

Sensory Processing & Integration

Looking for a new insight

Mayfield School Torbay 2019

Introduction

- “What happens to a sense?” a history of Psychology
- Introduction of Sensory Integration

WORKSHOPS

- Brain Systems and Sensory Roles
- A New View of Sensory Systems
- How can it affect the children we see?

What Happens to a Sense?

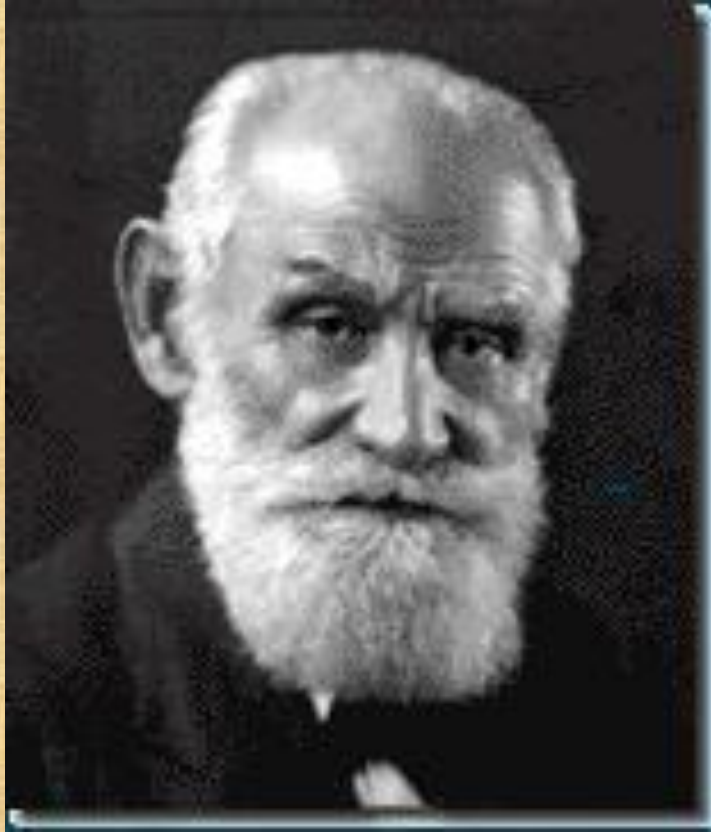
A journey back through time.

The Behaviourists

1890's

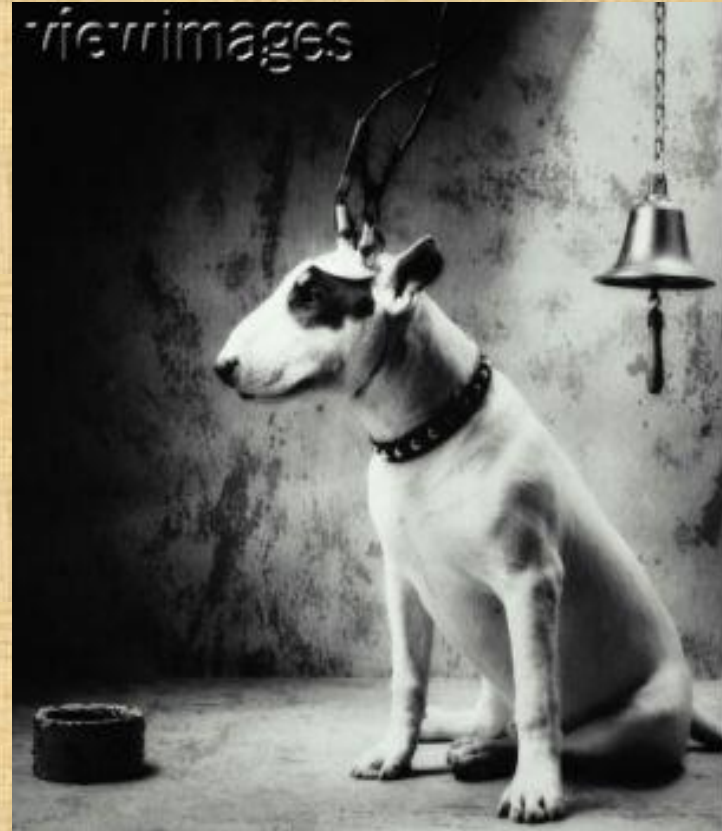
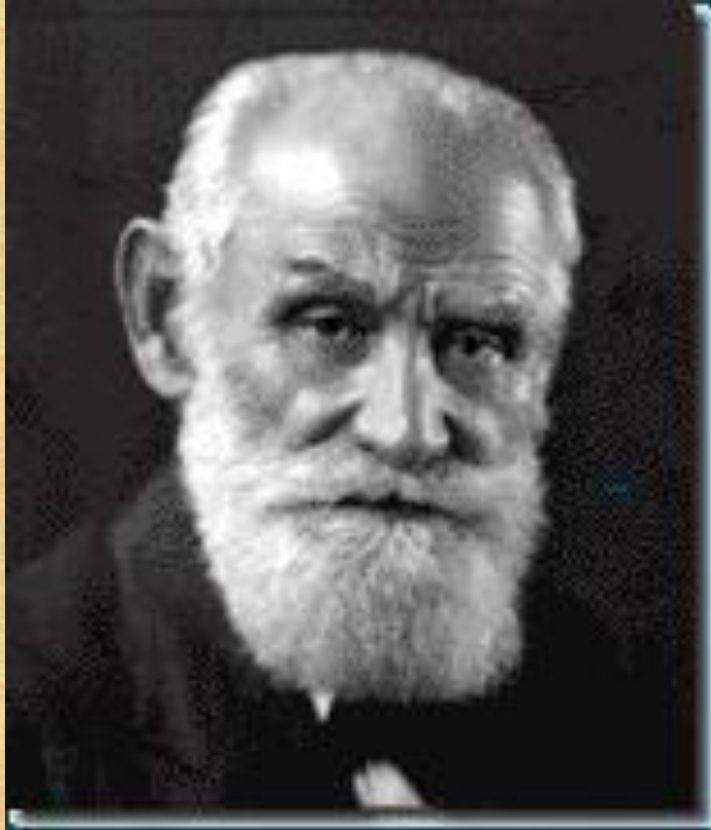
All human endeavour can be explained as behaviour.

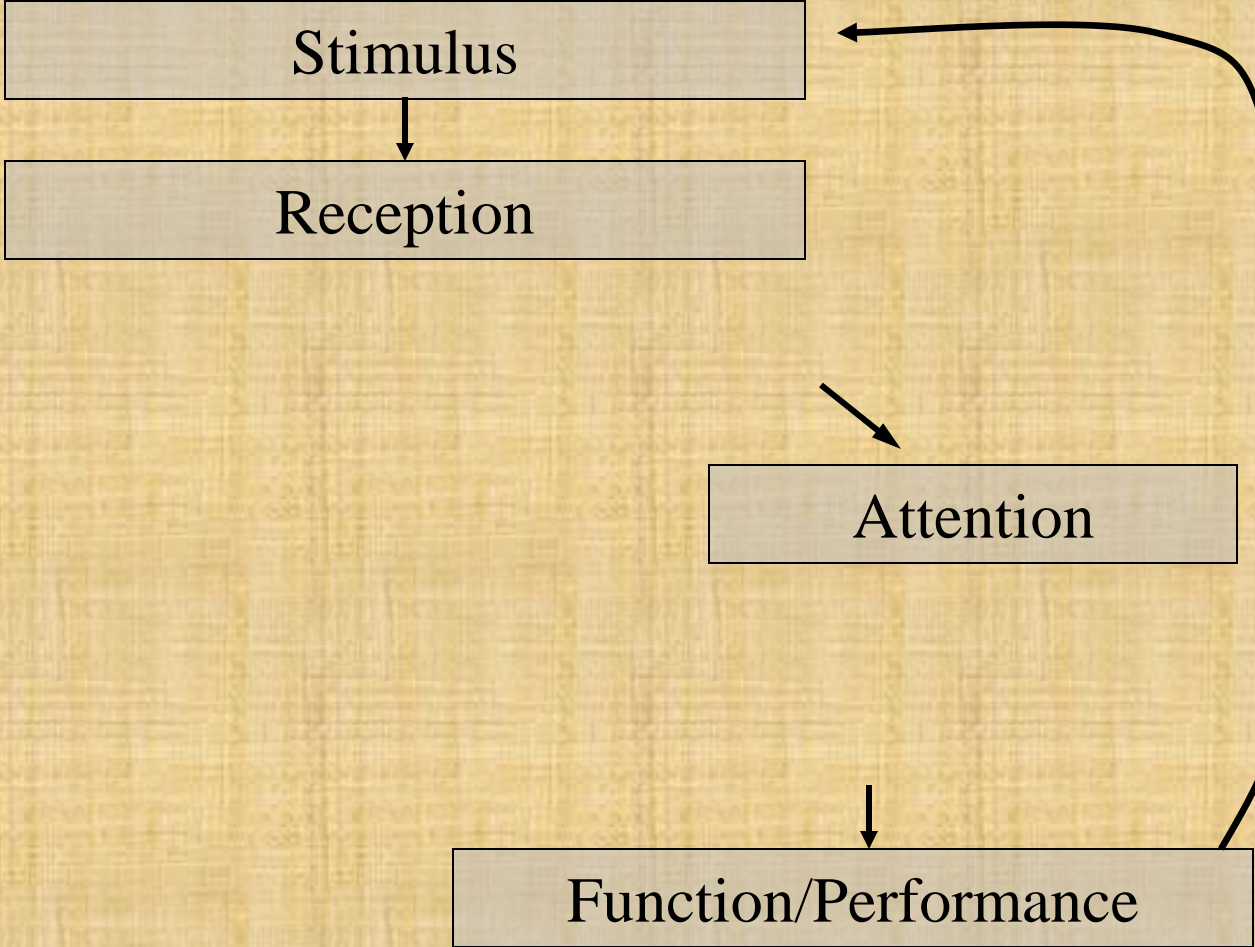
Pavlov and his dogs 1848 -1936



*' Only one thing in life
is of actual interest to us
- our physical experience.
Its mechanism, however,
has been, and remains,
wrapped in a deep mystery '*

