LECTURE 4

Emotion, Intuition, Reason

MAJOR QUESTIONS

- Is Moral decision-making and judgment dependent on rational deliberation?
- What is the role of emotion in moral decision-making?
- Why it matters
  - Moral justification and moral knowledge (*warranted* reasons for actions)
  - Moral realism – knowing vs. feeling (are emotions source of knowledge?)
  - Moral disagreement – rational appeals to belief revision?

WHAT IS ETHICS FOR?

Knowing vs. doing…

- *Epistemic functionalism* the larger structure is a person's representation of the world, and moral thinking is done in order to improve the accuracy and completeness a moral agent's representation of the world

- *social functionalism* moral thinking is done in order to help the social agent succeed in the social order they are embedded in (instrumentalism)

EXAMPLE VIEWS - EMOTION

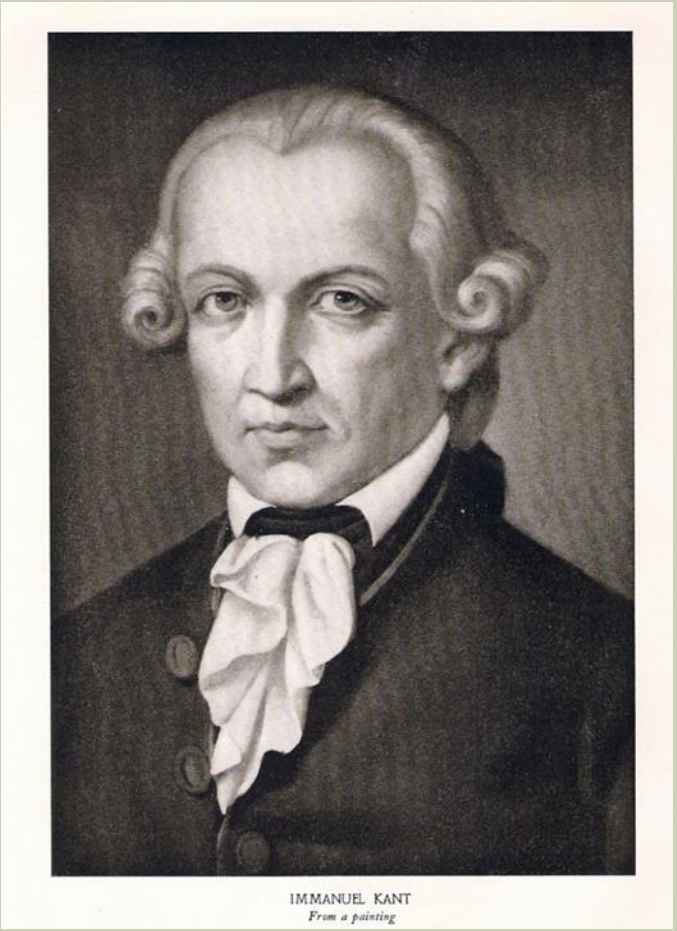
- David Hume (1711-1776), Adam Smith (1723-1790)
  - Principle of sympathy:
    - *How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortunes of others, and render their happiness necessary to him, though he derives nothing from it, except the pleasure of seeing it. Of this kind is pity or compassion, the emotion we feel for the misery of others, when we either see it, or are made to conceive it in a very lively manner. That we often derive sorrow from the sorrows of others, is a matter of fact too obvious to require any instances to prove it; for this sentiment, like all the other original passions of human nature, is by no means confined to the virtuous or the humane, though they perhaps may feel it with the most exquisite sensibility – Theory of Moral Sentiments*

CONTEMPORARY

- Antonio Damasio – neurologist (Descartes' Error) Somatic Marker Hypothesis
- Jonathan Haidt – social intuitionism

EXAMPLE VIEWS - COGNITIVE

- Immanuel Kant (1724-1804)
  - Moral duties are based on considerations of rationality (categorical imperative)
  - Act only according to that maxim whereby you can at the same time will that it should become a universal law without contradiction.
  - Moral agents are beings who are capable of guiding their own behavior on the basis of directives, principles and laws of rationality
- Lying – "it is good to lie" can this be a universal law without contradiction?



IMMANUEL KANT
From a painting

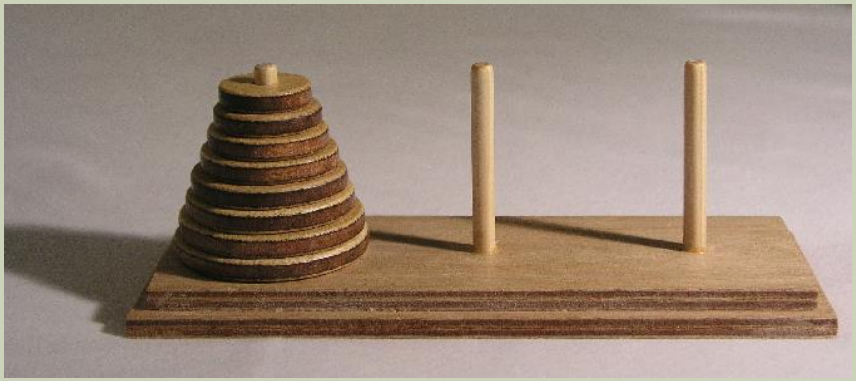
EXAMPLE VIEWS - COGNITIVE

- Lawrence Kohlberg (1927-1987) developmental moral psychologist
  - Heinz's wife was near death, and her only hope was a drug that had been discovered by a pharmacist who was selling it for an exorbitant price. The drug cost $20,000 to make, and the pharmacist was selling it for $200,000. Heinz could only raise $50,000 and insurance wouldn't make up the difference. He offered what he had to the pharmacist, and when his offer was rejected, Heinz said he would pay the rest later. Still the pharmacist refused. In desperation, Heinz considered stealing the drug. Would it be wrong for him to do that?

SIX STAGES OF MORAL REASONING:

- Stage one (*obedience*): Heinz should not steal the medicine because he will consequently be put in prison which will mean he is a bad person. Or: Heinz should steal the medicine because it is only worth $20,000 and not how much the druggist wanted for it; Heinz had even offered to pay for it and was not stealing anything else.
- Stage two (*self-interest*): Heinz should steal the medicine because he will be much happier if he saves his wife, even if he will have to serve a prison sentence. Or: Heinz should not steal the medicine because prison is an awful place, and he would more likely languish in a jail cell than over his wife's death.
- Stage three (*conformity*): Heinz should steal the medicine because his wife expects it; he wants to be a good husband. Or: Heinz should not steal the drug because stealing is bad and he is not a criminal; he has tried to do everything he can without breaking the law, you cannot blame him.
- Stage four (*law-and-order*): Heinz should not steal the medicine because the law prohibits stealing, making it illegal. Or: actions have consequences.
- Stage five (*human rights*): Heinz should steal the medicine because everyone has a right to choose life, regardless of the law. Or: Heinz should not steal the medicine because the scientist has a right to fair compensation. Even if his wife is sick, it does not make his actions right.
- Stage six (*universal human ethics*): Heinz should steal the medicine, because saving a human life is a more fundamental value than the property rights of another person. Or: Heinz should not steal the medicine, because others may need the medicine just as badly, and their lives are equally significant.

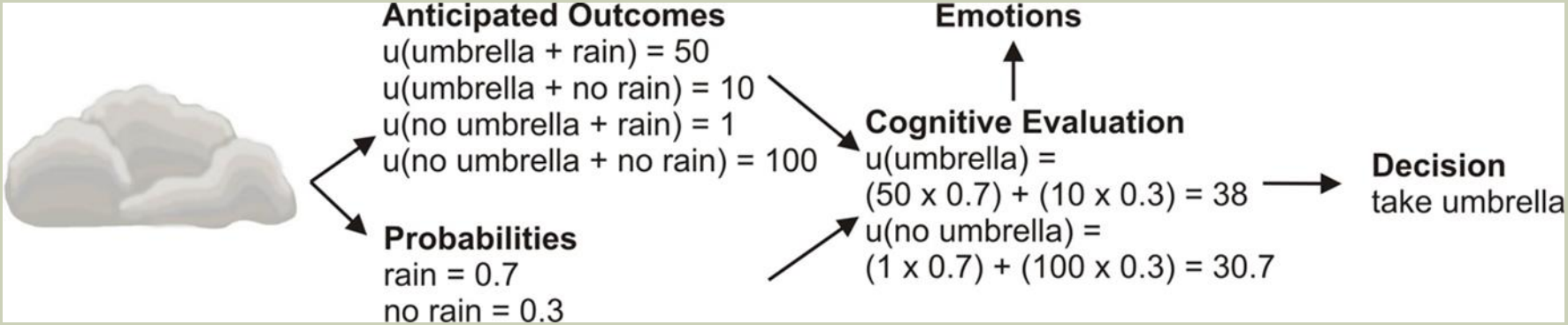
DELIBERATIVE COGNITION



- Only one disk may be moved at a time.
- Each move consists of taking the upper disk from one of the rods and sliding it onto another rod, on top of the other disks that may already be present on that rod.
- No disk may be placed on top of a smaller disk.

