

Moral Psychonomics

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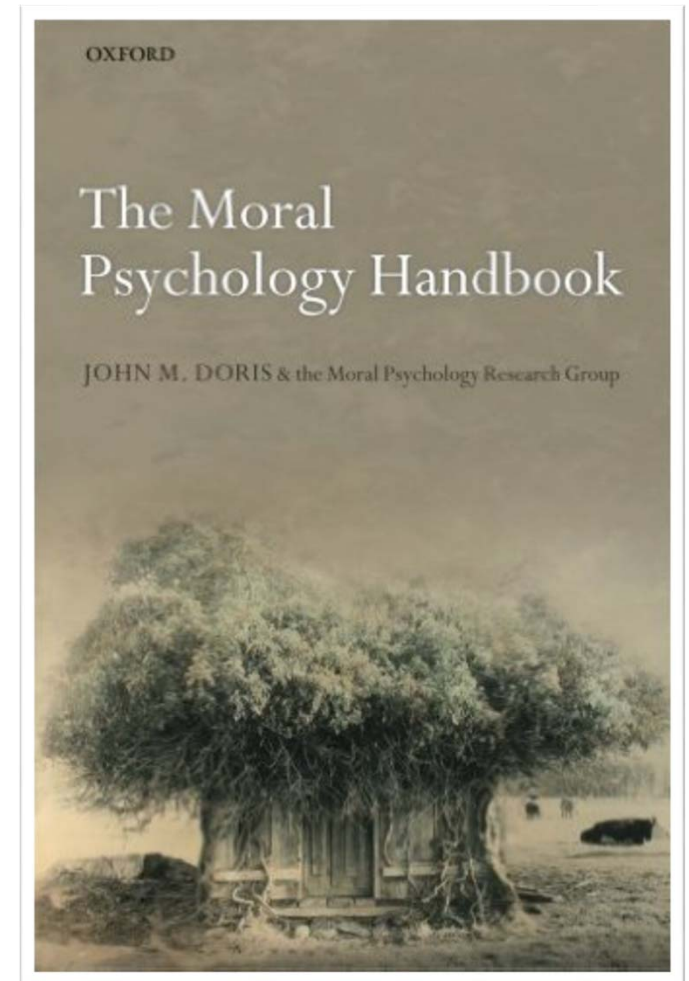
Moral Psychology

- How do human beings create and respond to occasions of moral significance?



Interdisciplinary Moral Psychology

- The study of moral psychology should be *richly* informed by the *quantities* of relevant empirical work in the human sciences.
- This methodological precept is *controversial* – in practice anyway.
 - *Descriptive v. normative*
- Yet moral philosophers *routinely* make (quite apparently) empirical claims.



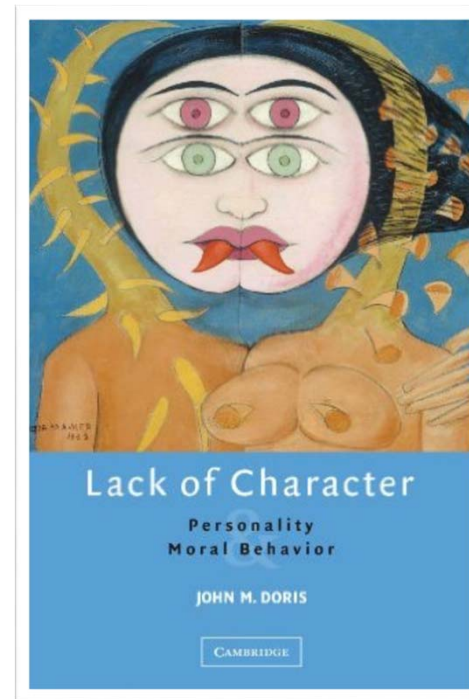
Moral Psychology: Philosophy & . . .

- Economics
 - Not so much
- (Cognitive) Social Psychology
 - Mostly
 - Accessibility (e.g., Milgram)
 - Appropriateness (Experimental Philosophy)
 - Happenstance (Small Worlds)



Moral Psychology: (Faintly Tendentious) Take-Aways

- **Small** things matter.
- **Silly** things matter.
- As a result, behavior is surprisingly **cross-situationally variable, or fluid**
- As compared with general **normative principles**



Illustrative Example

- **Ballot Order Effects:** candidates topping the slate may enjoy a several point advantage in vote share (Krosnick et al. 2004: 61–68; cf. Lutz 2010; Marcinkiewicz 2014; Meredith and Salant 2013; Webber et al. 2014).
- *I'll vote for her because she's first on the ballot*
- Huh? – small and silly
- *Vote for the best candidate.*
- [Not experimental social psychology –RepliGate]



Why is fluidity bad?

