

Defining and capturing deliberated preferences

Olivier Cailloux

LAMSADE, Université Paris-Dauphine

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<https://github.com/oliviercailloux/quick-deliberated>

What: Considered decisions

Help Decision Maker (DM) take considered decisions

- Which site for a nuclear plant?
- Which smartphone should I buy?
- Which voting rule should we implement?

My main interest is in analyzing such situations abstractly and generally

Perspective: Deliberated preferences

Intuitive preference

- Preference as an “immediate sensation” [von Neumann and Morgenstern, 1944]
- i knows what's best by introspection
- Recommend a movie: i knows how good it feels
- “There is, of course, an important sense in which preferences, being entirely subjective, cannot be in error” [Savage, 1972]

Deliberated preference

- ... “but in a different, more subtle sense they can be.”
- Change of mind after thinking about it
- Relates to “slow thinking” [Kahneman, 2013]

I want to define precisely and analyze deliberated preferences

How? Axiomatic analysis and argumentation

	aspect 1	aspect 2	aspect 3	aspect 4	
a	7	10	7	—	
b	1.5	5	1	—	
c	7.5	2	5	+	
d	2.5	3	3	++	
					$\xrightarrow{f} a > b$

- A family of aggregators \mathcal{F}
 - P_1, P_2 : properties of aggregators (Pareto-Dominance, Sure thing principle, Condorcet. . .)
 - Explain to the DM: if P , then $a > b$
- Argue: $\neg(a > b)$, otherwise $\neg P$

Enables

- Test axioms
- Compare aggregators empirically

Thank you for your attention!

References I

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