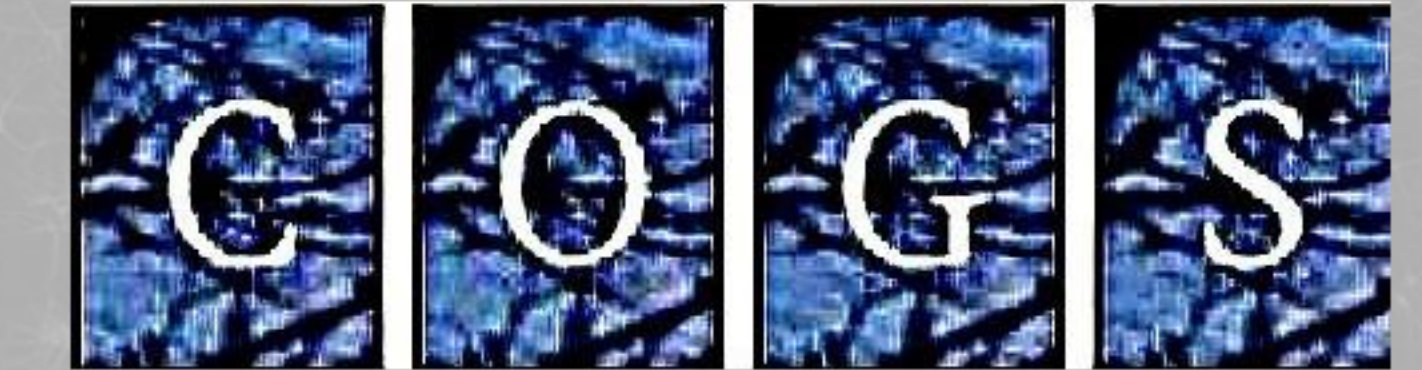


# Getting to the Heart of the Concept CONCEPT



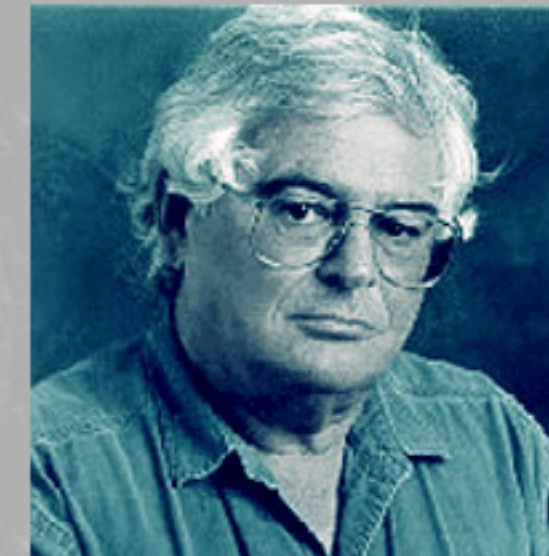
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## Motivations

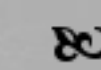
"For reasons I'll try to make clear, the heart of a cognitive science is its theory of concepts. And I think that the theory of concepts that cognitive science has classically assumed is in a certain way seriously mistaken."



## Toggling Between Two Perspectives Framing the Problem

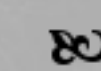
**On the one hand**, experience is conceptualized. To talk about concepts, we must use concepts!

Classical definitionism appealed for so long for a reason.



**On the other hand**, specifying concepts (or: specifying the content of concepts) solely with concepts invites all the usual paradoxes.

- The infinitely recursive concept of all possible concepts.
- Grelling's paradox.



**Therefore**, some non-conceptual tools of specification are required! The specification of concepts (or their contents) cannot be solely in terms of other concepts.

## Methodology

"If concepts are structurally uniform (or uniformly unstructured), a uniform theory of concepts is easier to achieve."



## Framing the Question

What is a concept? *implies*

What is our concept of "concept" (or: What is our concept CONCEPT)? *suggests*

How should we specify the content of a concept? *which might suggest*

What is our theory of concepts? *meanwhile:*

Why are we asking the question? What application will we make of the answer?

## Finding a Solution

**Premise:** The precise answer one gives depends on the application one needs it for.

"Replacement Question": What is a concept, with respect to our current goals?

The CYC Project (to take one example) gives one answer.

