

# Neuroscience and the psychology of atrocity

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## Relevant publications:

'Disgust is a factor in extreme prejudice', *British Journal of Social Psychology*, fast-tracked article, online, 2006.

'Intergroup atrocities in war: a neuroscientific perspective', *Medicine, Conflict and Survival*, 22, 230-44, 2006.

'On brainwashing', in *The Barbarization of Warfare*, ed. G. Kassimeris; New York University Press, 2006.

'So, do you know who's pulling your strings?', *Times Higher Education Supplement*, 26 November 2004.

*Brainwashing: the science of thought control*. Oxford, Oxford University Press, 2004.

# Psychological approaches

- Human harm-doing/evil (e.g. Staub, Berkowitz, Baumeister, Card)
- Stereotyping, prejudice (e.g. Allport, Tajfel, Fiske)
- Group dynamics, social psychology (e.g. Milgram, Zimbardo, Janis)
- Evolutionary psychology (e.g. Hauser, Wright)
- Genocide (e.g. Fein, Stanton, Woolf & Hulsizer)
- Specific atrocities (e.g. Browning, Lifton, Hinton)
- Literary and/or psychoanalytic approaches (e.g. Freud, Bakhtin, Shklar)

# Terminology

stereotyping, prejudice, discrimination, polarisation, outgroup distancing, dehumanisation, exclusion from the moral universe, objectification, social death, continuum of destruction ...

## ... OTHERISATION

A catch-all term for the many processes by which a person or group is defined as 'other', an 'outgroup', becomes viewed in negative terms, becomes subject to stereotyping and discrimination, and *in extremis* comes to be seen as less than fully human and fit for sometimes lethal persecution

# Key ideas

- otherisation 'continuum' from mild to extreme acts
- multiple contributing 'risk factors'
- postulated risk factors include male gender, social turmoil, *esp.* civil war/revolution, history of previous atrocities, leadership, propaganda/media control, totalist/essentialist ideology
- multiple psychological processes involved
- exceptionally complex interplay of causes makes each atrocity unique
- mild acts raise probability of more extreme ones
- extreme acts are preceded by milder ones

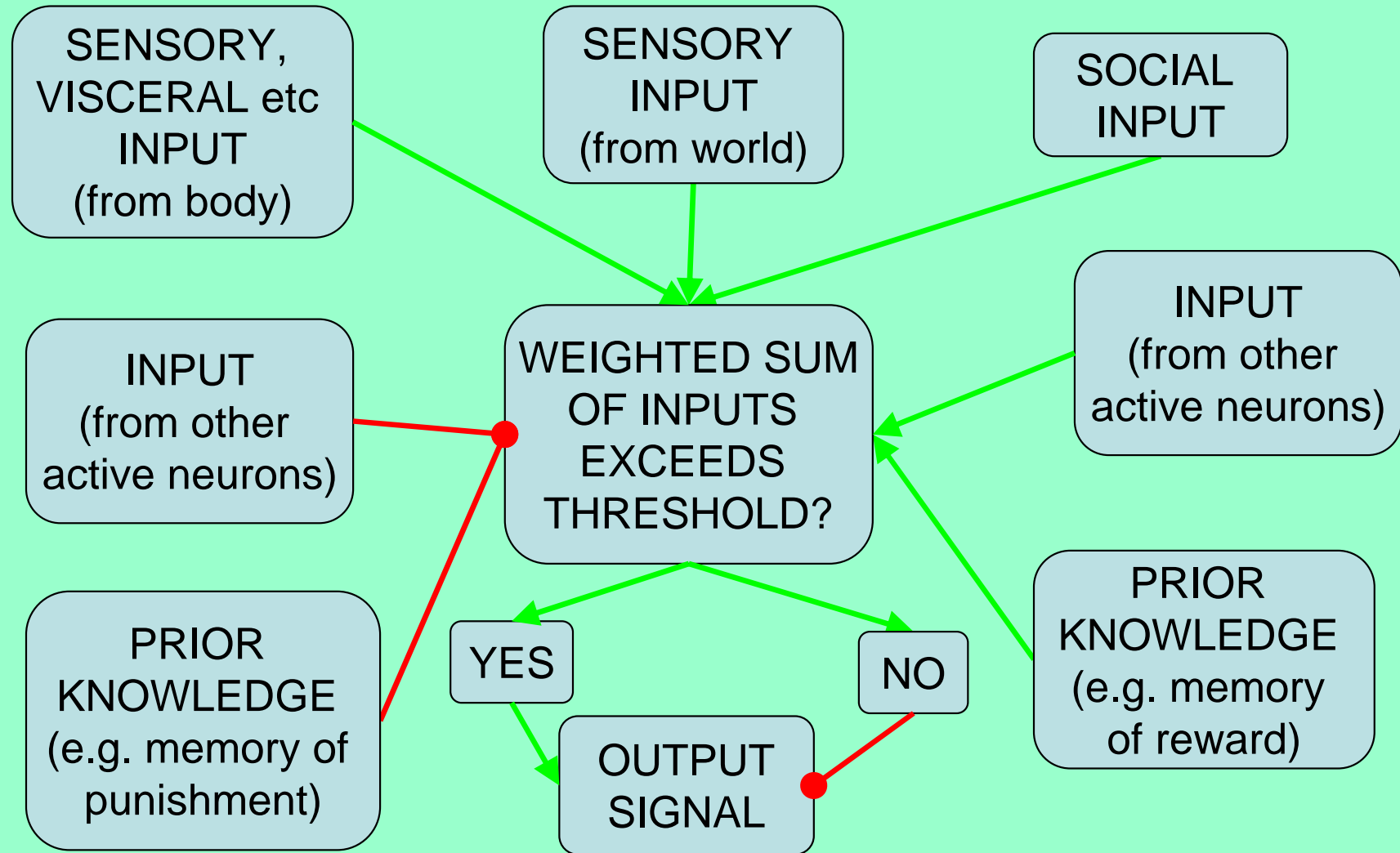
# Can studying brain function help?