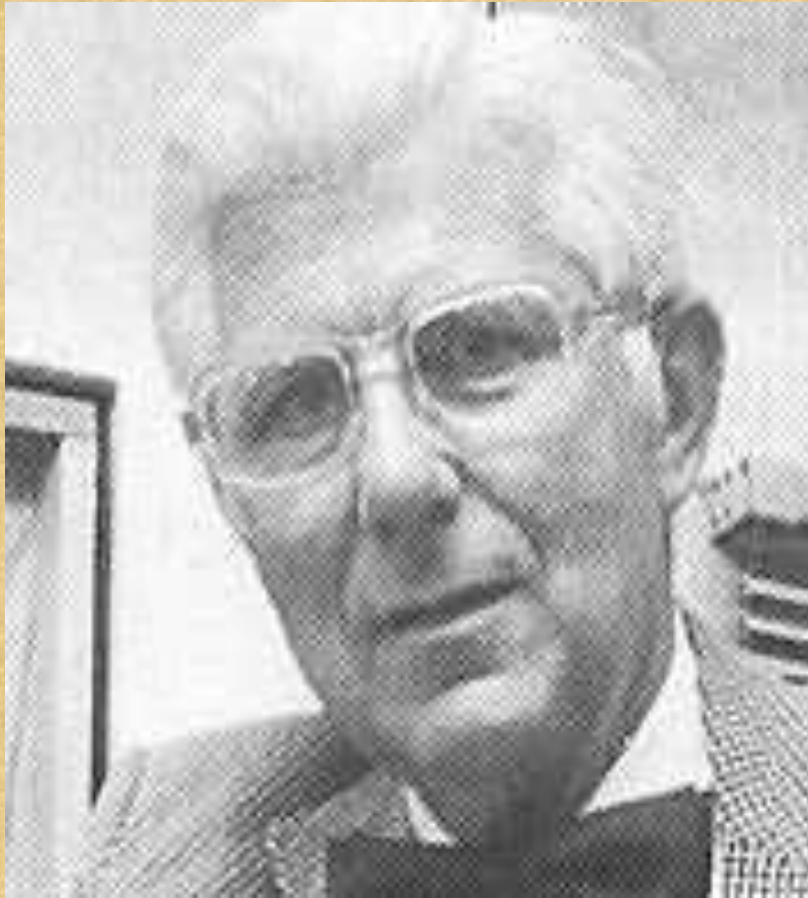
Pavlov and his dogs 1848 -1936





The Cognitive Psychologists 1950's

I think therefore I am

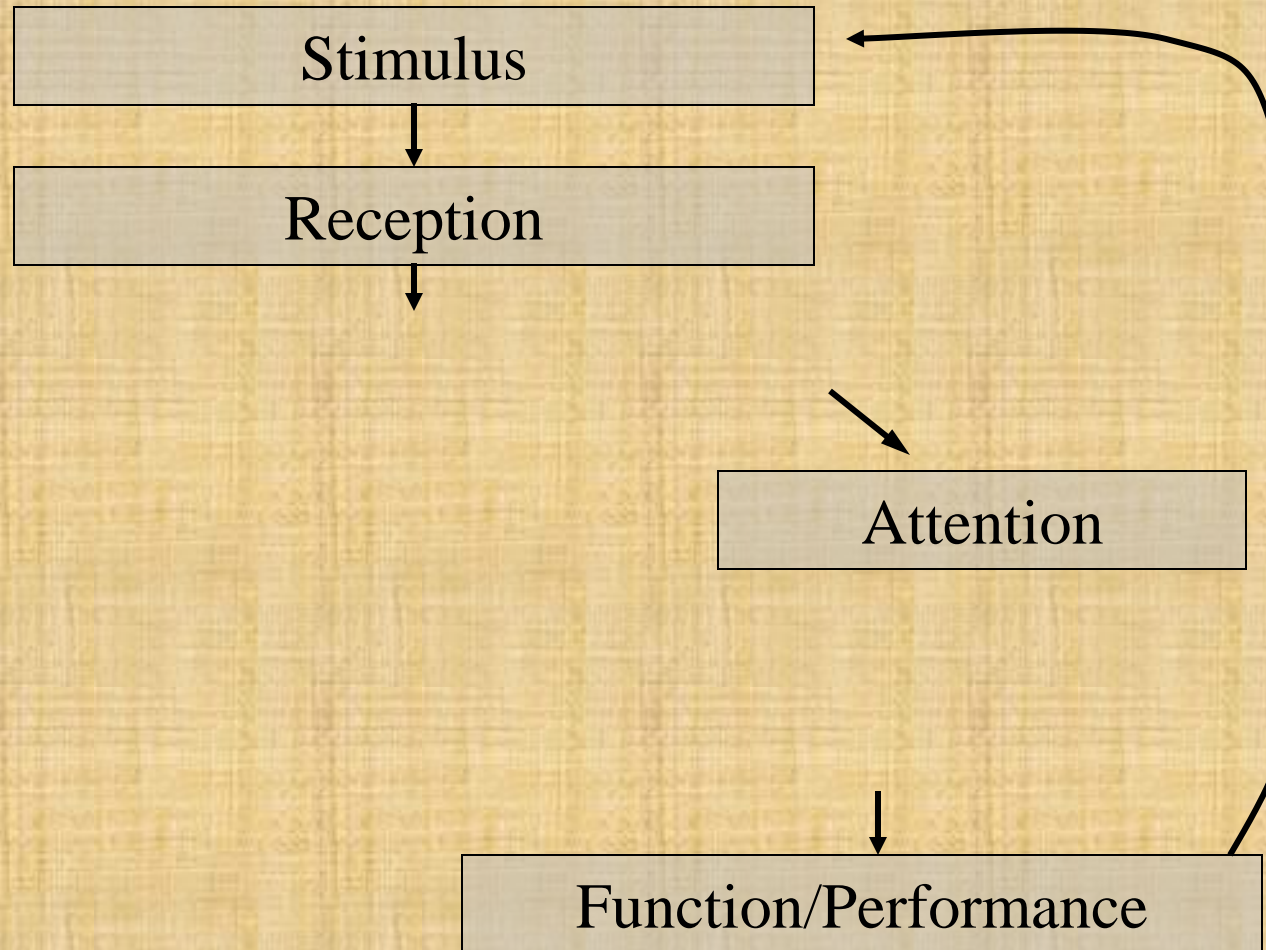


Aaron T Beck

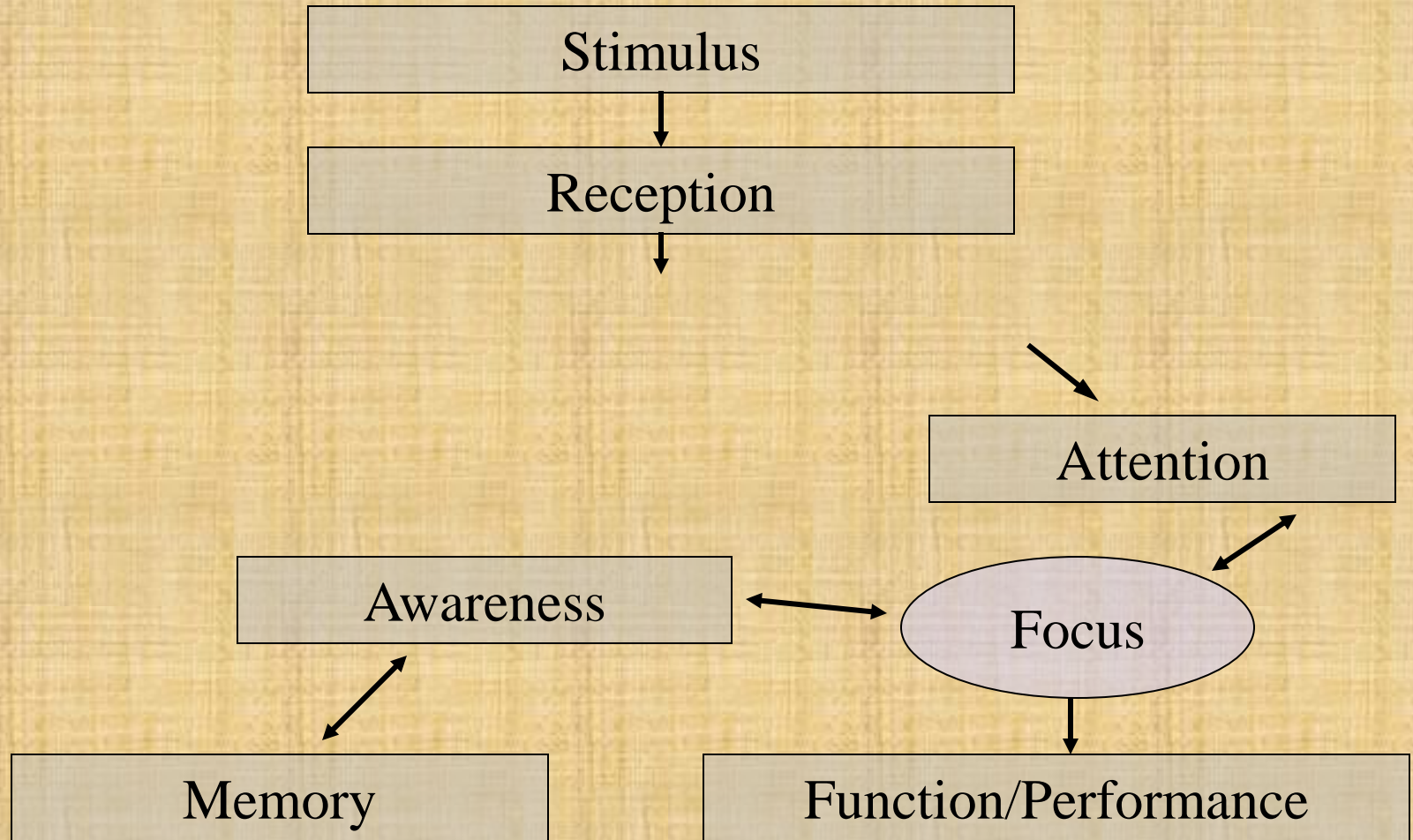
1921 - date

“Dr. Beck established for the first time the efficacy of any psychotherapy for the treatment of depression.”

What Happens to a Sense?



What Happens to a Sense?