A "playground of conceptual building blocks" would give another.

**BUT:** Any answer, to be in any sense complete, will come back to this "toggling" between two perspectives.

## Traditional Responses

- Concepts are abstract ideas derived from specific experiences. (*folk psychology*)
- Concepts are definitions (strings of other concepts). (*classical definitionism*)
- Concepts are "pictures in the mind". (*imagism*)
- Concepts are hypotheses within theories. (*theory theory*)
- Concepts are prototypes, exemplars, etc.

**Current philosophical baseline:**

- Concepts are sub-propositional components of thought.
- Jose Bermudez: most philosophers, when they say "concepts" mean "mental representations".
- Also: conscious experience is (partly or wholly) conceptualized.

## Possible Extensions

- Non-complex concepts = lexical concepts? (*Jerry Fodor*)
- Concepts as scale models of their referents, for use in mental simulations. (*Jesse Prinz*)  
As a bird has wings, so my BIRD concept has WINGS. My BIRD, of course, is not really a bird; at some point sooner than later, the structural isomorphism breaks down and what remains is as unrelated as the painting of a waterfall is to the waterfall. Still, if I THROW a STONE at a BIRD and HIT it, the result in my mental simulation should be as if I threw a stone at a 'real' bird and hit it.
- Concepts as patterns (regularities) in sensory experience, produced by some pattern recognition process?
- Might include propositions as a special category of concepts.
- We talk about neural correlates of consciousness. What about neural correlates of concepts?

## Fodor vs. Prinz

Two popular contemporary theories of concepts.

Rationalism vs. concept empiricism.

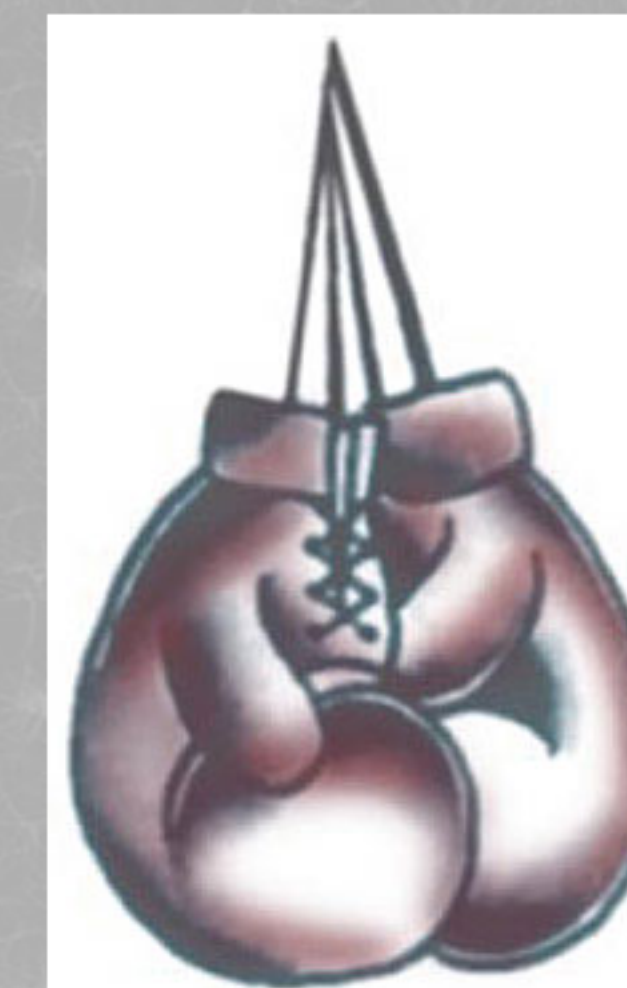
- *Prinz*: Rationalists can't avoid resorting to perceptual representations!

Informational atomism vs. informational semantics without the atomism.

- *Fodor*: Informational semantics just *is* naturally atomistic.

**Question:** Is it possible to have the explanatory benefits of both perspectives?

*Is it necessary?*



## Two Perspectives

**Proposal:** There are (at least?) two apparently incommensurable conceptual perspectives that we (as philosophical theorists or, to some extent at least, as lay persons) toggle between constantly. Both perspectives are central to understanding concepts and, by implication, cognition and consciousness.