- Makes **planning, cooperation, trust, and norm-compliance** difficult



Why care about what moral psychologists do?

- MP and BE share core goals:
 - Descriptive agenda: **Understanding and predicting** human decision-making and choice
 - Normative agenda: **Manipulations and meliorations** aimed at happiness, well-being, welfare
- Cooperation should **enhance progress**



Moral Psychology: Moving forward

- Moral psychology has made progress on the **components** of moral cognition
- But the field would benefit from a **unifying model** of moral cognition



*“Research in moral psychology has focused primarily on the critically important first step of identifying the key ingredients of moral judgments and decisions—**norms, empathy, intentions, actions, outcomes,** and so on”*
(Crockett 2016, 85)



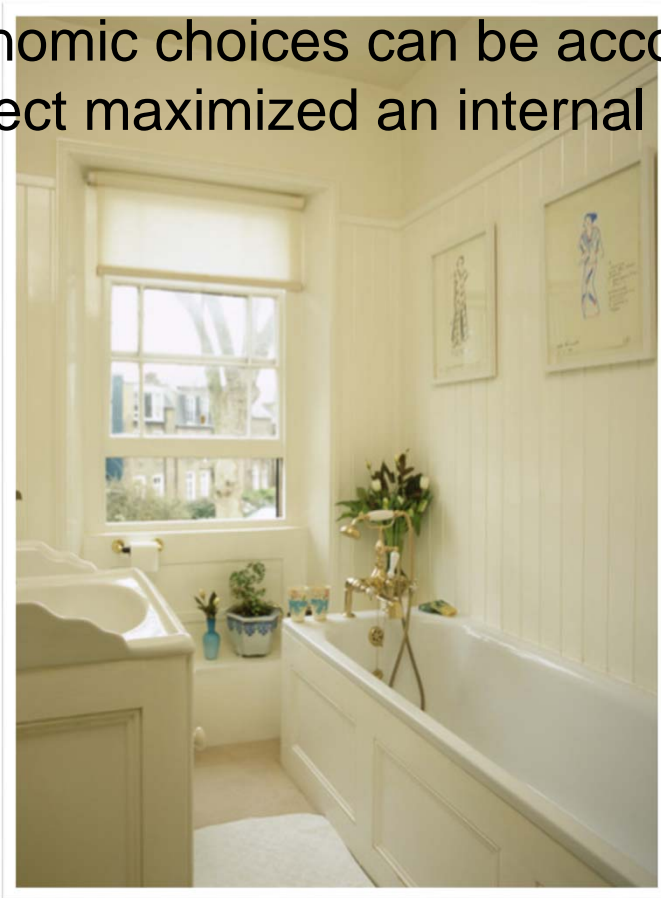
Neuroeconomic model of moral cognition

- We propose a model of moral cognition by building on the **neuroeconomic model** of choice



Neoclassical economics: Value as a theoretical construct

- Economic choices can be accounted for *as if* the choosing subject maximized an internal value function



E.g.: Buying a house in the suburbs or downtown



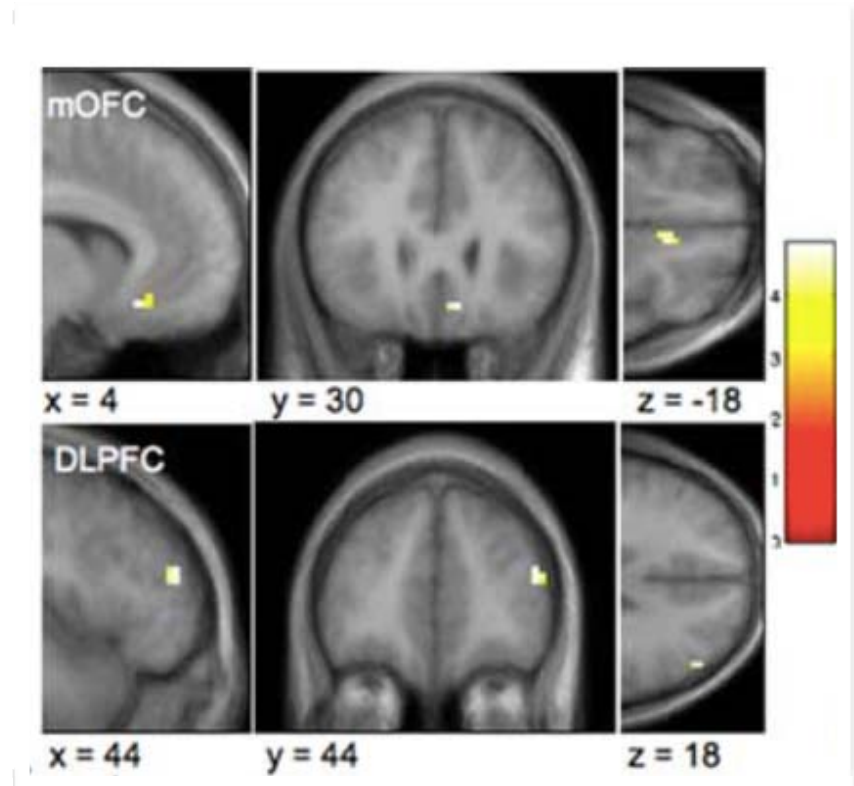
Neuroeconomics: Value as a function of the brain



