

Module:

Psychological Foundations of Mental Health

Week 3:

Introduction to Emotion and Emotional Processing



Dr Tom Barry

Topic 3:

Emotion Regulation: top-down
cognitive processes on emotional
responses

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Topic list



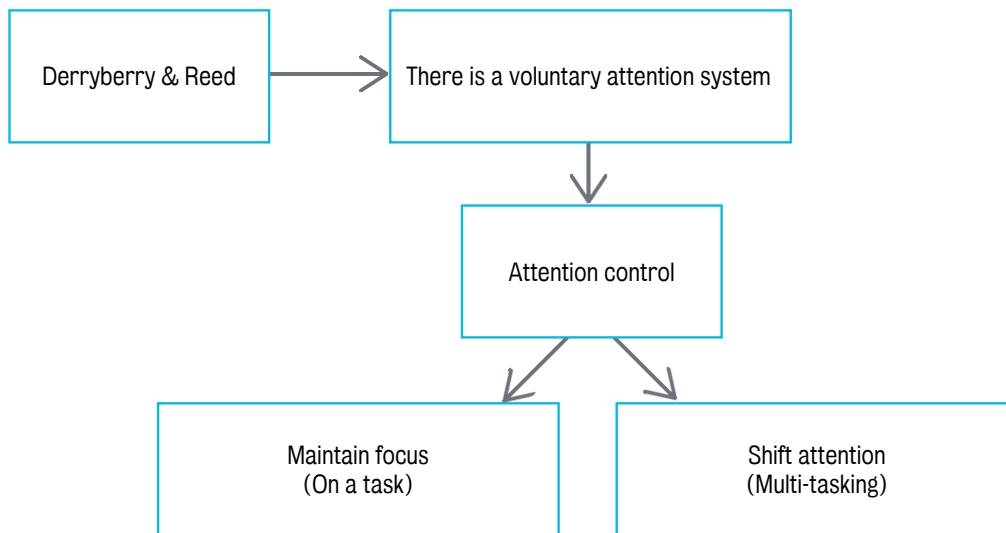
This week, we will be looking at the following topics:

- Topic 1: Nature of emotion
- Topic 2: Emotion processing: bottom-up effects of emotions on cognitive processes
- **Topic 3: Emotion regulation: top-down cognitive processes on emotional responses**
- Topic in Action 1: Maladaptive styles of emotion processing and regulation, and mental health

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Attention Control (1)



Derryberry & Reed (2002)

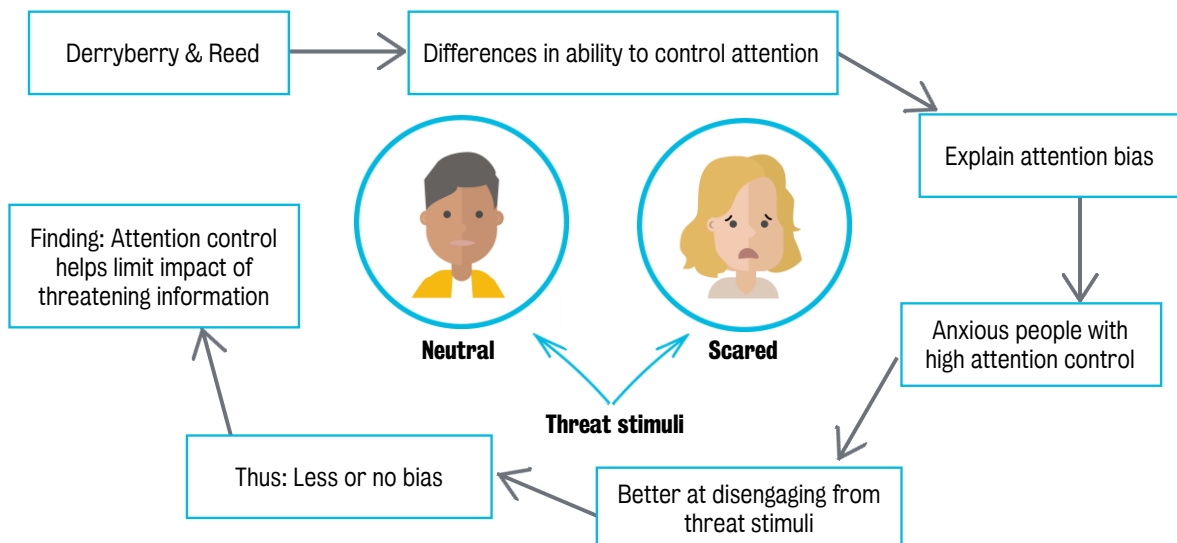
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Attention Control (2)