Concepts as conceptually structured entities (decomposing into other concepts, a la Prinz) **vs.** concepts as atoms (i.e., conceptually atomistic, a la Fodor).

Relates to:

- Reflecting on concepts *as* concepts **vs.** using concepts without reflecting on them as concepts.
- Thoughts **vs.** thoughts about thoughts; cognition **vs.** meta-cognition.
- Non-symbolic **vs.** symbolic, non-representational **vs.** representational accounts?

Also relates to:

Current sensory information (paradigmatically non-conceptual content; experience 'in the moment') **vs.** (overall) experience.

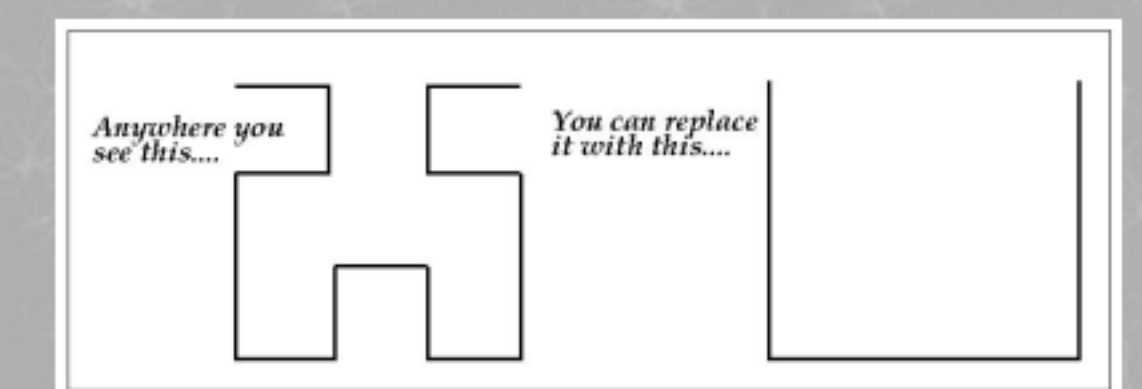
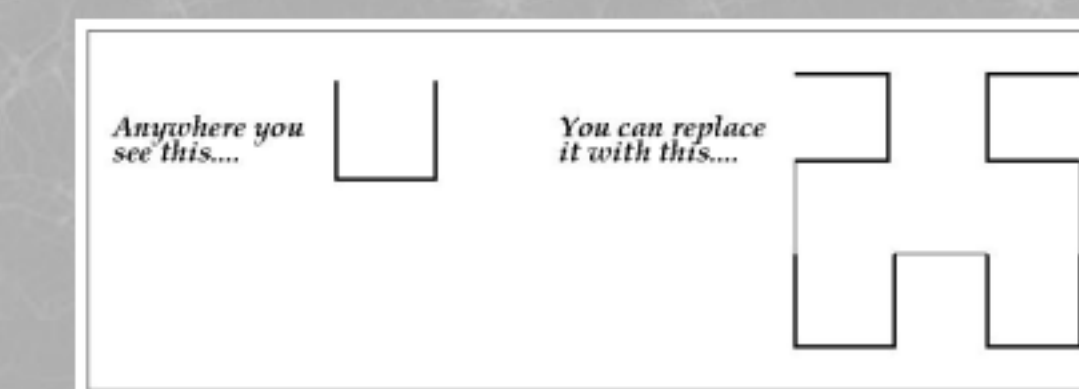
...And here, too, Prinz's proxytypes-as-scale-models may have their value, confirming our expectations of the world around us: concepts projected over top of non-conceptualized experience and all but obscuring it, so that we might even think sometimes that the non-conceptualized experience does not exist.

## Conceptual Spaces

- Gärdenfors' approach to modeling concepts in a non-language-bound way through the "language" of geometry.
- Concepts are convex shapes within *conceptual spaces*.
- Dimensions are qualitative ones: e.g., hue, brightness & intensity for color.
- Intended as bridge between associationist and symbolic levels of representation in models of mind; all three levels needed.
- Could it likewise provide a bridge between a Fodoran and a Prinziian theory of concepts?

## Conceptual Building Blocks

The smaller the number of building blocks, and the simpler they are, conceptually and structurally, the wider the range of surface structures that can be built with them.



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