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Mental Action & Epistemic evaluation

Joëlle Proust
http://joelleproust.org

What is the role of epistemic evaluation in mental action?

Granting that:

- A mental action is an episode of controlled thinking (memory, perception, reasoning) with a specific informational goal,

- Mental actions can be performed in the absence of epistemic/mental concepts
  - by infants: Goupil & Kouider, S. (2016): information-sensitive questioning
  - By nonhuman primates: Beran (2015): reliable control of memory and perception in opt-in/out decisions.

Is epistemic evaluation involved? If so, is it inherent to every mental action, or is it an independent agentive step?

Outline

1. Clarifying the nature of mental action
   a. Mental operation vs. mental action: the trying criterion
   b. Epistemic action versus instrumental action

2. A representational-causalist ("executive") view of mental action

3. Three ways of initiating a mental action: consequences on evaluation

4. Conclusion

1 - Clarifying the nature of mental action

Mental trying   versus   Mental operation

One can try to

- Discriminate a shape
- Remember a name
- Learn a poem
- Solve a problem

One cannot try to

- Perceive colors in normal lighting conditions
- Spontaneously fix a (non Gettier) kind of perceptual belief
- Automatically infer a proposition from another
- understand ordinary utterances in one's native language

Epistemic action versus instrumental action

A mental action is an episode of controlled thinking (memory, perception, reasoning) with a specific goal:

- remembering correctly,
- perceiving accurately,
- reasoning coherently, relevantly, etc.

- Mental actions have epistemic/informational subgoals. Their outcome can serve instrumental ends.
- Hence the choice of a particular mental action can be justified or not **from both** an epistemic-informational and an instrumental viewpoint.

Epistemic action versus instrumental action

Epistemic action:

Epistemic norm(s)
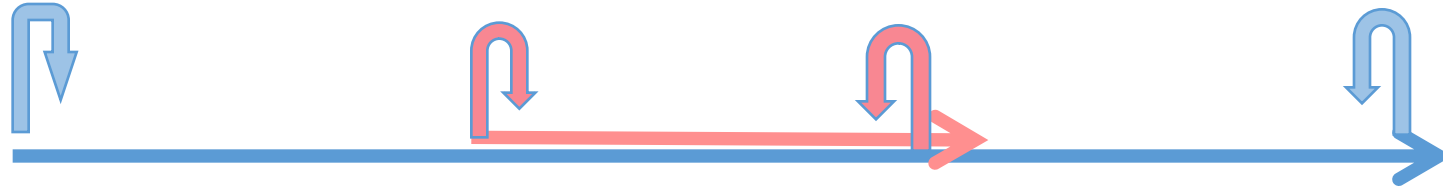
Instrumental action: norm of utility

2 - A representational-causalist view of mental action

Is "trying"(or "willing") independently causally efficacious?

- There is no more independent "trying" or volitional episode, followed by a specific action content, than there is content-independent perceiving or believing.

- What does a trying to do A consist in?

- Plausible hypothesis: The representation of an action itself has an executive dimension (Bach, 1978, Proust 2003).

Theories of executive representations: the action-effect model

Executive representations are a functional consequence of the teleological, **action-effect** model (W.Prinz, 1990):

- An action first occurs in an explorative manner in motivating contexts of a given type.

- A representation is thereby created associating a given motor sequence with an outcome.

- When the initial action has produced rewarding effects, it tends to be **selected and performed again (i.e. intended, tried, or simulated)** in the relevant contexts.

Generalizing the action-effect model: adaptive control theory

Adaptive control theory completes the action-effect representation of action with:

- sophisticated **predictive Bayesian mechanisms** ("forward models") and **selection procedures** ("inverse models").

- **comparators** able to assess on-line the degree of divergence between expected (internal) feedback and observed effects (external feedback).

→From an Adaptive control viewpoint, intending is inherent to a **specific** conscious goal representation, which activates subpersonally its associated executive commands.

→ You never intend to intend, or will to will.

Kent Bach 1978: "representational causalism"

- Bodily acting relies **on two sets of executive representations:**
  - **Effective representations** provide the commands,
  - **Receptive representations** provide feedback for correction or termination of the process.

- **Executive representations**
  - are **not** propositional in form
  - not necessarily **linguistically coded**
  - nor do **they necessarily imply any intentions or beliefs**. (Bach, 1978, 366)

Executive representations for mental actions?

- Acting mentally similarly might be claimed to rely on two sets of executive representations:
  - **Effective representations** provide the commands, for example:

  trying to remember a name

  - **Receptive representations** provide feedback for (i.e. monitor) correction or termination of the process; for example,
    - The agent feels that she can reliably retrieve the name that she is searching
    - The agent feels that the name she retrieved is correct.

Executive representations for mental actions?

Receptive representations provide feedback for (i.e. monitor) correction or termination of the process

This view competes with a conception of evaluation-based control according to which a mental action is meant to form an attitude embodying our **answer to a question or set of questions (Hieronymi, 2009, p. 139)**

For answering a question is a propositional attitude which itself **presupposes a prior sensitivity to informational gaps** embodied in nonconceptual receptive representations, **and efficient commands for repairing them**.

2 Hypotheses

1. Agents' ability to ask questions to themselves (and others) is **derived** from more basic forms of mental actions that do not require a mastery of questioning or of concepts such as knowledge and ignorance.

   Hypothesis 1 consistent with representational causalism and with evidence for animal & infant metacognition

2. A way of accounting for such derivations is to hypothesize that mental actions can be reactive or strategic, with a respective implicit (and non conceptual) or explicit (and conceptual) form of norm-sensitivity.

