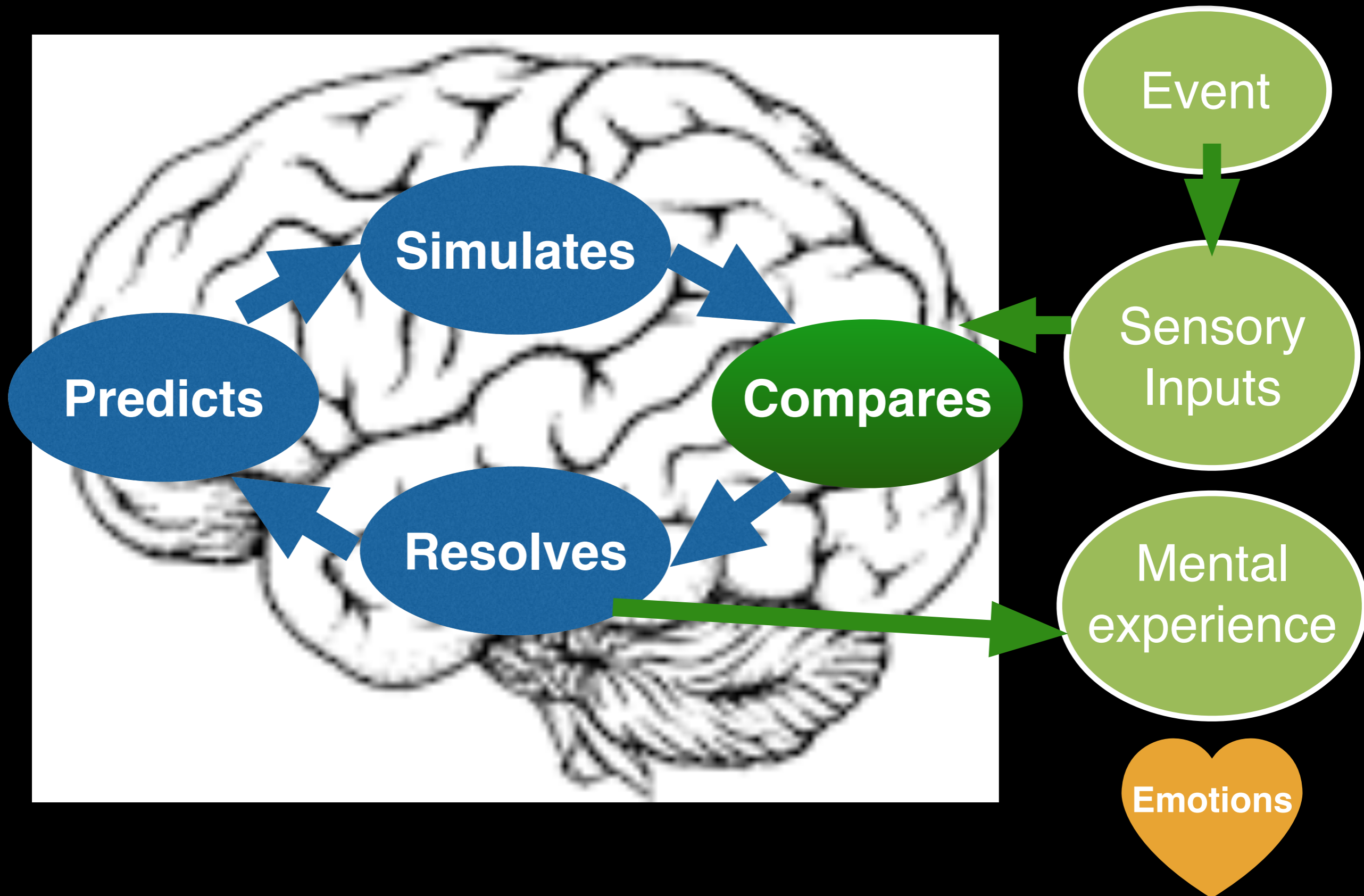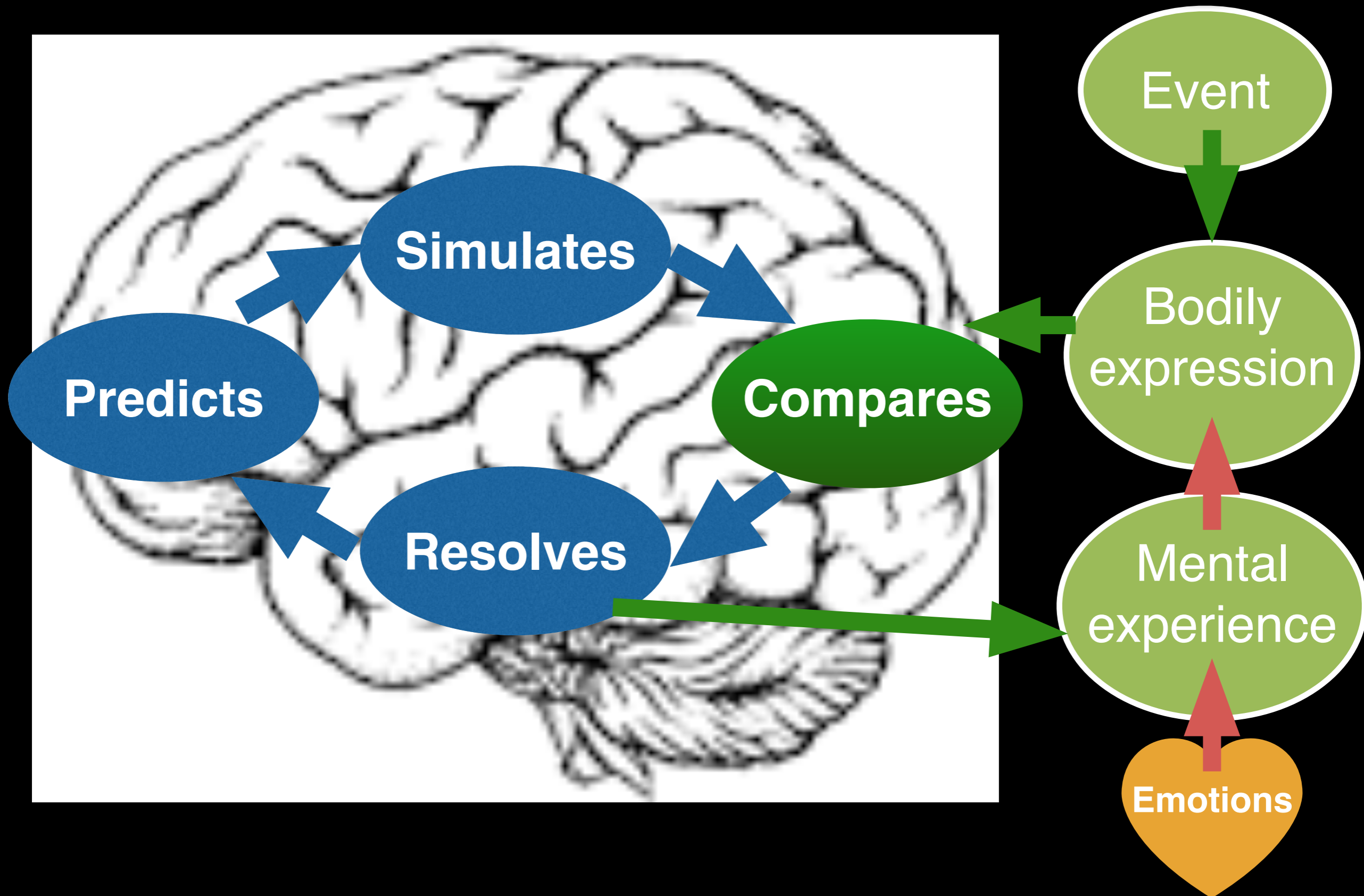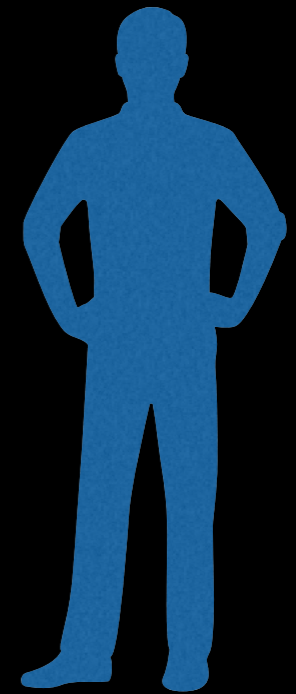
# Emotion Sequence

