✦✦ Chapter 34

Philosophy and Cognitive Psychology: Contrasting Assumptions

Abstract

This paper was originally written for the Association for Supervision and Curriculum Development (ASCD) meeting, held at Wingspread in 1987 to discuss the ASCD publication, Dimensions of Thinking. In it, Paul critiques the book for its pedagogical and theoretical bias toward a cognitive-psychological approach to thinking, a bias that largely ignores the contributions of philosophy, as well as those of affective and social psychology. Paul contrasts the very different assumptions that philosophers and cognitive psychologists make when analyzing the nature of thinking.

ne of the major objectives of the authors of *Dimensions of Thinking* was to produce a comprehensive, theoretically balanced, and pedagogically useful thinking skills framework. Unfortunately, the value of the present framework is limited by its bias in every important respect toward the approach of cognitive psychology. Virtually all of the research cited, the concepts and terminology used, and the recommendations made for implementation are taken from the writings of scholars working principally in cognitive psychology. The work and perspective of many of the philosophers concerned with thinking is minimally reported. Those whose work is not significantly used include these:

> Michael Scriven, Harvey Siegel, Mortimer Adler, John Passmore, Israel Scheffler, Mark Weinstein, R. S. Peters, Ralph Johnson, J. Anthony Blair, Stephen Norris, John Dewey, Vincent Ruggiero, Edward D'Angelo, Perry Weddle, Sharon Bailin, Lenore Langsdorf, T. Edward Damer, Howard Kahane, Nicholas Rescher, Paulo Freire, Robert Swartz, Max Black, James Freeman, John Hoaglund, Gerald Nosich, Jon Adler, Eugene Garver, (to name some who come readily to mind).

Nor does *Dimensions of Thinking* incorporate significant philosophical contributions to our understanding of thinking from the great philosophers of the last three hundred years. It fails to mention Immanuel Kant's work on the mind's shaping and structuring of human experience, Hegel's work on the dialectical nature of human thought, Marx's work on the economic and ideological foundations of human thought, Nietzsche's illumination of self-delusion in human thought, or Wittgenstein's work on the socio-linguistic foundations of human thought.

Another perspective conspicuously absent from *Dimensions of Thinking* is that of affective and social psychology, especially those studies that shed light on the major obstacles or blocks to rational thinking: prejudice, bias, self-deception, desire, fear, vested interest, delusion, illusion, egocentrism, sociocentrism, and ethnocentrism. The significance of this omission should be clear. The point behind the thinking skills movements (in both cognitive psychology and philosophy) is not simply to get students to think; all humans think spontaneously and continuously. The problem is to get them to think *critically* and *rationally* and this requires insight by students into the nature of uncritical and irrational thought. The massive literature in affective and social psychology bears on this problem; its seminal insights and concepts should be a significant part of any adequate framework for understanding how to reform education to cultivate rational, reflective, autonomous, empathic thought. (Philosophers, I might add, are often as guilty as cognitive psychologists of ignoring the work of affective and social psychologists.) Recently, when I did an ERIC search under the descriptors "prejudice or bias or self-deception or defense mechanism", the search turned up 8,673 articles! This then is a significant omission.

More important than the sheer numerical imbalance in scholarship cited is the imbalance in perspective. There are important differences between those features of thinking highlighted by philosophers in the critical thinking movement and the general approach to thinking fostered by cognitive psychologists and the educators influenced by them. And though there is much that each field is beginning to learn from the other, that learning can fruitfully take place only if some of their differences are clearly set out and due emphasis given to each. After I have spelled out these differences roughly, I will detail what I see as emerging common ground, what I see that gives me hope that these fields may yet work together. But first the down side.

In thinking of the relationship between the traditions of cognitive psychology and philosophy, I am reminded of a couple of remarks by the great 19th Century educator-philosopher John Henry Newman (1912) in his classic *Idea of a University*:

> I am not denying, I am granting, I am assuming, that there is reason and truth in the "leading ideas", as they are called and "large views" of scientific men; I only say that, though they speak truth, they do not speak the whole truth; that they speak a narrow truth, and think it a broad truth; that their deductions must be compared with other truths, which are acknowledged to be truths, in order to verify, complete, and correct them. (p. 178)

and:

> If different studies are useful for aiding, they are still more useful for correcting each other; for as they have their particular merits severally, so they have their defects. (p. 176)

In this case, the "scientific" views of cognitive psychologists need to be corrected by the insights of philosophers, for the whole truth to be apprehended.