   The next section defends hypothesis 2

3 - Three ways of initiating a mental action: consequences on evaluation

Evaluation of mental actions in context

Consider 3 cases of situations

1) You suddenly realize that your toddler child is no longer on your side in a city stroll.

2) You don't understand a word in a foreign idiom.

3) You plan Summer vacations in a distant country you never visited before.

Case 3 differs from 1 and 2 both on time/resources needed

Selection & evaluation of mental actions: the role of contextual constraints

Cases	Trigger of action	Initial evaluative step	Type of Mental Action
toddler child lost	Violation of spatial prediction	Feeling of not knowing & danger, with resolution **uncertainty**	**Impulsive**
Word understanding	Violation of expected reading fluency	Feeling of not knowing, With resolution **certainty**	**Routine**
Planning vacations	Set of beliefs, motivations and preferences	Knowledge and metaknowledge related to vacationing	**Strategic**

Selection & evaluation of mental actions: the role of contextual constraints

Cases	Trigger of action	Initial evaluative step	Type of Mental Action
toddler child lost	Violation of spatial prediction	Feeling of not knowing & danger, with resolution **uncertainty**	**Impulsive (time constraint)**
Word understanding	Violation of expected reading fluency	Feeling of not knowing, With resolution **certainty**	**Routine (resource economy)**
Planning vacations	Set of beliefs, motivations and preferences	Knowledge and metaknowledge related to vacationing	**Strategic (reduced constraints on resources and time, more demands on reliability)**

Reactive actions, based on nonconscious heuristics and conscious noetic feelings

No mental action would be possible without evaluative "noetic" feelings occurring at critical junctures

- When action A is found normatively flawed: motivate **switching to corrective action B if B is sensed as feasible** (ex: memory flaw- trying to remember - feeling of knowing)

- When action A is developing with no outcome in sight: **assess when it's worth stopping to A** (resolution uncertainty) (ex: feeling of effort heuristic)

- When action A has produced an outcome: **assess whether this outcome fulfils the conditions of correctness for A** (ex: feeling of being right)

Strategic mental actions

- Have access to reflective knowledge about justification
- Can select rule-governed methods that are most able to serve specific epistemic goals
- Allow filtering out known epistemic illusions, spurious forms of causal explanation (conspiracy theories, etc.)
- ➢ Still, they need to rely on noetic feelings to evaluate each individual subgoal. For example, careful planning will be evaluated for coherence, simplicity, etc. in an automatic way, acquired by our reactive habits. (Hookway, 2007).

Why is this important?

1. **Reactive actions can be rational or not as a function of current rational trade-off,** which is often ignored.

    - For example, **fluent** processing can be a reliable and consistent **truth** indicator – but this is no longer rational outside reactive actions.

2. **Routine mental actions (to acquire information, check accuracy, etc.) depend for their existence on education and social epistemic practices**. Epistemology should recognize the connection of individual norm sensitivity and socially acquired epistemic and communicative norms.

3. **Norms** that can at first only be **applied strategically** can**, with prolonged** education and training, be turned into rational habits, and give rise to strategically engineered ***"critical feelings".*** (Reber & Slingerland, 2015)

In summary.. Norms of evaluation depend

in part: on goal

- Remembering : fluent, accurate, or exhaustive
- Discriminating: fluent, accurate
- Reasoning: fluent, coherent, plausible, accurate, relevant, consensual.
- Etc.

In part: on time and resources

  ➢ **Impulsive or emotional mental actions:** selected when goal is **urgent**
  ➢ **habitual or routine mental actions:** selected when goal is **recurrent**
  ➢ **strategic mental actions:** selected when goal **constitutively involves reflective thinking**

Conclusion: Evaluative control vs managerial control?

Are evaluations a form of control? Hieronymi, (2009)

- *Evaluative control* is defined as the ability to change one's own attitudes (intentions and beliefs) as a function of the reasons one has for doing so: one asks oneself whether one should perform action *A*, or believe *P*, and finally decides to do *A*, or to believe *P*, (or not).

- *Managerial control* consists in acting in a way that secures one's having an attitude one wants to have (for non-epistemic motives), rather than deliberating about the proper attitude to have.

- The author observes that evaluative control is not a source of agency in the same sense as managerial control, because it is not up to the agent to decide what to do or believe, as it is in managerial control.

Point of agreement

An epistemic command does not **control an attitude content.**

- It rather maintains our attention focused on an epistemic goal (such as: trying to remember a factual property)

- This person-level command is associated with subpersonal search and evaluative mechanisms.

- Receptive representations are the nonconceptual outcome of these mechanisms, which in turn motivate attitude change.

Points of disagreement

1. From an action-effect viewpoint, critical junctures motivate revisions, but are not **mental actions**; they rather are constitutive ingredients in mental actions.

2. In **reactive** mental actions, commands are not self-presented as questions.

3. When they are so presented, the corresponding mental act consists in the **strategic** mental action of planning to respond to a question.

A second type of control: managerial control

- P. Hieronymi: *Managerial control* consists in acting in a way that secures one's having an attitude **one wants to have**, rather than deliberating about the proper attitude to have.

- also Blaise Pascal (& René Descartes)

    "Il y a deux entrées par où les opinions sont reçues dans l'âme, qui sont ses deux principales puissances, **l'entendement et la volonté**."

When evaluative and managerial forms of control cooperate

- Granting that habitual epistemic practices end up producing noetic feelings,

- One can transform strategic, rule-governed reasoning into habits by prolonged education (the "Confucean transformation"). (Reber & Slingerland, 2015)

- A form of knowledge-friendly managerial control, then, consists in intentionally upgrading the epistemic sensitivity of consenting agents
  - Not by implanting a given attitude content in their mind
  - But by shaping a sensitivity to "critical feelings" in case of violation of higher level rational requirements.

Thanks for your attention!