Panpsychism, Emergence and Physicalism

Anand Rangarajan

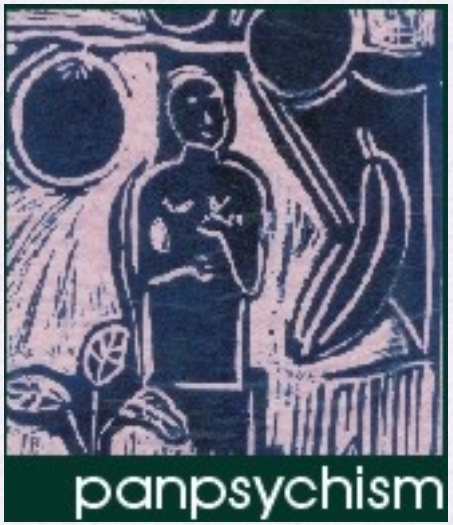
Dept. of Computer and Information Science and Engineering
University of Florida

Realistic physicalism & panpsychism

- When more radical alternatives - idealism or mysticism - are ruled out, only physicalism remains.
- Emergence - most popular physicalist approach – technological circles.
- Does realistic physicalism entail panpsychism? (*Strawson*)
- Rapprochement between panpsychism and emergence?

Panpsychism

- Primordial approach recast in modern and postmodern settings (*Skrbina*).
- Consciousness "all the way down."
- Varieties of panpsychism (*Turausky*).
- Combination problem of panpsychism.



JCS 10:3, 2003

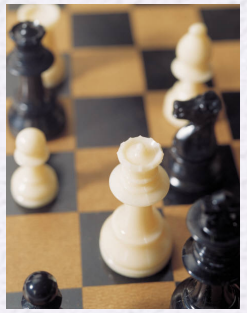
Emergence

- Default approach in technological circles.
- Emergence, complexity, self-organization – standard tropes in theoretical biology.
- Emergence of consciousness from life.
- Emergence of qualia from brain function.
- Complexity problem for emergence.

