

PHILOSOPHY FOR CHILDREN

Multidimensional Thinking in a Community of Inquiry vs. Critical Thinking

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Abstract

John Dewey's most basic assumption was that learning improves to the degree that it arises out of the process of reflection. Dewey initially used the terms 'critical thinking' and 'reflective thinking' interchangeably by putting critical thinking as the main part of reflection. As time went on, terminologies concerning reflection proliferated, spawning a host of synonyms such as "Critical Thinking," (CT) "Problem Solving," "Inquiry" and "Higher Order Thinking" (HOT). Reflective thinking now refers to the whole process of thinking, while critical thinking is simply a type of thinking accompanied by creative thinking. The "Community of Inquiry" (COI) however, is both cognitive and affective. It includes empathy and insights that make students more competent in making good judgments. The Philosophy for

Children (P4C) movement adopted the COI methodology to enhance the dialogical and multi-dimensional thinking skills to help students *do* philosophy instead of merely learning *about* Philosophy.

Key words: *reflective thinking, Inquiry, critical thinking (CT), “Community of Inquiry” (COI), “Philosophy for Children” (P4C)*

The reflective model of thinking dates back at least as far as the time of Socrates 2,500 years ago. He discovered a method of questioning that led people to realize that they could not rationally justify their confident claims to knowledge. Confused meanings, inadequate evidence, or self-contradictory beliefs often lurked beneath their empty rhetoric.¹ Most of our real problems, however, are complex and controversial. Although we can never be certain that our beliefs or judgments about controversial issues are true or correct, we can come to defensible conclusions about such problems. Controversial issues often do not have clear-cut solutions and cannot be identified by merely using inductive or deductive logic. These issues are better solved by using reflective judgments.

Reflective Thinking

Reflective judgments “involve integrating and evaluating data, relating those data to theory and well-formed opinions, and

¹ See <http://www.criticalthinking.org/pages/a-brief-history-of-the-idea-of-critical-thinking/408>

ultimately creating a reasonable or plausible solution.”² In the face of uncertainty, “people’s assumptions about what and how something can be known, provide a lens that shapes how individuals frame a problem and how they justify their beliefs about it.”³ This is precisely because reflective thinking involves both thinking about the “how” or the procedures, and about the “what” or the content of its subject matter.

According to Dewey, reflective thinking starts by facing a controversial issue or problematic situation which means admitting the state of genuine doubt (a state of disequilibrium) and trying to reach a fixed belief (a state of equilibrium). This idea can be traced back to Charles Sanders Peirce’s theory of the “Community of Inquiry.” According to Peirce,

The irritation of doubt is the only immediate motive for the struggle to attain belief. It is certainly best for us that our beliefs should be such as may truly guide our actions so as to satisfy our desires; and this reflection will make us reject any belief which does not seem to have been so formed as to insure this result. But it will only do so by creating a doubt in the place of that belief. With the doubt, therefore, the struggle begins, and with the cessation of doubt it ends. Hence, the sole object of inquiry is the settlement of opinion.⁴

² King and Kitchener, *Developing Reflective Judgment*, xvi.

³ King and Kitchener, *Developing Reflective Judgment*, xvi.

⁴ C.S. Peirce, *Philosophical writings of Peirce*, J. Buchler ed. (New York: Dover Publications, Inc., 1955), 10.

Reflective thinking involves a state of hesitation and mental difficulty, in which thinking originates, and an act of searching, hunting, and inquiring to find materials that will resolve the doubt, settle, and dispose the perplexity. Demand for the solution of a perplexity should be the steadying and guiding factor in the entire process of reflection.⁵ Dewey noted that true reflective thinking is uncalled for in situations in which there is no controversy or doubt, no concern about the current understanding of an issue, or in which absolute, preconceived assumptions dominate.⁶

Further experience may problematize previous knowledge or beliefs giving rise to a reconsideration of this knowledge or these beliefs and creating a ‘continuity’ in inquiry. This continuity is troublesome because it involves a willingness to endure a condition of mental unrest and disturbance.