BENTHAM'S CENTRAL AIM

- Notions of utility were popular in Bentham's day (and before).
- Bentham's aim was to reduce utility to a single measure and develop a method for measuring it.
- Moral science to be based on a hedonic calculus.



MORAL INTUITION

- Julie and Mark are brother and sister. They are travelling together in France on summer vacation from college. One night they are staying alone in a cabin near the beach. They decide that it would be interesting and fun if they tried making love. At the very least it would be a new experience for each of them. Julie was already taking birth control pills, but Mark uses a condom too, just to be safe. They both enjoy making love, but they decide not to do it again. They keep that night as a special secret, which makes them feel even closer to each other.
  - What do you think about that? Was it OK for them to make love? (Haidt, 2001, p. 814)

HAIDT'S SOCIAL INTUITIONISM

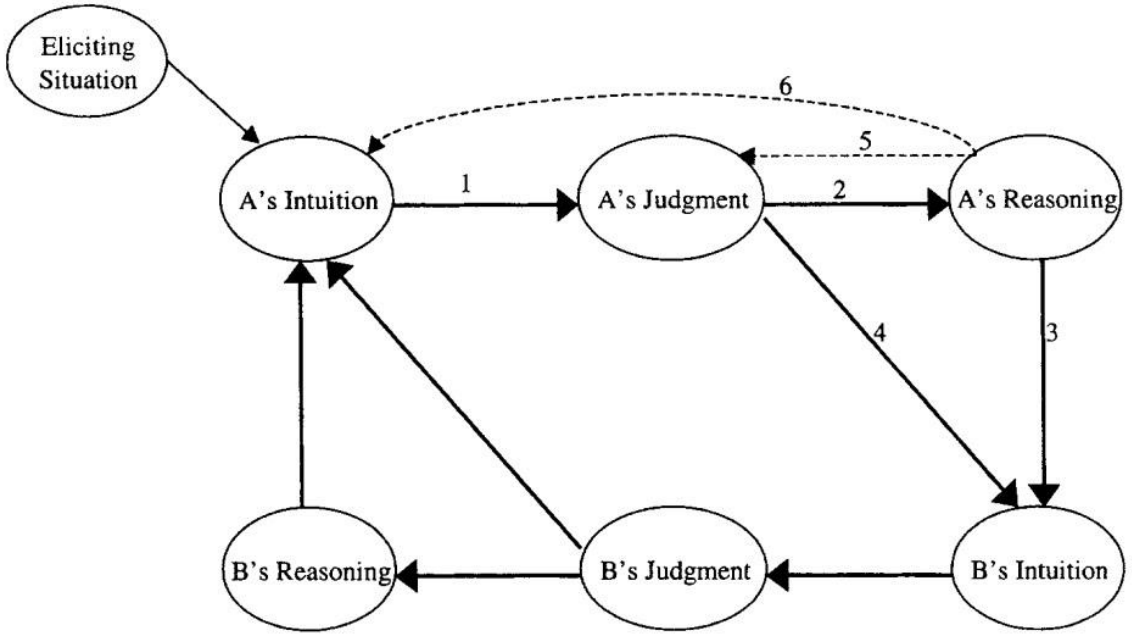


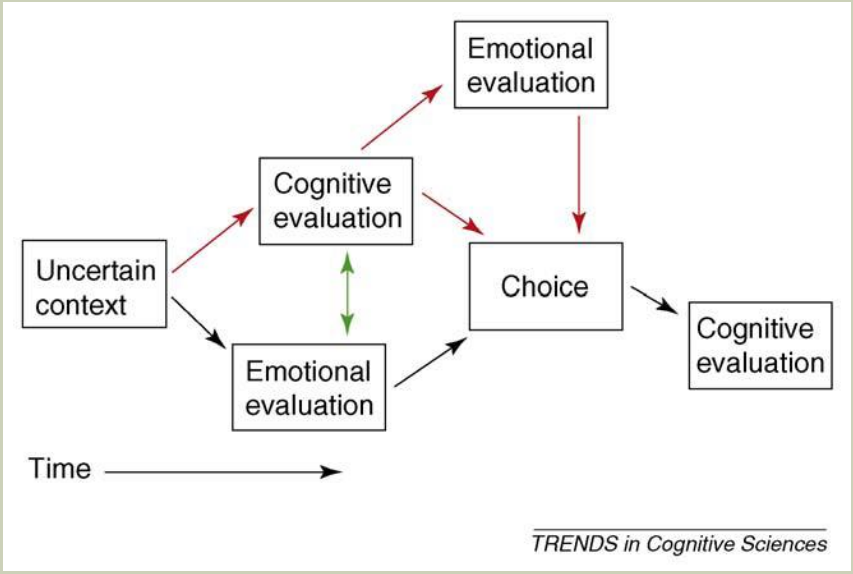
Figure 2. The social intuitionist model of moral judgment. The numbered links, drawn for Person A only, are (1) the intuitive judgment link, (2) the post hoc reasoning link, (3) the reasoned persuasion link, and (4) the social persuasion link. Two additional links are hypothesized to occur less frequently: (5) the reasoned judgment link and (6) the private reflection link.

NEW SYNTHESIS: INTUITIVE PRIMACY

1. People Make Rapid Evaluative Judgments of Others
2. Moral Judgments Involve Brain Areas Related to Emotion
3. Morally Charged Economic Behaviors Involve Brain Areas Related to Emotion
4. Psychopaths Have Emotional Deficits
5. Moral - Perceptual Abilities Emerge in Infancy
6. Manipulating Emotions Changes Judgments
7. People Sometimes Can't Explain Their Moral Judgments
8. Reasoning Is Often Guided by Desires
9. Research in Political Psychology Points to Intuitions, Not Reasoning
10. Research on Prosocial Behavior Points to intuitions, Not Reasoning

SOME INTUITIONS

- emotional processes underlie rapid, basic, and automatic evaluations
- low-level processes that elicit strong valenced and stereotyped behavioral responses
- reflect a speed/accuracy tradeoff whereby behavioral options are evaluated only with sufficient resolution to bias behavior in a generally adaptive manner, often described as a crude biasing signal or a heuristic (JDM).
- In cognitive processes are regarded as integrating information regarding the dimensions of risky choices according to some expectation-based calculus, or cost-benefit analysis & are typically regarded to involve controlled processes and are sequential and rule-based