# Emotion Sequence

# Emotions



Emotions

Context

# Emotions

- **Give us *meaning* and *direction***
- **Fast, automatic and constant**
- **Arise outside our consciousness**
- **Appear seamless to us**
- *'data' - they provide us awareness of threats and opportunities and indicate actions we could take*

?

# Emotions - What do we do with this?

**Law** - crimes of passion - e.g. road rage?

**PERMA** - Positive Emotions & Broaden and Build

**Goleman** - Emotional Intelligence

**Australian Curriculum** - *Personal and Social Capability*
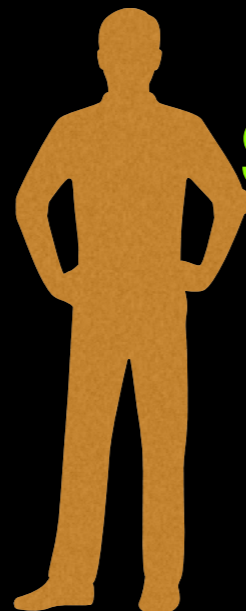
# Emotional Intelligence

**Developing Self Awareness / Management**

**Emotional granularity** - the number of emotion concepts held.  *Being able to experience many flavours of emotion.*

*Low granularity of emotions:*

- **I feel good**
- **I feel sad - crappy**

Year 10 class

How many emotions are there?   - 4 000

English feeling words

# Emotional Granularity

# Emotional Intelligence

*High emotional granularity:*

- **Happy**, **content**, **thrilled**, **relaxed**, **joyful**, **hopeful**, **inspired**, **prideful**, **adoring**, **grateful**, **blissful**…

- **Crappy**- **angry**, **aggravated**, **alarmed**, **spiteful**, **grumpy**, **remorseful**, **gloomy**, **mortified**, **uneasy**, **dread ridden**, **resentful**, **gloomy**, **woeful**, **envious**, **melancholy**, **sad**, **helpless**, **vulnerable**, **embarrased**, **disappointed**

# Emotional Intelligence

**Self Awareness**

*Take a moment to check in - BMH*

- *Body* **How's your current physical experience?**
- *Mind* **Are you focussed, distracted, evaluating observing?**
- *Feelings* **are your calm, agitated, worried, playful, bored????**