- Not with direct experiments – ethical issues
- Indirect experiments, e.g. fMRI of gameplay, already being done
- Theoretically, may help provide a conceptual framework to underpin psychology
- At this early stage, more about explanation than prediction (but will speculate later)

# Key concepts

- Brain cells (neurons) receive many incoming signals at any one time.
- Most signals are positive, some negative.
- Each neuron adds up its current positive inputs and subtracts negative inputs. If the total is greater than some specific value (the neuron's 'threshold') the neuron will signal.

# Neuron/network processing



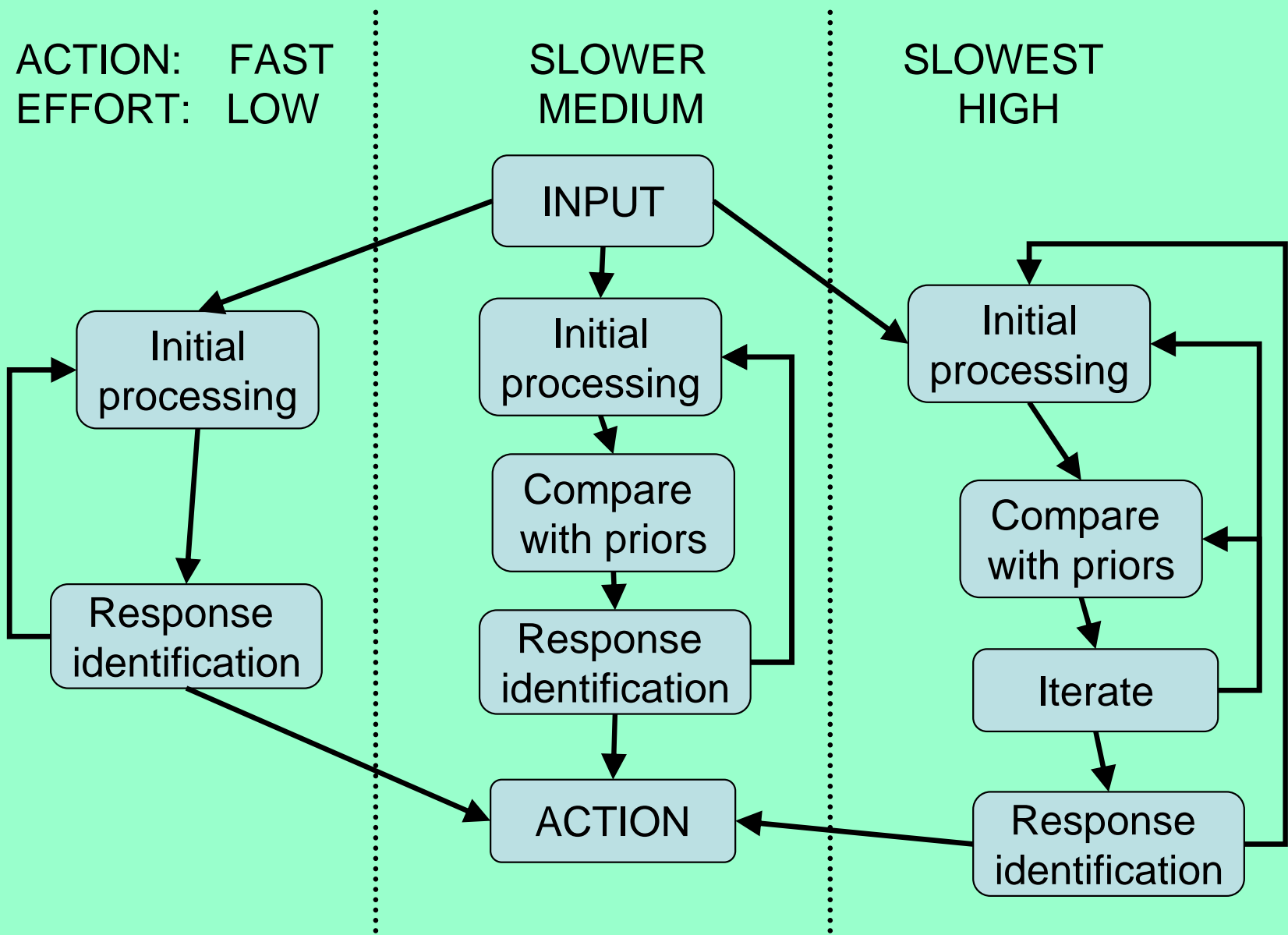
# Neuroscience (I): incoming signals

- Brains get input signals from their 'environment'
  - the **physical world**
  - the **social world**
  - the **body**
- Signals may be **weaker** or **stronger**
  - stronger signals processed faster and with less effort
- Signals may be **consistent** or **inconsistent**
  - consistent = predictable and easily/quickly processed
- Signals compared with **predictions** generated from **prior knowledge** to select an appropriate response
  - unexpected signals may be filtered out unless they are particularly strong,
  - especially if the brain's prior expectations are well-established.

# Neuroscience (II): neural paths

- Neural activity flows from sensory inputs to motor outputs
  - fastest routes direct, give automatic, 'reflexive' movements
  - slower routes involve complex interactions, give 'willed' actions
- Neurons connected by synapses
  - synapses can change their 'strength' when they are used
  - 'strength' = how easily they let signals through
  - stronger synapses allow signals to flow faster
  - used pathways = stronger synapses = faster processing
- Paths which currently have no activity flowing through them can be reactivated later by similar inputs. They can be seen as 'storing' the brain's prior knowledge.

# Brain processing



# Neuroscience (I): some implications

Stronger/consistent/expected signals flow faster/more easily:

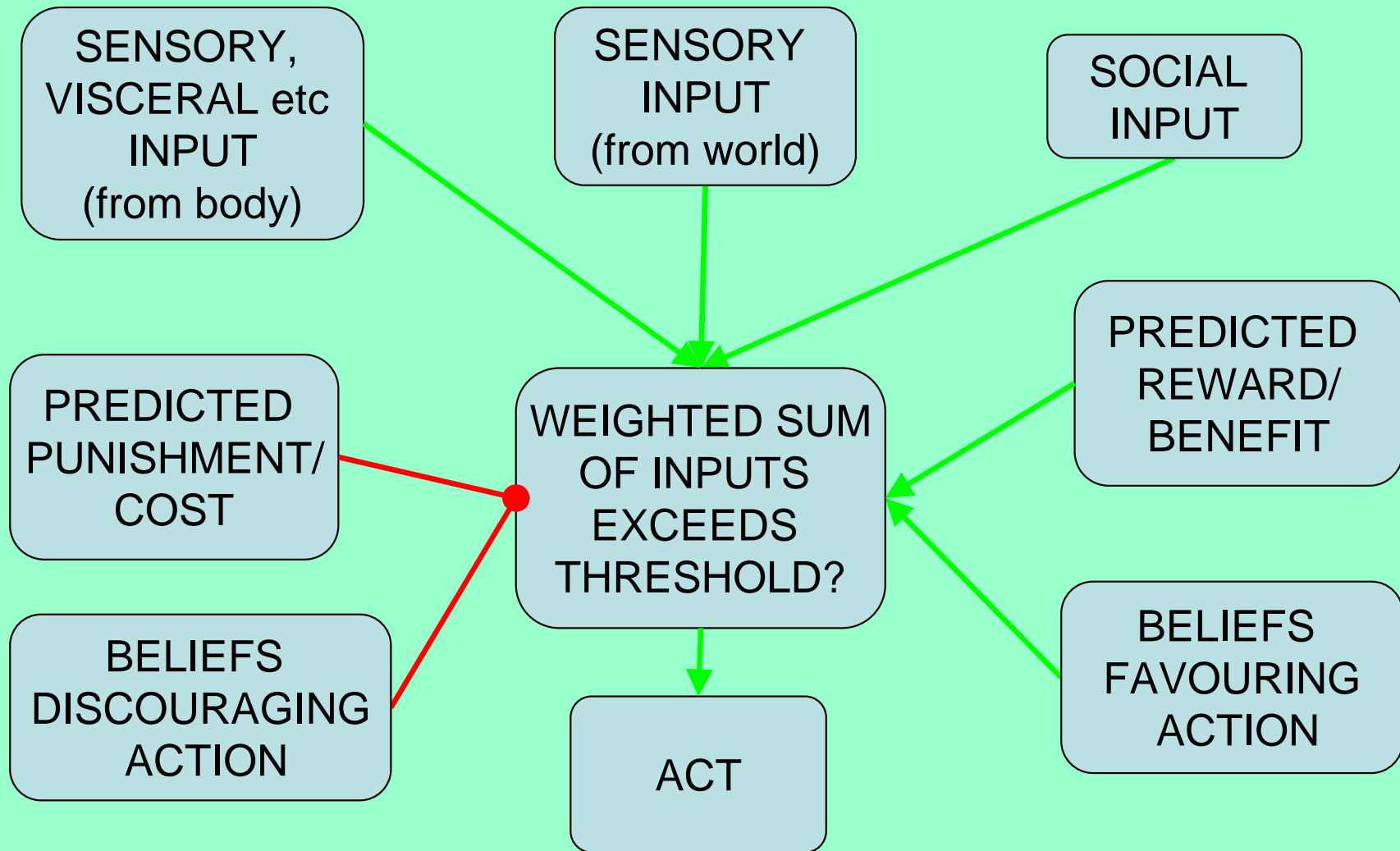
- 'stress' and negative emotions ->
  - pressure to act
  - reduced time and attention for considering prior knowledge
  - if action relieves stress or evokes reward, it is likely to be repeated
- consistent, simple signals from the world – or from people – are trusted more than varying or complex signals
- under stress, inputs which match prior expectations/beliefs are experienced as pleasant
- challenging inputs are experienced as unpleasant
- inputs challenging strong beliefs may be filtered out early on.

