EPISTEMIC PRACTICES:
AN INFERENTIALIST-NATURALIST APPROACH

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FRAMEWORK

What is rational action?
Action that optimises a utility function? (rational digestion?), or
Action motivated by a process of reasoning?

TWO PROBLEMS
1. Is reasoning itself an action?
   What is rational reasoning?
   A rational action is one that is motivated by a process of ‘appropriate’ reasoning
   How to model normativity?
2. How does reasoning ‘motivate’ action?
   ‘Humean’ stance: statistical correlation
MODELLING REASONING AND DELIBERATION AS SCOREKEEPING

Inspiration

• Wittgenstein to Speech Act Theory
  (Language games)

• Sellars to Pragmadialectics to Brandom
  (Rationality as ‘giving and asking for reasons’)

• Artificial agents, evolutionary models, and computer simulation
THREE MAIN ELEMENTS

1. For an agent $a$ at moment $t$, we associate a ‘normative score’ telling what claims or actions she is committed or entitled to do (new commitments or entitlements can be triggered by external events –e.g. perceptions–).

2. Agents are located in a system specifying what commitments or entitlements they have at moment $t+1$, given the ones they had at $t$ (‘inferential norms’).

3. A ‘behavioural law’ giving the probability that action $A$ is done by $a$, depending on the normative status of $A$ for $a$. 
'Reasoning' as the process by which an agent 'follows' the inferential links determined by her score and the inferential norms.

The statistical nature of the behavioural law makes possible that not all ‘conclusions’ are actually derived by the agent. Mutually contradictory claims can also be derived sometimes.

‘Deliberation’ as the process by which an agent intends that another agent goes to certain conclusion from the claims the latter is committed to.
Where has naturalism gone?

The introduction of *normative* concepts seems to go against naturalism (cf. Brandom’s non-naturalist elimination of ‘beliefs’ and ‘preferences’)

**Two ways of defending naturalism:**

1. The normative concepts can be introduced as theoretical primitives, *‘partially interpretable’* through their empirical consequences together with the other element of the theory (behavioural law).

2. A plausible evolutionary psychological interpretation can be given (eg. Carruthers’ “two reasoning systems” theory)
A NATURALIST MODEL OF RATIONAL BEHAVIOUR

Distinction between an agent’s **normative score** (what she is committed to claim/do) and her **psychological state** (what he actually believes/desires). Call their combination the agent’s **epistemic state**.

Psychological states are linked by **psychological regularities** (not by inferential norms).

The **behavioural law** will make depend actions *also* on the agent’s actual beliefs and desires.

Normative scores are **reduced** to beliefs about entitlements and commitments. So, they can also have an **influence** on the other psychological states, through the psychological regularities.

Rationality-as-‘optimisation’ is a **special case**: when normative scores can be subject to some optimisation procedure.
DEONTIC SCORE
(commitments and entitlements)

PSYCHOLOGICAL STATE
(beliefs and desires)

DEONTIC SCORE
(commitments and entitlements)

PSYCHOLOGICAL STATE
(beliefs and desires)

EVOLUTION BY DELIBERATE OR UNINTENDED MODIFICATION

EXTERNAL EVENTS

(INCLUDING OTHERS’ ACTIONS)

PSYCHOLOGICAL TENDENCIES

Epistemic state 1

Epistemic state 2

INFERENTIAL RULES
EPISTEMIC PRACTICES

• An *institution* is a system of inferential norms.
• *Epistemic institutions*: those whose main function is the production of *doxastic* claims

• *Collective agency* is no particularly problematic; it only needs that the scores of a ‘collective agent’ can be defined (no ‘psychological states’ needed)

• *Assessment* of epistemic practices by the *success* of the *actions* they tend to produce, in relation to the *goals* of the agents, or to *our own goals*.

• Different ways of *changing institutions*:
  – Deliberate agreement (contractarian views)
  – ‘Blind’ selection (e.g., Austrian economists)
  – Usually, by a mix.
AN EXAMPLE: THE GAME OF SCIENCE

• A scientist’s score: the claims she has accepted (or is assumed to accept)

• Two valuations of the score:
  – internal (how well the methodological norms have been followed)
  – external (how many claims from the scientist become accepted in her colleagues’ own scores)

• Three types of inferential norms:
  – Evidence gathering norms (from ‘events’ – observations or authority- to ‘claims’)
  – Dialogical norms (from claims to claims; rules for theory evaluation vs. rules for theory choice)
  – Resource allocation norms (from scores to actions)

• What combinations of norms are better from an epistemic (or social?) point of view?