# Emotional Intelligence

## Self Management

**Emotional Differentiation Technique**
- Reduce the effects of an emotion instance
- Need good emotional literacy

# Emotional Differentiation

**I feel angry**
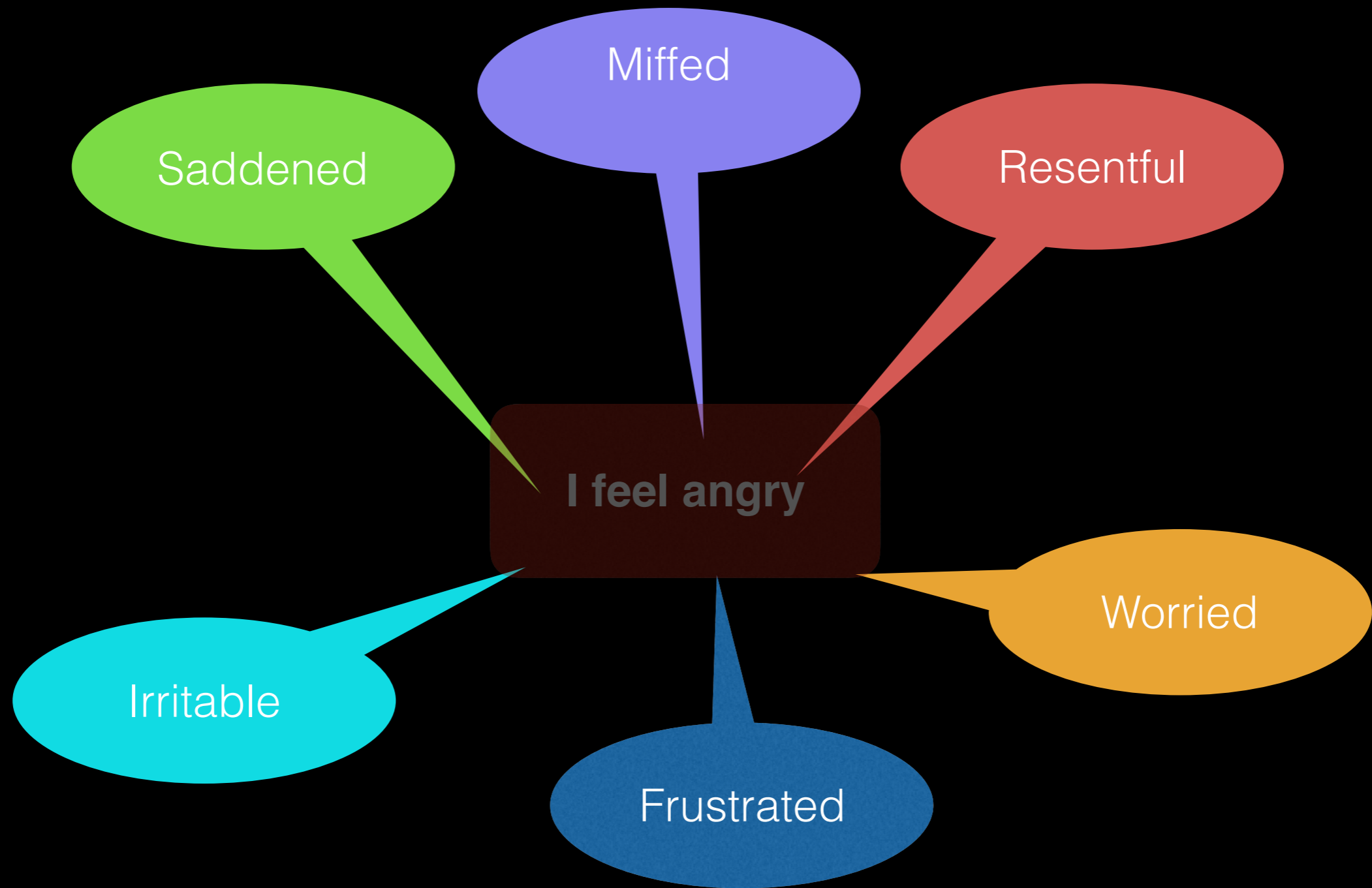
# Emotional Intelligence

## Self Awareness

**High granularity of emotions**
*Many flavours of emotion are available:*

- Less illness
- Less medication
- Less time sick
- Better relationships
- Richer life experience
- Do better academically

# Emotions

**Emotions fit into two general categories:**

- **Pleasant emotions (Positive)**
- **Unpleasant emotions (Negative)**

# Emotions

**Emotions fit into two general categories:**

- **Pleasant emotions (Positive)**
- **Unpleasant emotions (Negative)**

Sad?

# Emotions

*Emotions fit into two general categories:*

- *Pleasant emotions (Positive)*
- *Unpleasant emotions (Negative)*

Anger

# Emotions

**Emotions fit into two general categories:**

- **Pleasant emotions (Positive)**
- **Unpleasant emotions (Negative)**

Contempt

# Emotions

**Emotions fit into two general categories:**

- **Pleasant emotions (Positive)**
- **Unpleasant emotions (Negative)**



Shame

# Emotions

Negative affect seem to serve the purpose of keeping us from **harm - avoidance feeling**.

We also know that they cause us to **focus** on the source of the emotion, causing us to **close down** to the broader world.