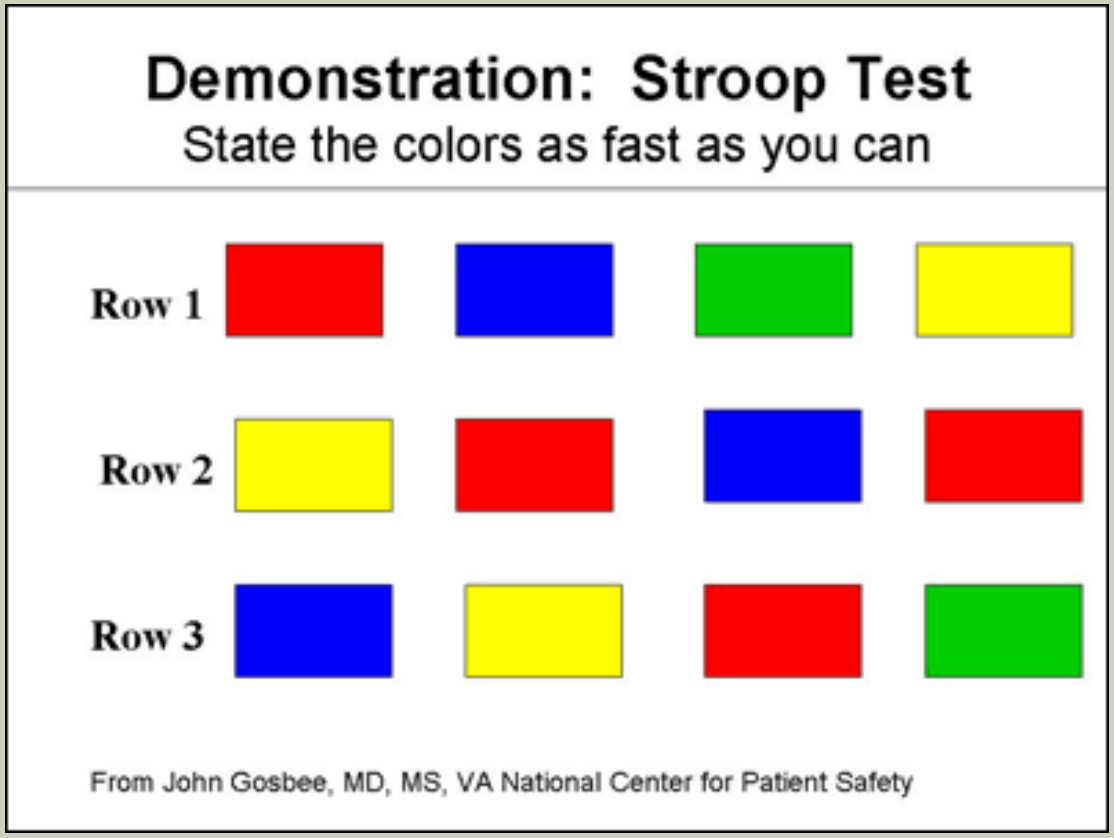


DUAL SYSTEMS

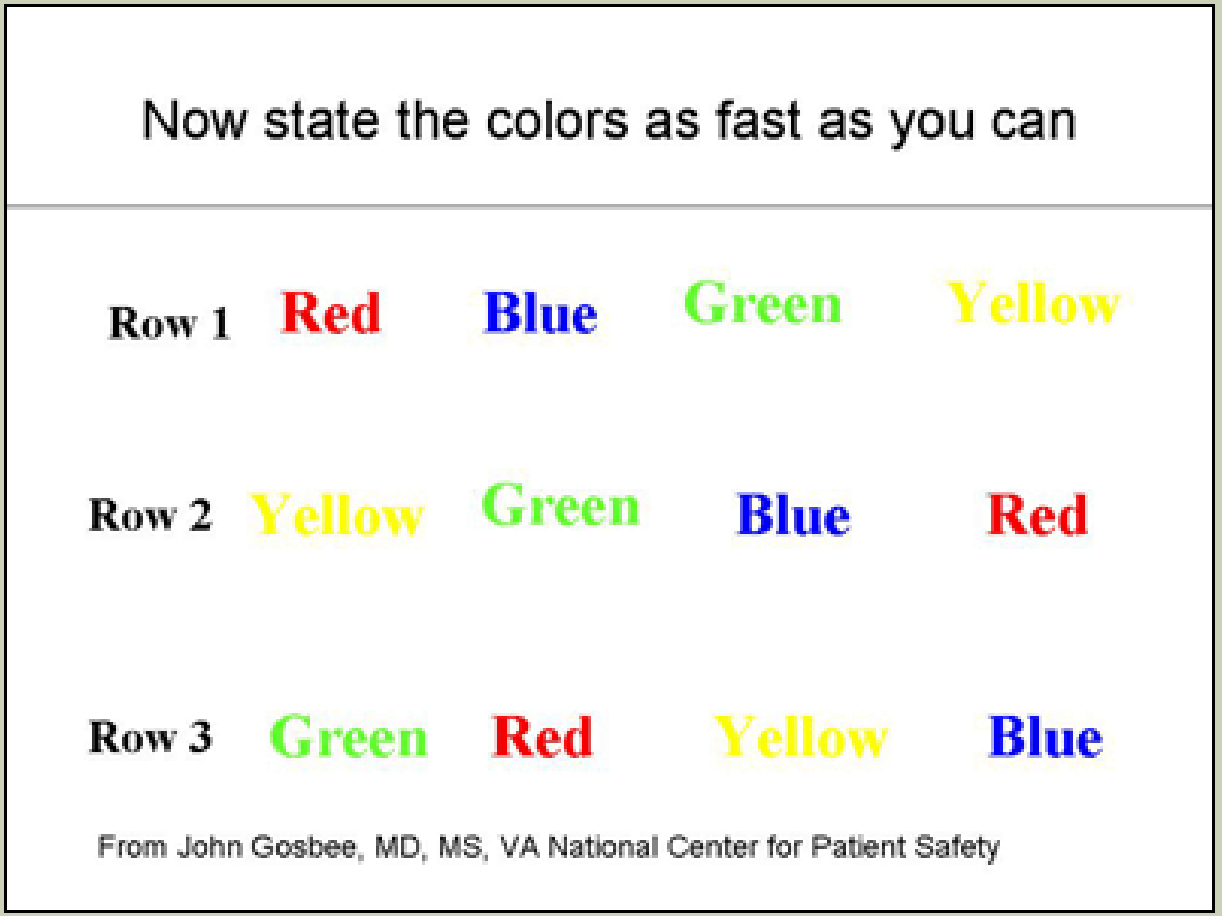
Table 1
General Features of the Two Systems

The intuitive system	The reasoning system
Fast and effortless	Slow and effortful
Process is unintentional and runs automatically	Process is intentional and controllable
Process is inaccessible; only results enter awareness	Process is consciously accessible and viewable
Does not demand attentional resources	Demands attentional resources, which are limited
Parallel distributed processing	Serial processing
Pattern matching; thought is metaphorical, holistic	Symbol manipulation; thought is truth preserving, analytical
Common to all mammals	Unique to humans over age 2 and perhaps some language-trained apes
Context dependent	Context independent
Platform dependent (depends on the brain and body that houses it)	Platform independent (the process can be transported to any rule following organism or machine)

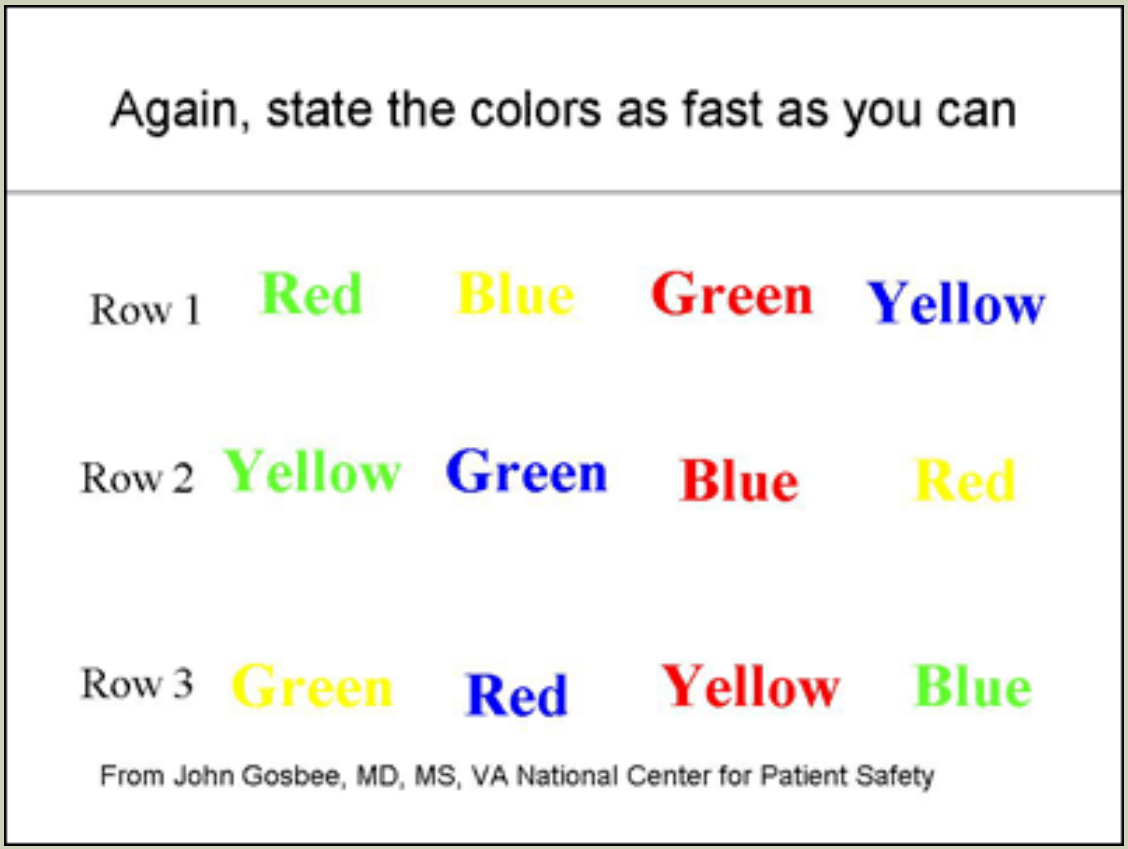
EXAMPLE: CONFLICT - STROOP



STROOP


Now state the colors as fast as you can
Row 1 Red Blue Green Yellow
Row 2 Yellow Green Blue Red
Row 3 Green Red Yellow Blue
From John Gosbee, MD, MS, VA National Center for Patient Safety

