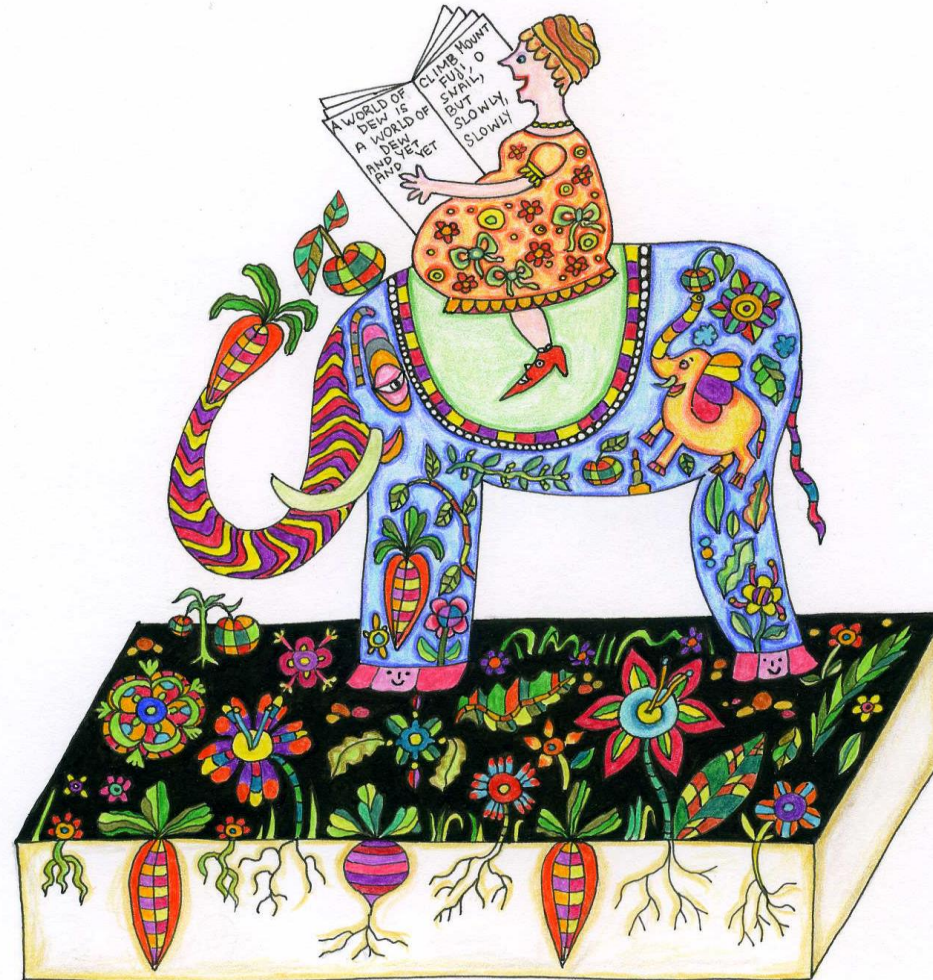


# The Teleological Transitions in Evolution

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Drawing by Anna Zeligowski



“Teleological mode of being” refers to: living-non-sentient mode of being; sentient mode of being, and a rational-symbolic (human) mode of being. All three are characterized by the possession of distinct hierarchically-nested goals and value systems. Since they are biological, these modes of being have evolved. We therefore called the evolutionary transitions to living, to subjective experiencing, and to symbolizing-rationalizing the teleological evolutionary transitions.

**Distinct set of value system delineate new types of goals for each of these teleological modes of being.**

| <b>Mode of being</b>                  | <b>Living</b>   | <b>Subjective experiencing</b>                                     | <b>symbol-based, reflective</b>                                 |
|---------------------------------------|---|--|---|
| <b>Aristotelian soul</b>              | nutritive/reproductive soul   | sensitive soul   | rational soul   |
| <b>Dennett's selectionist stance</b>  | Darwinian   | Some Skinnerian; all Popperian                                     | Gregorian   |
| <b>Telos</b>                          | Self-maintenance, reproduction  | Satisfaction of felt needs   | Abstract regulative ideas (e.g. justice, beauty)                |
| <b>Values</b>                         | Phylogenetic; fitness is used to measure differential survival and reproduction | Ontogenetic; Affective states                                      | Historical; Cultural-symbolic norms                             |
| <b>Organizing principle</b>           | Functions   | Mental representations (qualia)                                    | Symbolic, meta-mental representations (abstract value concepts) |
| <b>Heredity</b>                       | Unlimited (e.g., genetic)   | Unlimited memory/learning  | Unlimited cultural variation                                    |
| <b>Selection principle</b>            | Open ended natural selection during phylogeny                                   | Open ended exploration and selective stabilization during ontogeny | Open ended cultural symbol-based selection                      |
| <b>Evolutionary transition</b>        | To living   | To subjective experiencing   | To symbolizing-rationalizing                                    |
| <b>Evolutionary transition marker</b> | Unlimited heredity  | Unlimited associative learning (UAL)                               | Unlimited symbolizing   |