JCS 8:9-10, 2001

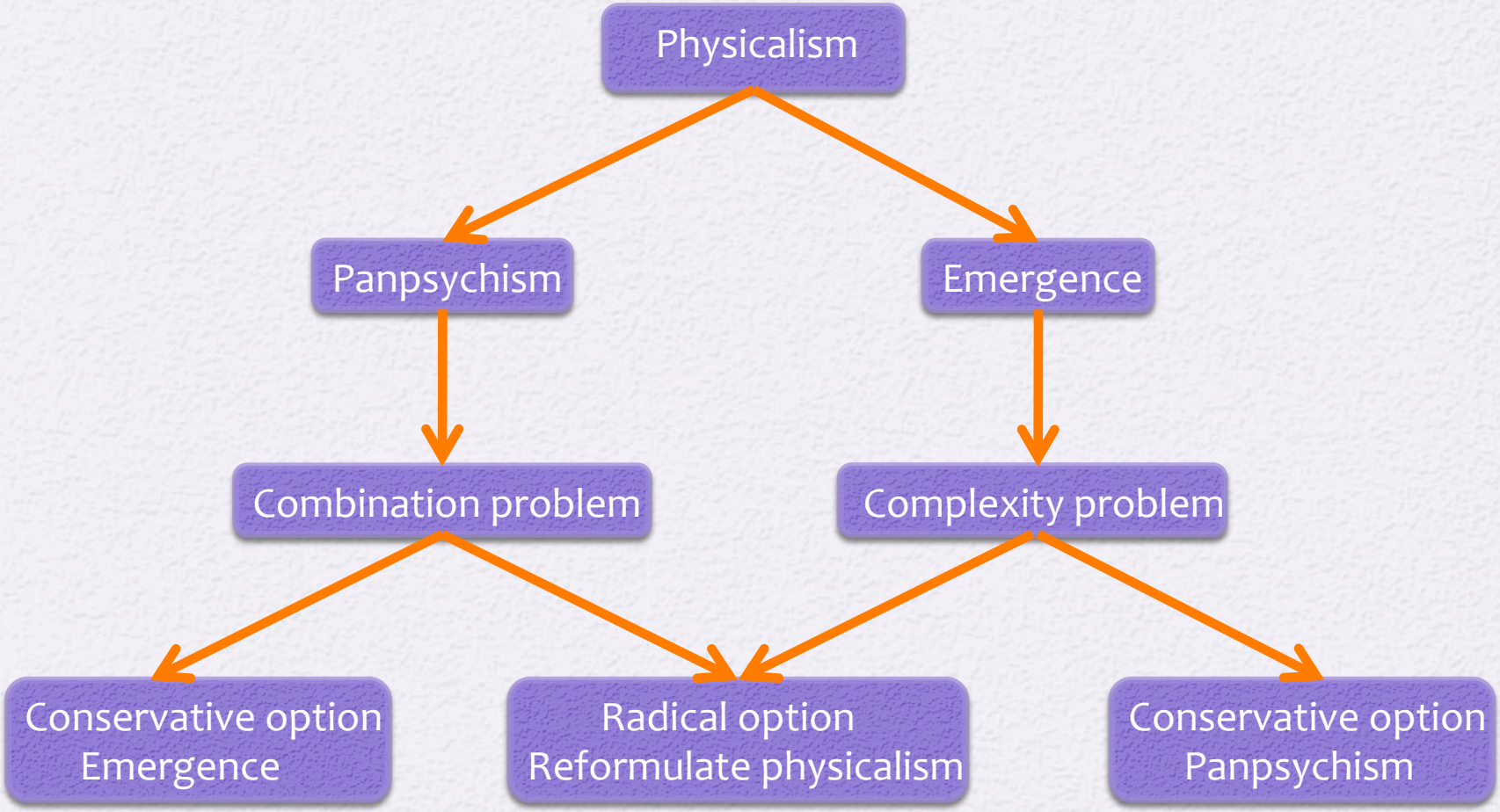
Panpsychism and Emergence

- Panpsychism
  - Main problem: How does phenomenology add? The combination problem of panpsychism.
- Emergence
  - Main problem: Is "More is different" true? The complexity problem of emergence.



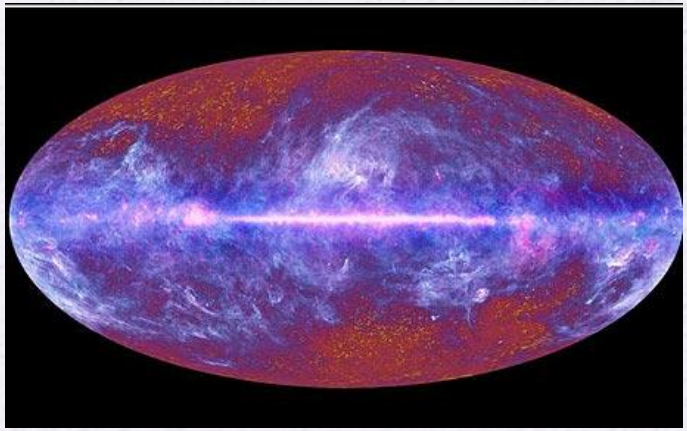
- Clue: Problems faced by both approaches related to combination of basic elements

Panpsychism, Emergence & Physicalism



Physicalism

- "Everything is physical": explanatory gap.
- Can physicalism be expanded to accommodate consciousness?
- Why is it accompanied by experience? (*Chalmers*)
- Forced into speculative ontology because of hard problem.



Source: esa.int

Physicalism = Physicalism + *X*

- Add ingredient *X* to physicalism.

- Physicalism should remain physicalism despite *X*.
- Re-examine panpsychism and emergence in light of new physicalism.

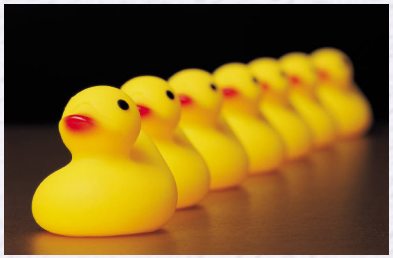
- It is accompanied by experience because *X* is always accompanied by experience.

Orienting Intuition

- Experience implies subject of experience – the experiencer (*Frege*).
- Avoid doubling of problems:
  - the problem of experience.
  - the problem of subjects.
- Subjects cannot be Cartesian – controversial.
- Both panpsychism and emergence have difficulties related to combination of basic elements.

Clues: Problems in panpsychism and emergence

- Panpsychism: Combination problem. How does phenomenology add up?
- Emergence: Is there a level of complexity at which consciousness "pops out"?
- Common problem: The many somehow become one.
- Could compositionality be the missing ingredient *X*?



A fundamental compositionality

- *A counter-intuitive proposal.*
- *Assertion:* Physicalism + fundamental compositionality accompanied by experience.
- *Letter but not the spirit of panpsychism:* fundamental but not pan.
- *Spirit but not the letter of emergence:* non-reductive but fundamental.

Compositionality and Experience

- A composition is always accompanied by experience.
- Structural counterpart to phenomenology.
- Combinations not accompanied by experience.
- Uniqueness of compositions related to ineffability of qualia?

