Cognitive Economics and the Organization of Inquiry

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New Collectives / Agent Organizations & Economies

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Cognitive Economics → Data Engineering → Cognitive Engineering

Cognitive Economics Starts Before Choice

Standard emphasis

$$\text{world} \rightarrow \text{beliefs} \rightarrow \text{choice}$$

Given beliefs and incentives, explain action.

Move upstream

- What did they know?
- What did they notice?
- What did they investigate?
- Which questions were missed?
- When did they stop learning?

Not just behavioral economics

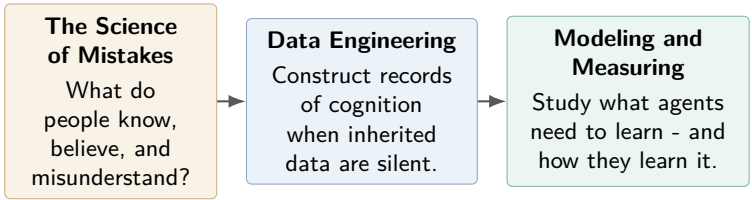
Behavioral economics taught us to take cognitive limits seriously.

Cognitive Economics measures and models the knowledge, beliefs, and learning processes from which behavior emerges.

Rationality is not omniscience. Mistakes can arise from costly, incomplete inquiry.

People do not merely process information; they must discover what is worth learning.

A Research Program: From Mistakes to Inquiry



The earlier book

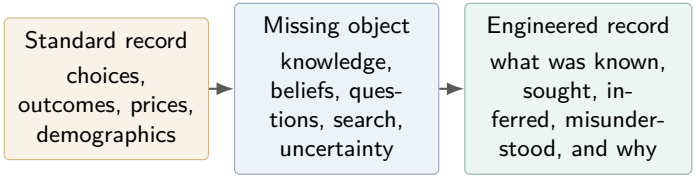
An Introduction to Cognitive Economics: The Science of Mistakes introduces the field and the basic measurement problem.

The current book

Modeling and Measuring the Modern Economy: Learning What to Learn - and How extends the program from individual mistakes to organized inquiry.

My work has moved progressively upstream: from decisions, to cognition, to the organization of inquiry.

Data Engineering: Build the Missing Record



Problem

Inherited datasets usually preserve the decision and the outcome, but not the cognitive process that produced them.

The method I call Data Engineering

Design new observational objects: beliefs, expectations, missing questions, diagnostic histories, advisory interactions, and decision records.

If the observations needed to study cognition do not exist, build them.

See "Data Engineering for Cognitive Economics," *Journal of Economic Literature* 63(1), 2025.

AI Changes the Scale of the Problem

AI amplifies inquiry

- agents can search, question, compare, simulate, and act at scale;
- delegated inquiry can fail before the final choice;
- speed and volume make attention and rules more binding.

AI exposes inquiry

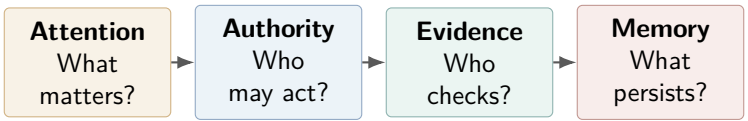
- prompts, questions, tool calls, sources, and revisions can be logged;
- challenge, abstention, and escalation can leave traces;
- alternative institutional designs can be compared.

The cognitive-economic problem does not disappear.
It becomes more important - and potentially far more observable.

AI makes inquiry more consequential because machine systems can conduct it, scale it, and act on it.

Acting Together Changes the Object Again

One agent has a cognitive problem.
Agents acting together have an institutional problem.



At first glance, this is a meeting about AI agents.
The deeper object is an institution.

An organization divides up inquiry as well as action.

From Data Engineering to Cognitive Engineering

Human cognition

Construct records that reveal how inquiry occurred: knowledge, beliefs, missing questions, search paths, advice, and mistakes.

Agent organizations

Design the rules under which inquiry occurs - and preserve the record of questions, evidence, challenge, escalation, and stopping.

This is what interests me about New Collectives: inquiry may become not only measurable, but experimentally designable.

Behind this talk: *An Introduction to Cognitive Economics: The Science of Mistakes* | "Data Engineering for Cognitive Economics," *JEL* (2025) | *Modeling and Measuring the Modern Economy: Learning What to Learn - and How* (forthcoming).