Dewey argues that the human being “who lives in a world of hazards is compelled to seek for security” and the perennial assumption has been that it is certainty, in the form of fixed and eternal truths that can provide such security.⁷ He believes that humans are very fallible creatures, yet capable of inquiry, reasoning, forming concepts and dialogue—but always in need of an intellectual humility that helps one realize that “one can always be wrong.” Therefore, absolute certainty is not something we can ever attain.⁸

⁵ J. Dewey, *How We Think* (Chicago: Henry Regnery Company, 1933), 9–11.

⁶ King and Kitchener, *Developing Reflective Judgment*, 6.

⁷ J. Dewey, *The Quest for Certainty: A Study of the Relation of Knowledge and Action* (London: George Allen & Unwin, 1930), 7.

⁸ Dewey, *The Quest for Certainty*.

According to Dewey, a person makes a reflective judgment to bring closure to situations that are uncertain. There is no way to apply a formula to derive a correct solution and no way to prove definitively that a proposed solution is correct. He argues that problematic issues or those which are inadequate for making judgments when there is an inadequate database, cannot be answered by formal logic alone, but should be resolved by a thinker who identifies a solution to the problem that temporarily closes the situation. Part of the process of forming a reflective judgment involves identifying which facts, formulas, and theories are relevant to the problem and then generating potential solutions. These strategies must then be evaluated for their relevance and validity by the thinker. The thinker who engage in reflective thinking must evaluate the potential solutions to the problem in light of existing information that might be incompatible and unverifiable with formal logic being insufficient for such purposes. Instead, other criteria are employed. These include coherence of the argument, better consistency with other data and arguments, more intensive explanatory powers, plausibility, and so on.⁹

A *fitted version of truth* is when “It harmonizes with all other judgments; false when it is in contradiction to some other.”¹⁰ However, because “there is no simple criterion or rule for determining truth which can be applied immediately to every judgment, . . . the only criterion is relation to the whole body of acquired knowledge . . . so far as it is realized.”¹¹ But since the process of acquiring knowledge is an ongoing progress, there is

⁹ King and Kitchnere, *Developing Reflective Judgment*, 7.

¹⁰ J. Dewey, *Psychology* (New York: Harper and Brothers, 1886), 217.

¹¹ *Ibid.*, 218.

always flexibility and room for novel judgments as long as the whole system of knowledge can account for them.

When truth cannot be verified, the mind “waits for evidence” and “learns to assume a state of suspended judgment.”¹² Through this process of trial and error, individuals cultivate the ability for critical judgment so that they do not make rash decisions yet can still act with prudence and timeliness. As Dewey puts it, “The essence of critical thinking¹³ is suspended judgment; and the essence of this suspense is ‘inquiry’ to determine the nature of the problem before proceeding to attempts at its solution. This, more than any other thing, transforms mere inference into tested inference, suggested conclusions into proof.”¹⁴ The reflective judgment process or stages of inquiry process is enumerated by Dewey as follows:

Table 1: Different definitions of inquiry process

Reflective Judgment Process ¹⁵	Stages of Inquiry ¹⁶
1. Selecting a controversial issue as the problem for inquiry	1- Feeling of difficulty or puzzlement
2. Setting the agenda for inquiry	2- Doubt
3. Formulating hypotheses	3- Formulation of the problem
4. Evaluating hypotheses through reasoning	4- Hypothesis (making up a theory)
	5- test the hypothesis

¹² Ibid., 219

¹³ Reflective judgment and critical thinking in Dewey (1933, 1938) are used interchangeably; King and Kitchener, *Developing Reflective Judgment*.

¹⁴ J. Dewey, *The Collected Works of John Dewey: The Middle Works 1899-1924, vol. 16*, ed. J.A. Boydston (Carbondale, Souther Illinois: University Press, 1978) 238–239.

¹⁵ F. Shahrtash, *P4C-Science Educaion: Scientific Literacy in Primary School Science* (Jinju, Gyeongnem, South Korea: Gyeongsang National University, 2016).