- Not 'as if'
- Brain **assign values** to various choice alternatives
- Neural circuits **encode the cardinal subjective values** of the objects of choice (Glimcher 2011, Padoa-Schioppa 2011)

Neural signature of economic choice

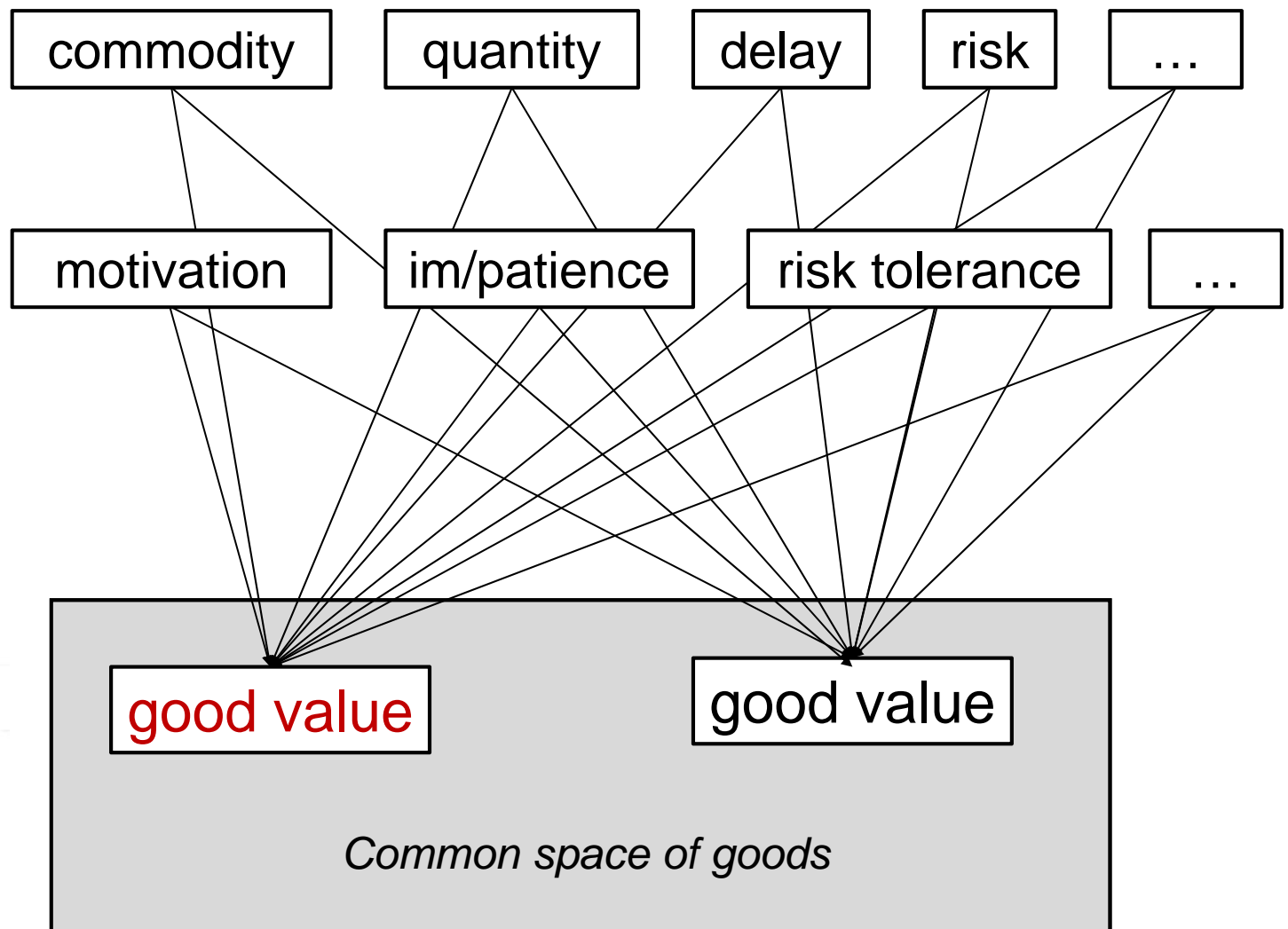
- Signaling in the medial orbitofrontal cortex (OFC) and in the dorsolateral prefrontal cortex (dlPFC) **encodes subjective value** (Plassman et al. 2007, De Martino et al. 2009)
- **How?**