STROOP

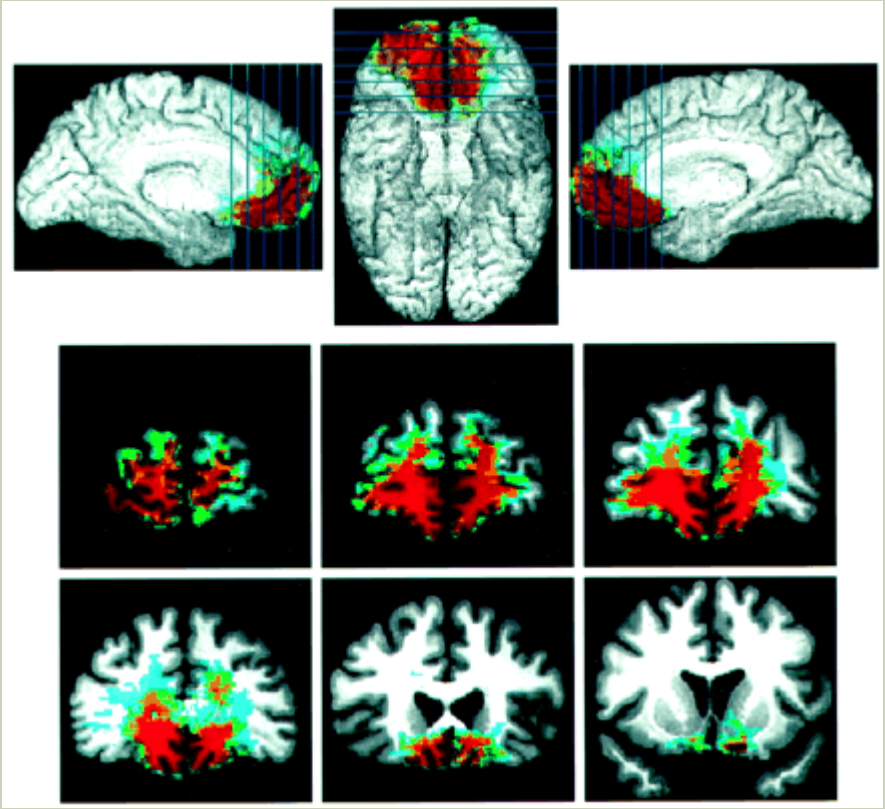

Again, state the colors as fast as you can
Row 1 Red Blue Green Yellow
Row 2 Yellow Green Blue Red
Row 3 Green Red Yellow Blue
From John Gosbee, MD, MS, VA National Center for Patient Safety

EMOTIONS IN CONTEMPORARY SCIENCE

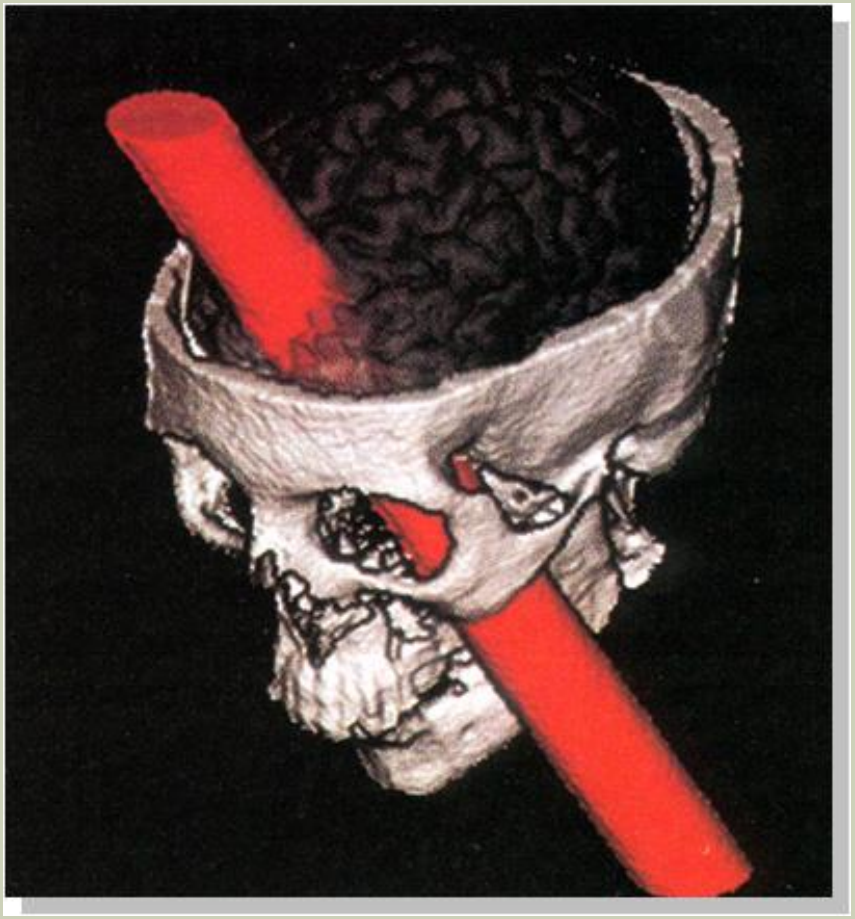
- 1950s rise of cognitive science
  - Chomsky and language
  - Mental states are computational states
  - Thought = symbol manipulation (LOT)
  - Emphasis on problem solving
    - Newell & Simon's Logic Theorist (1955-56) first "AI" program designed to mimic (implement?) human problem-solving:
      - Proved 38 theorems of Principia Mathematica (23/100 nonfiction works of 20th century), one more elegantly than Russell & Whitehead (submitted to Journal of Symbolic Logic, rejected)
      - *[We] invented a computer program capable of thinking non-numerically, and thereby solved the venerable mind-body problem, explaining how system composed of a matter can have the properties of mind* – Simon, 1956
  - Little room for emotions, which did not fit well with computation, emphasized emotions as normatively inadequate

EMOTIONS REEVALUATED

DAMASIO'S PATIENTS



PHINEAS GAGE



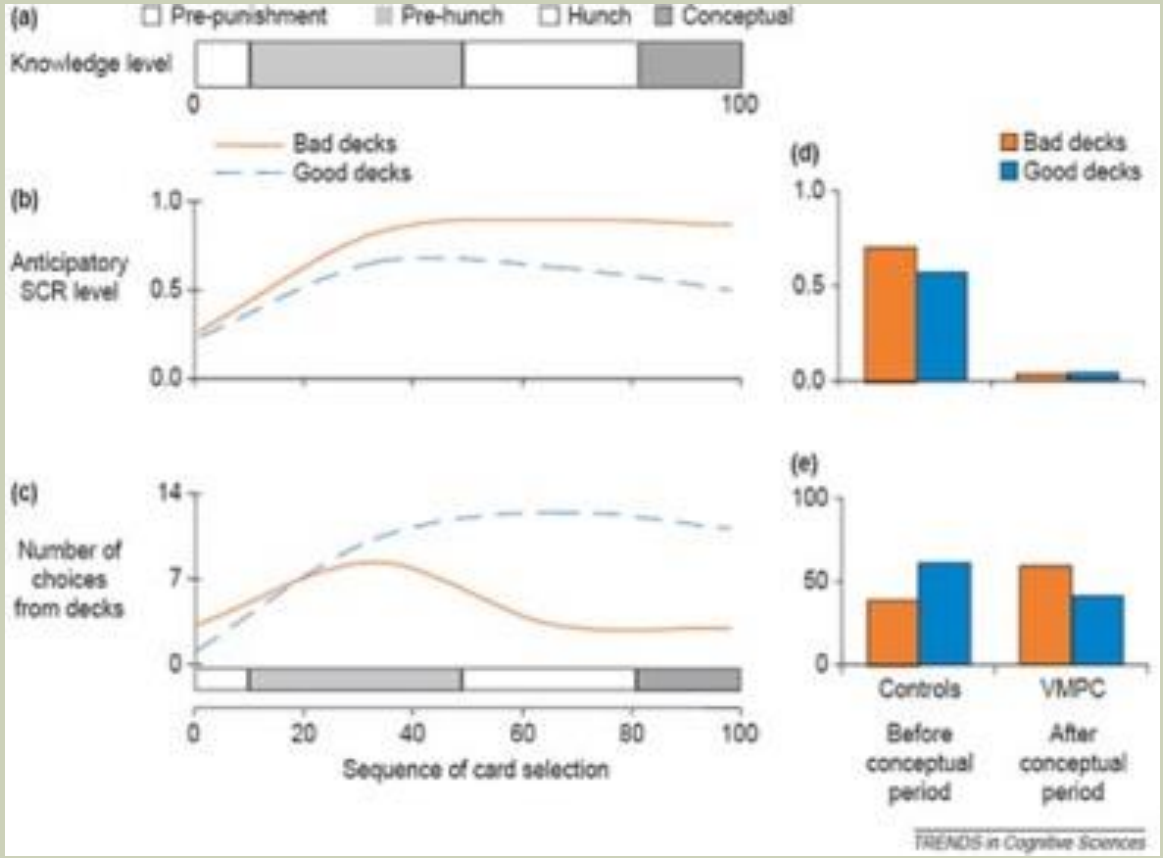
BECHARA

- “Most theories of choice assume that decisions derive from an assessment of the future outcomes of various options and alternatives through some type of cost-benefit analyses. The influence of emotions on decision-making is largely ignored. The studies of decision-making in neurological patients who can no longer process emotional information normally suggest that people make judgments not only by evaluating the consequences and their probability of occurring, but also and even sometimes primarily at a gut or emotional level.”

