Ethics of (futures) knowledge co-production

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Ethics of Knowledge Production & Karl Popper

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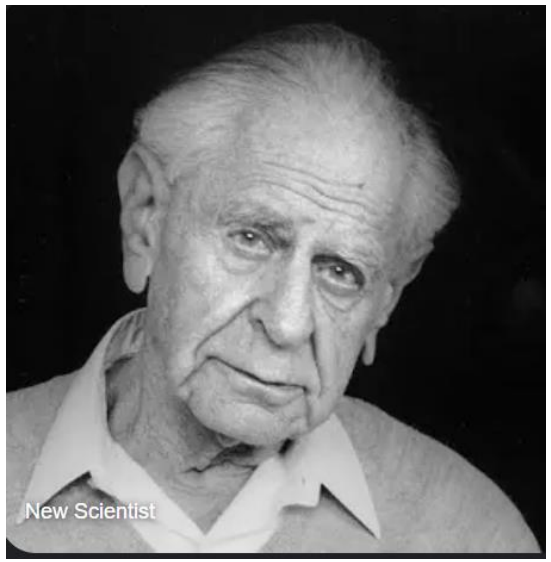
RF Workshop 27 June 2024

Part 1: Popper’s knowledge creation
Part 2: Responsible futures practice

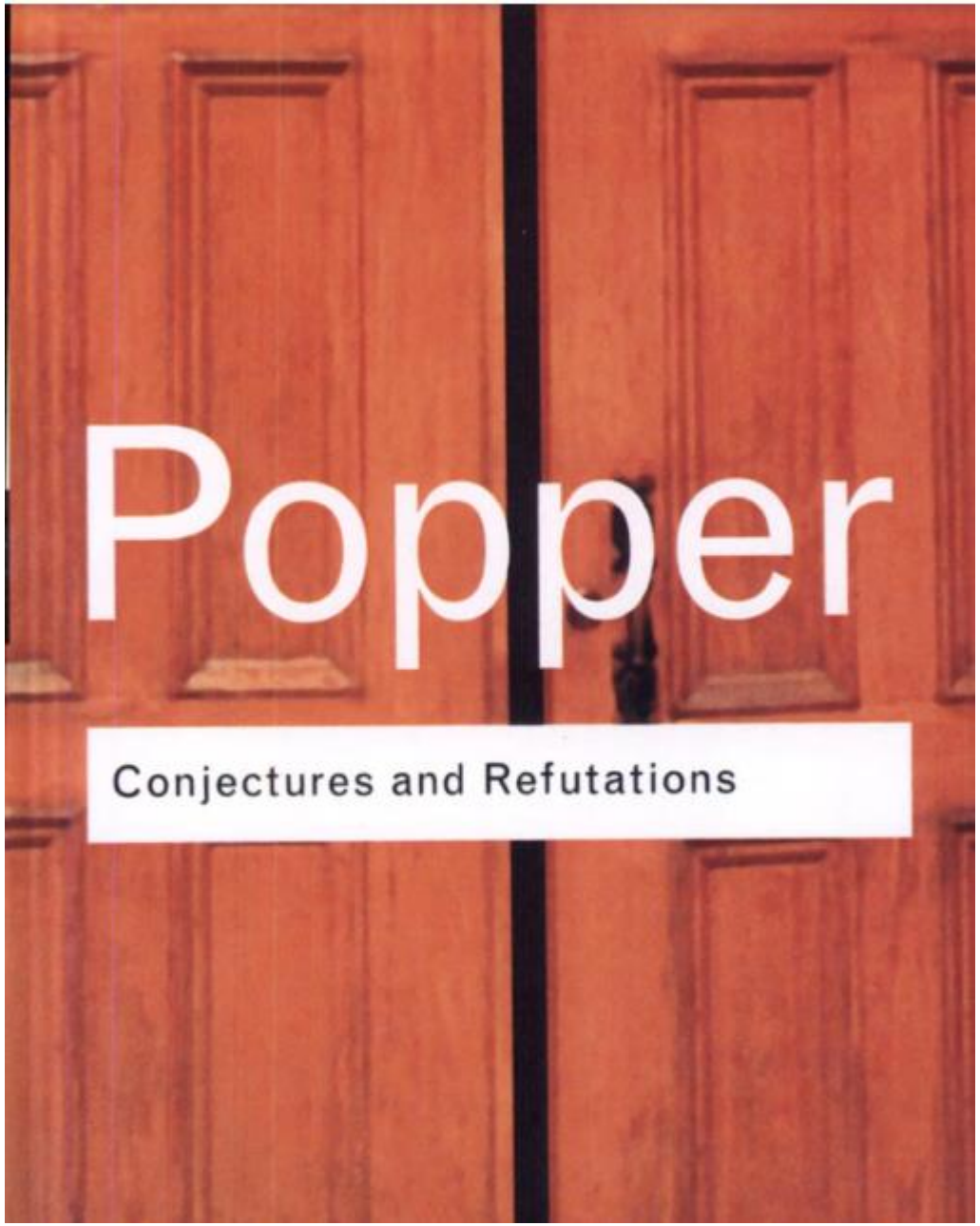
- *The Two Fundamental Problems of the Theory of Knowledge*, 1930–1933 (as a typescript circulating as *Die beiden Grundprobleme der Erkenntnisthe* as a German book 1979, as English translation 2008), ISBN 0415394317
- *The Logic of Scientific Discovery*, 1934 (as *Logik der Forschung*, English translation 1959), ISBN 0415278449
- *The Poverty of Historicism*, 1936 (private reading at a meeting in Brussels, 1944–45 as a series of journal articles in *Econometrica*, 1957 a book), ISBN 0415065690
- *The Open Society and Its Enemies*, 1945 Vol 1 ISBN 0415290635, Vol 2 ISBN 0415290635
- *Quantum Theory and the Schism in Physics*, 1956–57 (as privately circulated galley proofs; published as a book 1982), ISBN 0415091128
- *The Open Universe: An Argument for Indeterminism*, 1956–57 (as privately circulated galley proofs; published as a book 1982), ISBN 0415078652
- *Realism and the Aim of Science*, 1956–57 (as privately circulated galley proofs; published as a book 1983), ISBN 0091514509
- *Conjectures and Refutations: The Growth of Scientific Knowledge*, 1963, ISBN 0415043182
- *Of Clouds and Clocks: An Approach to the Problem of Rationality and the Freedom of Man*, 1965
