

The Neuropsychology of Conflict

A New Way of Looking at Human
Conflict

Overview

- Brain function and anatomy
- Automaticity
- Neurotransmitters

Three Primary Brain Units

- Regulates cortical tone
- Obtains, processes and stores information
- Programs, regulates, and verifies mental activity

Cortical Tone

- Cortical tone maintains a waking state
- Cortical tone is maintained in brain stem
- Ordinary tone is elevated for
 - Metabolic demand
 - Outside stimulation
 - Mental intention

Information Processing

- Primary zones receive sensory data
 - High modal specificity
 - Neurons respond narrowly
- Secondary zones combine data
- Tertiary zones organize and analyze combined data
 - Low modal specificity
 - Neurons respond broadly

Cognitive Operators

- Holistic operator
- Reductionistic operator
- Causal operator
- Abstractive operator
- Binary operator
- Quantitative operator
- Emotional value operator

Levels of Processing

- Preconscious—processing that occurs before we become aware
- Unconscious—processing that we are never aware of
- Conscious—process that we are aware of
- 98% of brain processing is preconscious or unconscious

Automaticity

- Much of everyday life is automatic
- We make decisions and judgments more than $\frac{3}{4}$'s of a second before we become aware
- We judge quickly, then rationalize our judgment

Serial Stage Model

A social event occurs.

We see and hear what is going on.

We consciously evaluate the people and their actions.

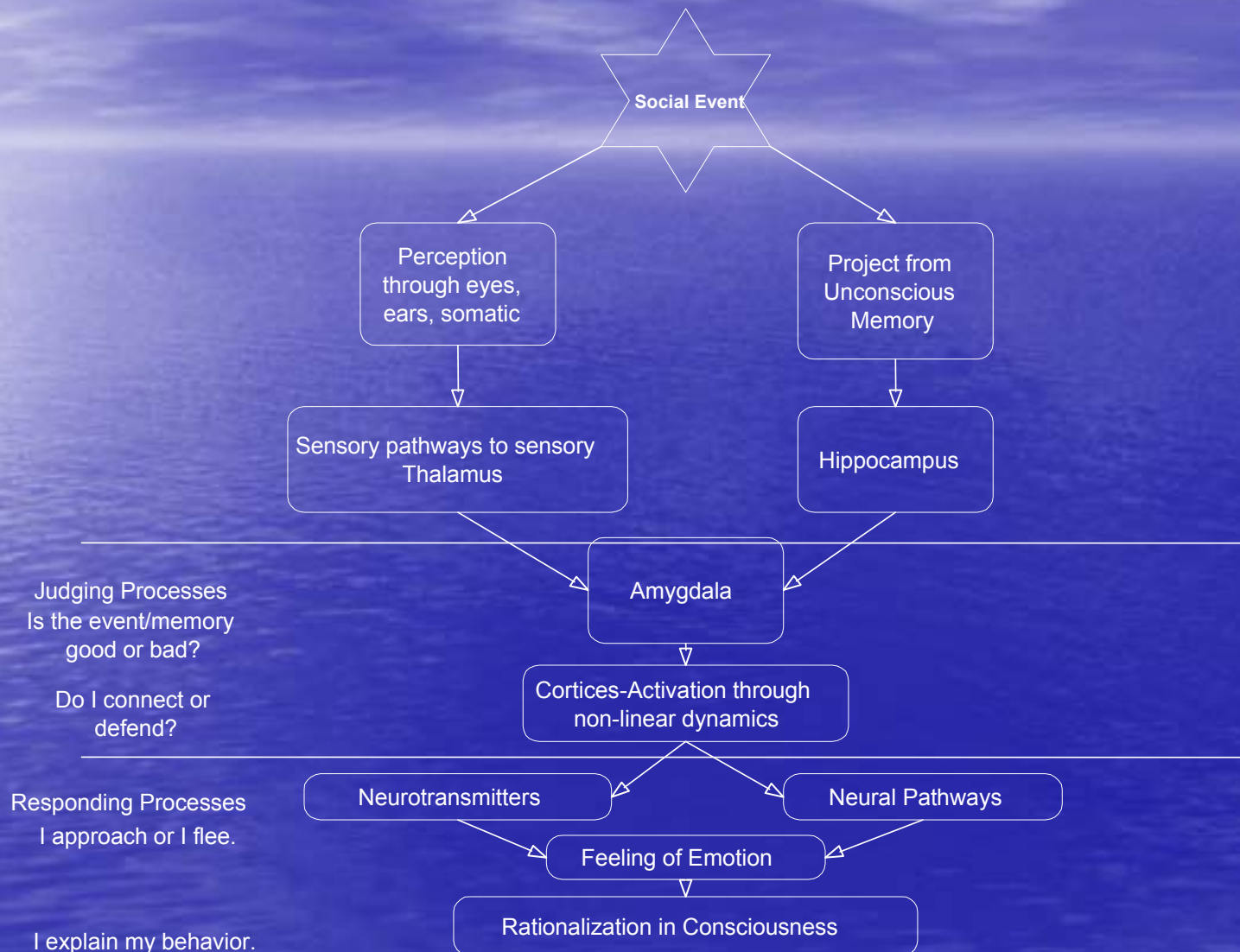
We consider an appropriate response.