¹⁶ A. Sharp, *Breaking the Vicious Circles*, 240.

5. Testing hypotheses or ideas to making good judgment 6. Make habits of actions based on good judgment in further similar situations	6- Discovery of counterexample 7- Revising the hypothesis 8- Application of revised hypothesis to life situation
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“[This] does not follow that one judgment is as good as another . . . there is a craft to good thinking and like any craft, we can learn it and in practicing it, we can get better at it, more refined, more insightful, more subtle, and more wise.”¹⁷ In reflective thinking, the term ‘warranted assertion’ is preferred to the terms belief and knowledge”¹⁸ in reflective thinking. The process is guided by the need for a solution to the problem and is characterized by an interaction between the basis of the proposed solution and the reasoning of the thinker. The process is imperfect not only because of limitations of the available information but also because of the limitations of the thinker.

Reflective thinking requires the *continual evaluation* of beliefs, assumptions, and hypotheses against existing data and against other plausible interpretations of the data. The resulting judgments are offered as reasonable integrations or syntheses of opposing views involving ongoing verification and evaluation. Judgments derived from the reflective thinking process are more likely to be valid and insightful than are beliefs derived from authority, emotional commitments, or narrow reasoning. Reflective judgments remain open for further scrutiny, evaluation and reformulation,

¹⁷ M. Lipman and A. M. Sharp, Interview by S. Naji and S. Karimi, ed., “P4C & Rationality in the New World,” 2006.

¹⁸ J. Dewey, *Logic, The Theory of Inquiry* (New York: Henry Holt and Company, 1938), 8–9.

and are open to self-correction. Reflective thinking is called for where there is awareness of a real problem or when there is uncertainty about a solution.¹⁹

Judgment Education

The development of judgment abilities is a mutual task among philosophy and science educators and is a part of scientific literacy objectives. A science-literate person should know what kind of knowledge is relevant to personal decision-making as well as the nature of the reasoning required for resolving dilemmas. From a scientific literacy point of view, this does not mean turning everyone into a scientific expert, but enabling them to fulfill an enlightened role in making choices which affect their environment and to understand in broad terms the social implications of debates between experts.

Judgment education sees future citizens not as producers of scientific knowledge, but rather, as critical consumers.²⁰ Dewey, influenced by Frobel—American practitioner of Socratic education—believed that children need to learn to take charge of their own thinking and to engage with the world in a curious and critical spirit.²¹ For Dewey, thinking was the method of intelligent learning, “learning that employs and rewards the mind.”²² Dewey’s most basic assumption was that learning improves to the degree that it arises out of the process of reflection.

¹⁹ King and Kitchener, *Developing Reflective Judgment*, 8.

²⁰ J. Osborne, “Science for Citizenship,” in J. Osborne and J. Dillon, eds., *Good Practice in Science Teaching: What research has to say*, 2nd ed. (Bershire, England: McGraw Hill Open University Press, 2010), 46–68.

²¹ M.C. Nussbaum, *Not for Profit: Why Democracy Needs the Humanities* (Princeton, N.J.: Princeton University Press, 2010).

²² J. Dewey, *How We Think* (Chicago: D.C. Heath & Co. Publishers, 1910), 180.

Dewey was mostly alone in his concern about pedagogical change. He defined education as the fostering of thinking rather than just transmitting knowledge. It was not enough to merely teach for an update in factual knowledge, just as it was not enough to teach just for reasoning or for truth. Dewey saw that teaching for thinking had to be teaching for precise, open-minded, fair-minded thinking. He visualized education as the operative leading edge of an enormous social reform aimed at revising society into a world order in which people lived democratically. "In reality, the reflective model is thoroughly social and communal. Its aim is to help us form better judgments so that we can proceed to modify our lives more judiciously."²³

Dewey's Socratism was an argumentative technique in the classroom; it was a form of life that carried on with other children in the pursuit of an understanding of real world issues and immediate practical projects. It means that socratic questioning grows from real events as "points of departure."²⁴ Dewey never addressed systematically the question of how Socratic critical reasoning might be taught to children of various ages. Thus, his proposal remains general and in need of supplementation by the actual classroom teacher who may or may not be prepared to bring this approach to life.²⁵

Critical Thinking

Deweyan contributions to the critical thinking (CT) movement are not limited to reflective thinking but involve a conception of

²³ Lipman, *Thinking in Education*, 25–26.

