How To Think / Reason

by Elliot Temple, 2019

- Fallibility
  - Correcting errors (= progress)
    - Paths Forward
      - If I'm mistaken, how will my error be corrected?
      - If someone knows my error, can they tell me?
    - Error rate management
      - Consumption tasks
        - Error = fail to accomplish a goal = don't benefit
        - The easier it is, the better. The more you learn before you do it, the more efficiently you can get it done.
      - Investment tasks
        - Goal here is *learning*/ improvement. Error = failure to learn/improve.
        - 3 stages of *learning*/practice
          - 1: get it correct at all
          - 2: get it correct repeatedly
          - 3: get it fast, easy, automatic habit
      - Objectively testing/measuring success
  - Bounded and unbounded error correction
    - Universality
- Guesses and criticism / evolution of ideas
  - Evolution is the only known solution to how new knowledge can be created
    - There are two known sources of knowledge: genes and memes
      - Most knowledge today comes from evolution of memes within a mind (not between minds). It's faster: one generation can take one second instead of years.
- Problem solving
  - Ideas have a purpose – to solve a problem (= ideas are contextual)
    - Evaluate ideas by success at their purpose, or not (yes/no)
      - Only act on non-refuted ideas
  - Win/win solutions
  - Dividing problems into sub-parts
  - Discussion
    - Impasse chains
    - Self-discussion and discussion with others are fundamentally mostly the same thing
- How ***not*** to think
  - Induction
    - Correlation hints at causation
      - At which causation? There are infinitely many logically compatible with the dataset.
    - Evidence supports theories
      - Which theory? There are infinitely many logically compatible with the dataset.
    - Reading the book of nature
      - Open mind free of biases, preconceptions
  - Justificationism
    - Probabilities of ideas
      - Physical events have probabilities. Ideas don't have a probability of being true. An idea is correct or incorrect.
    - Judging ideas by which one has a greater degree/amount of goodness
- Knowledge
  - What is knowledge?
    - Information adapted to a purpose via active replication with variation and selection. Active = the replication must be caused by the replicator (a house key isn't a replicator when you get it copied at a hardware store). Today, the only known evolutionary replicators are genes and memes.
  - How to get knowledge? See evolution/C&R part.