Of the psychic powers above enumerated some kinds of living things, as we have said, possess all, some less than all, others one only. Those we have mentioned are the **nutritive**, **the appetitive**, **the sensory**, **the locomotive**, and **the power of thinking**. **Plants have none but the first, the nutritive**, while **another order of living things has this plus the sensory**. **If any order of living things has the sensory, it must also have the appetitive; for appetite is the genus of which desire, passion, and wish are the species; now all animals have one sense at least, viz. touch, and whatever has a sense has the capacity for pleasure and pain and therefore has pleasant and painful objects present to it, and wherever these are present, there is desire, for desire is just appetition of what is pleasant. [...]** **Lastly, certain living beings – a small minority – possess calculation and thought, for (among mortal beings) those which possess calculation have all the other powers above mentioned.**

[Aristotle, *On the Soul*, book 2, part 3]

Rational

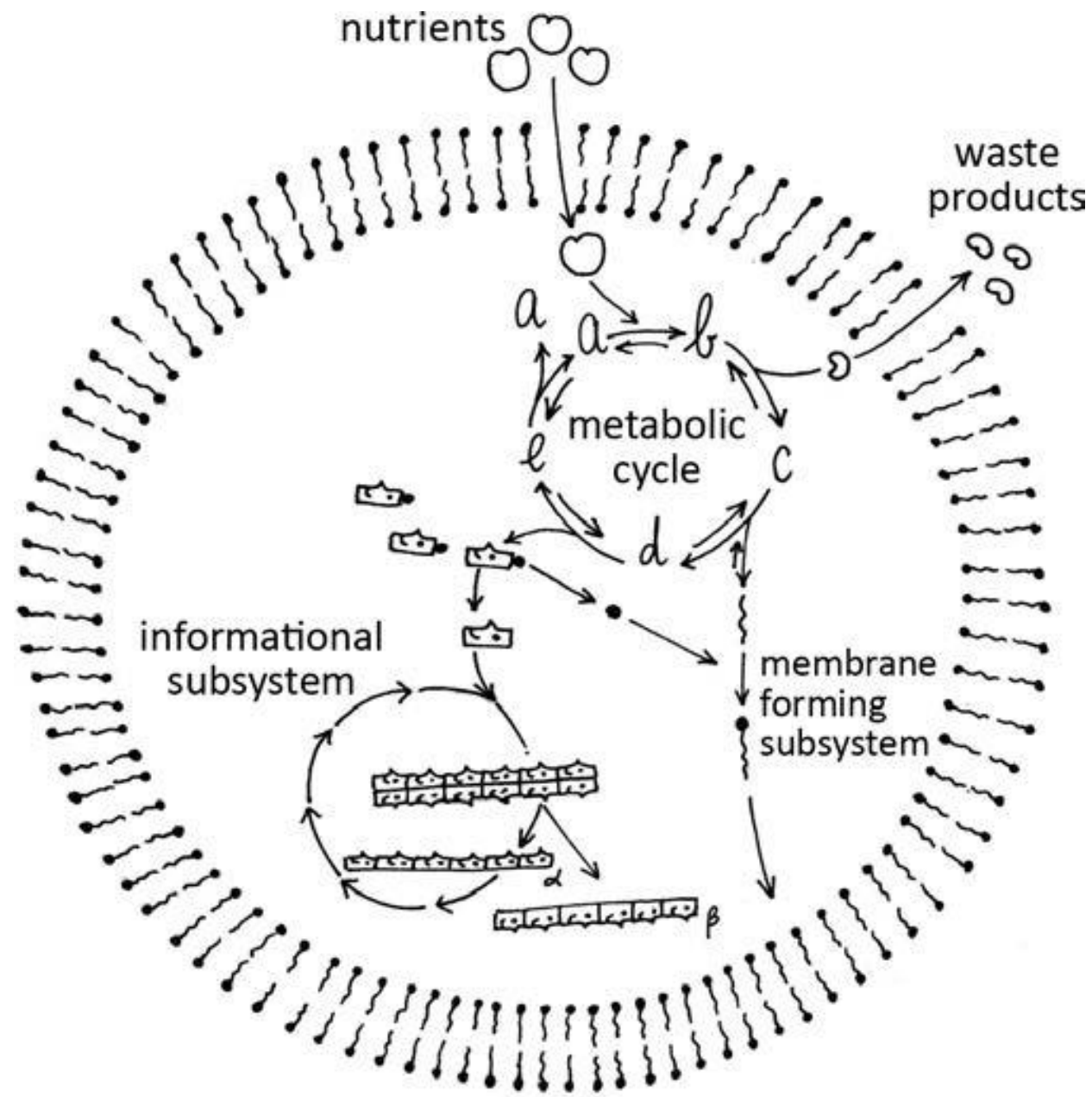
Sensitive

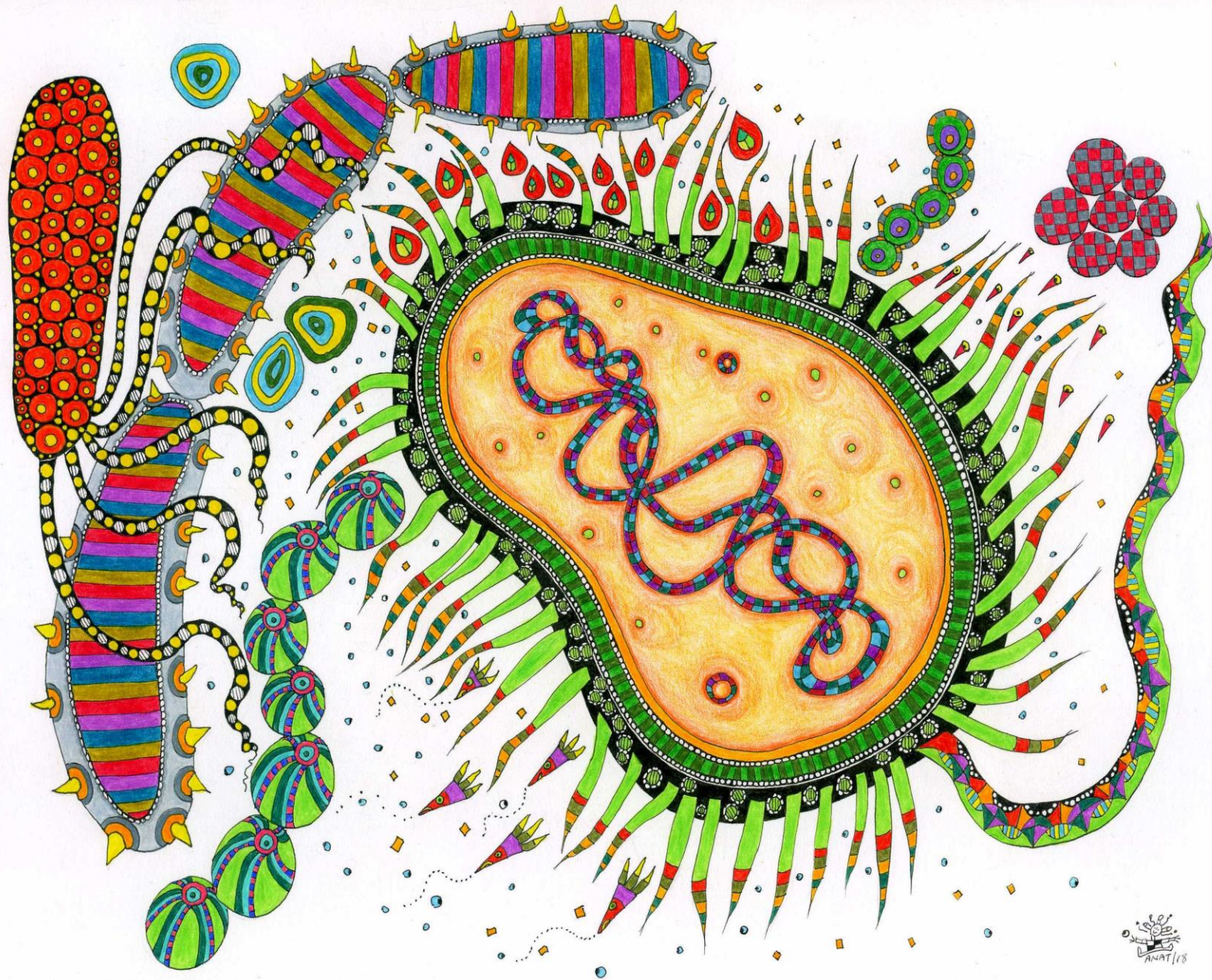
Nutritive and reproductive



I want to propose a framework in which we can place the various design options for brains, to see where their powers come from. It is an outrageously oversimplified structure, but idealization is the price we should often pay for synoptic insight. I call it the Tower of Generate-and-Test; as each new floor of the Tower gets constructed it empowers the organisms at that level to find better and better moves, and find them more efficiently.