- *Objective Knowledge: An Evolutionary Approach*, 1972, Rev. ed., 1979, ISBN 0198750242
- *Unended Quest: An Intellectual Autobiography*, 2002 [1976]. ISBN 0415285895, 0415285909)
- *The Self and Its Brain: An Argument for Interactionism* (with Sir John C. Eccles), 1977, ISBN 0415058988
- *In Search of a Better World*, 1984, ISBN 0415135486
- *Die Zukunft ist offen* (*The Future is Open*) (with Konrad Lorenz), 1985 (in German), ISBN 349200640X
- *A World of Propensities*, 1990, ISBN 1855060000
- *The Lesson of this Century*, (Interviewer: Giancarlo Bosetti, English translation: Patrick Camiller), 1992, ISBN 0415129583
- *All Life is Problem Solving*, 1994, ISBN 0415249929
- *The Myth of the Framework: In Defence of Science and Rationality* (edited by Mark Amadeus Notturno) 1994. ISBN 0415135559
- *Knowledge and the Mind-Body Problem: In Defence of Interaction* (edited by Mark Amadeus Notturno) 1994 ISBN 0415115043
- *The World of Parmenides*, Essays on the Presocratic Enlightenment, 1998, Edited by Arne F. Petersen with the assistance of Jørgen Mejer, ISBN 0415173019
- *After The Open Society*, 2008. (Edited by Jeremy Shearmur and Piers Norris Turner, this volume contains a large number of Popper's previously unpublished or uncollected writings on political and social themes.) ISBN 978-0415309080
- *Frühe Schriften*, 2006 (Edited by Troels Eggers Hansen, includes Popper's writings and publications from before the *Logic*, including his previously unpublished thesis, dissertation and journal articles published that relate to the Wiener Schulreform.) ISBN 978-3161476327



Sir Karl Popper

How is knowledge created?