²⁴ Nussbaum, M. C., *Not for Profit*.

²⁵ Ibid.

philosophy as criticism. Dewey locates philosophy as a special non-scientific form of inquiry that is concerned with the judgment of value—a judgment of judgment, a “criticism of criticism.”²⁶ The term reflective thinking and CT are sometimes used interchangeably, even by Dewey.²⁷ For example, the definition of reflective thinking is much the same as Lipman’s definition of CT.²⁸ He argues that thinking facilitates judgment, relies on criteria, self-correcting, and sensitive to context. Similar to Dewey, Lipman used CT and Reflective Judgement interchangeably. Critical thinking simply helps us avoid acting unreflectively.²⁹

Gradually, these two terms became separated³⁰ with reflective thinking used by different names in psychology, education, and philosophy.³¹ Ennis, Glaser and Lipman see CT as a process of inquiry or problem solving, while others such as Salmon assume CT as logic or a hypothetico-deductive method. Both approaches are limited by assuming that CT consists of a set of skills or general principles that one can apply in order to solve problems and that learning those skills and how to use them will lead to CT. For the latter perspective, “uncertainty does not really exist.” And they see a close relationship between such thinking and the scientific method.³²

The typical description of CT and the conception of reflective judgment are different in two ways: “(1) the epistemological assumptions on which the thinking person operates, and (2) the

²⁶ Sharp, *Breaking the Vicious Circles*.

²⁷ King and Kitchener, *Developing Reflective Judgment*, 8.

²⁸ M. Lipman, *Thinking in Education*, 212.

²⁹ Lipman, *Thinking in Education*, 47.

³⁰ King and Kitchener, *Developing Reflective Judgment*, xix.

³¹ M. Lipman, *Thinking in Education*.

³² King and Kitchener, *Developing Reflective Judgment*, 9.

structure of the problem being addressed. Both are concerned with Dewey's observation that awareness of uncertainty must exist prior to the initiation of reflective thinking. Therefore the impulse should conclude that the situation is problematic before further observation."³³ The origin of these differences might be rooted in the fact that the reflective judgment model focuses on thinking about ill-structured problems, which is neglected by those who see CT as merely a process of problem solving.³⁴

In the latter half of the twentieth century, the slogan of progressive educators was that schools needed to teach through CT—thinking that did not violate the principles of experimental science or of formal, or even of informal logic. The aim of CT is to improve the quality of our beliefs, judgments, and decisions. CT is not a new method of intellectual inquiry but is essential as a tool of inquiry. As such, CT is a liberating force in education and a powerful resource in one's personal and civic life. While not synonymous with good thinking, CT is a pervasive and self-rectifying method of thinking. What educators call CT is known in professional fields as "professional judgment." This is one of the links between liberal education and professional education.³⁵

Expert consensus defines CT as a "purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based. CT is essential as a tool of inquiry."³⁶

³³ Ibid., 8.

³⁴ Ibid., xix.

³⁵ Peter and Noreen Facione, "Critical Thinking as a Reasoned Judgment, The Album," in *Insight Assessment and the California Academic Press* (2002).

³⁶ P. A. Facione *The Delphi report executive* (California Academic Press, 1990).