[Dennett, *Kinds of Minds*, 1995, p. 373]





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Darwinian

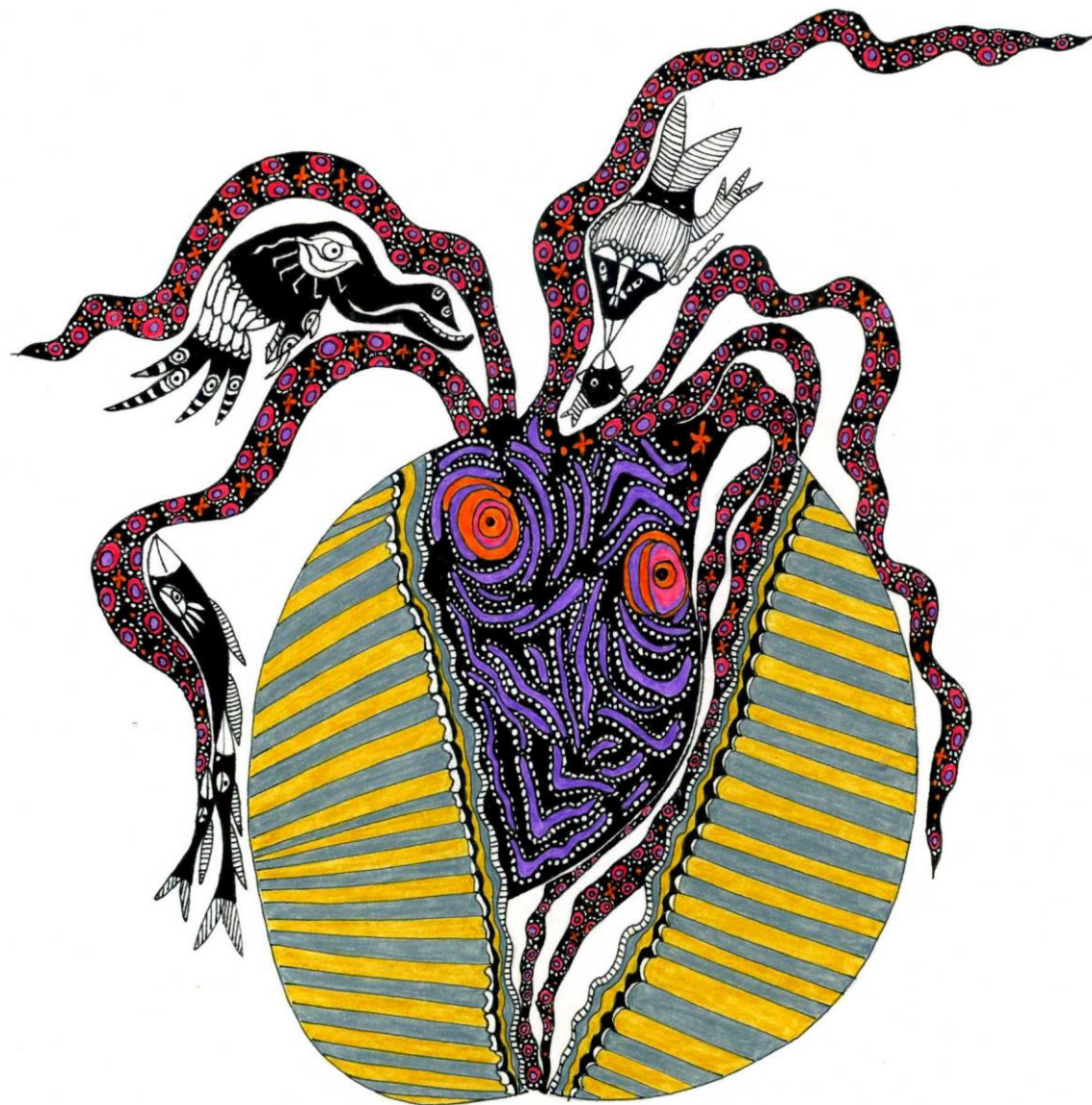


Where inherited behavior leaves off, the inherited modifiability of the process of conditioning takes over (Skinner)