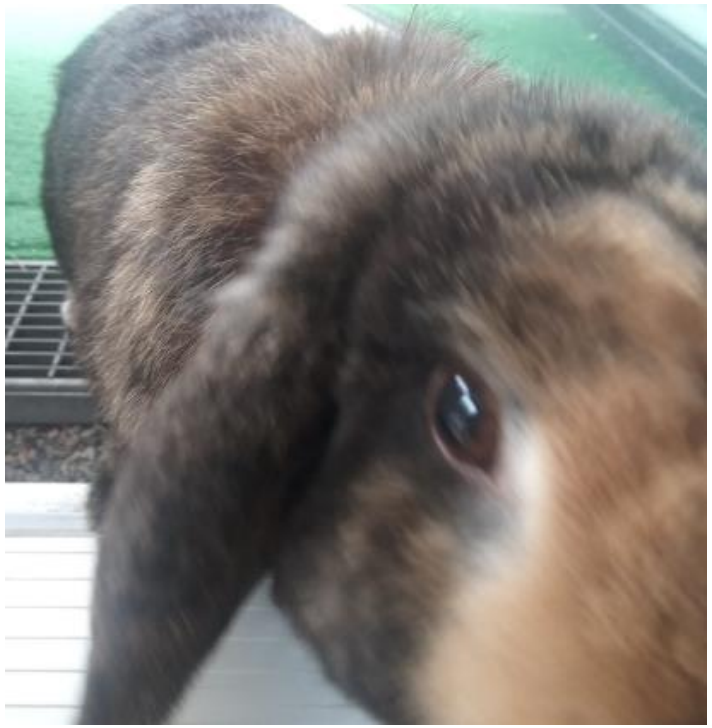
- Starts with a problem
- Trial and error epistemology
- Conjecture and refutation
- Falsification
- Fallibilism (not a positivist)
- Critical rationalism
- Policy experimentation