The Humanists

1960's

I am therefore I develop

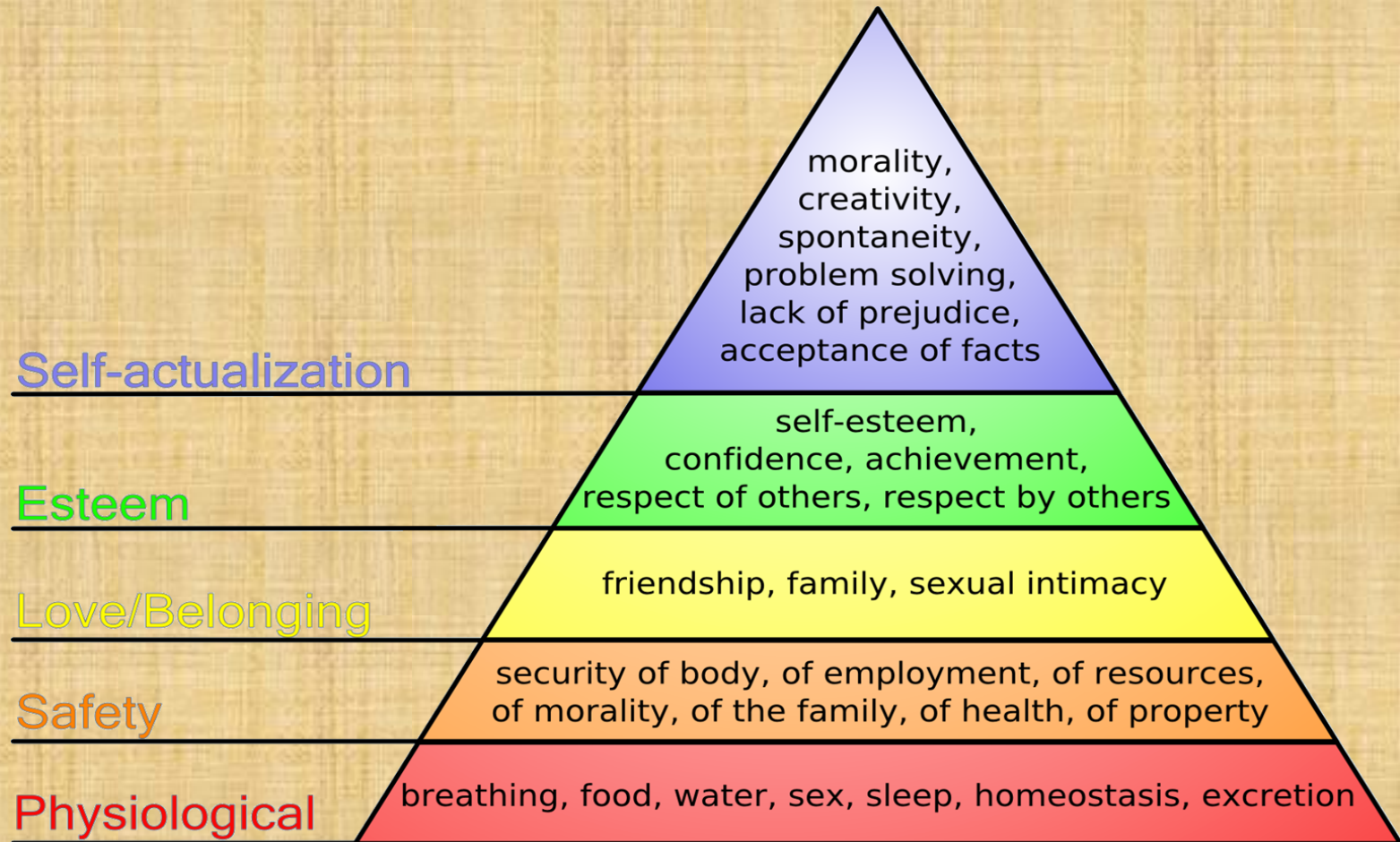


Abraham Maslow

1908 - 1970

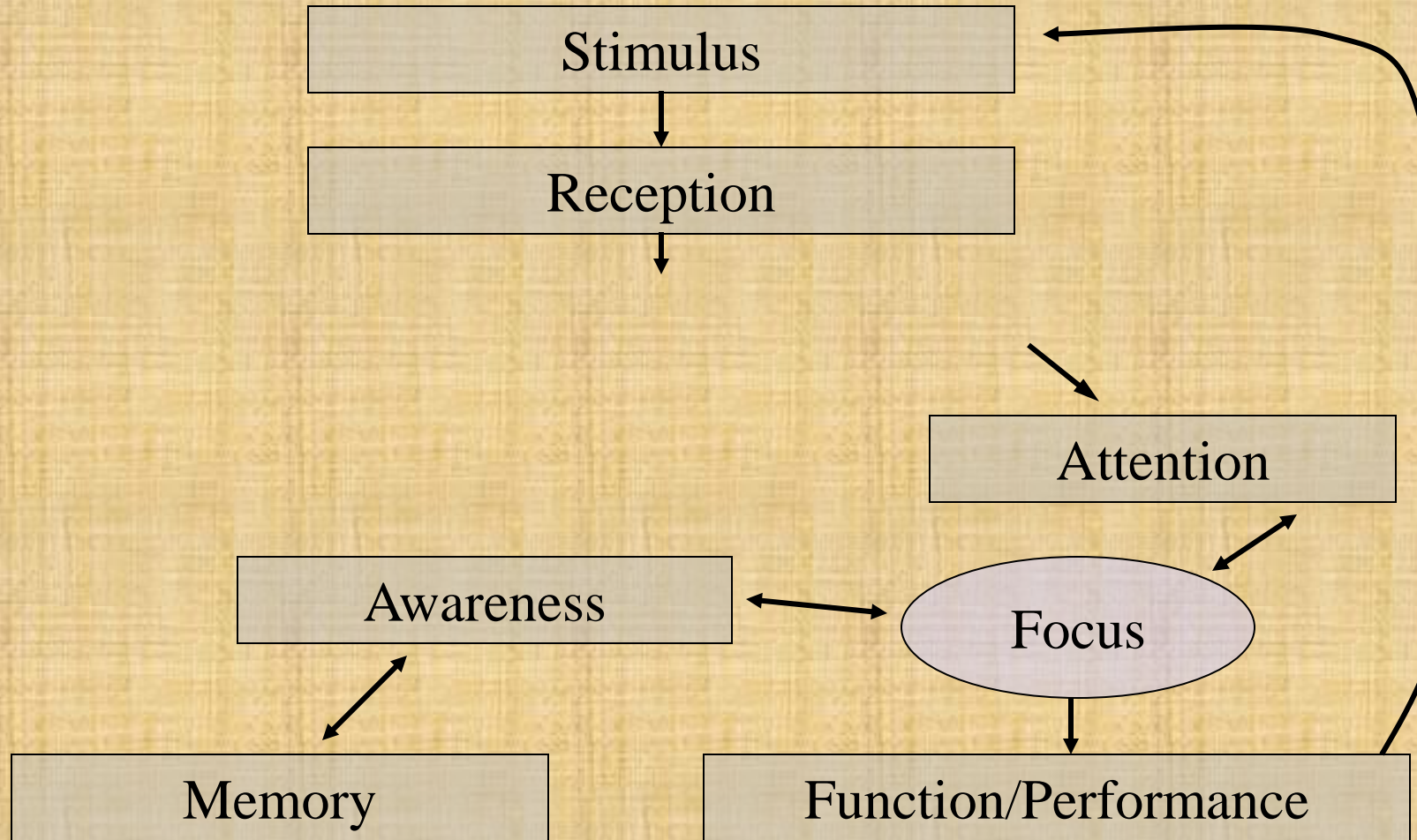
“all needs are instinctive, [but] some are more powerful than others”

Hierarchy of Human Needs



“The lower the need is in the hierarchy the more powerful it is.”

What Happens to a Sense?



Sensory Integration Theory

Sensation underlies all behaviour and thinking.