# Emotions - Negativity Bias

***The Negativity Bias***

– a tendency to easily notice bad things, bad events or bad people

- Extremely sensitive, more than the positive

Negative emotions tend to focus on the source and close us down

# Positive Emotions

# Broaden and Build Theory

*Positive states broaden our minds and build resources.*

*Professor **Barbara Fredrickson**, Ph.D*
*University of North Carolina*
*Schools of Psychology and Business*

# Emotions - Broaden and Build

*Positive states broaden our minds and build resources.*

**Pleasant Emotions Ratios**

**5:1  - Successful marriage**

**3:1  - Successful - flourishing**

**2:1 – Getting by - languishing**

**11:1 - Pollyanna**

**>1:1 - Pathology**

Positivity self test - www.positivityratio.com

*Resilience is built by positive moments.*
*Positive emotions undo negativity*

# Pleasant emotions

Each pleasant emotion has its own dynamic:

Pride ……………dream big

Amusement……shared laughter

Inspiration……..aspire to excellence

Awe…….…………accomodate new things

Love……………...explore, trust, savour, dream

# Pleasant emotions

Each pleasant emotion has its own dynamic:

Joy ……………..Play

Gratitude………Creatively give

Serenity……..…Savour and integrate

Interest……..…Explore

Hope…………..Yearn for a positive change

# Pleasant emotions

Pleasant emotions.

The 10 Positive emotions

Joy                    Pride

Gratitude              Amusement

Serenity               Inspiration

Interest               Awe

Hope                   Love

Pleasant emotions ACTION URGE

# Pleasant Emotions
# Positivity Benefits

- Increased resilience,
- better immune system functioning,
- improved creative problem-solving
- Learning is improved, and
- enhanced feelings of connection to others.

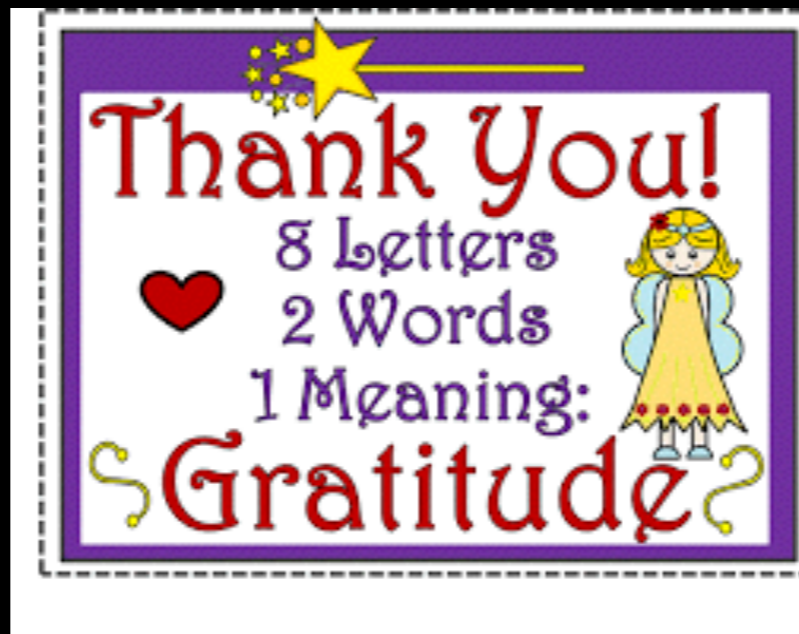The *frequency* rather than the *intensity* of positive emotions enhances well-being - small bits everyday.

# Growing positivity

## How do we grow positivity?

**Day one, or one day - you decide**

# Growing positivity

Show gratitude

# How do we develop positivity?

## Count your blessings



**THREE GOOD THINGS**

<u>Monday:</u> 1. Baked a cake.
2. Phoned Sarah for a chat
3. 2 hours of job research
<u>Tuesday:</u> 1. Had a bath
2. Ate some cake
3. Watched the last Cold Feet
<u>Wednesday:</u> 1. Did the pub quiz
2. Ate dinner with all the family
3. Played with the cats
<u>Thursday:</u> 1. Drank some wine
2. Bought a new hat
3. Learnt that I smile a lot