Compositions versus Combinations

- Fundamental composition of basic elements contrasted with combinations of basic elements.

Recap of new physicalism

- Panpsychism >> combination problem.
- Emergence >> complexity problem.
- New physicalism with compositions.
- Experience implies subjects of experience.
- Subjects are
  - (possibly unique) fundamental physical compositions.
  - always accompanied by experience.
- Compositions contrasted with combinations.
  - the former is necessary for experience.

Summary

1. Everything is physical.
2. There is experience.
3. Experience cannot exist without subjects of experience.
4. Subjects are physical (compositions).

1. Denied by idealists.
2. Denied by eliminativists.
3. Denied by materialists?
4. Denied by dualists.

Related ideas and background

- *Chalmers*: addition of experience to physicalist base.
- *Van Gulick*: Varieties of emergence.
- *Rosenberg*: receptivity, ingressions and causation.
- *Stoljar*: Ignorance and physicalism.
- *Strawson*: Realistic physicalism entails panpsychism.
- *Montero*: Inscrutables and Russelian physicalism.

Discussion

- Panpsychism with emergence used to solve the combination problem – conservative option.
- Radical option: a fundamental compositionality contrasted with standard physical combinations.
- Compositions always accompanied by experience: motivated by subjects of experience and inscrutables.
- Spirit of emergence and the letter of panpsychism.

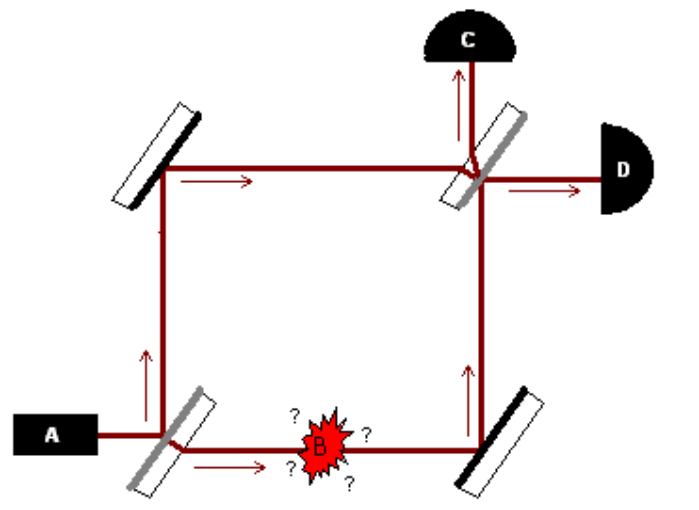
Thank You

Objections

- New ingredient merely motivated by subjects of experience.
- Freedom for adding compositions to physicalism not fleshed out.
- Experience epiphenomenal due to causal closure?
- What actually distinguishes compositions from combinations?

Do possibilities exist?

- Elitzur-Vaidman bomb testing experiment



If bomb is a dud, only D detects photon
If only C detects the photon, bomb is not a dud

Destructive interference at C only because both possibilities exist

Physicalism: Trajectories vs. Possibilities

Trajectories

- Evolution of particles and fields from the big bang
- Phase space
- No room for top down causation.

Possibilities

- Natural laws constrain the set of possibilities in spacetime.
- Configuration space
- New “entities” can further reduce set of possibilities.

Compositions acting on possibilities

- Current quantum field theories: evolution of scalar and vector fields in time.
- Instead we envisage a basic physicalism with a restriction operator on set of possibilities.
- Compositionality: further restriction on possibilities accompanied by experience.
- Qualia: What it's like to choose? Interior counterpart to choice.
- Ontologically bold, hence almost surely wrong.

William James on combination problem

"Where the elemental units are supposed to be feelings, the case is in no wise altered. Take a hundred of them, shuffle them and pack them as close together as you can (whatever that might mean); still each remains the same feeling it always was, shut in its own skin, windowless, ignorant of what the other feelings are and mean. There would be a hundred-and-first feeling there, if, when a group or series of such feeling were set up, a consciousness *belonging to the group as such* should emerge" (James, 1890)

The Combination Problem

- How does phenomenology add up?
  - What about awareness of "mid-level subjects" [James 1890, Seager - JCS 2:3]?
  - Intersubjective phenomenal content at mid-level?
- Quantum coherence etc. suggested as objective criteria.
- Ontology of subjects as a way out?

Nested Compositions

- Fundamental compositions formulated from intuition regarding subjects.
- Qualia correlate with compositions.
- Nested compositions provide structure for qualia