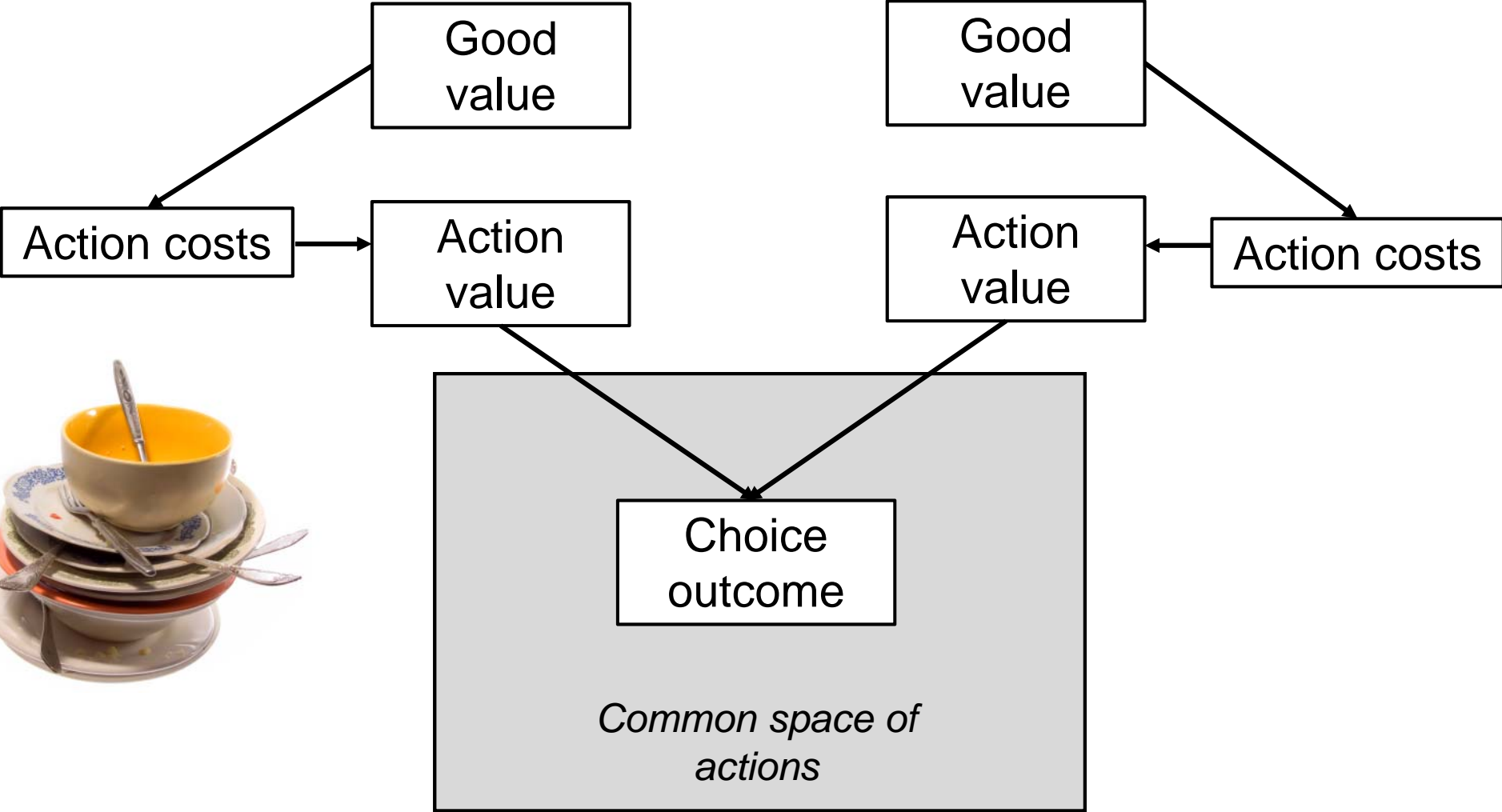
Goods-based model of subjective value (Padoa-Schioppa 2011)