<u>Friday:</u> 1. Saw the Bond film
2. No phones date night
3. Slept all night without waking
<u>Saturday:</u> 1. Went for a walk
2. Watched the fire burn
3. Wrote a letter
<u>Sunday:</u> 1. Had a lie in
2. Went out for Sunday dinner
3. Planned my Summer holiday
<u>All Week Greatest</u>
1. Saturday walk
2. Family Dinner
3. No phones date night

**Day one, or one day - you decide**

# How do we develop positivity?

## Savour the good
## *Find the silver lining*

- Look forward to things - *"It's going to be great"*
- During - *"I just want to soak it all in"*
- After - *"Relive and replay the event it in your minds eye"*

**Day one, or one day - you decide**

# How do we develop positivity?

*"My life has been filled with terrible misfortunes, most of which have never happened."*

## Reframing

Reframing is a way of viewing and experiencing events, ideas, concepts and emotions to find more positive alternatives

People never listen to me!

Several people agreed with my proposal

I can't handle this...

I've faced challenges before and succeeded, this is no different

# How do we develop positivity?

## Power poses
### *Amy Cuddy*





**5 Power Poses**

**Day one, or one day - you decide**

# How do we develop positivity?

- Find your meaning
- Cultivate your strengths
- Heed hedonic adaption
- Invest in relationships
- Service learning
- Grow emotional literacy
- Loving kindness meditation
- Pay it forward

**Day one, or one day - you decide**

# How do we develop positivity?

- Go to nature
- Dispute negative thinking
- Develop distractions
- Cultivate kindness - RAK
- Develop connections
- Apply your strengths
- Ritualise gratitude