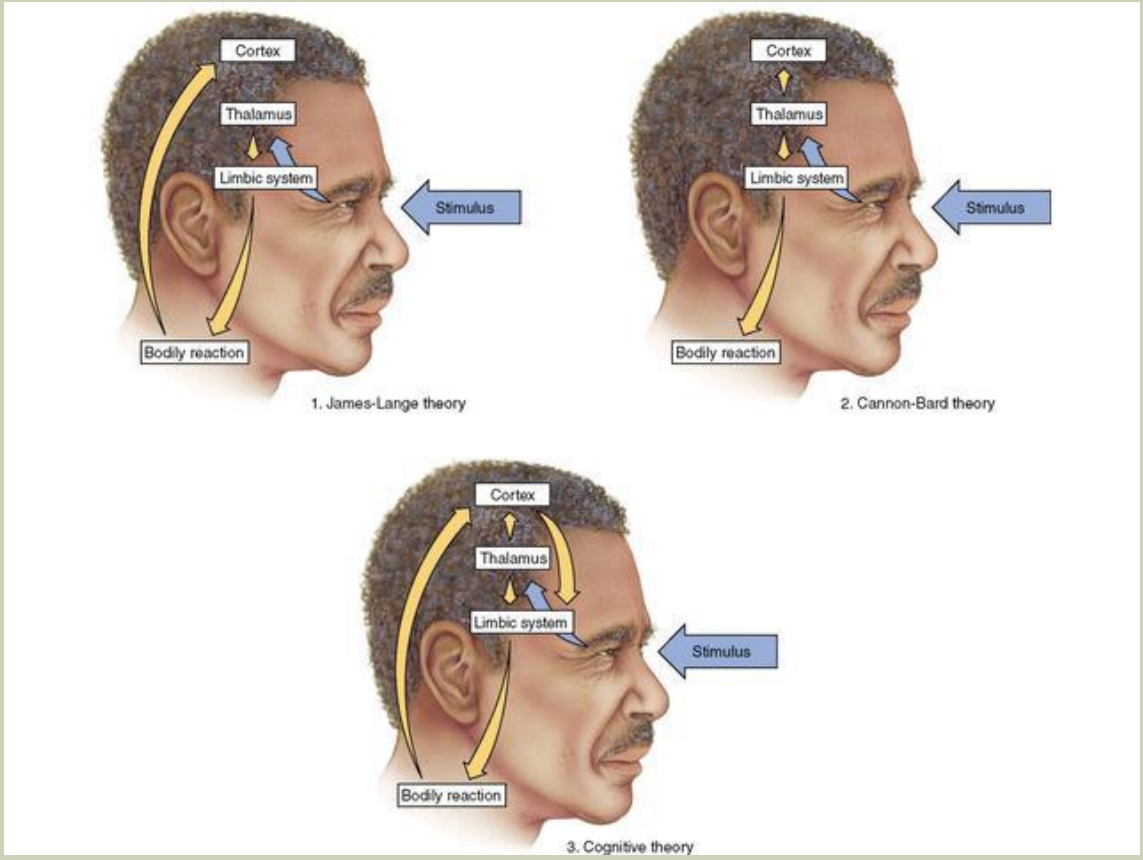
IOWA GAMBLING TASK

	Bad Decks		Good Decks	
	A	B	C	D
Gain/Deck:	$100	$100	$50	$50
Loss/10 cards:	$1250	$1250	$250	$250
Net/10 cards:	-$250	-$250	$250	$250
Rewards/10 cards:	5	1	5	1

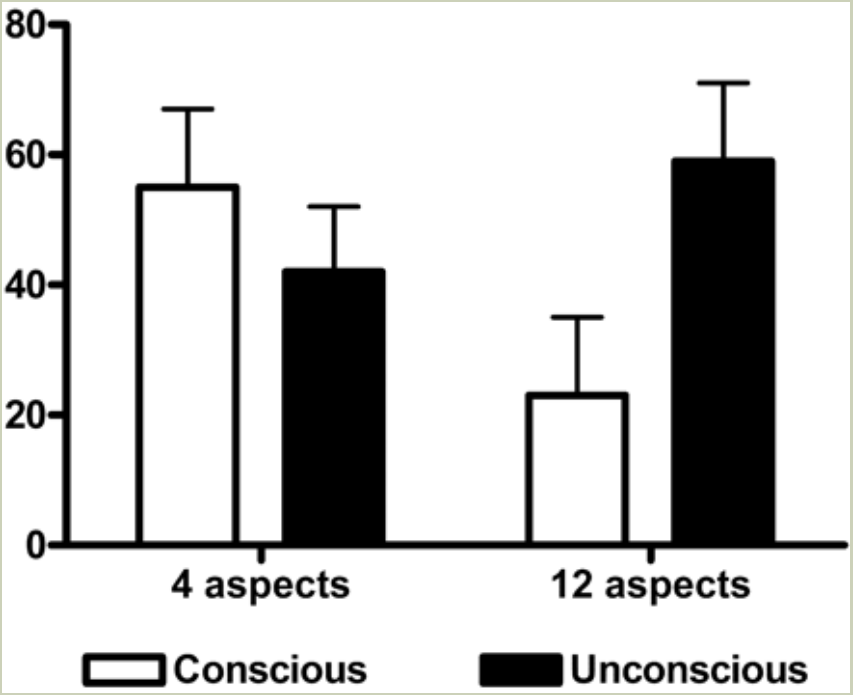
INTUITION: DOING WITHOUT KNOWING?



COGNITIVE VS SOMATIC THEORY



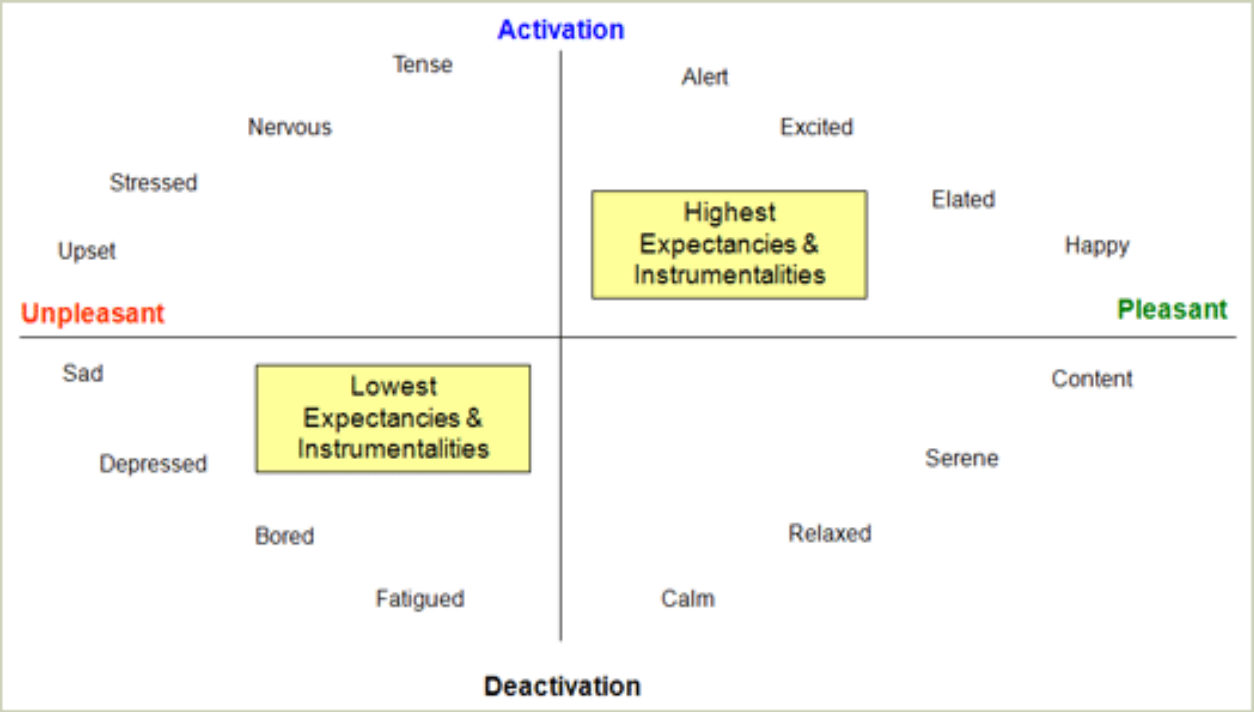
DELIBERATION WITHOUT ATTENTION?



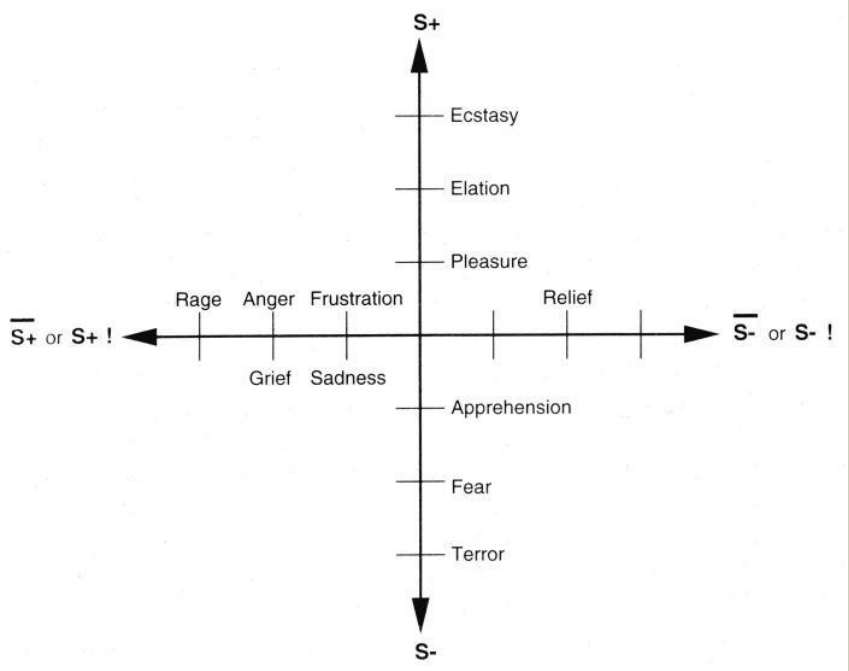
- One car was characterized by 75% positive attributes, two by 50% positive attributes, and one by 25% positive attributes
- Percentage of participants who chose the most desirable car as a function of complexity of decision and of mode of thought

6 OR 7 UNIVERSAL EMOTIONS

DO EMOTIONS HAVE STRUCTURE?