Guldlyn

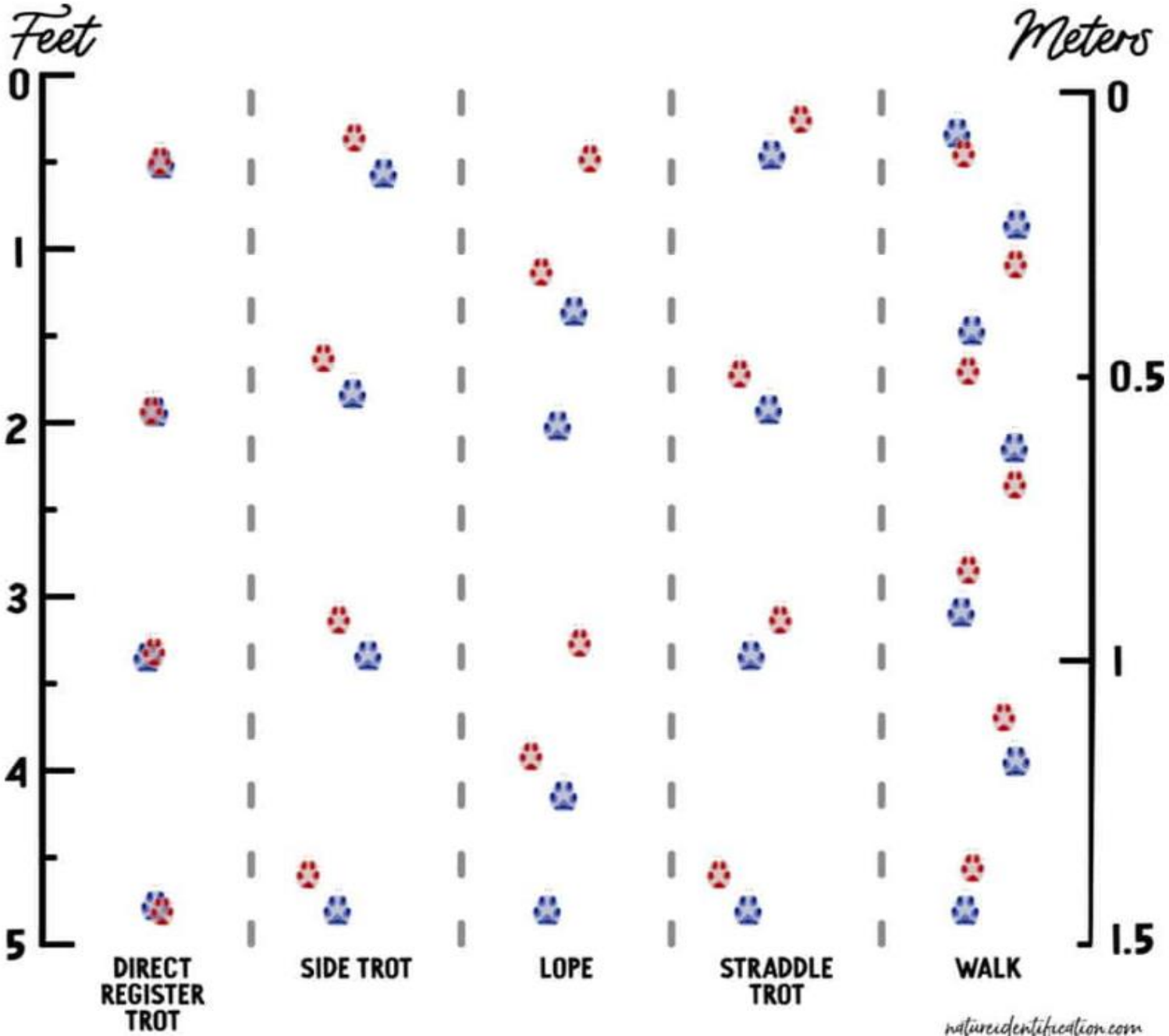
SIDE VIEW

FRONT



CLOSE UP

Red Fox Gaits (Movement Patterns)



1a. There is an a priori & fallible stock of (tentative) ideas, conjectures, pre-formed anticipations, proto-hypotheses, and explanations that we live out. 1b. We can recognize patterns; 1c. We have reference experiences & cases.

8. We criticize & reject bad explanations quickly (based on past experiences & knowledge)

7. We guess about the possible explanations (invent conjecture)

4. (Depending on the problem) we are curious, motivated, optimistic, opportunity seeking, prepared.

2. We encounter a problem (often revealed by new information or conflict of ideas); problems are individual

3. We want to explain it.

5. We are (mostly) free to pursue knowledge creation

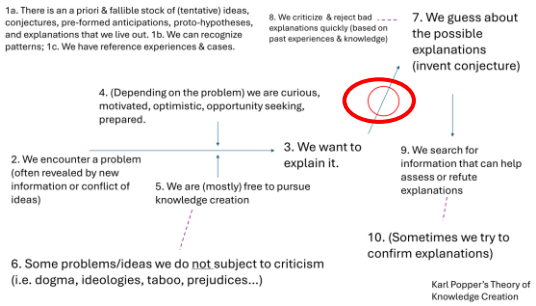
9. We search for information that can help assess or refute explanations

10. (Sometimes we try to confirm explanations)

6. Some problems/ideas we do not subject to criticism (i.e. dogma, ideologies, taboo, prejudices...)

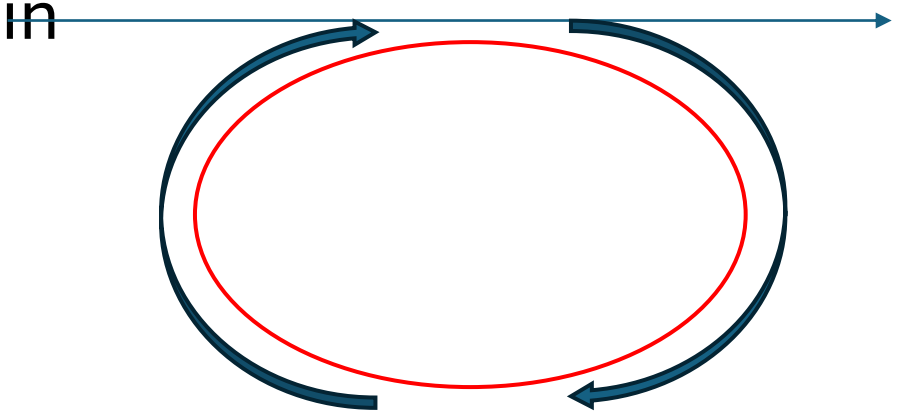
Karl Popper's Theory of Knowledge Creation