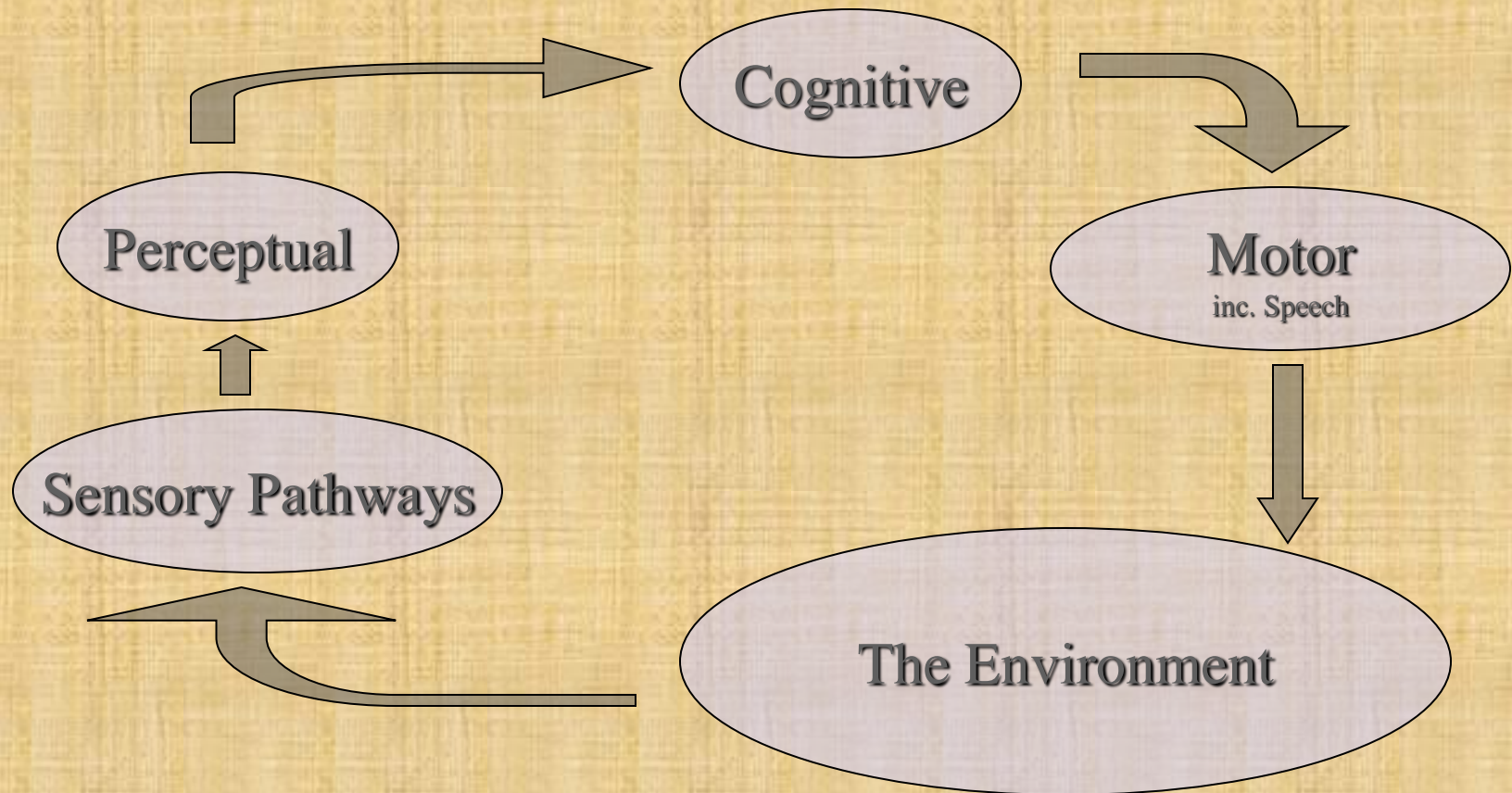
Jean Ayres

1920 - 1988

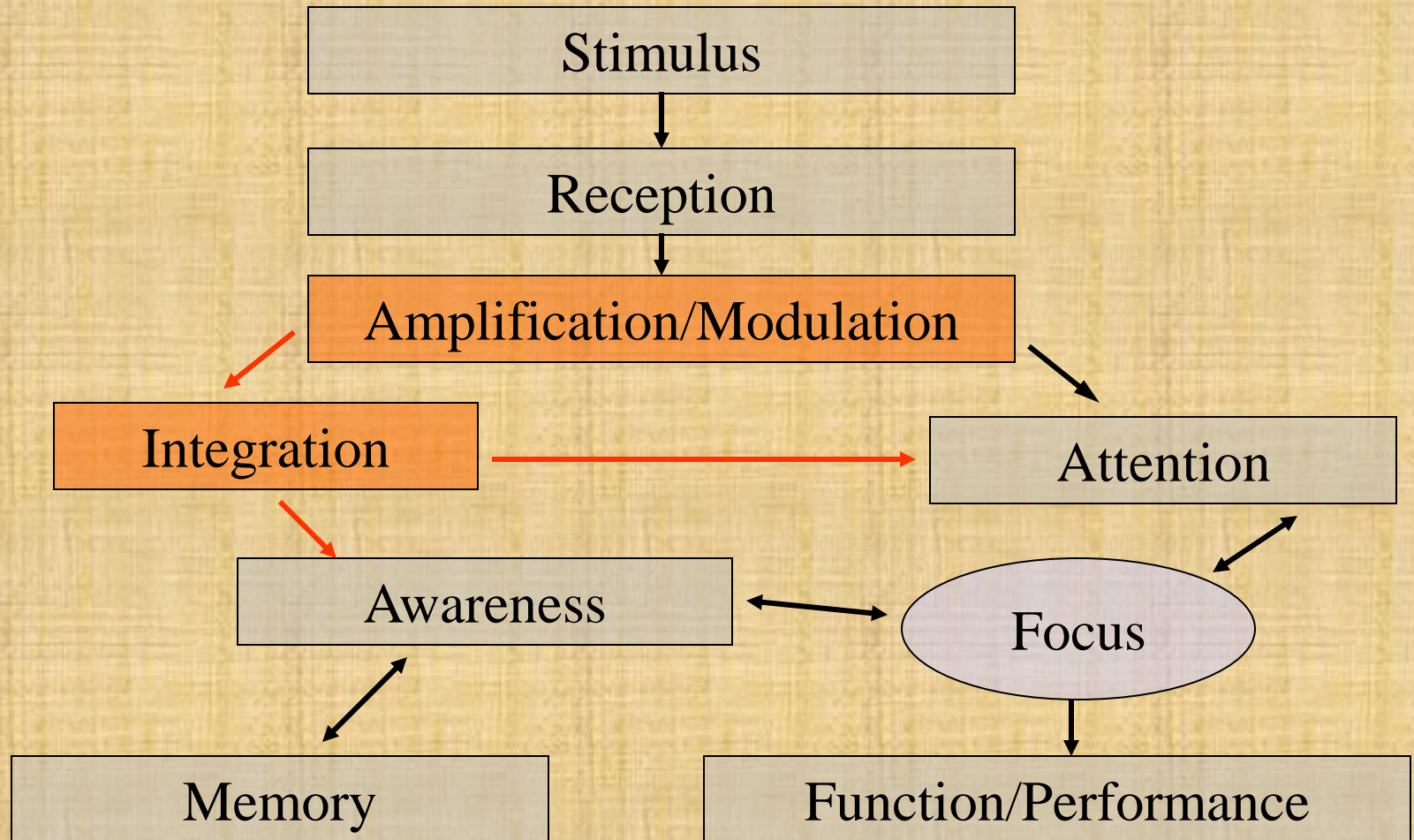
Believed that without understanding sensory systems our understanding of children's development was flawed.

Sensation in the Human System

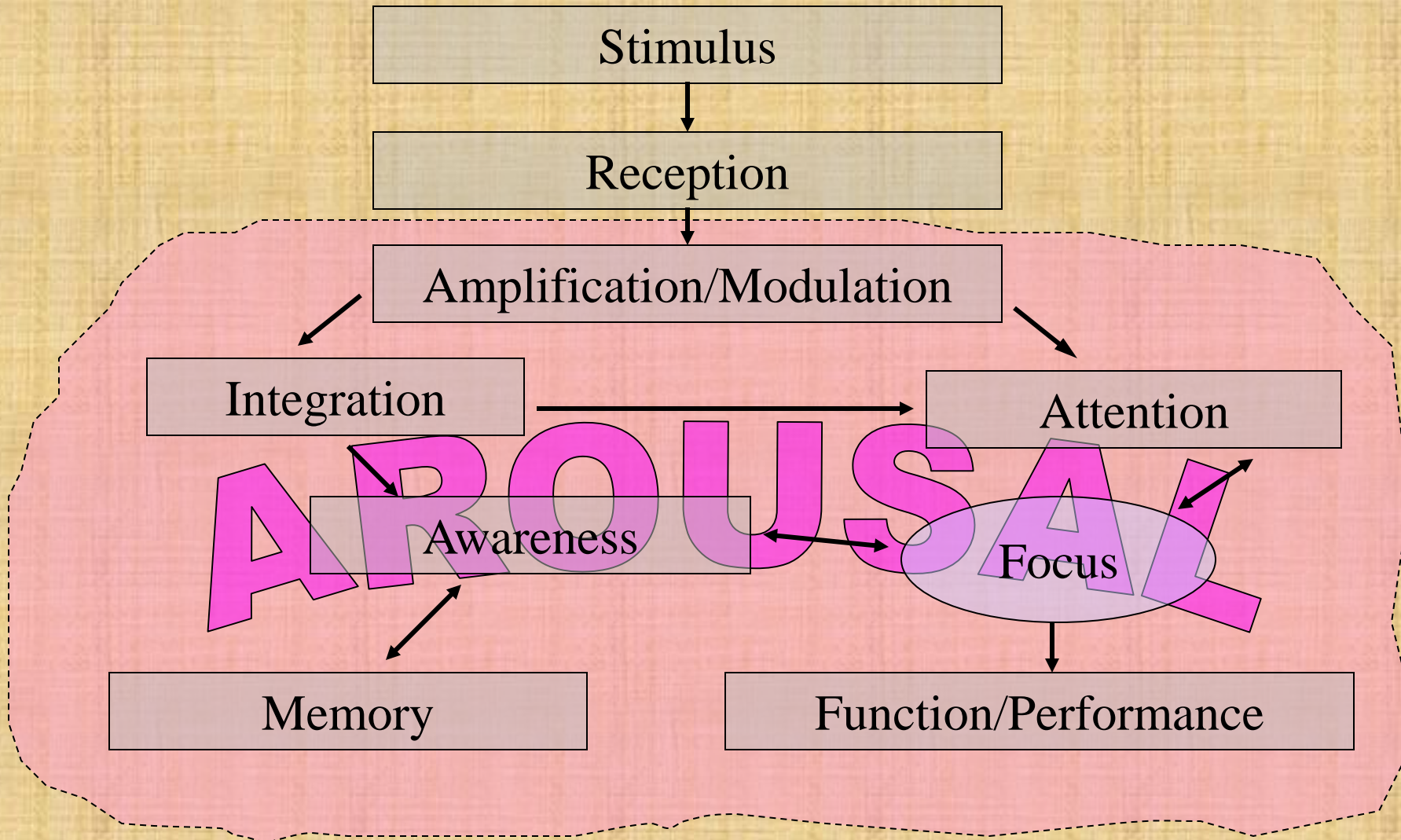
Informs all subsequent Neurological Processing
And thereby behaviour.



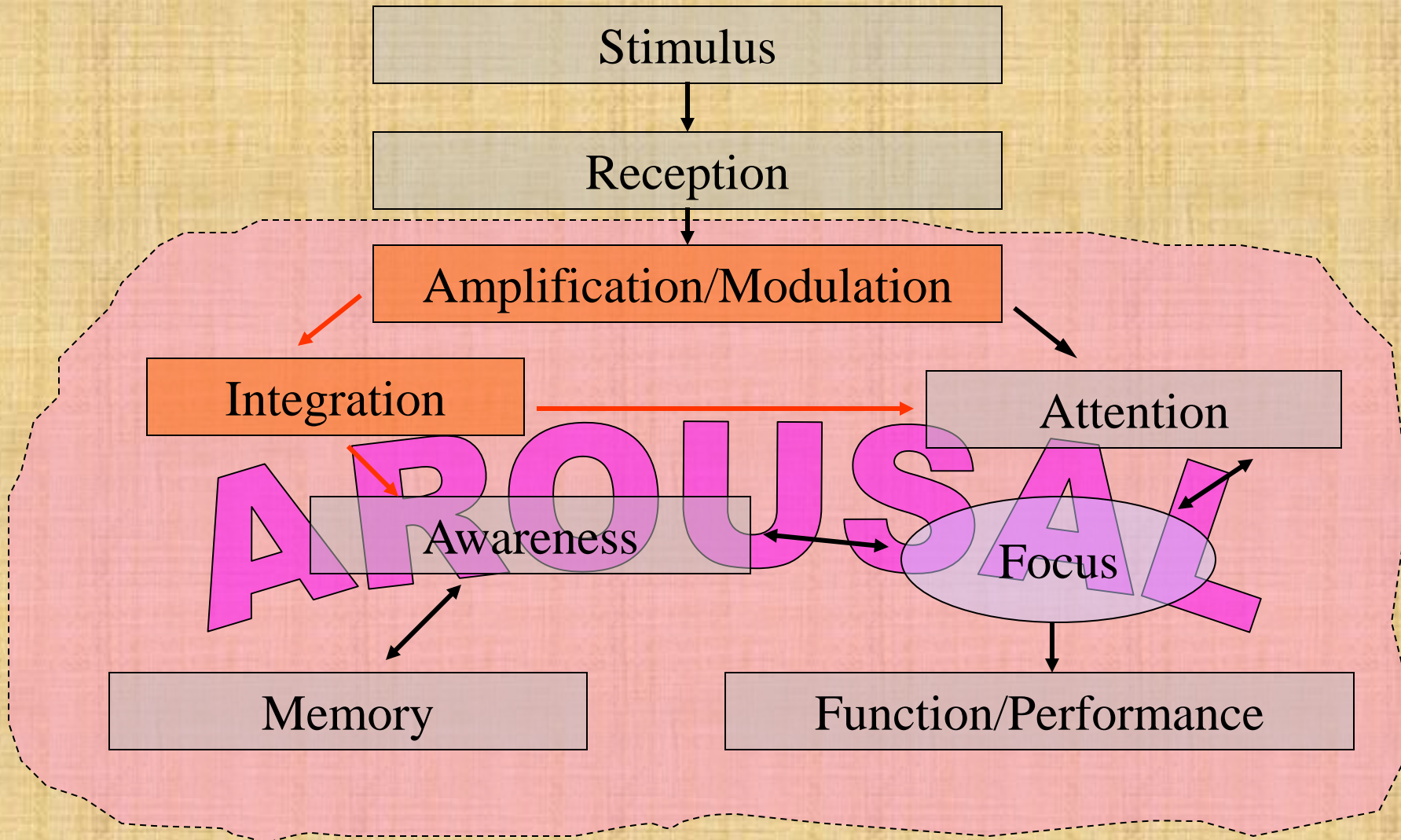
What Happens to a Sense?



What Happens to a Sense?

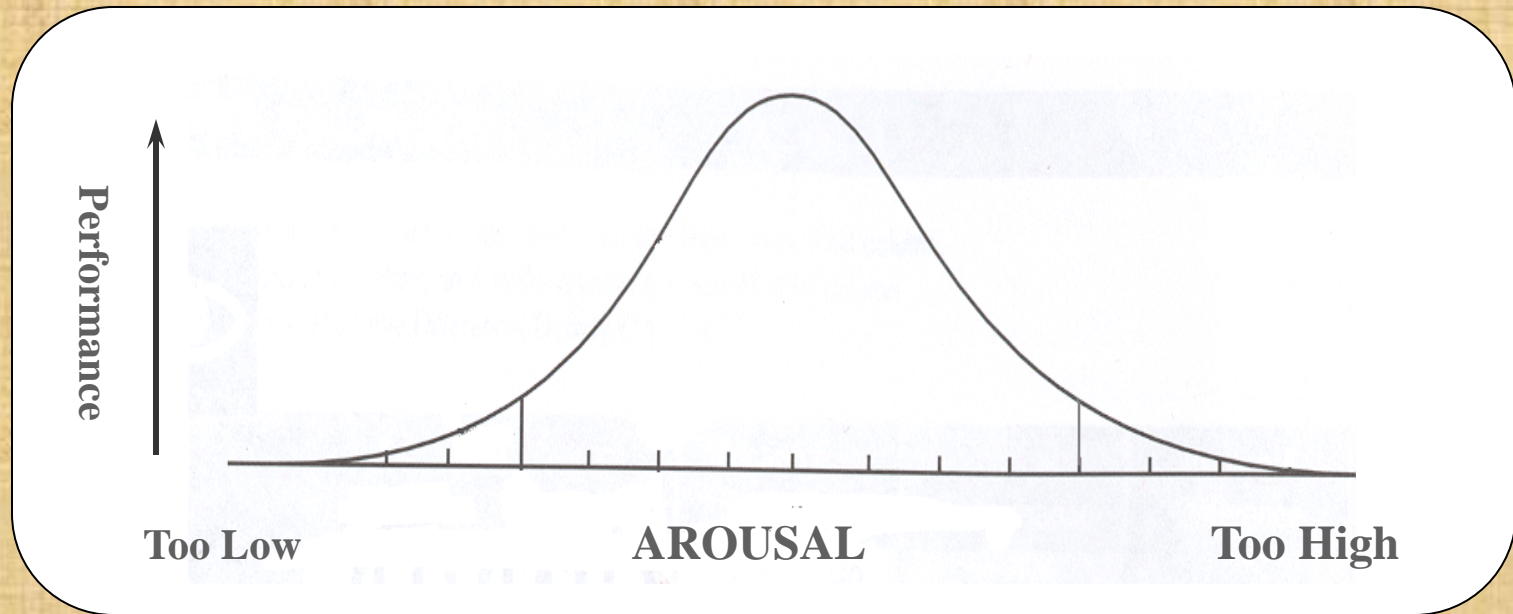


What Happens to a Sense?