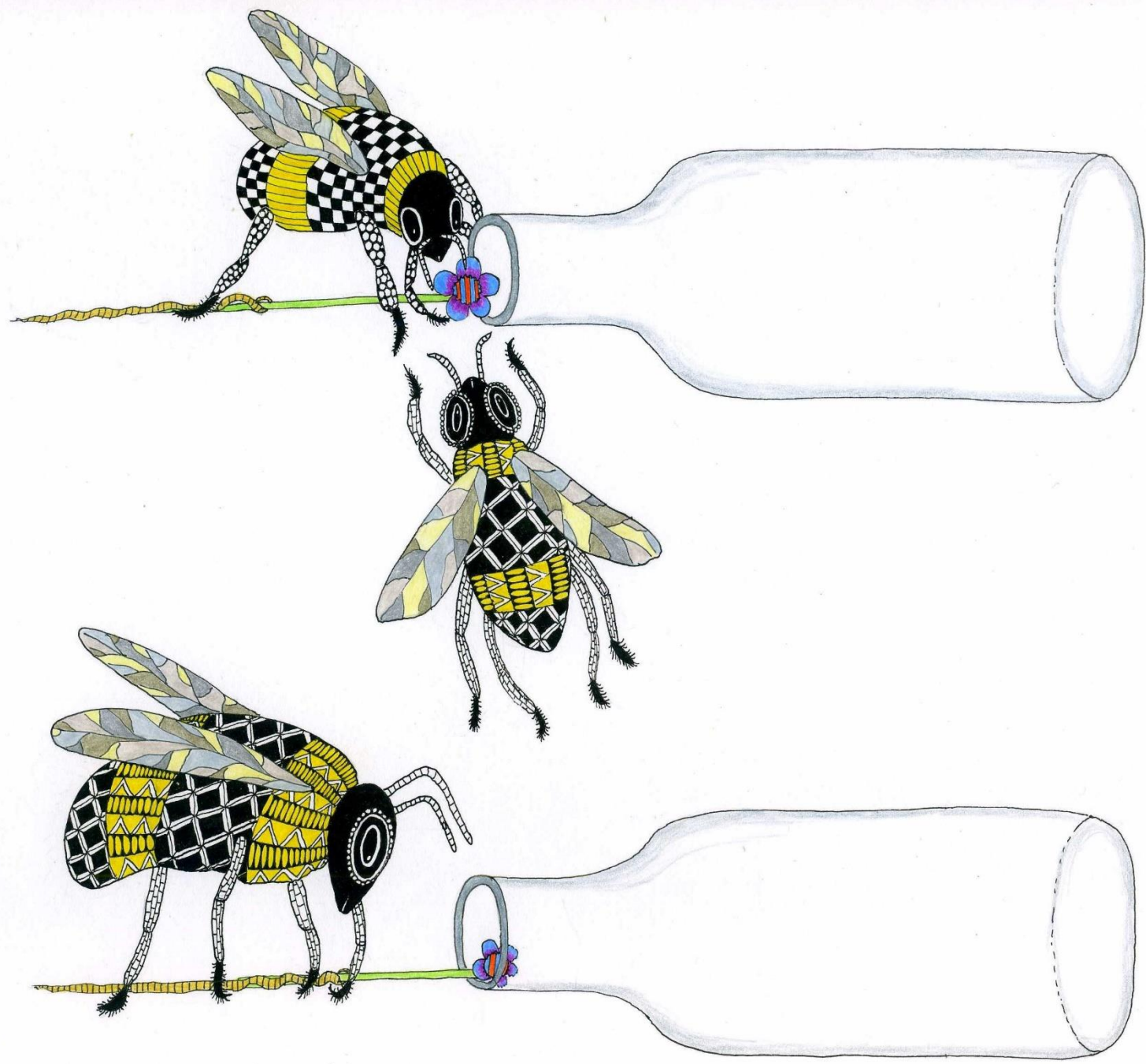


Skinnerian





Popperian?



Popperian?



Popperian

Gregorian





Daniel Dor: [Language is a technology for the instruction of Imagination.](#)

“The communicator provides the receiver with a code, a plan, a skeletal list of the basic coordination of the experience—which the receiver is then expected to use as a scaffold for experiential imagination. Following the code, the receiver raises past experiences from memory and then reconstructs and recombines them to produce a novel, imagined experience.”

“modern human individuals came to imagine the world in order to manipulate it in thought via ‘objective’ representations (anyone’s perspective), reflective inferences connected by reasons (compelling to anyone), and normative self-governance so as to coordinate with the group’s (anyone’s) normative expectations.” (Tomasello 2014)

What is the mind?  
It is the sound of the breeze  
that passes through the pines  
In the Indian-ink picture

Ikkyū Sōjun,  
Zen priest

*[Handwritten repetition of the text above in various orientations, including vertical and diagonal, with Japanese characters interspersed.]*





|                                       |   |  |   |
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Thank you!



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