*External
determinant
s*

*Internal
determinant
s*



Goods plus action costs



Subjective value is fluid

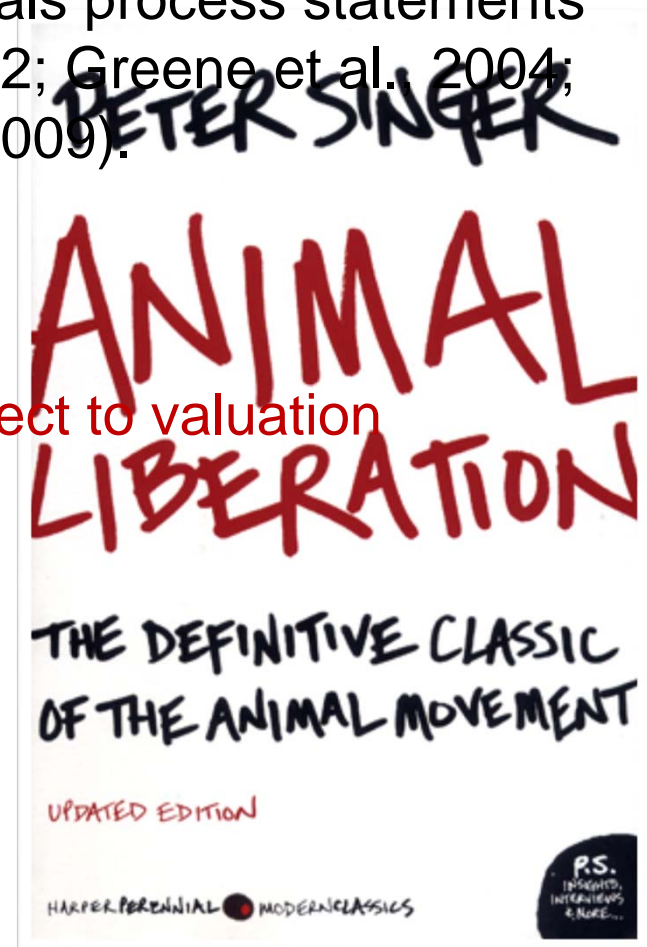
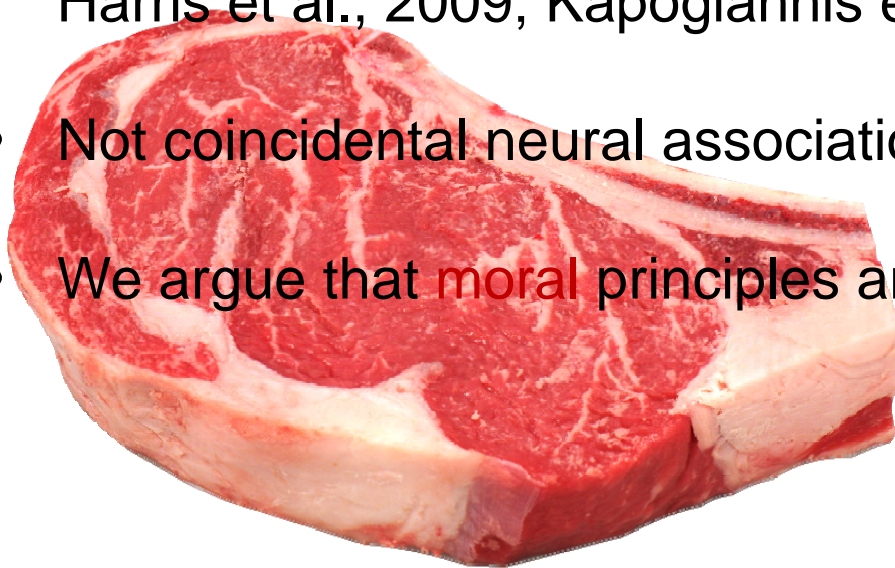
- Goods-based action values are calculated by the brain **online**, *i.e.*, at the **time of choice**
- Consequently, a given good's subjective value is surprisingly **variable** over time and across situations

What then of *moral* principles?

- PFC activation increases when individuals process statements about “sacred” values (Berns et al., 2012; Greene et al., 2004; Harris et al., 2009; Kapogiannis et al., 2009).