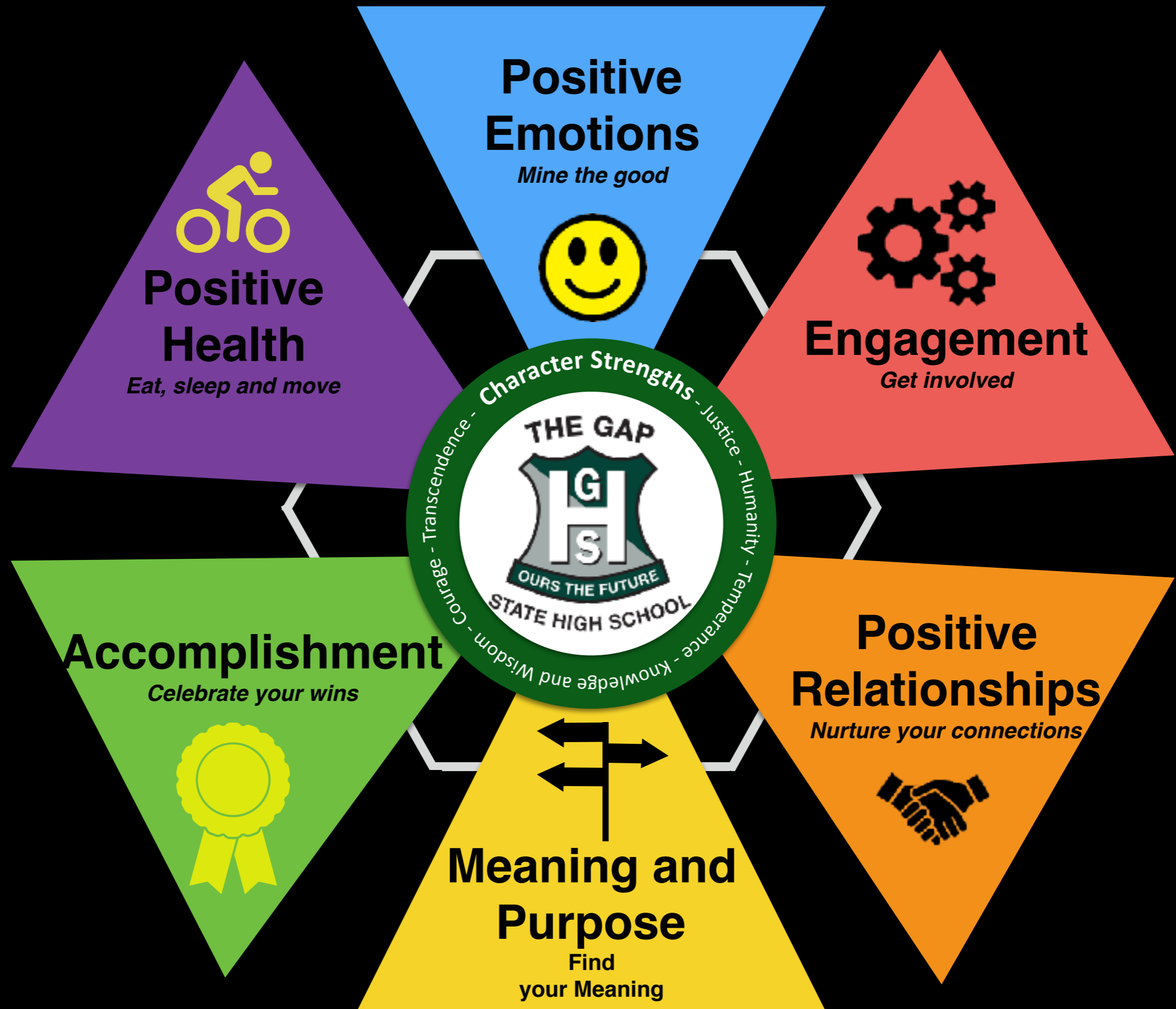**Day one, or one day - you decide**

**Golden rules are:**

Learn to attend to your emotions

Become curious and patient with your emotions

Talk about them and show your real emotions to others

Learn to accept having different emotions

Use your EI to change your emotions with other emotions

Positive Emotions
Mine the good

Positive Health
Eat, sleep and move

Engagement
Get involved

Accomplishment
Celebrate your wins

Positive Relationships
Nurture your connections

Meaning and Purpose
Find your Meaning

Character Strengths - Justice - Humanity - Temperance - Knowledge and Wisdom - Courage - Transcendence -

THE GAP
G H S
OURS THE FUTURE
STATE HIGH SCHOOL

Back

# Emotions

*What emotion is this lass feeling*

# Emotions are broadcast

*Facial expressions are universal communicators*

**Silver medalist**
**USA**
McKayla Maroney
"Contempt?"

**Gymnastics**
**2012**



Duchenne Smile
Gold and Bronze Medalists

# Growing positivity
## How do we do with this?



- **Intention**:  Don't do anything without thinking of the why behind the why.
- **Clarity**: I have to know what I want and the best way to achieve it.
- **Authenticity**: I don't get pulled into other people's stuff that doesn't serve me well.

# Emotions

★ Why would you want a *better quantity and quality of life!*

- Greater resilience - bounce back after set backs
- A more fulfilled life
- Higher self-esteem and more optimism
- Happier, less anxiety, less depression
- Achieve more, better engagement - more "flow"
- Better relationships

Cherokee Indian to his son:
"My son, we all have an internal battle. The battle is between two wolves. One is evil. It is anger, envy, jealousy, sorrow, regret, greed, arrogance, self-pity, guilt, resentment, inferiority, lies, false pride, superiority and ego. The other is good. It is joy, peace, love, hope, serenity, humility, kindness, benevolence, empathy, generosity, truth, compassion and faith."

The son thought for a minute and then asked his father:
"Which one wins?"

The old Cherokee replied "The one you feed."

