

The Standard Accounts of Representation

- Definition: "*Representational content* is whatever it is that constitutes a representation of a dog as representing a dog rather than as representing something else, or rather than not being representational at all." (Bickhard, 1993)
- Definition: *Vehicle* is the bearer of content. For example, neural activity.
- Pictures, maps, symbols, Aristotle, mental images
- An unexpected issue: does nature represent? But it surely emerged somehow??
- Intentionality = aboutness
- Turns out surprisingly hard to get a grip of it!

Some Standard Paradoxes / Issues

- Encodings as stand-ins: Morse code example
- Crucial question: Where does the content come from?
- Homunculus - my favorite A
- Circularity - cog. sci. supposed to explain rep. but suppose it?
- Incoherence - Grounding - External Provider
- Empty Symbols - Chinese Room (Harnad - Searle)
- Copy argument (Piaget)

The Standard Account of Representation

- For this talk take: Semantics = Meaning = Sense = Content = Knowledge = Epistemic
- User / Designer semantics: Computers
- Observer semantics: Observing frogs
- Correspondences, covariations, causality, functional analysis are NOT content/epistemic analysis: The system itself does not know!
- Transducer semantics: Correspondence-as-encoding error - Fodor's claims?

Some Standard Paradoxes / Issues

- Neural networks
- Analogical semantics
- No new representation is possible!
- Skepticism
- Skepticism to idealism
- Copy argument

Some Standard Paradoxes / Issues

- Skepticism and idealism result from issues of accuracy, how to check what encodings represent
- The copy argument result from issues of origins
- The incoherence result from asking how a system knows what its representations supposed to represent prior to any issues of accuracy or construction (Bickhard, 1993, p. 9)

Some Standard Paradoxes / Issues

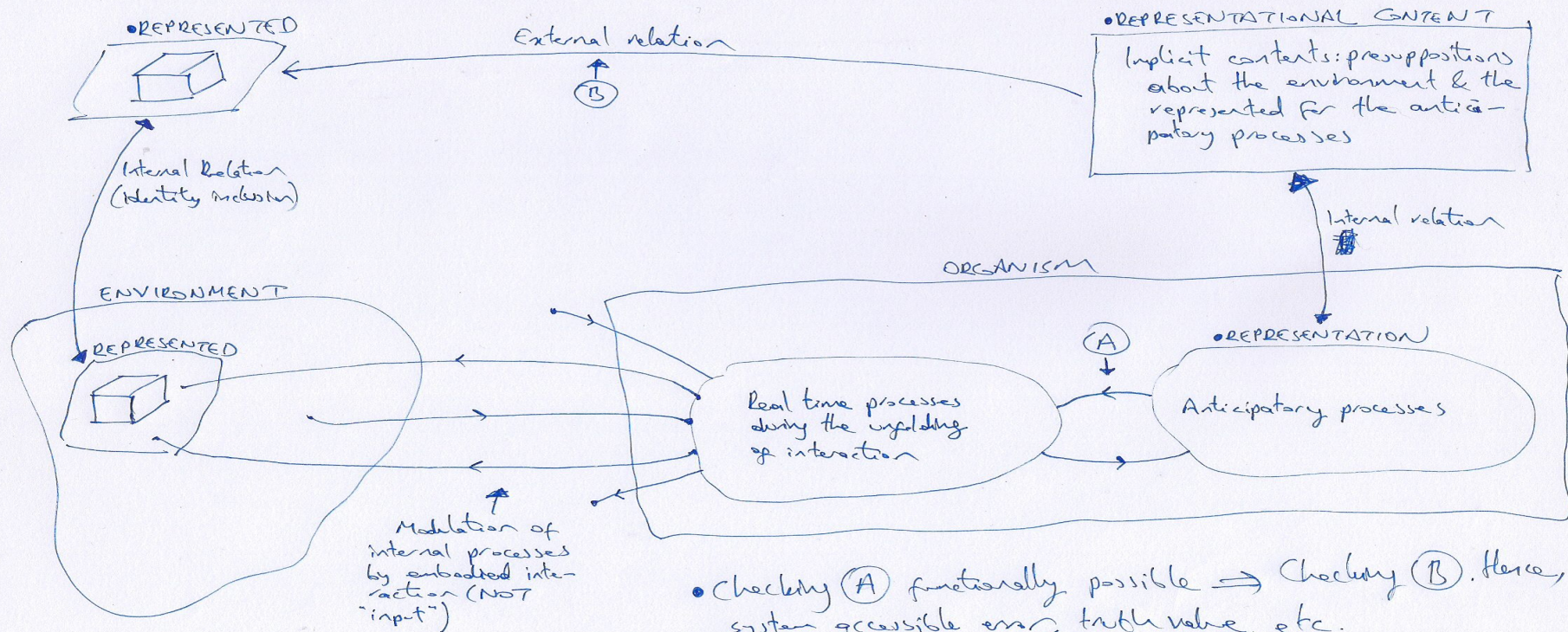
- Too many correspondences / which level of correspondence is the representational content?
- A solution: correspondence + functionality
- Does not work! Correspondence + trainedness also does not work. Trained to learn the correspondence not the representational content! (Bickhard, 1993, p. 11)
- Correspondence + functionality from evolution does not work

Some Standard Responses

- Fodor -> Innatism, Simulation
- Dretske -> Informational correspondence
- Milikan -> Historical functionalism

Some Responses In The Right Direction

- Gibson -> Direct Perception
- Piaget -> Construct instead of copy
- Predictive Mind
- Bickhard -> Emergence, anticipation, radical construction, etc.



- checking (A) functionally possible $\Rightarrow$ checking (B). Hence, system accessible error, truth value, etc.
- Emergence $\Leftrightarrow$ internal relations
- Add narrative function $\rightarrow$ representation?
- Add context? • Add higher levels of interaction?