WORKSHOPS

Arousal, Performance & Sensation



Evidence increasingly suggests that this is an inter-relationship.

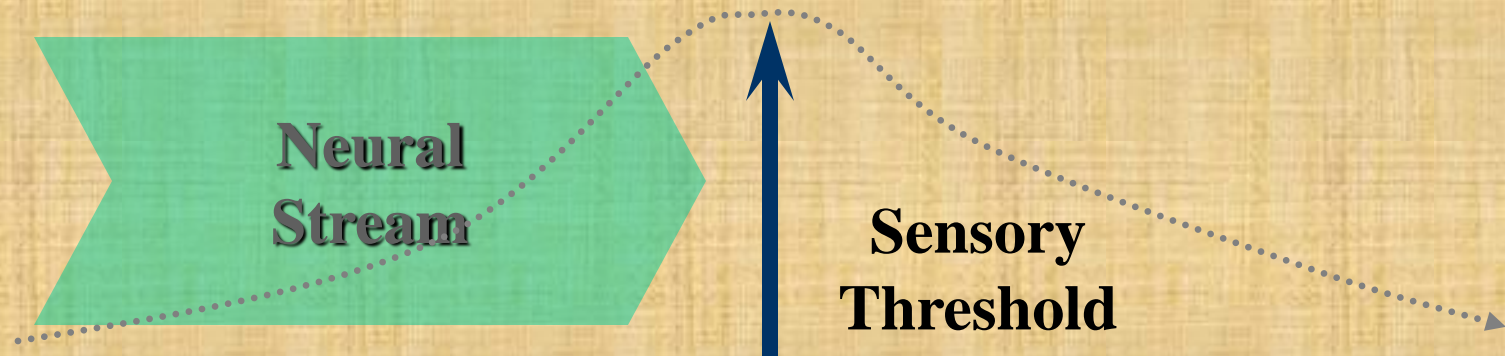
Some Sensory Systems may drive or lower Arousal.

Correct Arousal States may influence successful Modulation

Modulation and Registration

- Thresholds are set so that registration attention occur when appropriate in our environment.

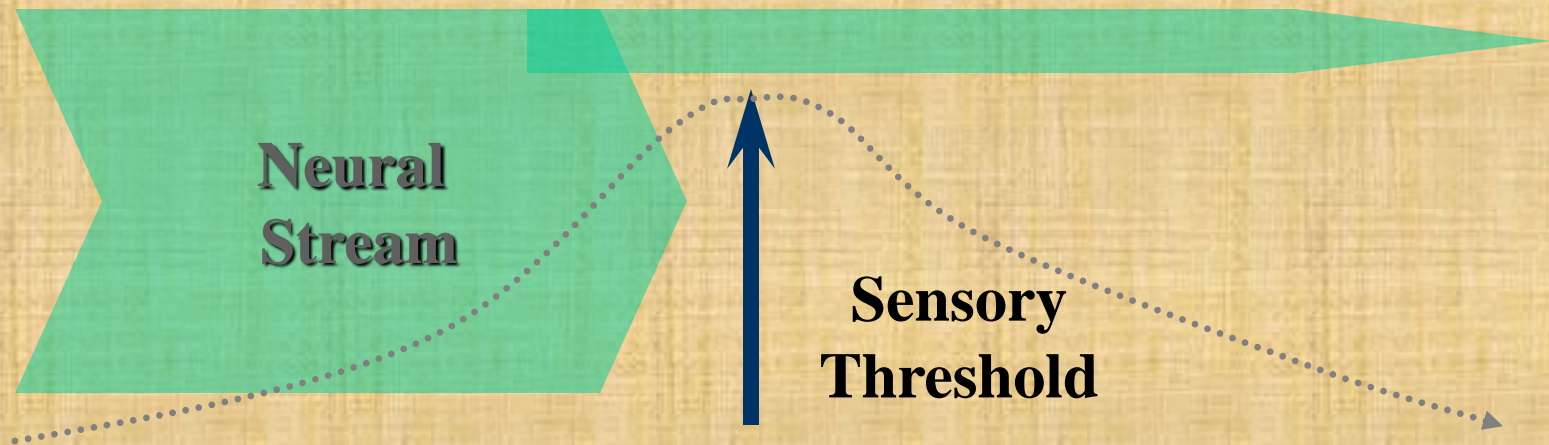
No Transmission



Modulation and Registration

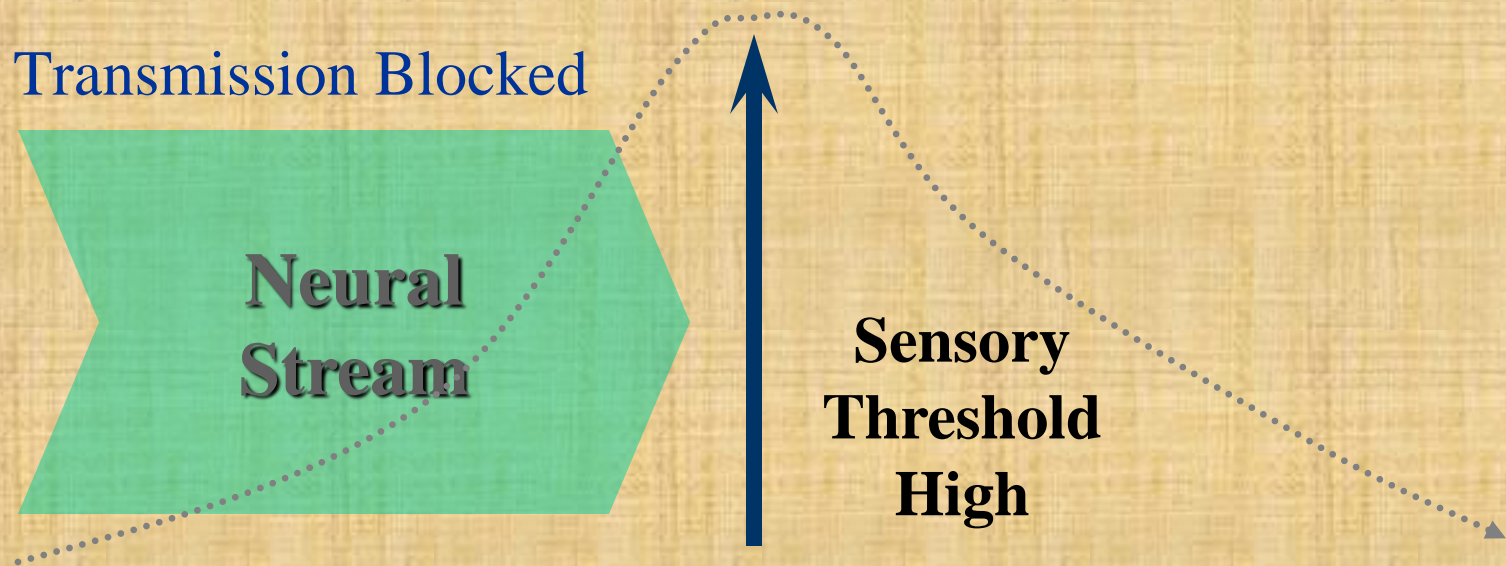
- Thresholds are set so that registration attention occur when appropriate in our environment.

Transmission



Modulation and Registration

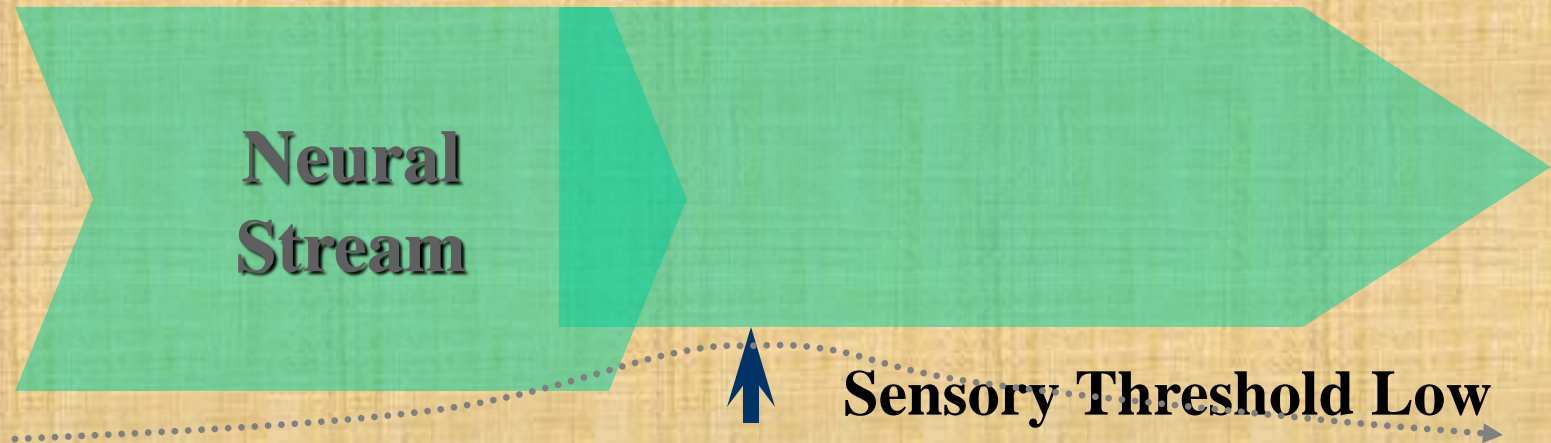
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Modulation and Registration