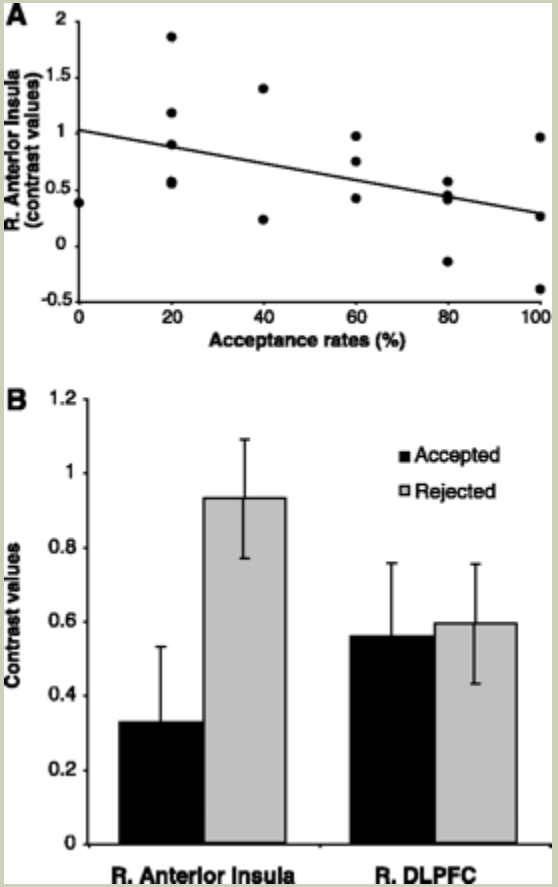
REWARD & EMOTIONS



1. the presentation of a positive reinforcer S+
2. the presentation of a negative reinforcer S-
3. the omission of a positive reinforcer ~~S+~~
4. the termination of a positive reinforcer S+!
5. the omission of a negative reinforcer ~~S-~~
6. the termination of a negative reinforcer S-!

3. EMOTION & MORALLY CHARGED ECONOMIC BEHAVIORS

- Violations of rationality in behavioral game theory
- Ultimatum game rejections and anterior insula



10 PROSOCIAL BEHAVIOR POINTS TO INTUITIONS

Table 1 | Median and average transfer behaviour of investors

	Trust experiment		Risk experiment	
	Oxytocin group	Placebo group	Oxytocin group	Placebo group
Mean average transfer (MU)	9.6	8.1	7.5	7.5
Median average transfer (MU)	10	8	8	8
Standard deviation of transfers (MU)	2.8	3.1	3.3	3.4
Number of observations	29	29	31	30

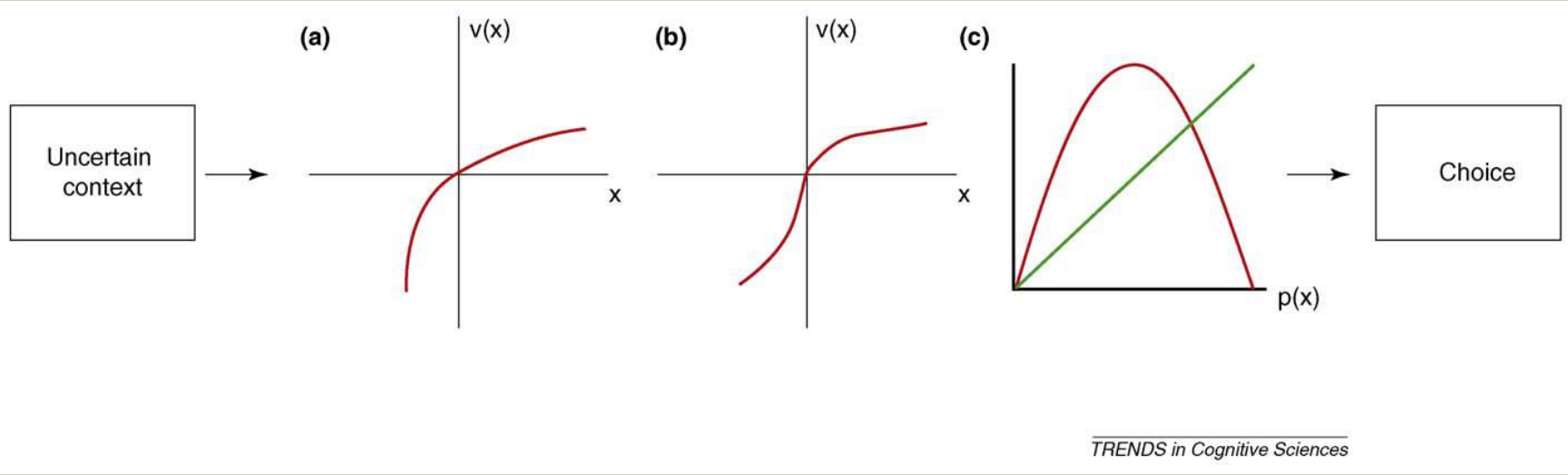
OUTSTANDING QUESTIONS

- what specific parameters of decision contexts are encoded by the brain?
- how are these parameters represented and processed at the neural level?
- To what extent do such representations correspond to the parameters of decision-making frameworks?
- What is the relationship between these representations and cognitive and emotional processes?

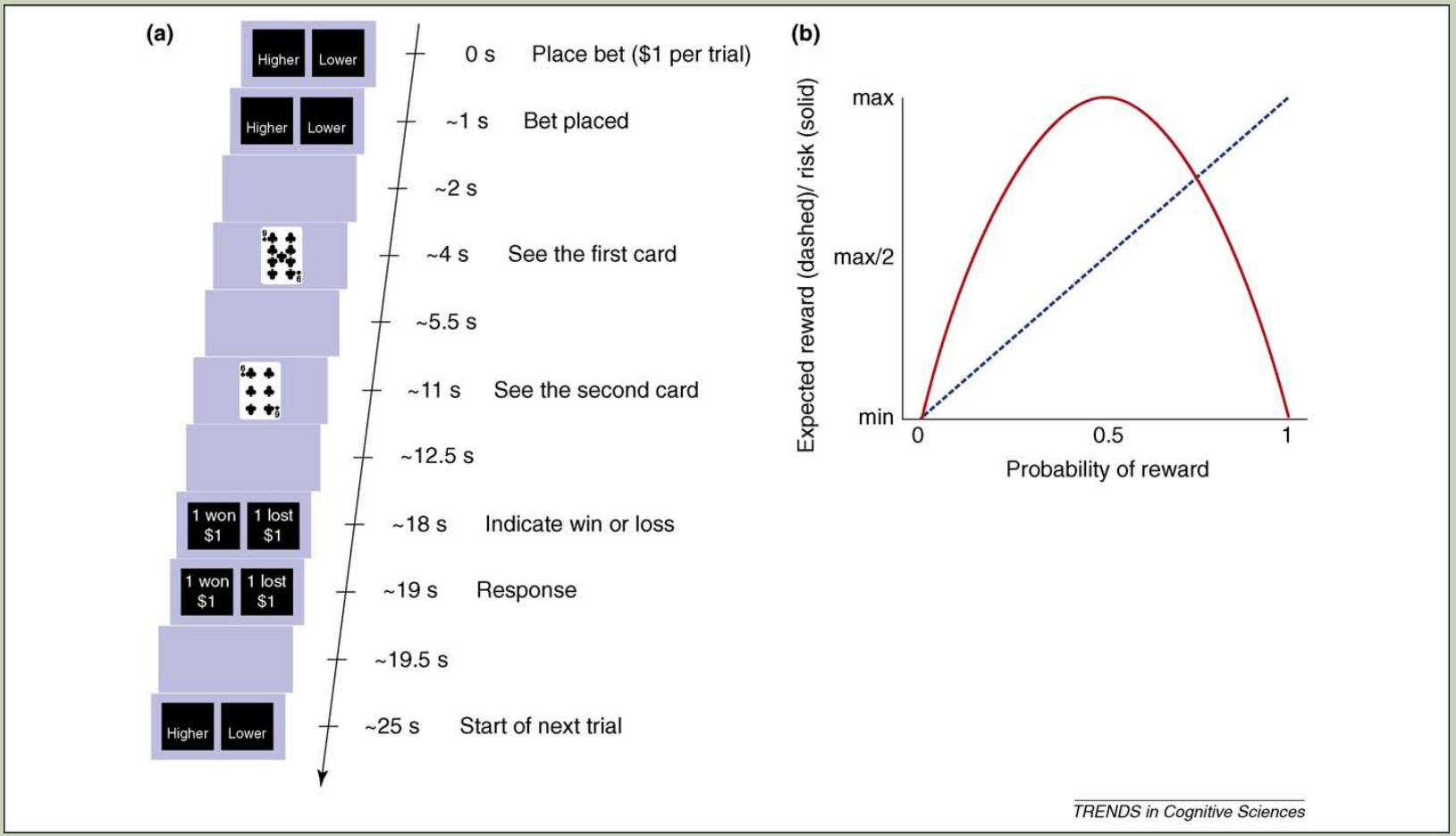
DECISION MAKING UNDER UNCERTAINTY

- Minimal parameters: a basic tradeoff between expected reward and risk
  - Choosing between putting money into a savings account or the stock market
- Expected utility (risk is implicit) vs. financial decision theory