Only when we see the differing emphases, assumptions, and concepts, even the differing value priorities of the two disciplines and how the work of those interested in critical thinking reflects them can we begin to appreciate the distinctive contributions of both cognitive psychology and philosophy to instruction for thinking. Few K–12 educators and their education department counterparts recognize the possible contribution of philosophy to instruction for thinking because their own educational background was heavily biased in favor of psychologically and scientistically-oriented courses. Rarely were they expected to articulate a philosophical perspective, to reason and synthesize across disciplinary lines, to formulate their philosophy. Moreover, few feel comfortable with philosophical argumentation and counter-argumentation as a means of establishing probable truth. Well-reasoned philosophical essays do not seem to them to be *research,* properly so called, because they rarely cite empirical studies.

With these thoughts in mind, let us examine 24 contrasting emphases between these two disciplines. I do not assume, of course, that all 24 are always present, but that, on the whole, there is a pattern of differences between the writings of *most* cognitive psychologists and *most* philosophers. In the case of *Dimensions of Thinking,* for example, I am confident that had the co-authors been Lipman, Ennis, Scriven, Scheffler, and Paul, a very different account of thinking would have emerged, one reflective of the contrasts which I now list.

	Tendencies of:	
With respect to:	**Cognitive Psychologists**	**Philosophers**
1. Approach to thinking	Approach thinking descriptively.	Approach thinking normatively.
2. Methodology	Focus on empirical fact-gathering. (This is not to imply that cognitive psychologists do not formulate theories or engage in conceptual analysis.)	Focus on the analysis of cases of "well-justified" thinking in contrast to cases of "poorly justified" thinking.
3. Modes of thinking studied	Focus on expert versus novice thinking, intradisciplinary thinking, and monological thinking.	Focus on rational reflective thinking, on interdisciplinary thinking, and on multilogical thinking.
4. Value emphasis	Emphasize the value of expertise.	Emphasize the values of rationality, autonomy, self-criticism, open-mindedness, truth, and empathy.

	Tendencies of:	
With respect to:	**Cognitive Psychologists**	**Philosophers**
5. Authority	Make the authority of the expert central.	Play down the authority of the expert and play up the authority of independent reason.
6. Language used	Generate more technical terminology and make their points in a technical fashion.	Take their terminology and concepts more from the critical, analytic vocabulary of a natural language (e. g., assumes, claims, implies, is consistent with, contradicts, is relevant to).
7. Role of values in thinking	Separate the cognitive from the domain of *a)* value-choices of the thinker and *b)* the overall world view of the thinker (at least when discussing basic mental skills and processes).	Emphasize the role in thinking of values and the overall conceptual framework of the thinker; hence, the significance of identifying and assessing points of view and frames of reference.
8. Place of dialogue	Play down the significance of dialogical and dialectical thinking.	Play up the significance of dialogical and dialectical thinking; view debate and argumentation as central to rational thinking.
9. View of affect	Underemphasize the affective obstacles to rational thinking; fear, desire, prejudice, bias, vested interest, conformity, self-deception, egocentrism, and ethnocentrism.	Emphasize the affective obstacles to rational thinking (this emphasis is correlated with the emphasis on the philosophical ideal of becoming a rational person).
10. Role of teacher	Play down the role of the teacher as autonomous critical thinker (this is perhaps an emerging issue in cognitive psychology).	Make central the role of the teacher as autonomous critical thinker, the need to question her own biases, prejudices, point of view, and so forth.

