Understanding Intellectual Growth

Applying Perry's Scheme to Support Metacognition

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Warm-up Activity

- How would you rank the level of intellectual growth of each student?
- How would you help each student grow further?

Guiding Students to Awareness of Higher-level Thinking

The Perry Scheme

- William Perry:
  - head of counseling, Harvard, 1950s
- A framework for understanding how students approach learning
- College students “journey” through 9 “positions” in their intellectual development
- Has been replicated & adjusted
  - Cf. Belenky et al. (1986), Women’s Ways of Knowing
  - Journal of Adult Development, 2004

Dualism: Knowledge is black/white, right/wrong, good/bad.

- **1. Basic**
  - All problems are solvable
  - Authorities exist to give answers ➔ Obey them
  - Student's task = learn the right solution
- **2. Full**
  - Some authorities (literature) disagree, others (Math) agree
  - Non-believers are wrong, those who don't have clear-cut answers also wrong.
  - Student's Task = learn the right solution and *ignore the others*
  - "Teachers" who offer complexities are not to be trusted.
  - Knows the answer but are holding it back to teach us something.

Transition point: If we have to search for answers, maybe the teachers do too??? Let's wait until they find the answers.

Multiplicity (Subjective Knowledge): Trust "inner voice", not external authority

- **3. Early**
  - All questions have answers: some we know now, and some not yet
  - Authorities don't have all the answers yet.
  - Student's task = Learn how to find correct solution

Transition point: "Yet" can take a very long time, maybe never???

"I still don't have all the answers, but I'm beginning to ask the right questions."

Multiplicity: “intuitions” but not explicit justifiable beliefs

- **4. Late**
  - Most problems’ answers haven’t been found yet or are unsolvable
  - Authority is fallible ➔ everyone’s opinion is valid
  - It’s safe to make up your own answers ➔ doesn’t have to true beyond personal experience ➔ can’t prove I’m wrong
  - Metacognition has not yet developed.
- Alternate
  - Tell the authorities what they want, parrot back even if you don’t believe it ➔ Find out how they grade exam

Transition point: Authorities can no longer be counted on to provide any worthwhile answer.

"Maybe it's not a wrong answer—maybe it's just a different answer."