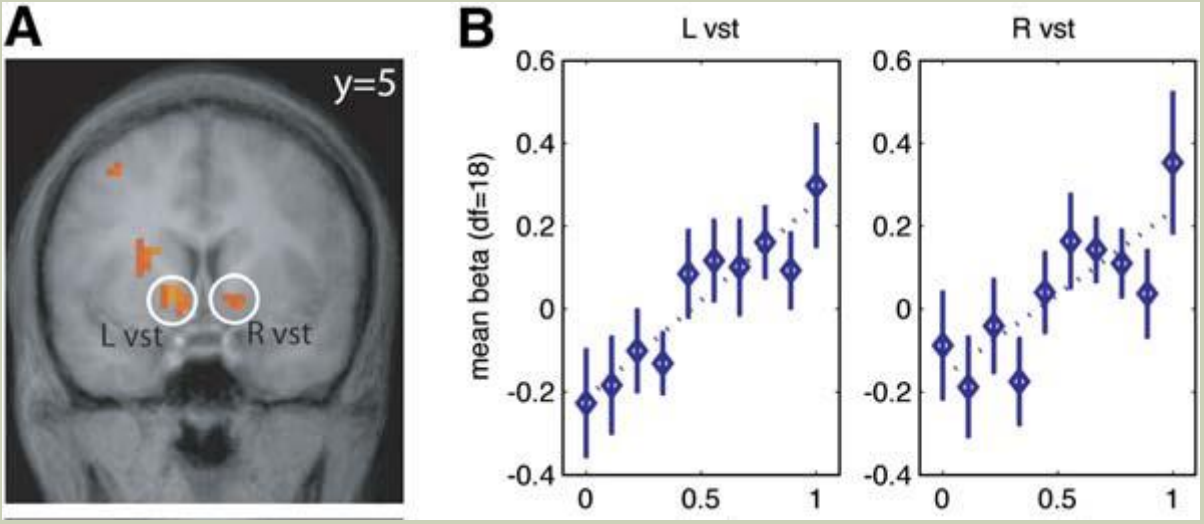
UNCERTAINTY PARAMETERS



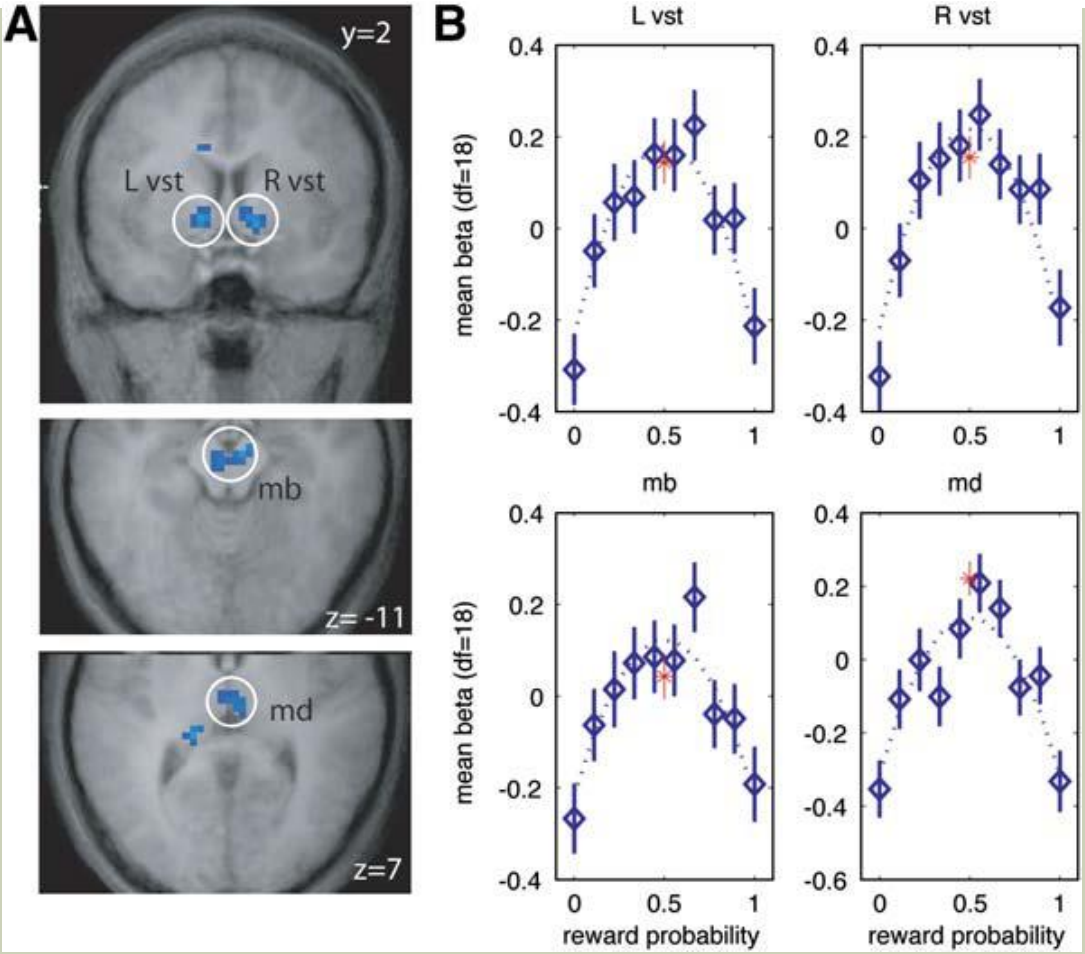
EXPERIMENTAL DESIGN



NEURAL CORRELATES OF EXPECTED REWARD



NEURAL CORRELATES OF RISK



CONCLUSIONS, PART 1

- the brain decomposes risky choice contexts along the statistical dimensions that are the cornerstone of financial decision theory, a paradigmatic cost-benefit and cognitive computation
- However, these are paradigmatic emotion/affective regions (including insula)
- At the level of reward/risk perception, no need for speed/accuracy tradeoff

INTUITION & ETHICS

- are intuitions a source of moral knowledge?
- What is the relation between intuition and implicit learning

MORAL DECISION MAKING

- Emotion – reason distinction central to classical and contemporary debates
  - Kant (cognitivism) vs. Hume (moral sentimentalism)
  - Kohlberg ‘s cognitivist moral developmental psychology (moral reasoning) vs. Gilligan
  - Contemporary moral intuitionism (Haidt)

HAIDT'S SOCIAL INTUITIONISM

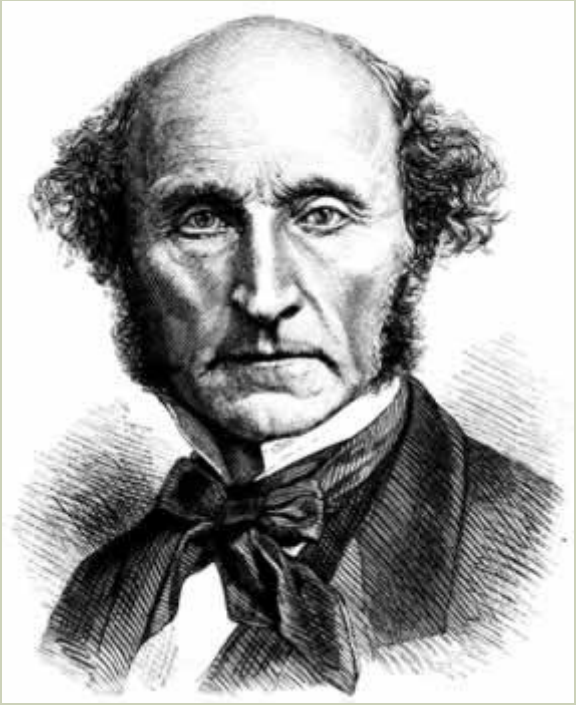
- Julie & Mark
- Family Dog

- 4 reasons to doubt the causal importance of reason
  - Dual process problem
  - Motivated reasoning problem
  - Post hoc problem (objective reasoning a cognitive illusion)
  - The action problem