	Tendencies of:	
With respect to:	**Cognitive Psychologists**	**Philosophers**
11. Classroom climate	Play down the need to develop classrooms as communities of inquiry wherein dialogical and dialectical exchange is a matter of course.	Play up the need to develop classrooms as communities of inquiry where students learn the arts of analyzing, synthesizing, advocating, reconstructing, and challenging each other's ideas.
12. Place of intelligent skepticism	Ignore or play down the significance of the student as Socratic questioner, as intelligent skeptic (this too may be an emerging issue).	Make central the significance of questioning; view intellectual advancement more in terms of skill in the art of questioning than in the amassing of anunquestioned knowledge base (the thinker as questioner is connected by philosophers with the disposition to suspend judgment in cases in which the thinker is called upon to accept beliefs not justified by his or her own thinking.)
13. Place of empirical research	Play up the significance of empirical research in settling educational issues.	Skeptical of empirical research as capable of settling significant educational issues without argumentation between conflicting educational viewpoints or philosophies on those issues.
14. View of the teaching process	Give more weight to the significance of teaching as embodying step-by-step procedures (although there is increasing dissent within cognitive psychology on this point).	Play up the significance of dialogical approaches that involve much crisscrossing and unpredictable back-tracking in teaching and thinking; skeptical of step-by-step procedures in teaching and thinking.

	Tendencies of:	
With respect to:	*Cognitive Psychologists*	*Philosophers*
15. Identified micro-elements in thinking	Emphasize such categories as recalling, encoding and storing, and identifying relationships and patterns — all of which admit to empirical study.	Emphasize identification of issues, assumptions, relevant and irrelevant considerations, unclear concepts and terms, supported and unsupported claims, contradictions, inferences and implications — all of which shed light on thought conceived as the intellectual moves of a reasoning person.
16. Place of micro-skills	Separate the analysis of micro-skills from normative considerations.	Link the analysis of micro-skills with normative considerations since, for philosophers, micro-skills are intellectual moves which can be used to clarify, analyze, synthesize, support, elaborate, question, deduce, or induce.
17. View of macro-processes	View macro-processes from the perspective of categories of research in cognitive psychology: problem solving, decision making, concept formation, and so forth.	View macro-processes from the perspective of the overall reasoning needs of a rational person: ability to analyze issues and distinguish questions of different logical types, ability to Socratically question, ability to engage in conceptual analysis, ability to accurately reconstruct the strongest case for opposing points of view, ability to reason dialogically and dialectically (each use of a macro-process is a unique orchestration of some sequence of micro-skills in the context of some issue, problem, or objective).

| With respect to: | Tendencies of: | |
	Cognitive Psychologists	Philosophers
18. Teaching as a science or art	Present teaching for thinking as a quasi-science, with the assumption that there is a discrete body of information that can be "added up" or "united" and passed on "as is" to the teacher.	Present teaching for thinking as an intellectual art; play down the significance of technical, empirical information as necessary to skill in that art.
19. Place of philosophy of education	Ignore or play down the significance of teachers developing a philosophy of education into which rationality, autonomy, and self-criticism become central values.	Emphasize the importance of each teacher developing an explicit philosophy of education which is openly stated in the classroom; tend to encourage students to do the same, especially in relation to their philosophy of life.
20. Obstacles to rational thinking	Ignore the problem of prejudice and bias in parents and the community as possible obstacles to teaching for rational thinking.	Sensitive to the dangers of community and national bias as possible obstacles to teaching for rational thinking.
21. Place of virtues and passions	Underemphasize the significance of rational passions and intellectual virtues.	Emphasize rational passions (a passiona for clarity, accuracy, fairmindedness, a fervor for getting to the bottom of things or deepest root issues, for listening sympathetically to opposing perspectives, a compelling drive to seek out evidence, an intense aversion to contradiction and sloppy thinking, a devotion to truth over self-interest) and intellectual virtues (intellectual humility, intellectual courage, intellectual integrity, intellectual empathy, intellectual perseverance, faith in reason, and intellectual sense of justice).

