

Module:

Psychological Foundations of Mental Health

Week 3:

Introduction to emotion and emotional processing



Dr Jennifer Lau

Topic 2:

**Emotion processing: bottom-up effects
of emotions on cognitive processes**

Part 2 of 3

The effects of emotion on learning

- Emotional stimuli can disrupt attention processing so we perform worse at a task
- But emotional stimuli can also enhance learning
- Rewards motivate



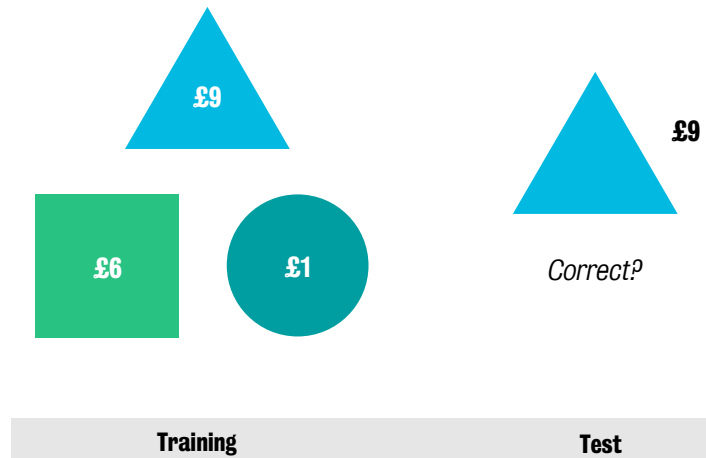
Rewards can enhance simple learning

Experiment:

Associative learning tasks

Finding:

Beneficial learning effect for high-reward

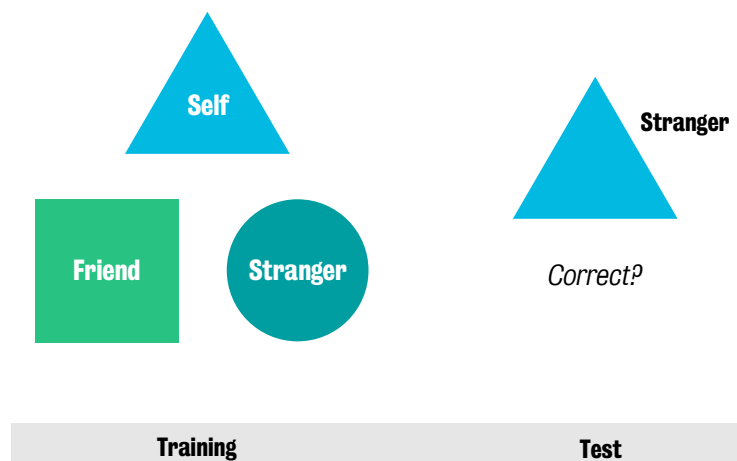


Sui, He & Humphreys (2012)

Rewards can enhance simple learning

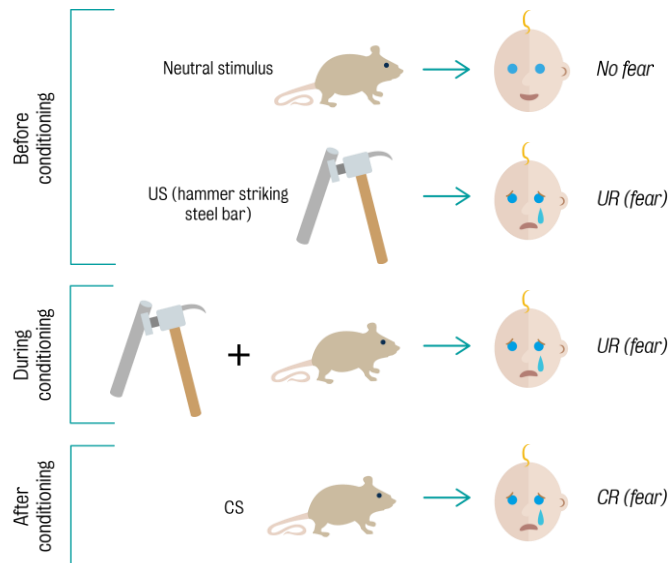
Clear bias to shapes associated with self

Self associations can be as salient as monetary rewards



Threatening stimuli can facilitate fear conditioning

- Fear conditioning
- Little Albert
- Object paired with emotional stimulus



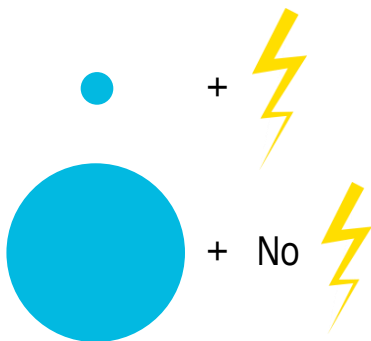
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Threatening stimuli can facilitate fear conditioning