Possible Responses

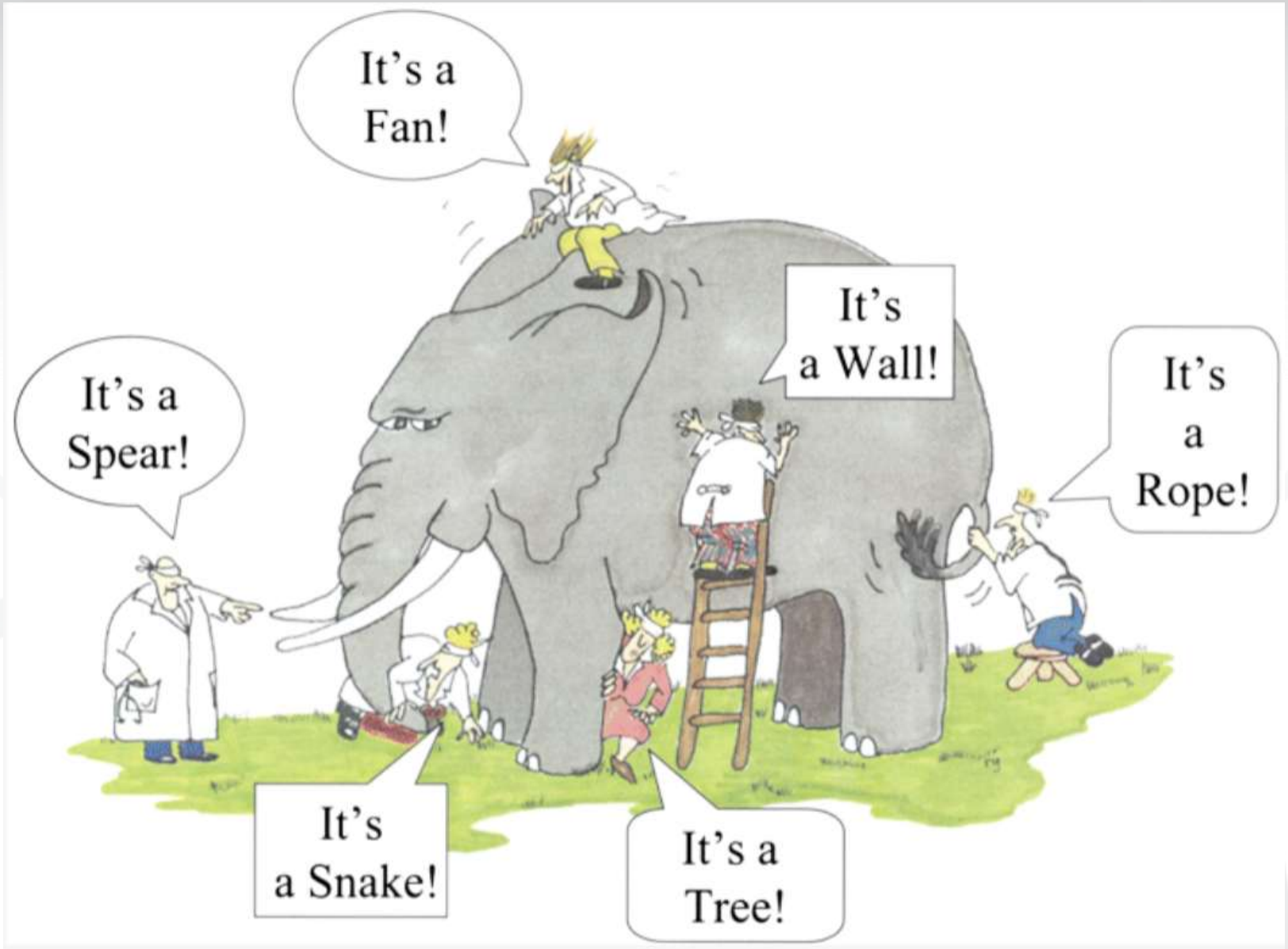
Temporizing
(Apathy, Refusal to recognize ambiguity, reactive - not proactive)

Retreat
("I'll study math, not literature, because math has clear answers & not as much uncertainty")

Escape
("I can't stand college; no one gives you the right answers") or
("I can't stand college; all they want is right answers")

Relativism (Procedural Knowledge): Express intuitions in language and seek justification

- There are different perspectives with different amounts of validity ➔ Discipline-specific
- Knowledge can be "connected"
  - Why do you believe X?
- Knowledge can be "separated"
  - "objective" analysis
- 5. Contextual Relativism
  - All solutions are supported by evidence and reasoning ("relative to")
  - Some solutions are better than others
  - Student's task = learn to evaluate solutions


It's a Fan!
It's a Spear!
It's a Wall!
It's a Rope!
It's a Snake!
It's a Tree!

Commitment (Constructed Knowledge)

- 6. Pre-Commitment (appreciate ambiguity as a legitimate quality of many issues)
  - **use evidence to explore alternatives**
  - Students see necessity of:
    - Making choices, Committing, Narrowing down
    - Autonomy ➔ Inner strength
- 7. Commitment - beliefs are individualized
  - Has thought about an issue, recognizes other perspectives, can tolerate other viewpoints given evidence
  - incorporate metacognitive reflection in their reasoning
  - “This is what is right for me”

Next Steps

- 8. Challenges to Commitment
  - Experience consequence
  - Explores issues of responsibility
- 9. Post-Commitment
  - Recognize commitment as an ongoing, evolving process

What teachers say vs. What students hear

- **Teacher:** Today we'll discuss 3 different ways to solve this Math problem
- **Dualist:** "Which is the correct one", "Why bother with the wrong ones?"
- **Multiplist:** "Only 3? Heck, I can think of a dozen?"
- **Contextual Relativist:** "What principles underlie each of them", "Which is most efficient"
- **Commitment:** "Which one should I use", "What would be the implication of 'my' interpretation"?

