



Studying Deliberated Judgements

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Context and goal of this poster

Context

- Internal deliberation facing a decision problem
- Considering an individual i

Goal

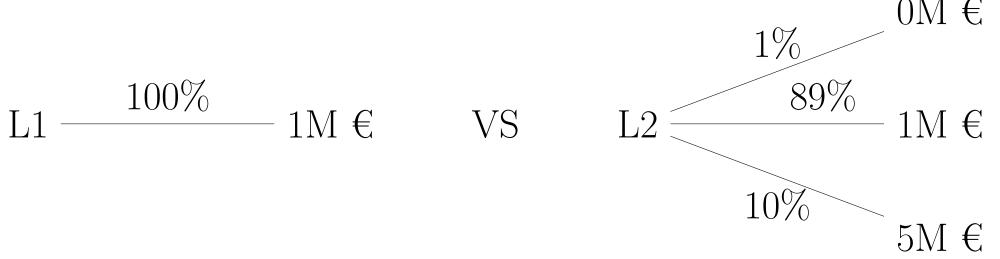
- Introduce the notion of Deliberated Judgement
- Motivate studying it
- Sketch how

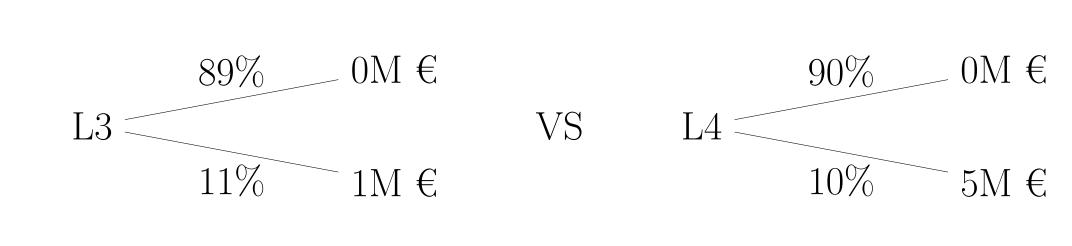
Deliberated judgement: a missing conception of "preference"

- Descriptive approach
- -Observe people's epistemic position / choice without interference
- Normative approach
- -How you ought to reason / choose
- -Can't be validated through observation of individuals
- Deliberated judgement (or preference)
- -i's position after having considered all arguments

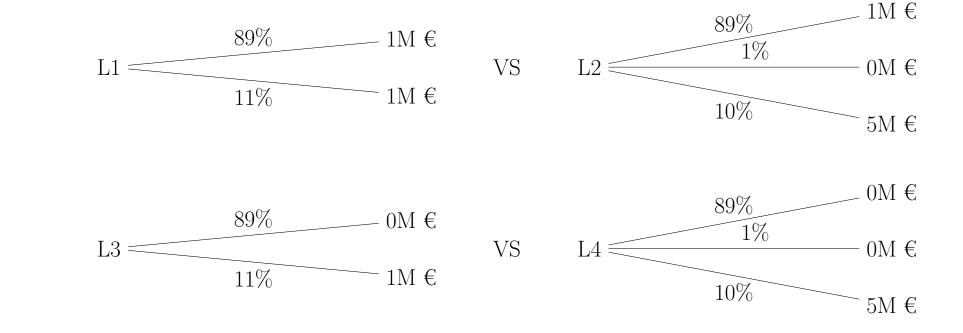
Deliberation can change your mind

Choose between L1 and L2, then choose between L3 and L4. Are you sure? $0M \in \frac{1\%}{89\%}$ $1M \in \frac{13}{14}$





- First observation (Bernouilli): don't be content with maximizing (untransformed) expected revenue!
- Second observation: i could be intuitively attracted by L1 \succ L2 and L3 \succ L4 (Allais's problem)
- Including Savage
- And might change her mind when given a reasoning pro expected utility
- "There is, of course, an important sense in which preferences, being entirely subjective, cannot be in error"
- ... "but in a different, more subtle sense they can be." (Savage, The Foundations of Statistics)
- ⇒ Systematic decision principles might help deliberate



Study deliberated judgement

The proposed research program aims at the following.

- . Define Deliberated Judgment (DJ) formally
- Given a set of arguments
- Of an individual i
- \Rightarrow The position that is stable facing counter-arguments
- 2. Define the concept of a model of someone's DJ
- \Rightarrow A model articulates claims concerning i's DJ and argues for its claim
- 3. Define validity of a model
- \Rightarrow Correctly captures *i*'s DJ
- 4. Study conditions for falsifying models using observable data only
- \Rightarrow Let models debate, use i as a judge

Example of a situation and a model of it

Notation	Here	Description
\overline{T}	$\{t\}$	The topic, containing propositions about which i deliberates
S	$\{s,s_1,s_2,s_3\}$	The arguments
$\leadsto \subseteq S \times I$	$T \mid \{(s,t),(s_1,t)\}$	Support as considered by i
$\triangleright_\exists\subseteq S imes S$	$S \ \{(s_2,s_1)\}$	Attacks as considered by i in some perspective
$\rhd_\eta \subseteq S \times \mathcal{S}$	$S \ \{(s_3,s_2)\}$	Attacks as considered by the model η
•		

weather f. predicts so $(s_1) \rightsquigarrow \text{rain tomorrow } (t) \rightsquigarrow \text{complex arg. } (s)$

weather forecast is often wrong (s_2)

 \triangleright_{r}

weather forecast is more often right (s_3)

Application: test axioms of decision theory

- Axioms considered appropriate normatively?
- -But some (Allais, Ellsberg) disagree
- Proposal: build models resting on those axioms
- Test models: their convincing power will give us indications about the reasonableness of the axioms for "normal" people (meaning, not scientists studying decision theory)

Application: test conceptions of justice

- Philosophers have proposed sophisticated conceptions of justice (Rawls, Nozick, ...)
- Individual's shallow intuitions about justice are observed and used to confront Rawls or others (Experimental Social Choice)
- Proposal: study reactions of individuals to arguments of philosophers rather than just shallow intuitions
- Move towards Reflective equilibrium (Goodman, Rawls)

Olivier Cailloux and Yves Meinard. A formal framework for deliberated judgment. To appear in Theory and Decision. arXiv:1801.05644 [cs.AI].