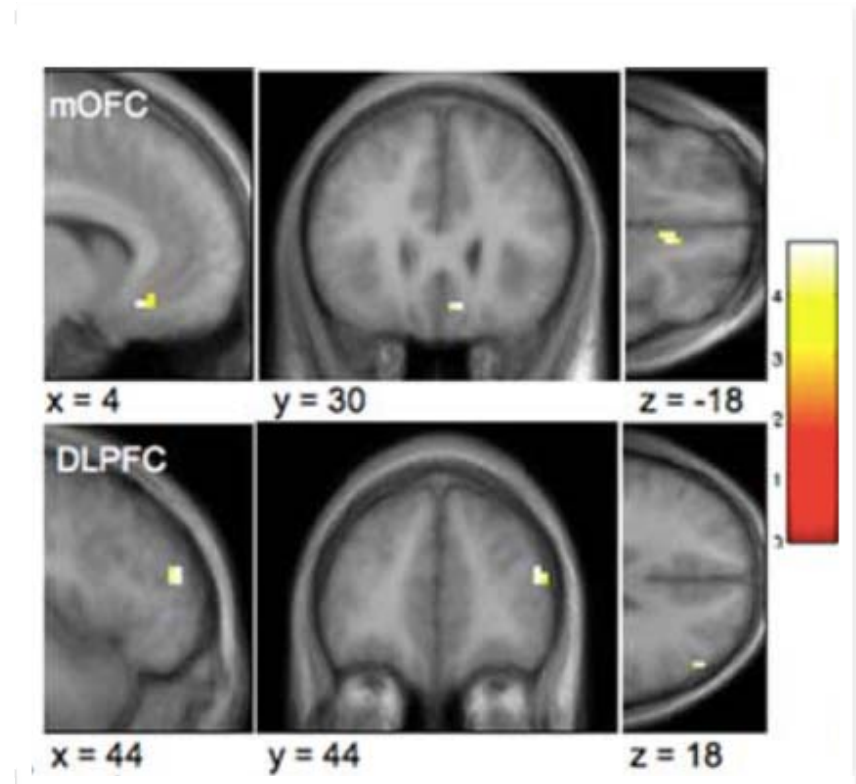
- Not coincidental neural association

- We argue that **moral** principles are **subject to valuation**



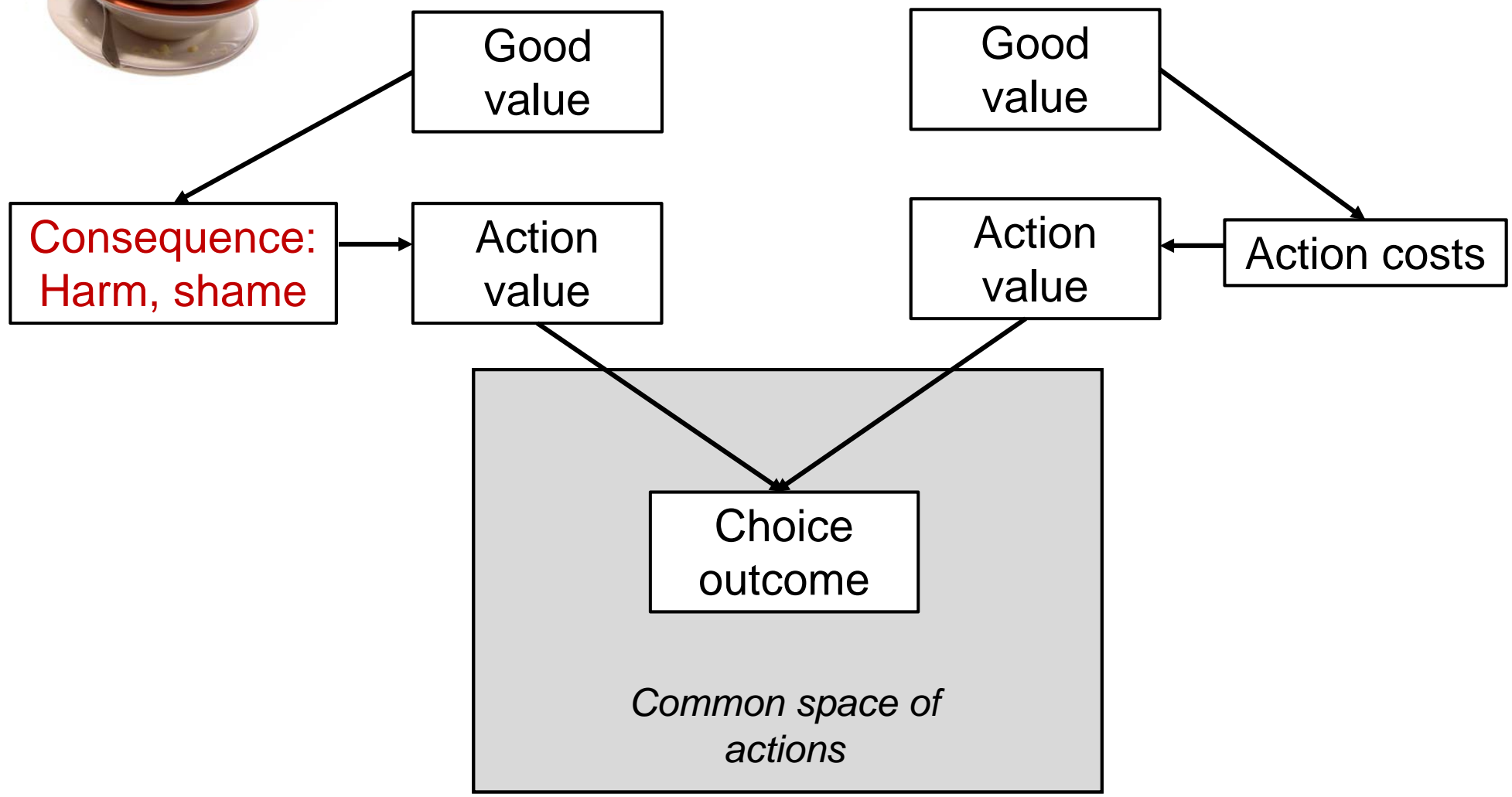
Prediction

- We predict a **positive correlation** between the values of different moral principles and their corresponding BOLD signal in the OFC, dIPFC
- **How?**
- **Three alternatives**