Thus, educating good critical thinkers means developing CT skills that nurture those dispositions which consistently yield useful insights and which are the basis of a rational and democratic society.” Examples for CT dispositions are as follows: open- and fair-mindedness, inquisitiveness, flexibility, a propensity to seek reason, a desire to be well-informed, and a respect for and willingness to entertain diverse viewpoints. An effective approach to teaching CT in schools and professional development programs must include strategies for building intellectual character (disposition or habitual way of acting or “personal attributes”³⁷) rather than relying exclusively on strengthening cognitive skills.³⁸

Philosophy for Children (P4C)

P4C program has gone through many changes since it was first introduced by Lipman and his colleagues in the 1970s. P4C was initially developed as a ‘thinking skills program.’ According to Marzano, “Such philosophers as Matthew Lipman holds that the development of rational thinkers should be the primary goal of education.”³⁹ Gregory admits these changes and says, “It’s true that the advent of P4C coincided with the critical thinking movement in education, and it is correct that *the study and promotion of excellent thinking* has been the cornerstone of Lipman’s work.”⁴⁰

We can distinguish the earlier reflective model, shaped by the pedagogical philosophy of Dewey, from the later model,

³⁷ Dewey, *How We Think*.

³⁸ Ibid.

³⁹ R. Marzano, et al., *Dimensions of Thinking: A Framework for Curriculum and Instruction* (Alexandria: ACSD: Association for Supervision and Curriculum Development, 1998).

⁴⁰ M. Gregory, “Philosophy for Children as a Process and a Content Approach to Philosophy Education: A Response to Judith Suissa,” Murris Symposium, South Africa, 2008.

characterized by P4C.⁴¹ This new paradigm emphasizes that reasonableness is “the result of a combination of *reasoning* and *judgment*.” As Santayana says, “all judgments have a kernel of reasoning and all reasonings have judgment as their natural fruition.”⁴² The term “reasonable” is different from both “rational” and “prudential” judgments, which relied heavily on the notion of self-interest. The term “reasonable” presupposes that ethical inquiry will result in a settlement that takes the interests of everyone in the community into account, including, of course, one’s own.⁴³ Since in ethical disputes, the controversial issues cannot be easily resolved, people should make compromises and employ trade-offs that allow each of the parties to save face and retain self-respect.

Lipman argued that the ethical inquiry approach in education should be centered on the cultivation of reasonableness. According to Lipman, a judgment education should appeal to reasonableness, which is identified as reason tempered by good judgment.⁴⁴ The aim of judgment education should be helping students become more thoughtful, imaginative, reflective, considerate, and *reasonable individuals*⁴⁵ along with being “more capable of exercising good judgment.”⁴⁶ Judgment education does not aim for rational beliefs, but it wants to cultivate “ethical, social, political, and aesthetic

⁴¹ Lipman, interview by S. Naji.

⁴² Lipman, *Thinking in Education*, 274.

⁴³ M. Lipman, “Philosophy for Children: Some Assumptions and Implications,” *Ethics in Progress* 2, no.1 (2011).

⁴⁴ Lipman, *Thinking in Education*, 11.

⁴⁵ M. Lipman, A. Sharp and F. S. Oscanyan, *Philosophy in the Classroom* (Philadelphia: Temple University Press, 1980).

⁴⁶ M. Lipman, *A Life Teaching in Thinking*, 107.

judgments and help the children to apply them ‘*directly to life situations*’.”⁴⁷

Community of Inquiry (COI)

COI involves both the individual and the collective, which Kant characterized as the idea of “logical common sense” which is specified by three maxims: (1) to think for oneself; (2) to think from the standpoint of everyone else; and (3) to always think consistently. The first is the maxim of an unprejudiced way of thinking, the second of a broadened way of thinking, and the third of a consistent way of thinking.”⁴⁸

COI is a model of reflective thinking that forms a community of individuals who are dedicated to the use of similar procedures in their pursuit of identical goals.⁴⁹ Communal inquiry is not possible unless there is some agreement about acceptable methods of inquiry. COI follows both Dewey’s logic of inquiry and his phenomenology of inquiry, wherein inquiries, following Peirce, begin with a problem, question, or doubt and must aim at a solution or resolution. Both the logic and phenomenology of inquiry are genuinely felt—something in which the inquirer actually has a stake.⁵⁰ In the COI pedagogy, “students can learn the principles and the uses of argumentation and informal logic, as well as habits of democratic interaction, by engaging in this kind of dialogue with a strong facilitator who both models the virtues [both skills and dispositions] and evokes them from students

⁴⁷ Lipman, *Thinking in Education*, 279.