# Enough
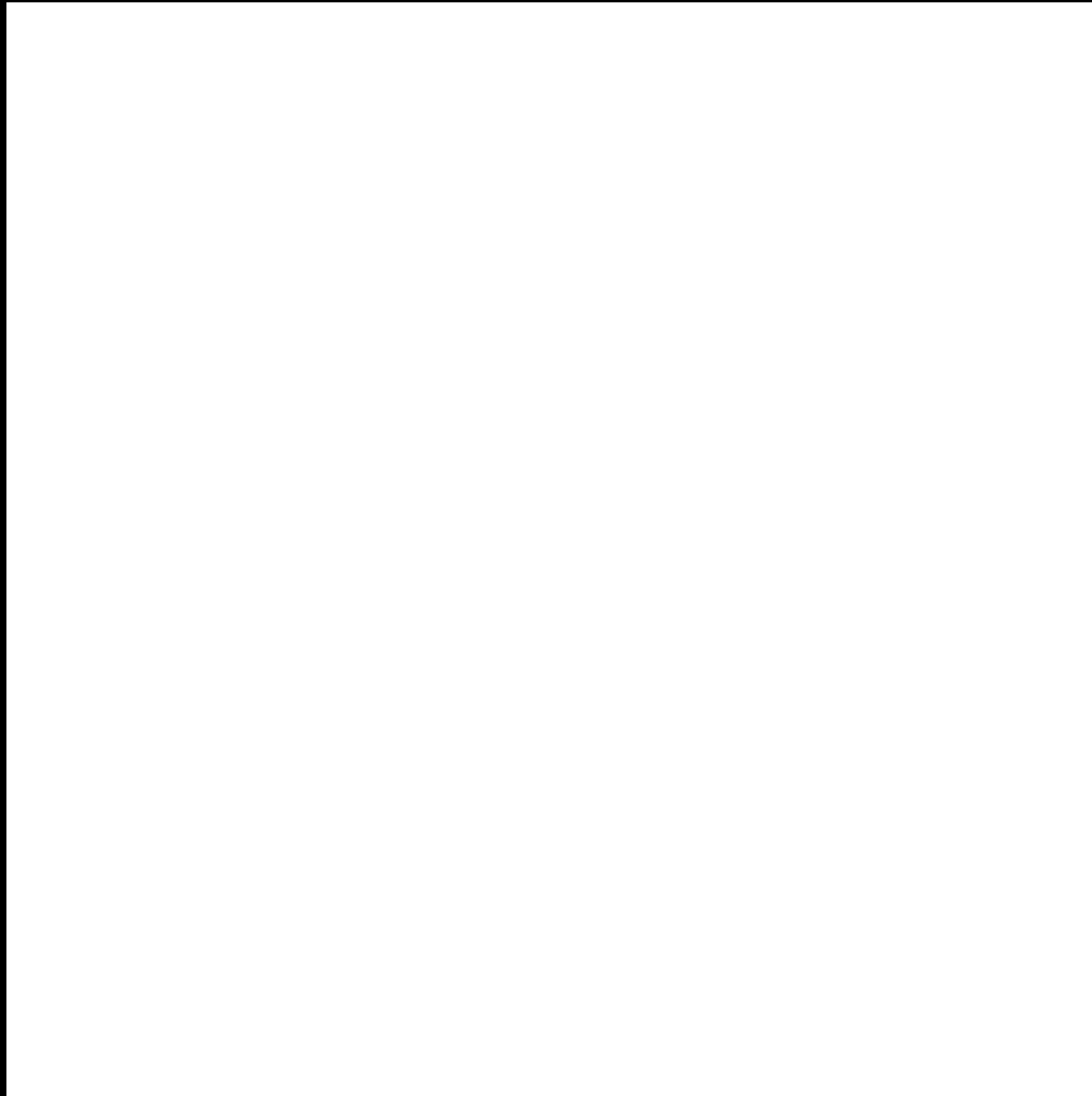
# The human Brain

- **1.5kg - 2%** of our body weight, uses 25% of our oxygen & 70% of our glucose
- **73% water** (90 minutes of sweating without hydration shrinks the brain like one year of ageing). Dry material is mostly fat.
- Approx 86 billion neurons, and one quadrillion connections - we use **100%** of it.
- A piece of brain tissue the size of a grain of sand contains 100,000 neurons and one billion synaptic connections!
- **Brain is only fully developed by about 25 years of age**
- Brain signals travel at approx 460 kph
- Each neuron can send 1000 impulses per second
- Crinkled cerebrum so that it fits inside our cranium
- Uses about 25 watts of power - **enough to light an LED light**
- Specific illnesses: Alzheimer's disease, Parkinson's disease and multiple sclerosis, strokes
- **The brain controls all body processes, thoughts, movements, and decisions.**