Derryberry & Reed (2002), Taylor, Cross & Amir (2016), Bardeen, Fergus & Orcutt (2015), Bardeen & Orcutt (2011)

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Attention Control (3)

Ability to control attention is not static

Various factors play a role

Compensation for poor control when there is an important goal to focus on

Eysenck → Ability to compensate has its limits

Berggren → Visual search task, where they manipulated cognitive load

High and low anxiety – no difference in visual search when no cognitive load, but high cognitive load affected those with high anxiety, yet didn't affect those with low anxiety.

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Attention Control (4)

Can we train people to enhance attention control?

Bernstein & Zvielli

↓
A-FACT

Measure attention bias

Your attention →

Thermometer reflects extent of bias



Told to balance attention between images

Avoidance measured: showed anxiety-eliciting clips - participants control presentation length

Training improved attention control


Less avoidance, quicker recovery

Bernstein & Zvielli (2014)

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Cognitive Reappraisal/Restructuring (1)

Control emotion experiences through cognitive reappraisal. Transform negative meaning and transform emotional impact.



Antecedent-focused (causes)

- Re-interpretation
- Reduce impact

This contrasts with:

- Response-focused strategies (manage feelings)
- Expressive suppression (hide emotional impact)

Individual differences in use of suppression or reappraisal to manage negative emotions

Cognitive Reappraisal/Restructuring (2)

Reappraisal is common

Reappraisal is sometimes only possible because of information given to us

Stemmler:



After new information was given to participants, they were able to reappraise a situation so that it reduced their anger at a set of circumstances

Excuses = less physiological response and reported less anger

Mauss:



Individual difference in ability to use reappraisal influenced extent to which participants could use excuses to down-regulate physiological response.

Cognitive Reappraisal/Restructuring (3)

Range of emotional disorders associated with inability to reappraise situations



Training will assist with ability to reappraise

Identify negative thought

Evaluate validity

Challenge (might not be true)

Re-evaluate

Werner et al (2011)

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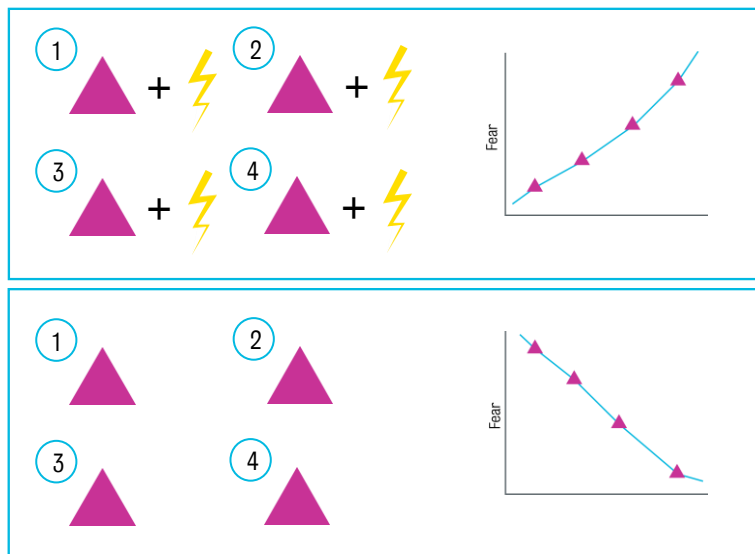
Extinction Learning (1)

Down-regulating emotional experiences by cognitive means

but also

Direct experience via process called **extinction**

$$\text{Triangle} + \text{Lightning Bolt} = \text{Fear}$$



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Extinction Learning (2)

**So how does extinction
reduce fear?**

Unlearning (broken up or deleted)

But fear can return!

Excitatory association remains
intact after extinction, but it is
inhibited.