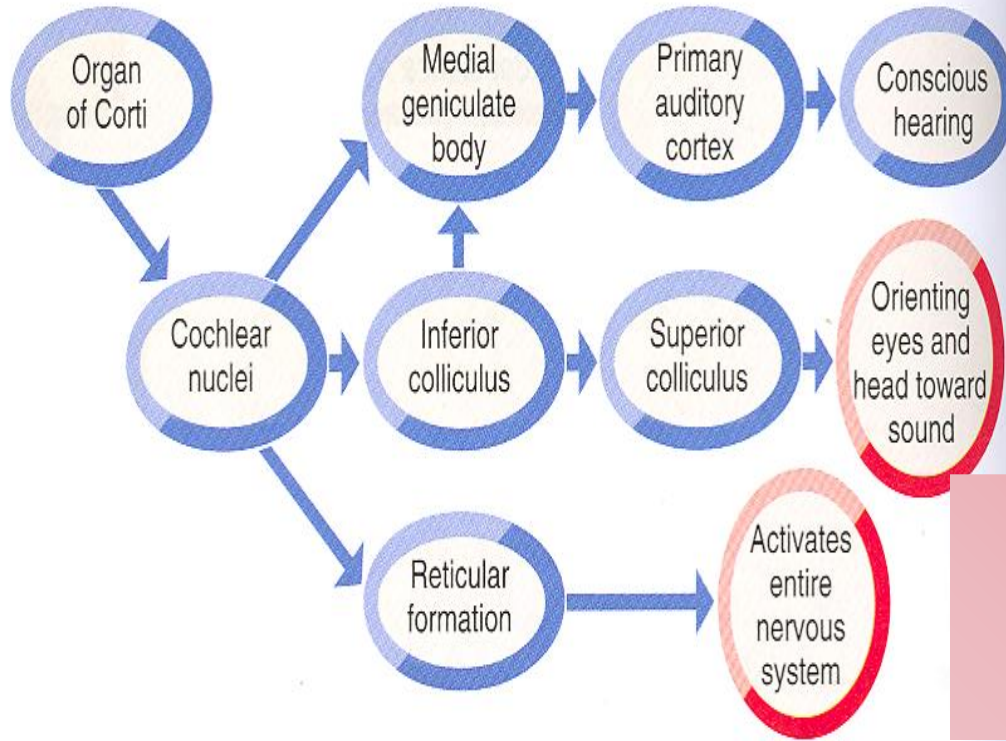
- Thresholds are set so that registration attention occur when appropriate in our environment.

Transmission exceeds acceptable Level

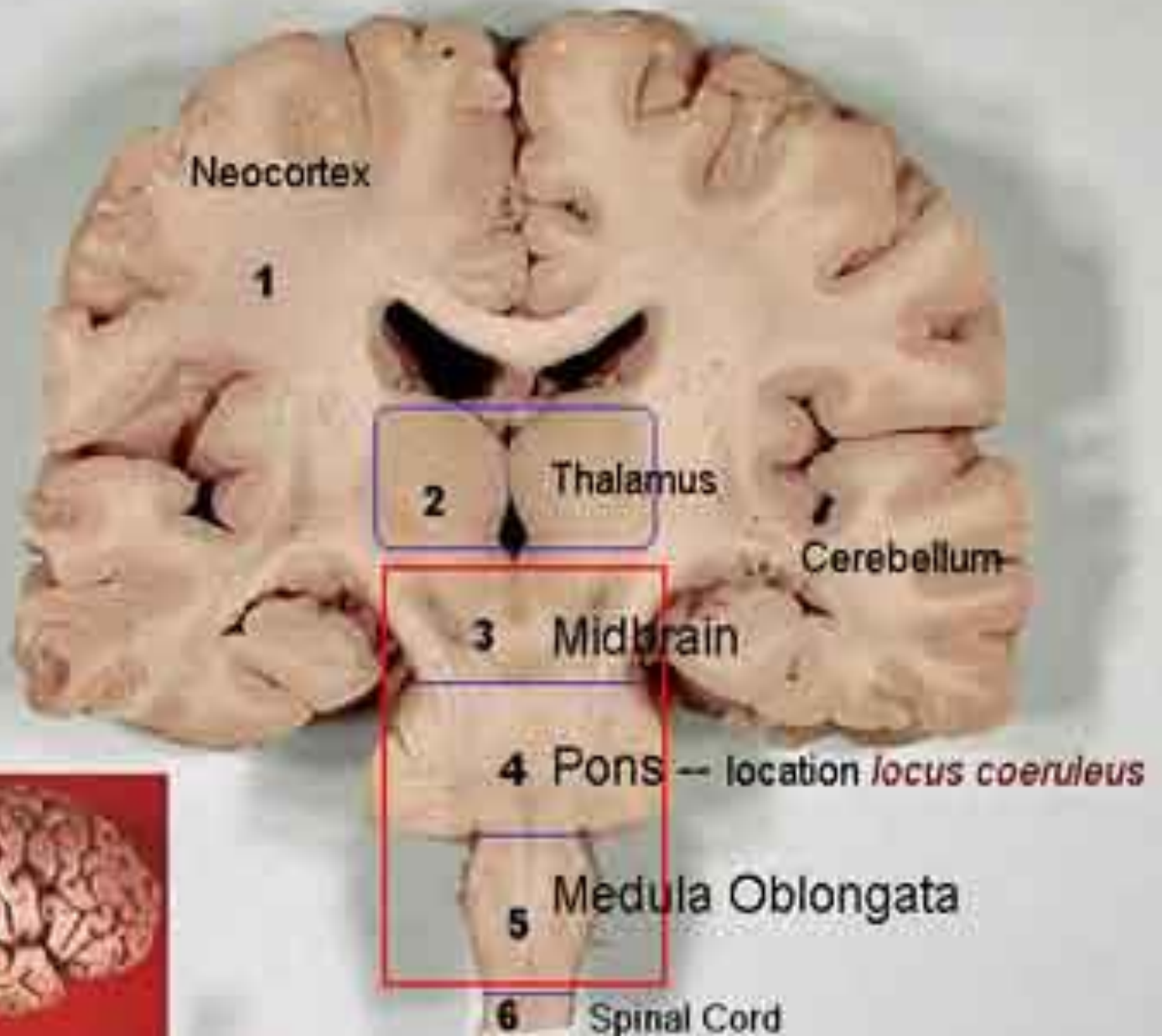


BRAIN SYSTEMS

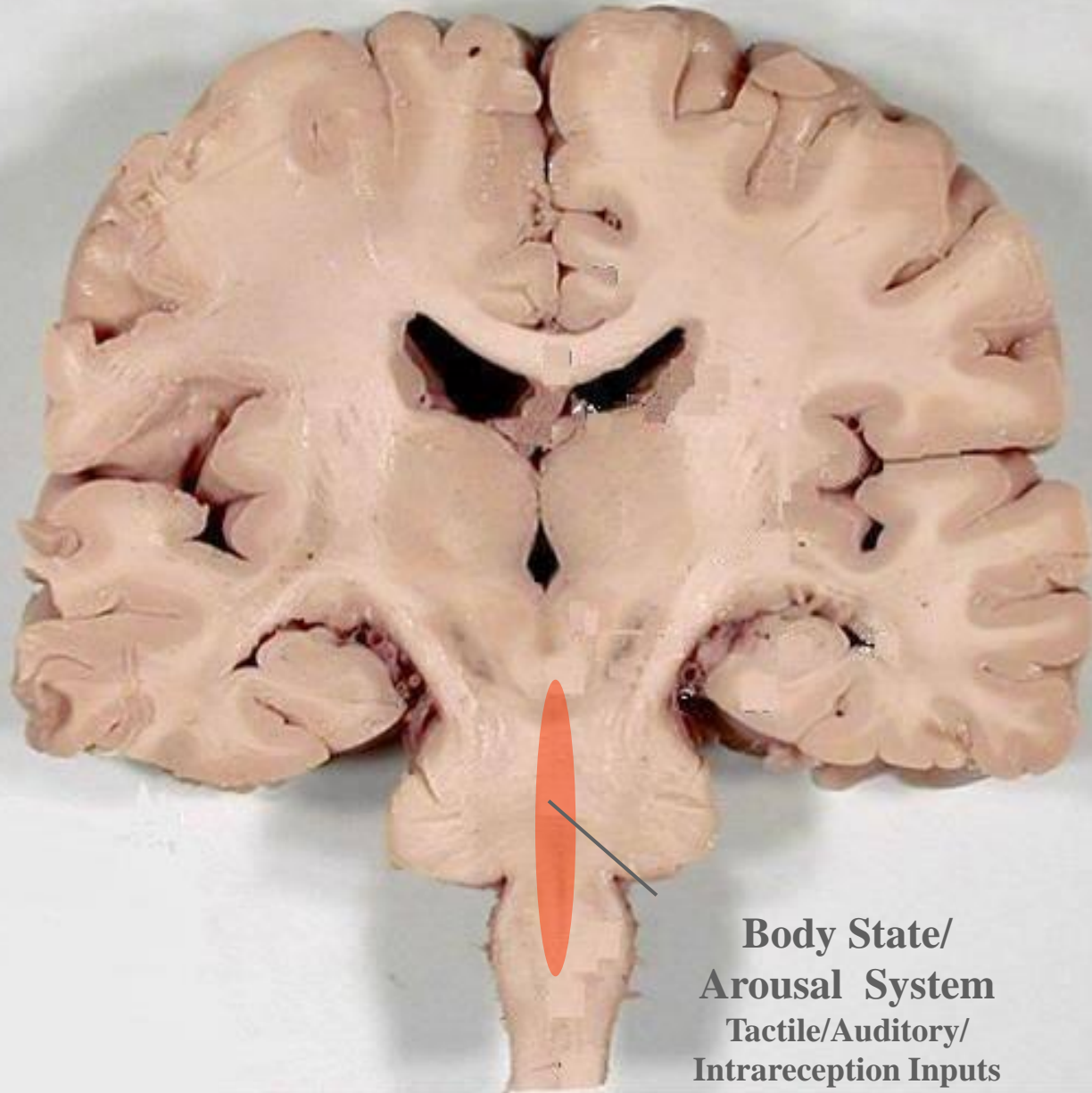




Laurie Lundy-Ekman (2007) Neuroscience Fundamentals for Rehabilitation Chapter 13, P.356