Building conjectures



12. Thought experiments structure and help us produce futures

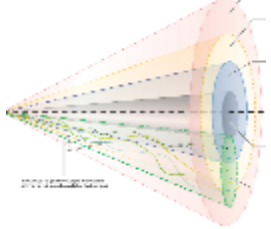
3. We want to explain it (a problem)



7. We guess about possible explanations (we invent conjecture)

13. Foresight tools afford acceleration, modification, specification, alteration, rearrangement

applied foresight toolbox

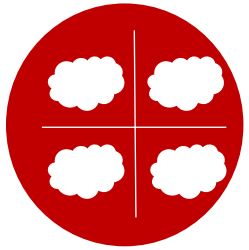


Futures cone

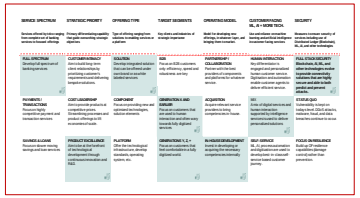
Futures wheel

Innovation forecasting

Backcasting



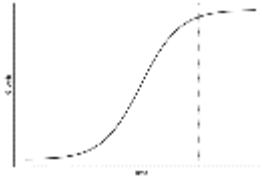
Scenario matrix



Strategy playboxes

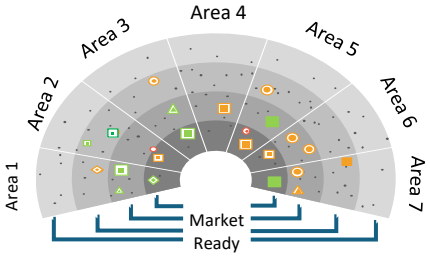
Stochastic modelling

Systems analysis

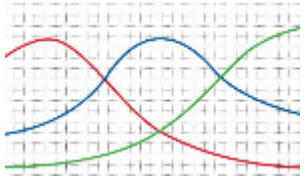


Technology forecasting

Business wargaming



Foresight radars

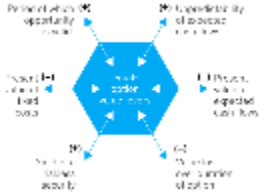


3 horizons

Science fiction-ing

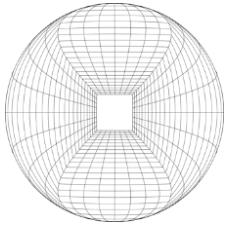
Trend auditing

Pre-mortem



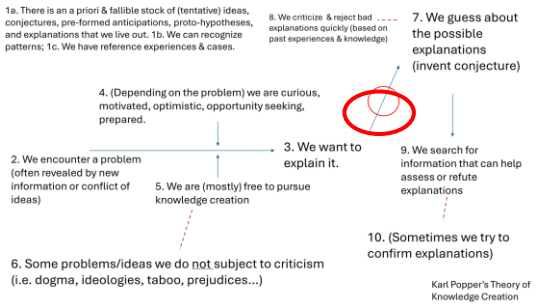
Real options analysis

Technology roadmapping



Delphi

Building conjectures

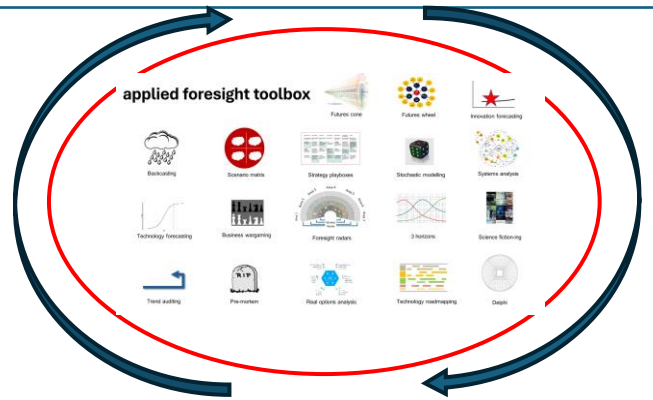


11. Some explanations become "wishful thinking"

15. Simulate: How might options perform under different conditions?

12. Thought experiments structure and help us produce futures

3. We want to explain it (a problem)



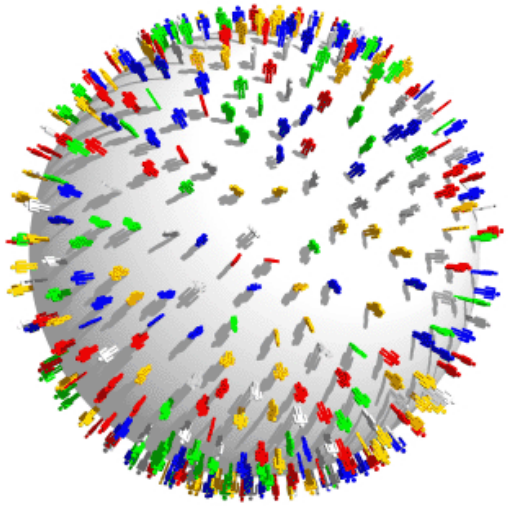
7. What guess about possible explanations (we invent conjecture)

13. Draw implications: How might it impact us?

13. Foresight tools afford acceleration, modification, specification, alteration, rearrangement

14. Develop options: what can we do?

Strategic foresight



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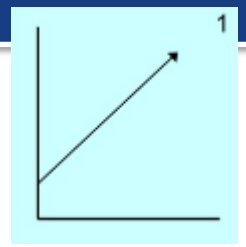
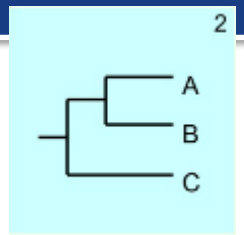
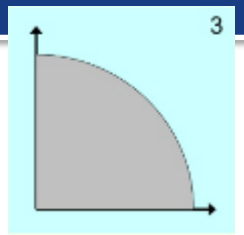
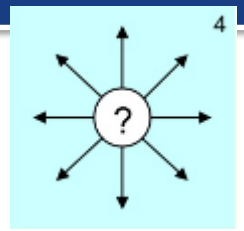
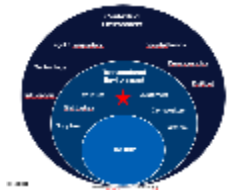