Bouton (2014), Craske et al (2008)

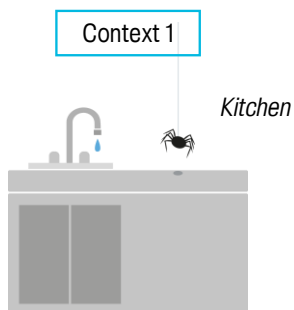
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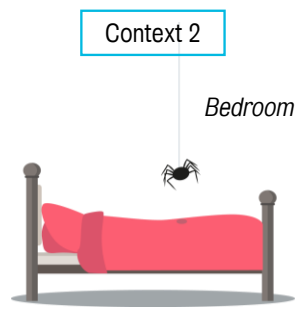
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Extinction Learning (3)



Fear reduced



Fear returns

*Insufficient inhibition of
GS/US association = fear*

Extinction = context dependent

Might explain clinical relapse

Vansteenweg et al (2007)

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Extinction Learning (4)

- Extinction occurs in everyday life
- Prevents fear from becoming pathological
- Individual difference in extinction learning might influence emergence of anxiety disorders (e.g. PTSD)

Lommen - Predictive relationship:
Extinction learning -> PTSD

Upon return: test for PTSD
symptoms (clinical interviews)

Soldiers prior to deployment:
Went through fear-conditioning
& extinction procedure

Finding: PTSD cases were those
soldiers who had difficulty
extinguishing their fear prior to
deployment

The DSM-5 reclassified PTSD as an "Trauma- and Stressor-Related Disorder."

Lommen et al (2013)

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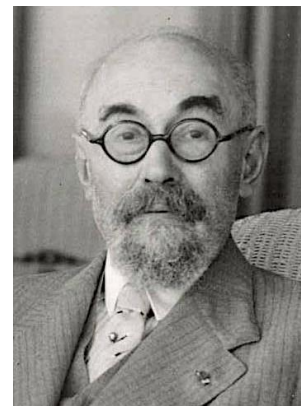
Memory Re-scripting (1)

Regulating emotion by altering memories post event

Memory re-scripting – intentional, top down

Pierre Janet imagery substitution – 1919

Beck – modifying visual cognitions can
modify emotions they provoke



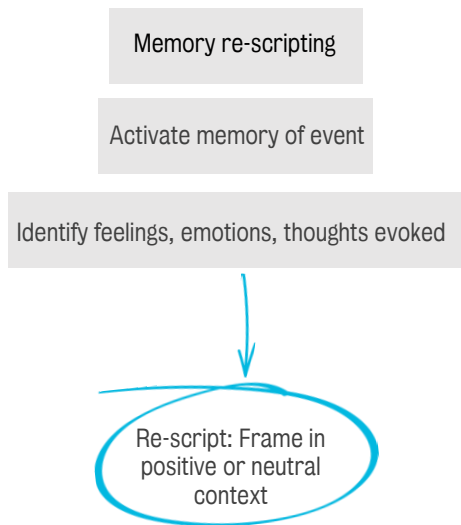
Pierre Janet 1859 – 1947

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Memory Re-scripting (2)



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Memory Re-scripting (3)



Enhance extinction learning

How aversive is the US?

Dibbets: Effect of re-scripting on extinction learning

Dibbets (2011)

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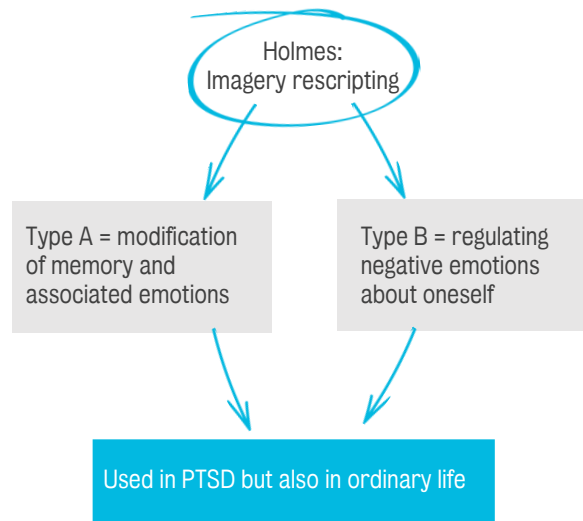
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Memory Re-scripting (4)

Functions of re-scripting:

1. Update and correct memories
2. Explore inhibited responses
3. Explore trauma-related beliefs



Arntz, Tiesema & Kindt (2007), Holmes, Arntz & Smucker (2007)

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