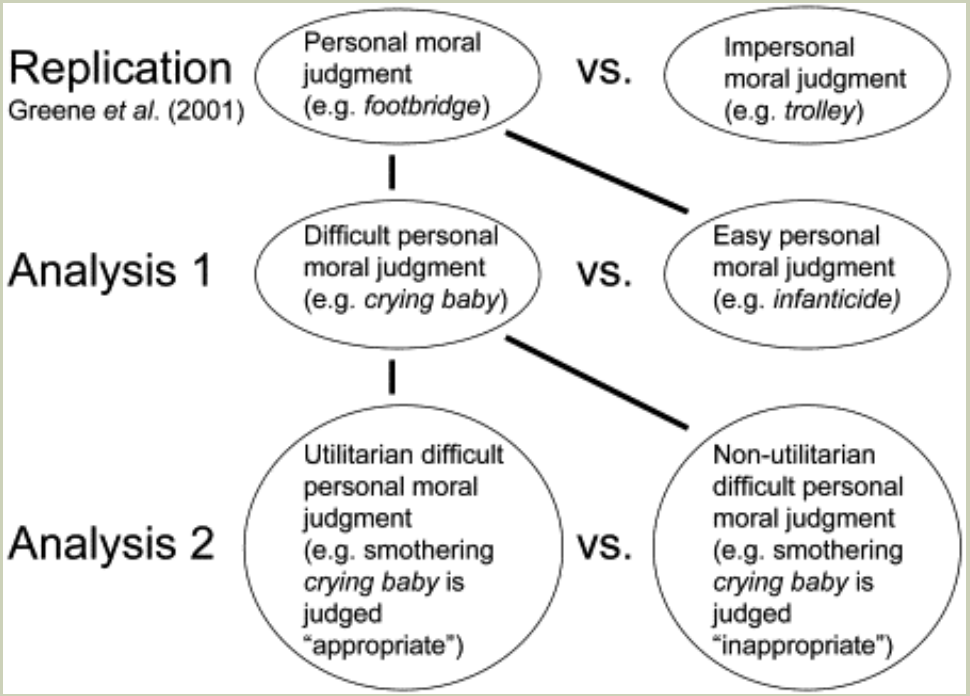
ETHICAL POSITIONS

	Consequentialism	Deontology	Virtue Theory
example	Mill's utilitarianism	Kantian ethics	Aristotle's moral theory
abstract description	An action is right if it promotes the best consequences.	An action is right if it is in accordance with a moral rule or principle.	An action is right if it is what a virtuous agent would do in the circumstances.
more concrete specification	The best consequences are those in which happiness is maximized.	A moral rule is one that is required by rationality.	A virtuous agent is one who acts virtuously, that is, one who has and exercises the virtues. A virtue is a character trait a human being needs to flourish or live well.

JOHN STUART MILL



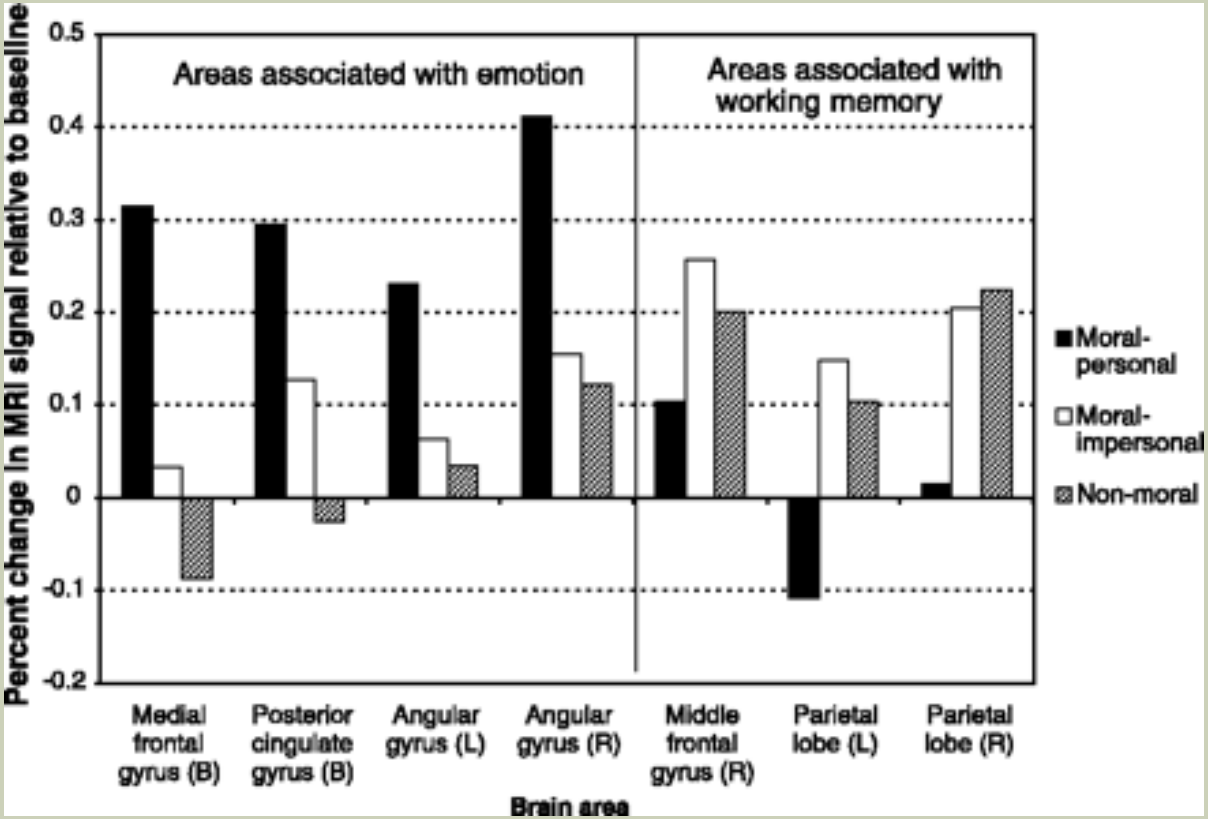
GREENE


Replication
Greene *et al*. (2001)
Personal moral judgment (e.g. *footbridge*)
vs.
Impersonal moral judgment (e.g. *trolley*)
Analysis 1
Difficult personal moral judgment (e.g. *crying baby*)
vs.
Easy personal moral judgment (e.g. *infanticide)*
Analysis 2
Utilitarian difficult personal moral judgment (e.g. smothering *crying baby* is judged "appropriate")
vs.
Non-utilitarian difficult personal moral judgment (e.g. smothering *crying baby* is judged "inappropriate")

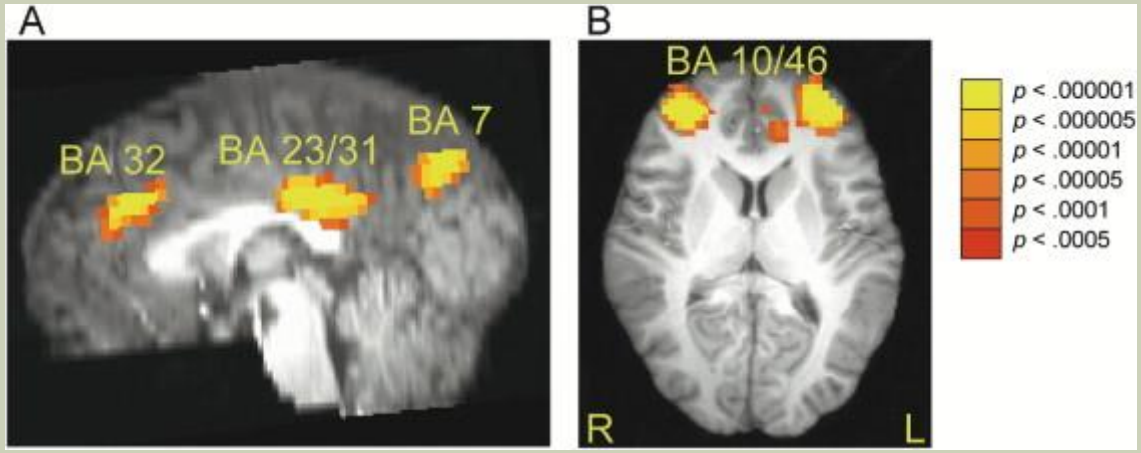
MORAL PHILOSOPHY

- Scenarios that probe moral intuition.
  - Much used in moral philosophy
  - One of the most famous is the "trolley" dilemma
- A runaway trolley is about to kill 5 people
  a) Push lever to change track -- kill 1 to save 5.
  b) Push man down foot bridge -- kill 1 to save 5.
- Deontological (emotion) /utilitarian (reason)

FOOTBRIDGE/SWITCH



DIFFICULT VS EASY PERSONAL DILEMMA



UTILITARIAN VS NON-UTILITARIAN