

How to Connect

Bounded Rationality and Shared Planning Agency

Bratman's Creature Construction of Planning & Shared Agency

Model/ Creature #	Key new capacities and limitations on each level
1	Moved by strongest desire or cluster of desires
2	Moved by strongest desire(s) and their direct consequences
3	Treating desired ends as justifying
4	Settle on partial plans of action in advance
5	Taking one's future self into account (anticipated future regret)
6	Reflective endorsement and rejection of desires (through higher-order desires)
7	Plans and policies apply to intentions, plans, and desires
8 = Human agency	Policies express commitment by desires by way of treating the desire as providing, in deliberation, a justifying end for action (Bratman 2000)
Social	Sharing desires, intentions and plans as justifying ends for action, having common knowledge of these shared intentions (Bratman 2014)

Agency

human agency

Bratman's Planning Agency

Diachronic and synchronic coherence is essential for Bratman's account of (shared) agency.

- Coherence is maintained through intentions, plans, and policies.
- Agents agglomerate intentions into larger consistent intentions

Creature 8 "is an agent with considered desires and beliefs, stable plans and policies, and higher-order self-governing policies [...] our model of Creature 8 seems to me to capture important core features of *our* agency" (Bratman 2000: 259).

Problems & Questions

- Assuming we do not always act following creature 8's deliberations: what do we do the rest of the time?
 - Do we act based on one of the lower creatures he constructed?
 - Or are acts underpinned by a different form of rationality, i.e., bounded rationality?
 - Both proposals are problematic for Bratman:
- If they are underpinned by bounded rationality, how do bounded and 'unbounded' rationality relate?
- Can we see intentions, plans and policies as *one* of the heuristics we use?
- What role does coherence through intentions and policies play in relation to bounded rationality?
- What other routes to shared agency are opened when considering bounded rationality?

Bounded Rationality

Heuristics are seen as a set of **building blocks** that can be combined to make accurate inferences despite being **bounded by limited time, knowledge, and computation.** (See Gigerenzer & Todd 1999, Hertwig & Herzog 2009, Kahneman 2011)

- Decisions and actions lead to **success in the external world**, not to internal coherence of knowledge and inferences.
- Less about omniscient minds and more about being able to act **quickly and reliably in a specific environment.**
- Not unconditionally successful: only ecological value, "true" in a certain situation
- Not the best decision, but a **satisfying** decision

Examples

- Satisficing: finding an action option, checking if it satisfies the desired end-state, and if so: picking it. Not checking for further (better) options. (Simon 1990, Klein 1998)
- Imitate-the-majority heuristic: looking at a majority of people in your reference group and imitating their behavior (Boyd & Richerson 2005)
- Imitate-the-successful heuristic: Looking for the most successful person and imitating their behavior (Boyd & Richerson 2005)
- Equity heuristic: distributing resources equally among N available options, people, etc. (Hertwig, Davis & Sulloway 2002)
- Motion cues help quickly categorize behavior into six categories, based on seven cues. (Blythe, Todd & Miller 1999)

Core References

Blythe, P. W., Todd, P. M., & Miller, G. F. (1999). How motion reveals intention: Categorizing social interactions (pp. 257-285). Oxford University Press; US.
 Boyd, R., & Richerson, P. J. (2005). *The Origin and Evolution of Cultures*. New York: Oxford University Press.
 Bratman, M. E. (2000). Valuing and the Will. *Noûs*, 34(s14), 249-265.
 Bratman, M., E. (2007). *Structures of Agency: Essays*. Oxford: Oxford University Press.
 Bratman, M., E. (2014). *Shared Agency: A Planning Theory of Acting Together*. OUP.
 Gigerenzer, G., & Todd, P. M. (1999). Fast and frugal heuristics: The adaptive toolbox (pp. 3-34). Oxford University Press.

Hertwig, R., & Herzog, S. M. (2009). Fast and frugal heuristics: Tools of social rationality. *Social Cognition*, 27(5), 661-698.
 Kahneman, D. (2011). *Thinking, Fast and Slow*. Farrar, Straus and Giroux
 Klein, G. (1998). *Sources of power: How people make decisions*. Cambridge, MA: MIT Press.
 Simon, H. A. (1990). Invariants of human behavior. *Annual Review of Psychology*, 41, 1-19.