What teachers say vs. What students hear

- **Teacher:** Today I'll show you how to solve these types of problems
- **Dualist:** "Great! I'll learn them"
- **Multiplist:** "Boring! I'll learn them anyway…", "Nah! I won't bother learning"
- **Contextual Relativist:** "Why are these problems important", "How do they fit in the bigger picture"

Conflicts

- Dualistic teacher, Multiplistic student:
  - boredom, alienation
  - to be successful in the sciences, do I need to adapt to the cognitive style of Dualism?
- Multiplistic teacher, Dualistic student:
  - no understanding
  - to be successful in the arts/humanities, do I need to reject Dualism and/or adapt (only) to Multiplism/Contextual Relativism?

Student's Assumption about Teachers

- **Contextual Relativist:**
  - There are a number of answers to my question, depending on how you look at it; maybe this teacher can help me see the alternatives more clearly.
- **Commitment:**
  - There are a number of answers to my question, depending on how ***I*** look at it; maybe this teacher can help me decide what I should believe (commit to).

Dualism → Multiplism

- If student rejects a view, have student be concrete (support) about basis for rejection (challenge)
- If student appeals to authority or overgeneralizes, ask about instances when authority's opinion might be challenged or generalization might not hold.
- Draw out student's own views/ experiences; reinforce student's legitimacy
  - structured discussions, small groups
  - responses from teacher on written work
- After evidence and rational arguments are presented, reinforce possibility of changing mind

Multiplism → Contextual Relativism

Support:

- Have students encounter several views.
- Reinforce that authorities can/do disagree
- Emphasize non-absolute criteria for generating evidence of support or criticism
- Use low degree of structure - Let students take responsibility for structuring own learning:
  - negotiate syllabus, course content, due dates
  - individual contracts; teacher as resource

Challenge:

- Evaluate relative merits - via non-absolute or imaginative criteria (support)
- own experiences (via biographies, stories)
- others' experiences (small groups)
- Explicitly identify bases for disagreements among authorities/views
- Identify and evaluate assumptions

Practical Strategies for Fostering Intellectual Growth

1. Encouraging students to question their own thinking
2. Foster Open-Ended Discussions
3. Use Case Studies and Real-World Examples
4. Model Your own Thought Process
5. Encourage Peer Review and Feedback
6. Error Analysis Exercises
7. Scaffold Decision-Making Skills
8. Guided Practice with Immediate Feedback
9. Promote Reflection on Learning Strategies
10. Incorporate Real-Life Analogies

The Meta Slide

- Dualist:
  - The Perry scheme is the best way of thinking about college students. Someone has finally told us how to make students change in the right ways.
- Multiplist:
  - Well, it's some people's way of talking about student growth and development, and they have a right to their own opinion, I suppose.
- Contextual Relativist:
  - It is one of a relatively few student-development models based on data collected in a fairly unbiased manner over many years.
- Commitment:
  - I have found the Perry scheme, integrated with other theories, extremely helpful to me as I try to interpret the behavior of people around me, as I think of my goals as an educator, and, especially, as I interact with my students.

Thank you!

References:

- Perry, W. G., Jr. (1999). Forms of intellectual and Ethical Development in the College Years. (Reprint of the original 1968 1st edition with introduction by L. Knefelkamp). San Francisco: Jossey-Bass.
- Journal of Adult Development (2004). Special volume of nine papers on the Perry legacy of cognitive development. Journal of Adult Development (11, 2) 59-161 Germantown NY: Periodicals Service Co.
- Belenky, M.F., B.M. Clinchy, N.R. Goldberger, and J.M. Tarule. (1986) Women's Ways of Knowing: The Development of Self, Voice, and Mind, New York: Basic Books. (Reprinted in 1997).