We respond.

Implications

- We believe we are rational
- We believe our reactions are controllable through will
- We attribute the same rational ability to others
- When they fail to act “rationally,” we impute motive and intent.

Parallel Stage Model



Parallel Stage Model-Summary

A social event occurs.

An automatic set of unconscious processes simultaneously:

Judges whether they are bad or good and generates options

Sets a goal for interacting with them and initiates our actions with them

Decides what all the things, people and actions are, determines their attributes (e.g., "polite" or "rude") and selects sensory information to be sent to the conscious mind

We become conscious of what is going on.

We create explanations.

Implications

- Judging process is preconscious
- We are predisposed to judge “bad” rather than “good”
- We approach for food, shelter, and sex.
- We defend against everything else

Feelings

Social event or memory

Body and brain react physically

Neural patterns representing the physical changes are created.

Neural patterns are sensed in the form of images (feeling).

Feelings are felt as a part of conscious process.

The actual feeling of feelings is the last part of the process.

Neurotransmitters And Neuromodulators

- Neuromodulators maintain the forebrain's global state
- Two main classes: the neuroamines and the neuropeptides

Table of Neuromodulators

Acetylcholine	Memory
Dopamine	Hedonism
Endorphins	Pain relief
Histamine	Arousal
Melatonin	Alarm clock
Norepinephrine	Imprinting
Oxytocin	Orgasm
Serotonin	Relaxation
Vasopressin	Aggression

The Serotonergic Effect

- Serotonin has a complex modulating role
- Made from the amino acid tryptophan
- System was essentially in place 500,000,000 years ago
- Maintenance of cortical tone

Decreased Serotonin

- Increased exploratory, eating, and sexual behavior
- Fear-induced aggression

Serotonin and Social Status

- Low levels of serotonin = low status
- Higher status unrelated to larger body size or canine teeth
- Status changes always preceded by changes in affiliative behavior with females

Serotonin Effects

- Positively related to prosocial behavior, such as grooming
- Negatively related to antisocial behavior, such as fighting
- Stabilized relationships between individual and group members

Evolutionary Explanation

- Old View-- Aggressive males become socially dominant
- New View--High status is more dependent on social skills and coalition building than on aggression

Diversity of Serotonin Levels

- Low serotonin levels related to stronger motivational drive
- High serotonin levels less sensitive to environmental hazards

Conflict Behavior and Serotonin

- Predominantly cooperative conflict style may have genes adapted to higher serotonin levels
- Predominantly competitive conflict style may have genes adapted to lower serotonin levels

Implications for Understanding Human Conflict

- Conflict may arise from preconscious processes
- Conflict may be unnecessarily continued by rationalization
- Propensity to conflict or peace may be modulated neurochemically

Implications for Peacemaking

- Create a safe environment
- Create conditions for connecting rather than defending
- Understand limitations of reason, rational thinking
- Be aware of neural processes and automaticity in conflict behavior



The End