Fear conditioning



Intermediate size circles



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Conditioned fear can also generalise to other similar-looking stimuli

Shorter communication

Generalization of conditioned fear-potentiated startle in humans: Experimental validation and clinical relevance

Shmuel Lissek*, Arter L. Biggs, Stephanie J. Rabin, Brian R. Cornwell, Ruben P. Alvarez, Daniel S. Pine, Christian Grillon

Food and Anxiety Disorders Program, National Institute of Mental Health, Intramural Research Program, NIH, DHHS, 15K North Drive, Room 200, Bethesda, MD 20892-2670, USA

Received 19 September 2007; received in revised form 25 January 2008; accepted 4 February 2008

Conditioning applies
to similar stimuli



Lissek et al (2008)

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Fear conditioning as a model of the development of phobias

Fear conditioning



Phobias



Incident + association



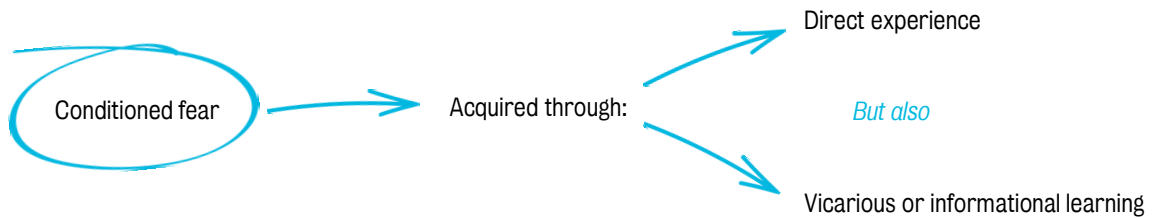
Perhaps too simplistic

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Conditioned fear does not only have to be acquired through direct experience



Rachman (1977)

Conditioned fear can be acquired through observational learning and social referencing

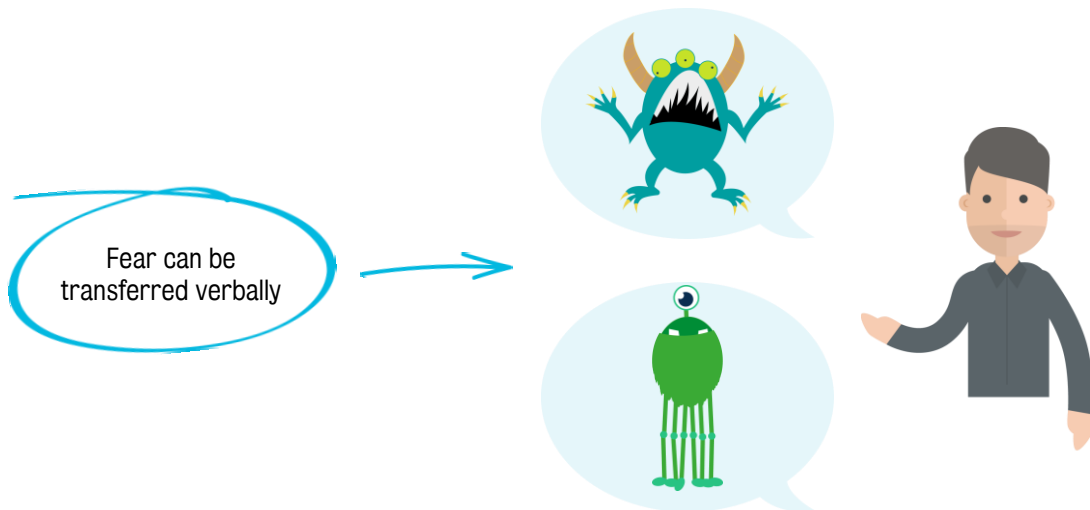


Vicarious learning:

Fear acquired by observing fearful responses

Children model fear on parents' responses

Conditioned fear can be acquired through informational / instructional transmission



Individual differences in fear learning

Not everyone develops phobias

Model of fear conditioning must account for individual differences in how fear is acquired.

Those with anxiety conditions differ in:

- How they generalised fears
- How much they resist fear extinction

DEPRESSION AND ANXIETY 32:239–253 (2015)

Review

UPDATED META-ANALYSIS OF CLASSICAL FEAR CONDITIONING IN THE ANXIETY DISORDERS

Puck Duits,^{1*} Danielle C. Cath,¹ Shmuel Lissek,² Joop J. Hox,³ Alfons O. Hamm,⁴ Iris M. Engelhard,¹ Marcel A. van den Hout,¹ and Joke M. P. Baas⁵

Duits, Cath & Lissek (2015)

Individual differences in acquiring threatening and rewarding associations in PTSD and addictions respectively