⁴⁸ *Ibid.*, vii.

⁴⁹ Pierce, *Philosophical Writings of Pierce*.

⁵⁰ Gregory and Grange, “Introduction: John Dewey on Philosophy and Childhood,” 13.

through [higher order] questions and observations.”⁵¹ Lipman integrates the elements of ‘dialogue,’ ‘inquiry,’ and ‘community’ within the domain of philosophy, as a dialogical community of inquiry. In this dialogical community of inquiry philosophy is redesigned and reconstructed so as to make it available, acceptable, and enticing to children in order to help them *do* philosophy rather than learn *about* philosophy.⁵²

The purpose of reflecting on and expressing one’s opinions in the COI is to critically evaluate how such opinions may be developed into possible means for reconstructing a problem common to all community members. Children’s initial opinions are referred to as the ‘raw ingredients’ of inquiry because “the goal of inquiry is to help children transform these ingredients into a more comprehensive worldview, through reflective and self-correcting dialogue—that is, through the activity of the community of inquiry.”⁵³

This kind of integration of critical and dialogical elements could be replicated with important variations within all school subjects by taking cues from the ongoing work of the disciplines from which those subjects are derived. The purpose of such inquiry is to determine the most reasonable thing to believe about the question at hand. The methods and standards for disciplined inquiry will vary from subject to subject. But the purpose of each session is for students to reach one or more “reasonable philosophical judgment”

⁵¹ M. R. Gregory, “A Framework for Facilitating Classroom Dialogue,” *Teaching Philosophy* 30, no. 1 (2007): 59–84.

⁵² K. Murris, “Can children do philosophy?”, *Journal of Philosophy of Education* 34, no. 2 (May 2000): 261–279.

⁵³ L. Splitter and A. M. Sharp, *Teaching for Better Thinking: The Classroom Community of Inquiry* (Melbourne: The Australian Council for Educational Research, 1995), 169.

regarding questions that are ethical, aesthetic, epistemological, etc.⁵⁴ This kind of communal inquiry, which is both cognitive and affective, includes empathy and insight in order to give students better competency in making good judgments.⁵⁵

The Deweyan stages of inquiry is fundamental to understanding Lipman's COI process (compare to table 1).

Table 2: Lipman's⁵⁶ COI process

- *Pre-reflective situation*: a situation presumably acceptable as it is.
- *Felt discomfort*, not yet intellectualized.
- *Doubt* that one's beliefs are functioning adequately.
- *Formulation of the problem* as one of blocked conduct.
- Offering *suggestions of desirable ends* that might be sought.
- Seeking out all relevant *considerations*; decisive considerations become *criteria*.
- Ends become more tentative and realistic *ends-in-view*; means become more practical *means-in-view*, compatible with ends-in-view.
- Certain *considerations* turn out to be alternative *hypotheses* for resolving the problem.
- *Ranking of alternatives* in terms of feasibility.
- Continuation of inquiry, following *the unique quality of the situation*.
- Discovery of a *working belief* to replace non-functional beliefs. Felt discomfort removed. (If "warranted assertibility can be substituted for truth" "functional conviction" may be substituted for "working belief").
- *Post-reflective situation*: transformed situation is found acceptable. *The entire situation has been changed*, and not just our understanding of it.

⁵⁴ M. Gregory, interview by M. F. Shaugnessy, Aug. 15, 2007.

⁵⁵ A. Sharp, *Breaking the Vicious Circles: Manual to Accompany Hannah* (Mexico: San Cristobal de las Cases, 2000), 342.

⁵⁶ Lipman, "Philosophy for Children."