Body State Arousal System

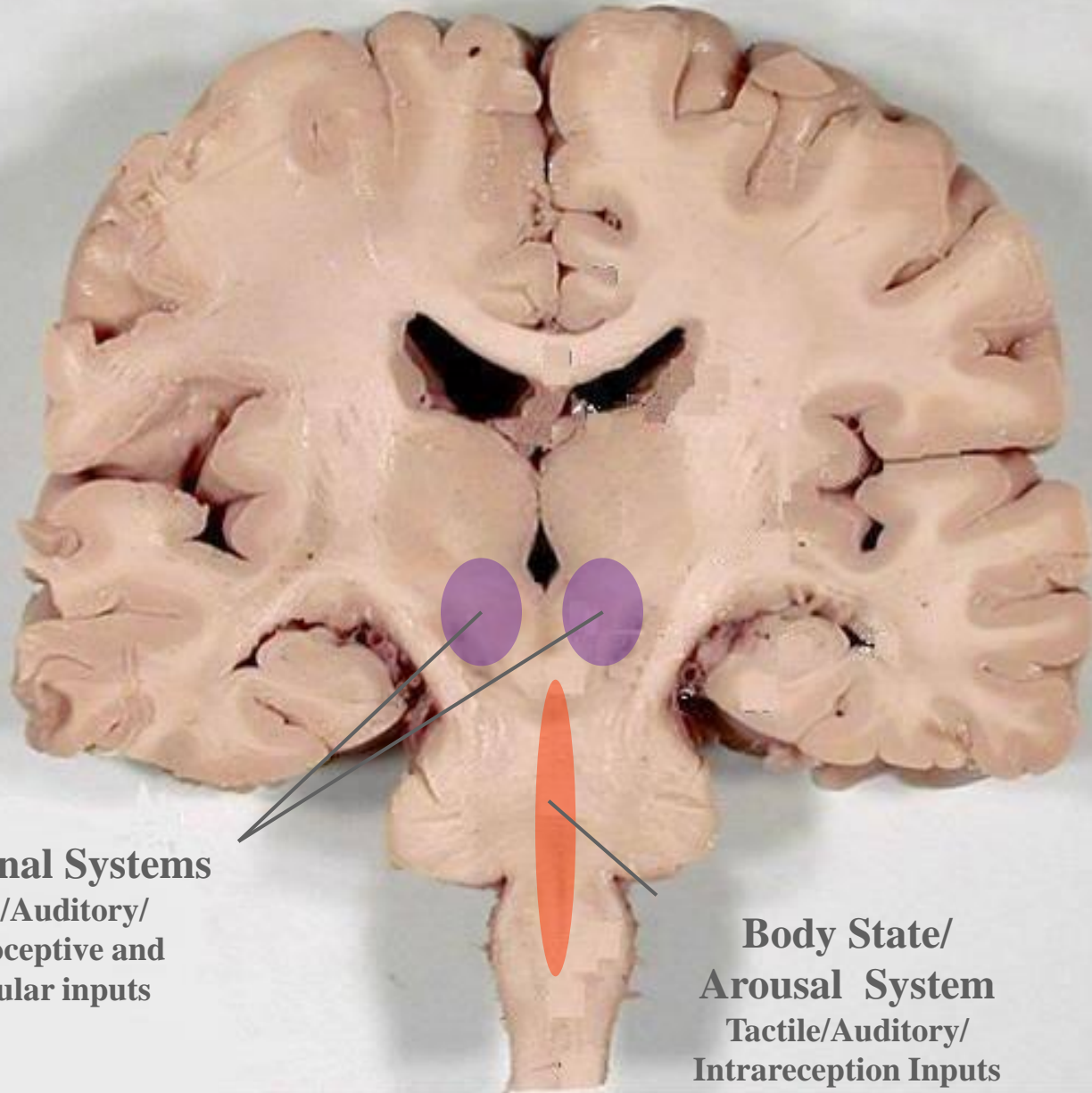


**Body State/
Arousal System
Tactile/Auditory/
Intrareception Inputs**

Body State Arousal System

- Can Amplify signals.
- Has Strong arousal consequences
- Supplied by tactile sensory pathways.
- Is linked to pain systems
- Processes interoception, and affects arousal by this route also.

Attentional System



Attentional Systems

Visual/Auditory/
Proprioceptive and
Vestibular inputs

**Body State/
Arousal System**
Tactile/Auditory/
Intrareception Inputs

Attentional System

- Very dynamic
- High levels of sensory integration
- Sensory systems vital for calibration
- Opens up the concept of bodyscheme
 - Bodyscheme exists where proprioception integrates with another sense
- Slow to develop but fast once established
- Has to perform well during high arousal

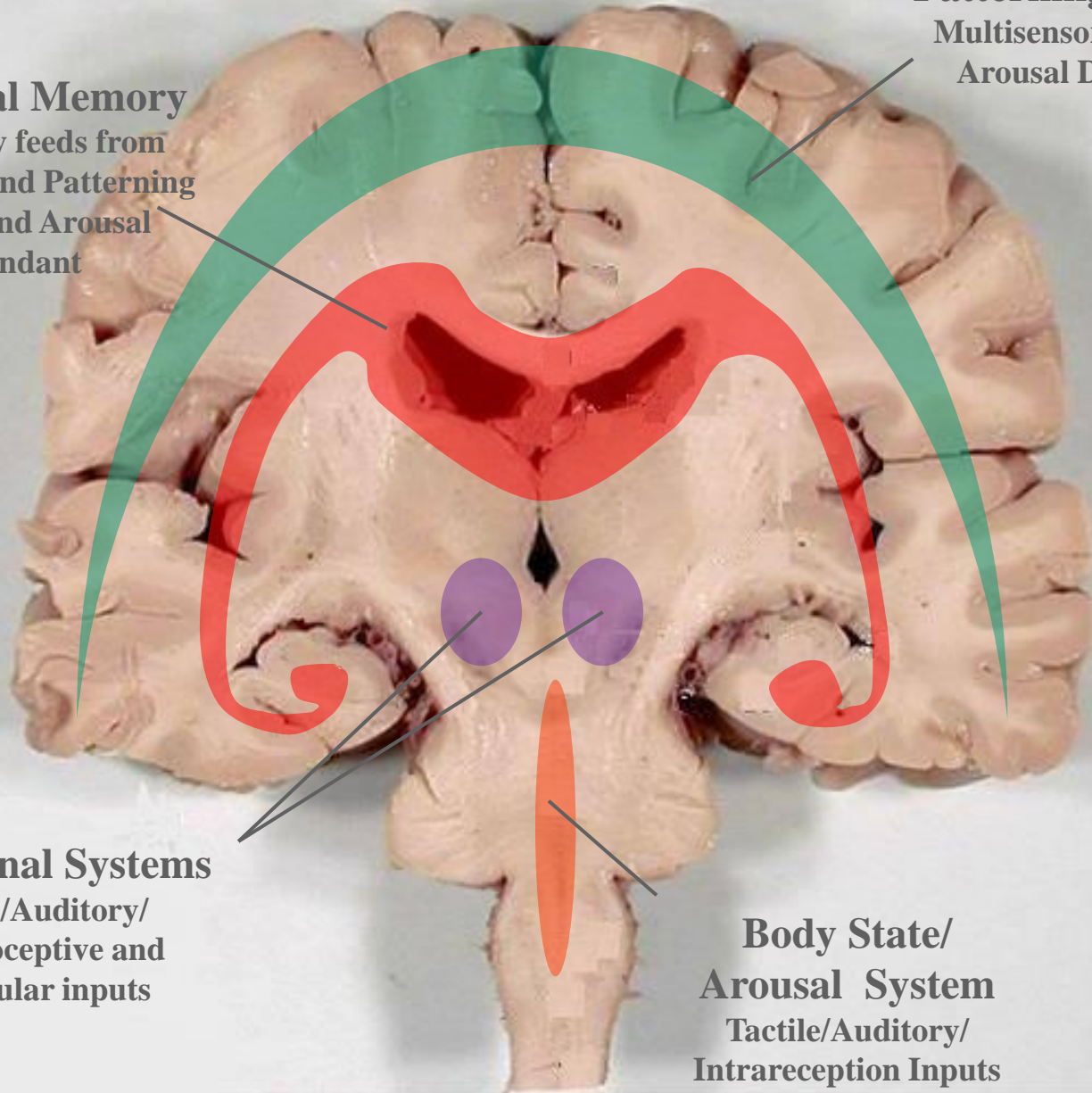
Memory / Patterning and Cognitive Systems

Patterning Memory
Multisensory Complex
Arousal Dependant

Situational Memory
Formed by feeds from
Attentional and Patterning
Systems and Arousal
Dependant

Attentional Systems
Visual/Auditory/
Proprioceptive and
Vestibular inputs

**Body State/
Arousal System**
Tactile/Auditory/
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Memory / Patterning and Cognitive Systems

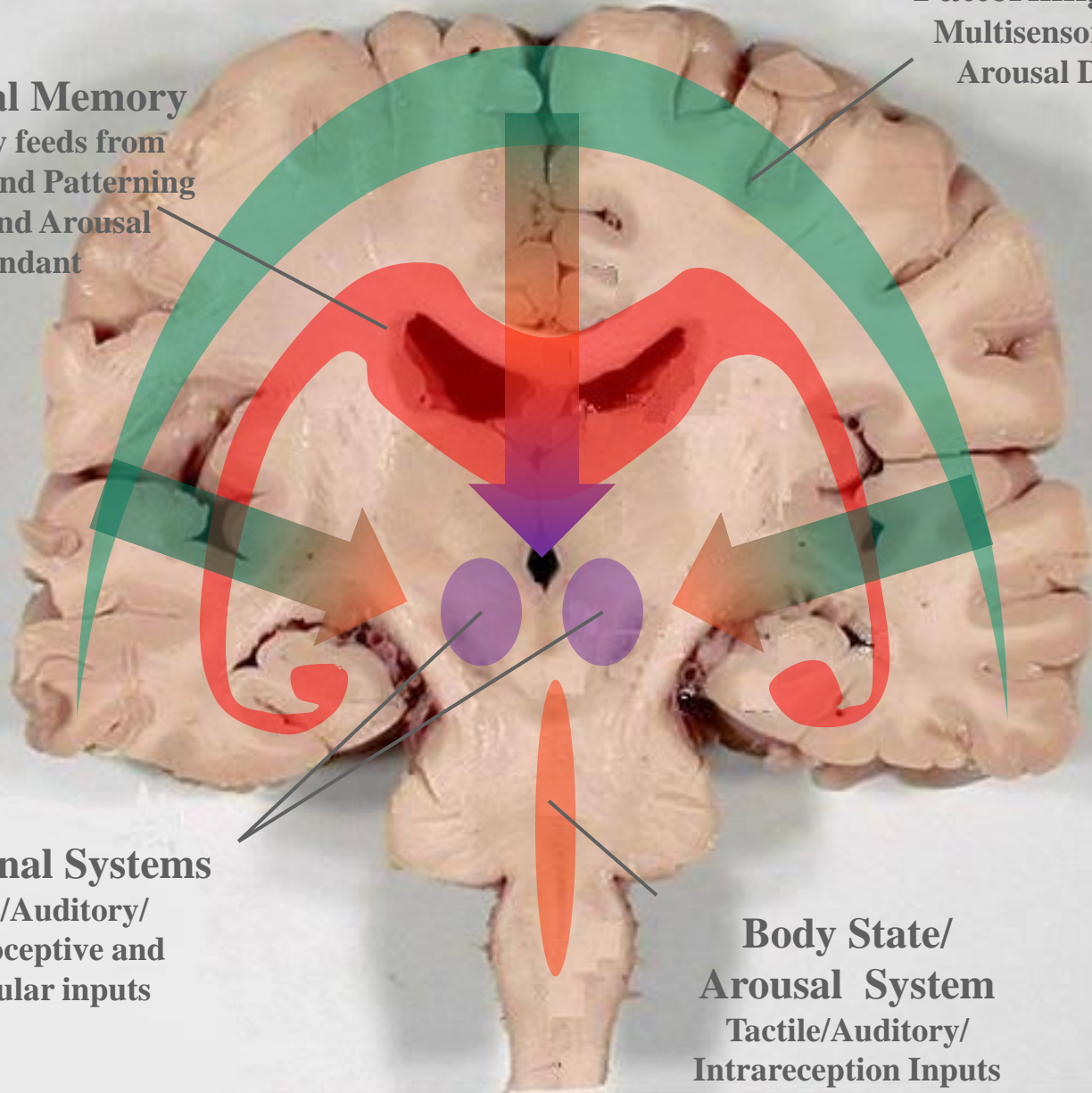
- Slower but more sophisticated processing
- Need optimum arousal to work
- Act to direct attentional systems on the basis of previous experiences