Distributed & personal	Tools for	Collective
Knowledge	**Constructing future(s)**	**Conjecture generation, assessment & refutation**

LEVELS

A clear enough future	A few identifiable outcomes (with probabilities)	A limited, bounded set of plausible futures	An unlimited, unbounded set of possible futures
			

LOCUS

CONTEXTUAL ENVIRONMENT



TRANSACTIONAL ENVIRONMENT

Problem- uncertainty landscape

"The growth of knowledge depends entirely upon disagreement"
-K. R. Popper, the myth of the framework

Box 1: Principles for Responsible Futures Practices (RFPs)

0. Foster social preconditions for knowledge creation
    - 0a. Establish a cooperative, collaborative spirit among participants
    - 0b. Establish that independent thought is necessary
    - 0c. Establish trust through rules of engagement

1. Announce rules to protect the generation of conjectures
    - 1a. Criticism of ideas, even wild ideas, will be suspended initially
    - 1b. Suggest that participants will be building upon and combining each others' ideas
    - 1c. Individuals will be shielded from *ad hominem* attacks

2. Facilitate the generation of conjectures
    - 2a. Push for clear problem articulation
    - 2b. Manage participants' energy effectively
    - 2c. Emphasize quantity of ideas over quality of ideas initially

3. Refine conjectures for evaluation
    - 3a. Bolster the best, most useful, and insightful ideas and conjectures
    - 3b. Formulate strong competing alternative explanations
    - 3c. Identify data, findings, and tests that could corroborate or refute ideas

4. Test conjectures and work toward plausible solutions
    - 4a. Rapid prototype options without apologies
    - 4b. Corroborate or refute conjectures
    - 4c. Correct errors in thinking or approach (repeat steps 3-4 until solutions materialize)

Thank you☺

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