Multidimensional Thinking vs. Critical Thinking

For Lipman, the word judgment originates from the Ancient Greeks. Socrates said that philosophy begins in wonder, and we see that philosophers are people who search for some kind of good judgment, truth, or meaning through history. The regulative ideals which the Greeks applied to their activities were the true, the beautiful, and the good. Lipman says, “The Greeks were right to insist on balance in these matters.”⁵⁷

Lipman argues that the three highest levels of Bloom’s taxonomy (analysis, synthesis, and evaluation) is a criteria one might apply to higher order thinking. It can be also “applied to anything and not just thinking.”⁵⁸ According to Lipman, thinking does not qualify as ‘higher order’ unless it satisfies three specifications (critically, creatively, and caringly). There are too many thinkers who are very logical but mechanical and diffident; too many who are caring but illogical and unreasonable. Good judgment requires that students become critical, creative, and caring thinkers.⁵⁹

He believes that the third leg of the HOT tripod should be a name that suggests a responsiveness to values, a sense of what is involved in an appropriate application of theory to a practical situation, an understanding of the cognitive role of the emotions—particularly those that are social in character, such as trust, considerateness, and compassion—and a recognition of the thinking that actually takes place when we appreciate a work of

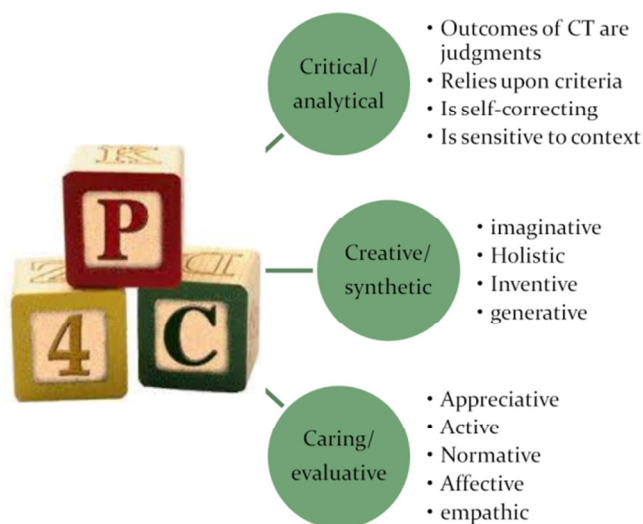
⁵⁷ M. Lipman, “Moral Education Higher Order Thinking and Philosophy for Children,” *Early Childhood Development and Care* 107 (1994) : 61–70.

⁵⁸ Lipman, “Moral Education.”

⁵⁹ *Ibid.*, 61.

art, survey a landscape, examine a snail's shell, discriminate barely distinguishable differences, and examine our own 'mental acts' and 'mental states.' He proposes 'caring thinking' for the third leg of the tripod, with the understanding that caring thinking here encompasses thinking that is concerned (with the predicaments others are in), appreciative (of every arrangement of parts and wholes), normative (suggestive of what ought to be done in moral situations) and deliberative (in that it seeks to weigh all the factors and take the context into account before judging).⁶⁰

Figure 1: Critical, Creative, and Caring Dimensions⁶¹



⁶⁰ Lipman, "Philosophy for Children."

⁶¹ Lipman, *Thinking in Education*, 204–271.

Table 3: The transformation from the Greek’s Trinity of Truth, Beauty, and Goodness into Critical, Creative, and Caring Thinking’ and the Branches of Philosophy and their Criteria

<i>As regulative ideals</i>	The true	The beautiful	The good
<i>As branches of philosophy</i>	Epistemology	Aesthetics	Ethics
<i>As modes of judgment</i>	Saying	Making	Doing
<i>As cognitive objectives</i>	Analytical	Synthetic	Evaluative
<i>As modes of thinking</i>	Critical	Creative	Caring

Although the advent of Philosophy for Children coincided with the CT movement in education,⁶² Lipman uses the phrase “multidimensional thinking” to refer to his famous tripartite of critical, creative, and caring thinking—all of which children practice extensively in P4C. P4C incorporates multidimensional thinking into a broader method of dialogical inquiry patterned on the pragmatist notion of the COI.⁶³ Lipman focuses on HOT as equal to the phrase “multidimensional thinking” composed of critical, creative, and caring forms of thinking. Children make better judgments in their daily lives with judgments marked by appropriate criteria, relevance, sense and attention to context, and also ethical, social, political, and aesthetic judgments.⁶⁴ The main

⁶² Gregory, “Philosophy for Children as a Process and a Content Approach to Philosophy Education.”