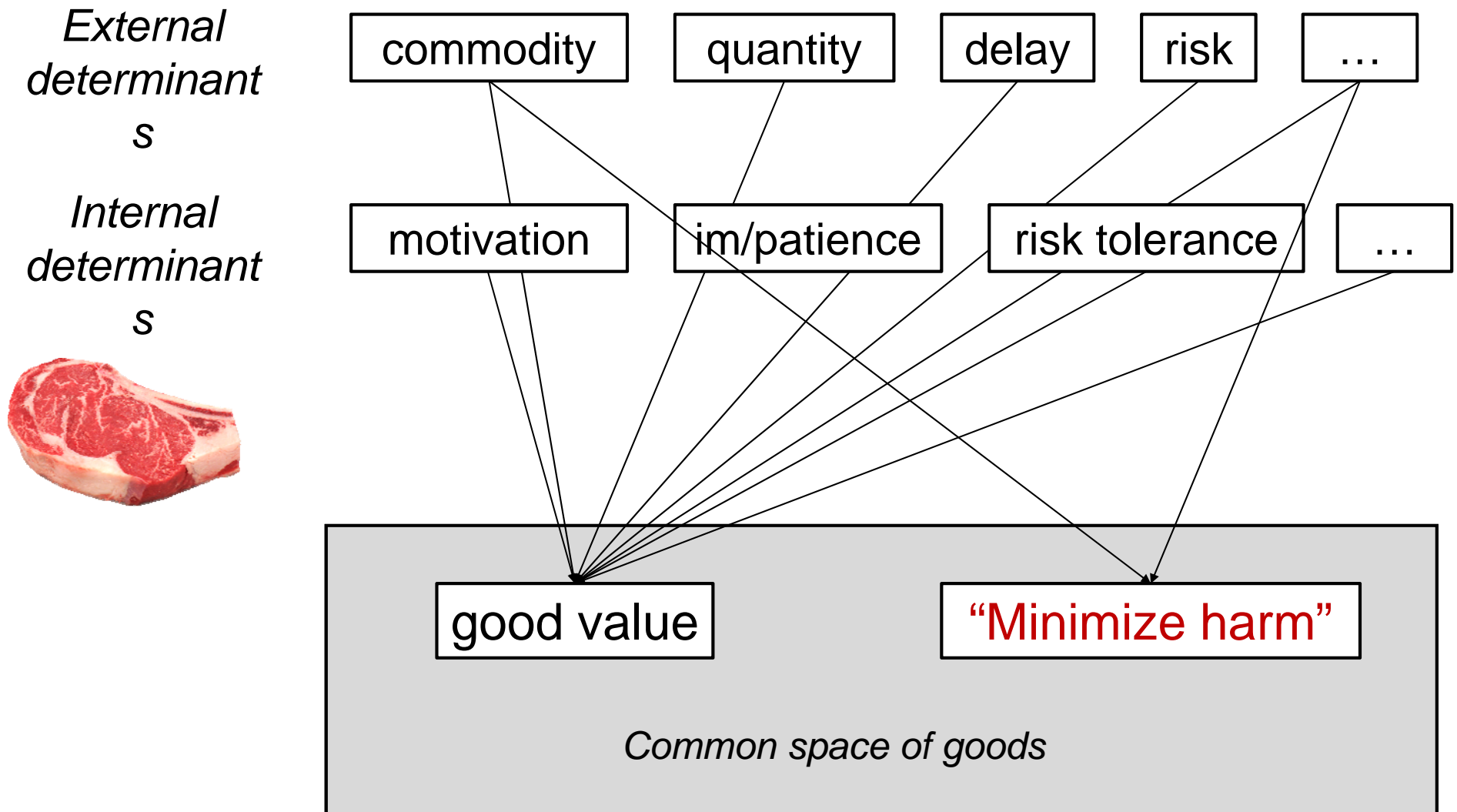




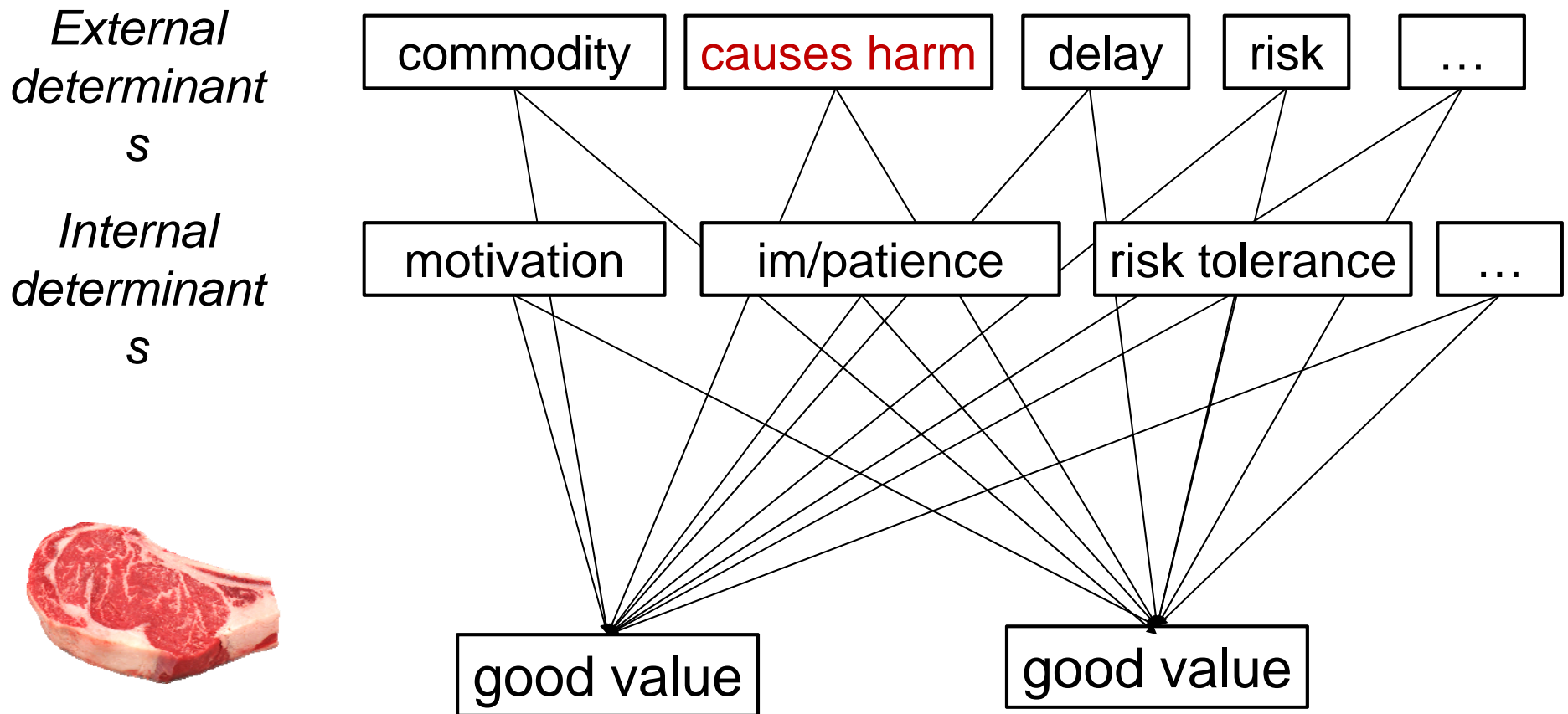
(1) Encoded as an action cost



(2) Encoded as a principle, maxim, or rule



(3) Encoded as an external determinant



Model of moral subjective value

- Neuroeconomic model of choice **extends** to moral cognition
 - Moral principles are **traded off** against material goods
 - Moral principles are traded off against **other moral principles**

Moral choices are inevitably fluid

- As in non-normative economic choice, we should **expect cross-situational fluidity**

Ensuring less fluid, more stable moral responses

- This understanding should help refine our predictive and manipulative strategies
- Target and manipulate valuation to ensure stable moral behavior

Thank you