# Neuroscience (II): some implications

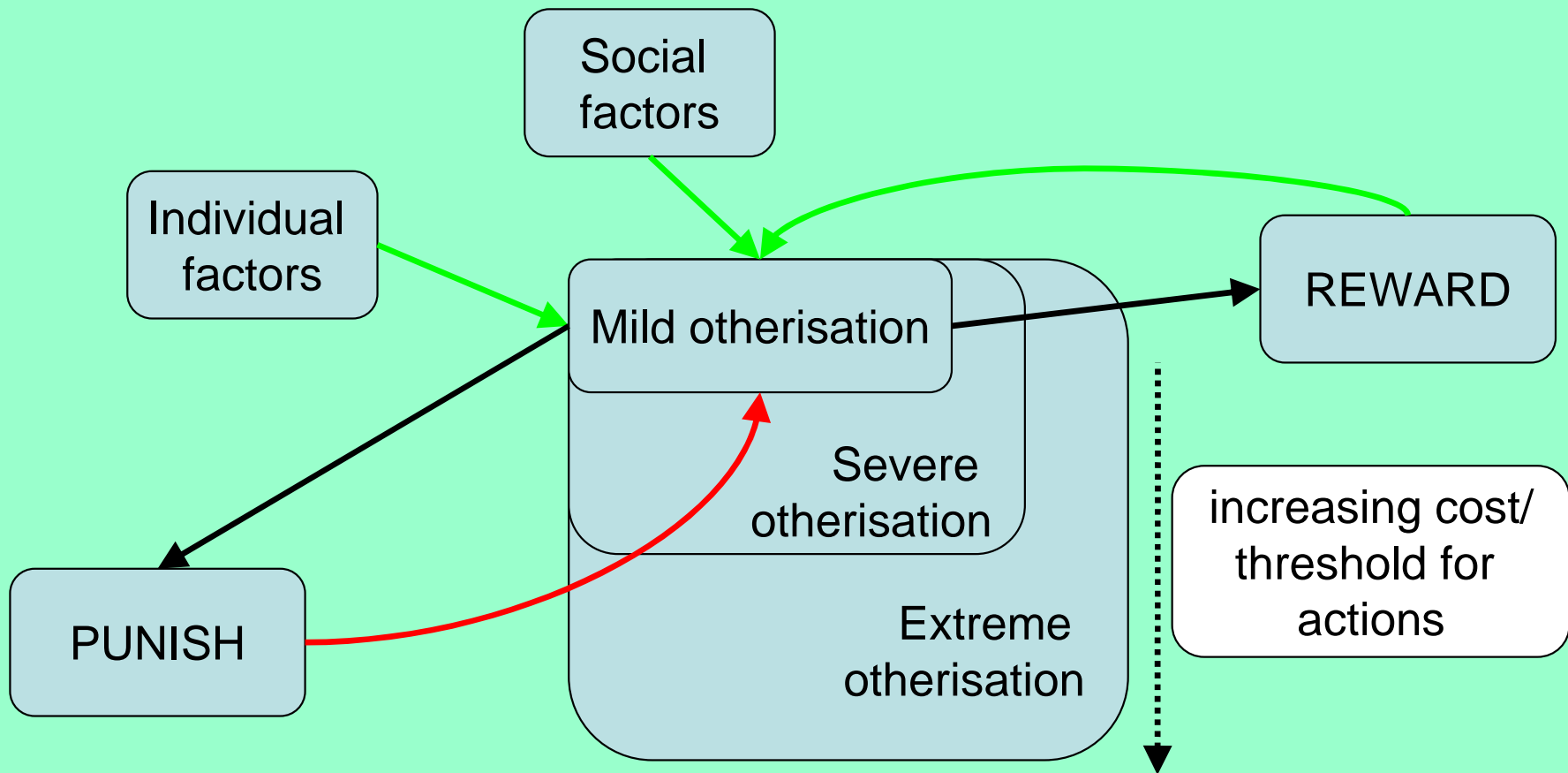
## Neural activity strengthens neural paths

- paths involved in rewarded actions strengthen
- strengthening part of a path (e.g. by discussing an action) lowers the threshold for *any* action which uses that path
- pressuring people to act faster makes them pay less attention to prior knowledge – e.g. learned moral precepts
- ‘priors’ need to be active to affect decision-making
- actions which are costlier, more complex or slower are less likely to be selected, especially under stress.

# Model (I)



# Model (II)



# Predictions (I)

- Individual differences in otherisation, e.g. due to:
  - differences in beliefs about capacity to act
  - beliefs about likelihood of punishment
  - personality features e.g. impulsivity, empathy
- Familiar actions/beliefs dominate under high stress
  - the more intense the perceived threat, the less baroque the killing
- Initial perpetrator stress reduces faster when:
  - actions consistently rewarded, e.g. group unanimous
  - perpetrators kept busy and/or distanced
  - justifications, e.g. necessity defence, are believed and/or unchallenged
- Disgust stereotypes -> more extreme attack than anger/fear ones
- Victims who challenge stereotypes more likely to be tortured/mutilated than those who do not

# Predictions (II)

- Longer lead-in to atrocities when perpetrators less obviously threatened
- Shorter lead-in when social authorities publicly unanimous
- The greater the incentive to attack, the less justification required
  - should expect long delay before initial attack, followed by rapidly increasing attack rate
- The more intense the pre-atrocity otherisation
  - the more trivial an incident may trigger the event
  - the more prolonged and savage the attack
- Better moral education for perpetrators less effective than
  - restorative justice / distance-reducing measures
  - emphasising alternative 'solutions' early on
  - reducing belief in capacity to act
  - emphasising costs of action
  - leadership condemnation

# Thank you for your attention

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# Further information

- All material is copyright Kathleen Taylor 2009
- Contact details: [kathleen.taylor@dpag.ox.ac.uk](mailto:kathleen.taylor@dpag.ox.ac.uk)
- This presentation was given in the History Department of Exeter University in February 2007