	Tendencies of:	
With respect to:	**Cognitive Psychologists**	**Philosophers**
22. Specialized versus mundane thinking	Orient themselves toward domain-specific think-ing, with the "good" thinker often associated with the successful business or profession-al person, or with a specialist working within a discipline.	Emphasize the link between an emphasis on rational thought and the goals of a tradition-al liberal education, of the ideal of the liberally educated person and on mundane generalizable skills such as the art of reading the newspaper critically, detecting pro-paganda and bias in public discourse, adver-tising, and textbooks, and in rational reorien-tation of personal val-ues and beliefs.
23. Place of ethics of teaching and the rights of students	Lay insufficient stress upon the relation of teaching for thinking to the ethics of teach-ing and the rights of students.	Emphasize the link between teaching for critical thinking and developing moral insight, with the rights of students; with the student's "right to exer-cise his independent judgment and powers of evaluation"; as Siegel (1980) puts it: "To deny the student this right is to deny the student the status of person of equal worth."
24. Thinking and one's way of life	Lay insufficient stress upon the relation of modes of thinking to fundamental ethical and philosophical choices concerning a way of life.	Link emphasis on critical thinking with an attempt to initiate stu-dents, as Israel Schef-fler (1965) puts it, "into the rational life, a life in which the critical quest for reasons is a dominant and integrat-ing motive."

Those whose thinking about thinking is basically shaped by scholars in one tradition differ from those shaped by the other. They differ in style, direction, and methods for improving thinking. Inevitably problems of misunderstanding and mutual prejudice remain as residues of the historical separation of psychology from philosophy. That psychologists are sometimes skeptical of philosophical approaches to teaching for thinking is poignantly demonstrated by Al Benderson (1984) of the Educational Testing Service. In characterizing "The View From Psychology" (on philosophy's contribution to teaching for thinking) Benderson says:

> Psychologists, who have their roots in research into mental processes, tend to view thinking from a different perspective than do philosophers. ETS Distinguished Research Scientist Irving Seigel, a psychologist, views philosophers who claim to teach thinking skills as encroaching upon a field in which they have little real expertise. "These philosophers are imperialists", he charges. "They don't know the first thing about how kids think." (p. 10)

R. S. Peters and C. A. Mace (1967), two philosophers in turn commenting on the separation of psychology from philosophy for the *Encyclopedia of Philosophy,* say:

> The trouble began when psychologists claimed the status of empirical scientists. At first the philosophers were the more aggressive, deriding the young science as a bogus discipline. The psychologists hit back and made contemptuous remarks about philosophical logic-chopping and armchair psychology. The arguments were charged with emotion and neither side emerged with great credit .... Not all issues between philosophers and psychologists have been resolved, but there has been notable progress toward a policy of coexistence, and here and there some progress toward cooperation has been made. (p. 26)

In the field of teaching for thinking there has been, in my view, much more coexistence than cooperation. The largest and oldest conference tradition in the field (the Sonoma Conferences: two national and six international conferences, the last with a registration of over 1,000 with over 100 presenters and 230 sessions) has had only token participation by cognitive psychologists. The conference on *Thinking* at Harvard, in turn, had only token participation by philosophers. It appears to me that few psychologists or philosophers read widely in the other tradition. The field of education has been dominated by various psychologically-based rather than philosophically-based models of instruction. It is understandable therefore why *Dimensions of Thinking,* written by a team that included no philosophers, fails to successfully represent or integrate the distinctive approach of philosophy toward the thinking skills movement.

Having said this much about the typical failure of cognitive psychologists and philosophers to appropriate the strengths and correct for the weaknesses of their two traditions, I nevertheless want to mention the signs of common themes emerging in the two traditions which may become the basis for integration. Representatives of both traditions are developing a profound critique

of what I would call a "didactic" theory of knowledge, learning, and literacy and framing a "critical" alternative. Behind this critique and reconstruction is a growing common sense of how the didactic paradigm impedes the scholastic development of critical thinkers.

✦ Conclusion

Perhaps a growing joint recognition of the need for both cognitive psychologists and philosophers to make common cause against the didactic theory of education will be the impetus for an on-going fruitful exchange of ideas across these rich traditions. It is certainly in the interest of all who consider the ability to think critically to be at the heart of education rightly conceived, for this rapprochement to take place.

✦ References

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