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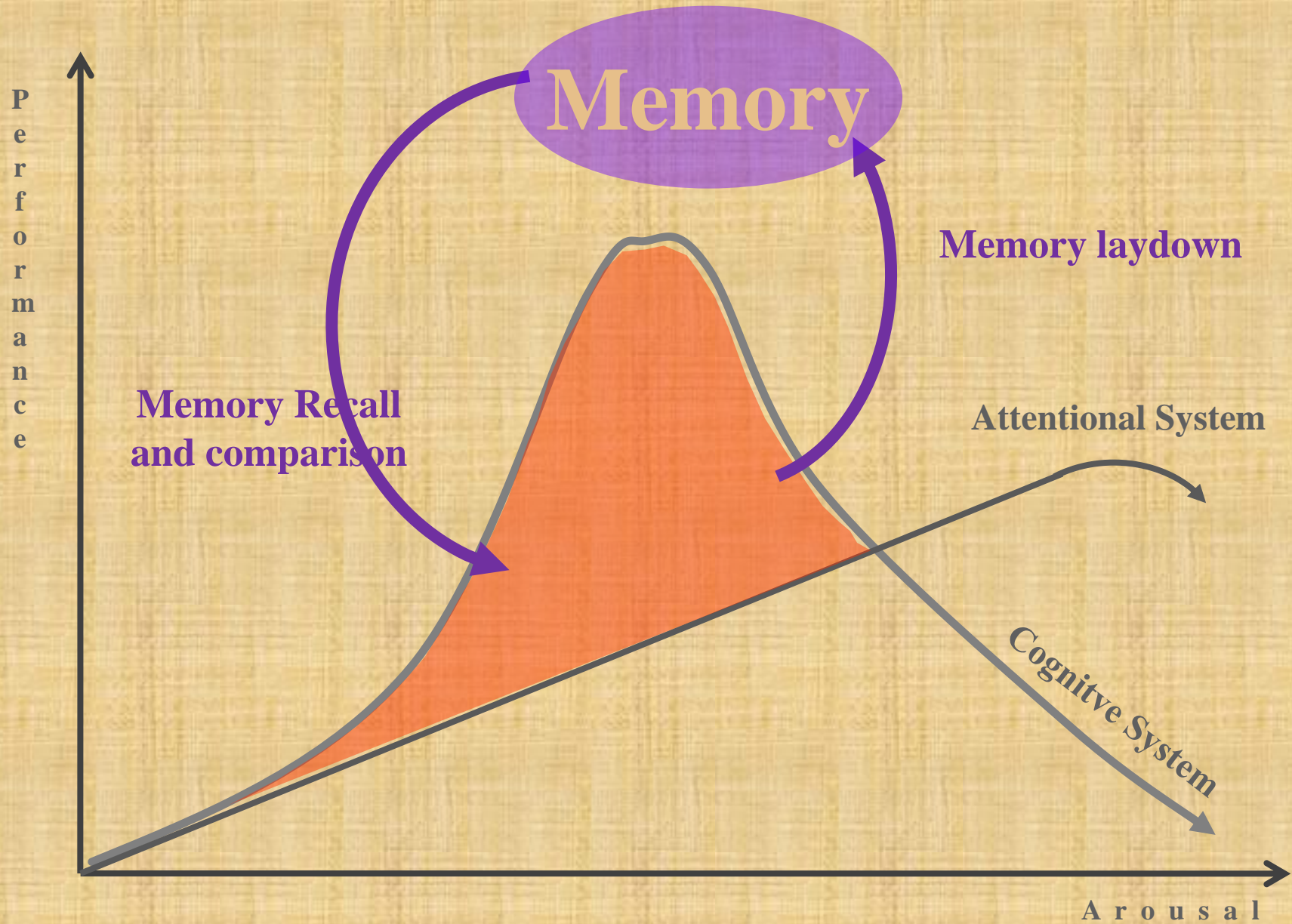
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Memory / Patterning and Cognitive Systems

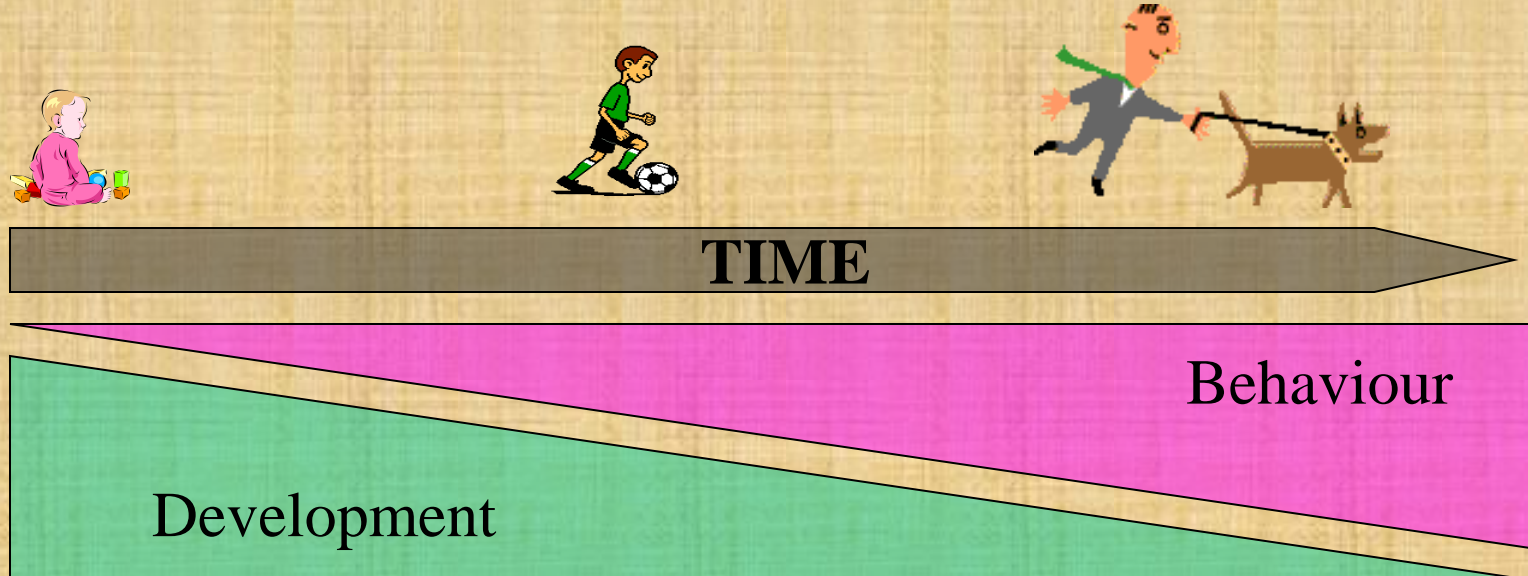
- Slower but more sophisticated processing
- Need optimum arousal to work
- Act to direct attentional systems on the basis of previous experiences
- Are dependant on good quality sensory systems to achieve good pattern recognition
- Tag emotions to experiences

Sensory Processing/Modulation/Learning Model



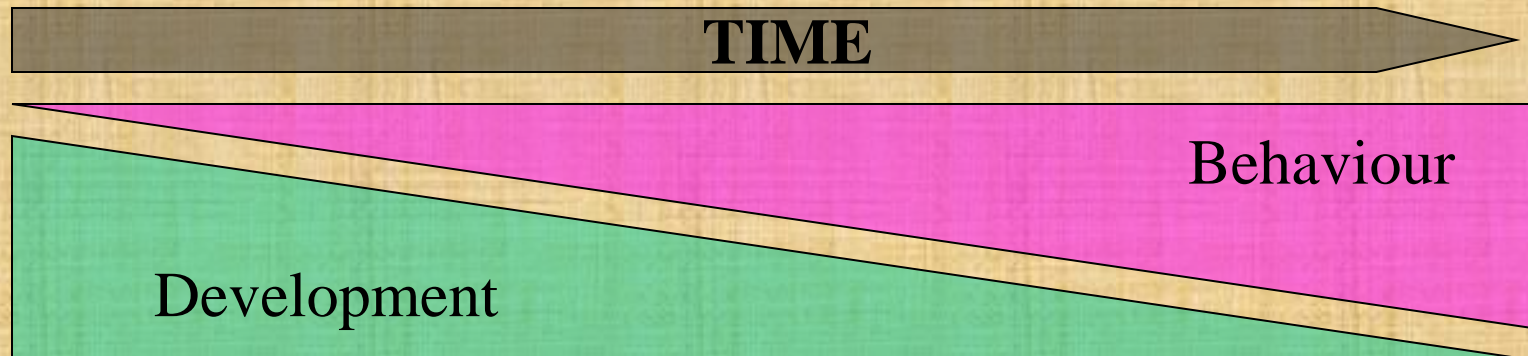
Sensory Integration as a Developing Continuum

- Behaviour is Sensory Integration that has occurred.
- Development is Sensory Integration that is or will occur.



Sensory Integration as a Continuum

- Behaviour is Sensory Integration that has occurred.
- Development is Sensory Integration that is or will occur.



Sensory Integrative Dysfunction and the Medical Model

Sensory Integration may play part in, or being the result of, a variety of clinical Presentations.

Autistic Spectrum Disorders

Dyspraxia

ADD/ADHD

Global Developmental Delay

Learning Disabilities

Cerebral Palsy

It is not currently considered a diagnosis.

It does have it's own unique expressions that may be more meaningful than an overall.

Sensory Integration and School

- Extreme behaviour may be signalling a developmental need, or a sensitivity.
- Meeting sensory needs prior to a learning experience may improve skills acquisition.
- Influencing arousal levels correctly will improve learning.
- Development occurs best, when problem behaviours have been diffused or channeled.

How can we support Fine Motor Skill Development?

- Supporting sensory input in School through play based activity is important for developing fine motor
- Meeting sensory needs prior to a learning experience may improve skills acquisition.
- Influencing arousal levels correctly will improve learning, some children may need more others less!
- Development occurs best, when problem behaviours have been diffused or channeled.
- Learning to write is difficult, reward levels need to be in the right place and meaningful to the child

BLUE SKY THERAPIES

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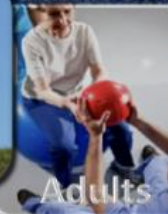
Children



Sensory



Therapy



Adults



Training

TRAINING
AREA Now
OPEN

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WELCOME TO BLUE SKY THERAPIES



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Blue Sky Therapy News

It was a real privilege to present at the SWALLS conference in Torbay on the 28th of January 2016. As promised we have posted the OT slides for the delegates here as a downloadable PDF. We hope you enjoyed the conference as much as we did!



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5 mins · 🌐

We absolutely love this page. Fun, colourful and magical activities all with materials that are cheap or you may have lying around the house already. Our only beef is that these activities are fun no matter what age you are!!!! Puffy paint and car washes... what can possibly go wrong, so long as you don't get it on the upholstery!



2 Years - 3 Years

A collection of activities and ideas to do with kids age 2 years to 3 years to promote learning and development. #activitiesforchildren2years3years

LEARNING4KIDS.NET

Like Comment Share



Blue Sky Therapies

26 mins · 🌐

Although this site might not be the flashiest looking we like it because it gives specific ideas and activities to help children develop specific skills such as wrist strengthening or tying shoe laces, in a way that everyone can understand and use!



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Or
link
here

Sensory Integration and Families

- A child with difficulties may present from normal to having a “heavy” diagnosis.
- A child with difficulties may be identified as having behavioural issues and often does.
- The contract of play in the family may be significantly skewed.
- Parents can’t look to other children and families for advice and inspiration, because it doesn’t work for their child.

Any Questions?