⁶³ Secondary sources cited in M. Gregory, “Philosophy for Children: Where are we now?” in *An Interview with Maughn Gregory*, interview by S. Naji, 2010.

⁶⁴ Gregory, “Philosophy for Children.”

characteristic of good judgments is therefore according to the fact that they are the products of multidimensional thinking in a COI.

The curriculum which cultivates good judgment must involve the fostering of critical thinking, creative thinking, and caring thinking because it is the combination of all three that prepares the child to make judgments that are appropriate, insightful and relevant. Lipman designed the COI classroom for practicing multidimensional thinking, a process of “a constant remaking, improving, revising of all its failing parts in order to maintain the equilibrium”⁶⁵ Thus, a COI engages children of the community in the art of questioning which requires using multidimensional thinking and cognitive skills. Their improvement requires:

1. The improvement of their CT which involves the strengthening of their logical and epistemological prowess as well as their evaluative skills. (A prototype of the critical thinker is the professional, the expert, the model of good judgment.)
2. The improvement of creative thinking which involves discovering, inventing, and perceptual thinking. (Prototypes of the creative thinker are scientists and artists.)
3. The improvement of caring thinking which includes wide types of thinking such as active, affective, and valiative thinking. (Some prototypes of the caring thinker are the solicitous/apprehensive/anxious

⁶⁵ Lipman, *Thinking in Education*, 197.

parent, the considerate environmental planner, the thoughtful and concerned teacher.

Nevertheless, Lipman confirms that he is not even certain about whether or not his program is warranted for cultivating good judgment. He says that the improvement of “children’s reasoning will [not] necessarily result in their exercising better judgment, just as it cannot be assumed that better judgments will necessarily be followed by better actions. We are in the area of likelihood here, not necessity.”⁶⁶ Not all good judgments are the product of good thinking, sometimes the person has the required cognitive skills but is still weak and needs to be improved. Other times the person uses intuition or ‘fine arts’ which is not necessarily considered the product of good thinking.

It should be noted that Daniel T. Willingham criticizes the position of Robert Ennis, Barry Beyer and others, that critical thinking can be effectively taught as a general group of skills outside the context of any particular discipline. Willingham argues that empirical studies have not demonstrated the success of this general skills approach, and that teaching generalized thinking skills does not prepare students to think through and with particular subjects. Gregory agrees with Willingham that good thinking, beyond an elementary level, is context-specific and also believes, paradoxically, that grounding in the tropes of critical thinking and inquiry that have evolved within a particular discipline prepares students to find ways to transfer those tropes to other contexts.⁶⁷

Willingham recommends that teaching critical thinking “should be taught in the context of subject matter” (in this case,

⁶⁶ Lipman, *Thinking in Education*, 274.

⁶⁷ Gregory, “A Framework for Facilitating Classroom Dialogue.”

philosophy); that it should not be reserved for older and/or advanced students, that it should “draw on students’ everyday knowledge and experience,” and that relevant strategies should be made explicit and practiced repeatedly.⁶⁸ He observes two features of the practice of “community of inquiry” in P4C in the scientific community which does not apply to teaching for domain-based critical thinking: (1) making one’s thinking accountable to one’s peers and (2) participation in a collaborative community. In short, students in P4C learn basic logic and argumentation skills, competency in dialogue, and what Harvey Siegel calls the disposition of concern for good reasons, by working in the domain of philosophy. To what extent philosophical tools and methods may be usefully employed in other subject areas remains to be seen, and we welcome others to join us in careful research.⁶⁹

Conclusion

Although the origin of P4C and CT movements is in Socrates and Dewey’s reflective thinking, it seems that since the late 1990s they have sought different methods of teaching. CT remains an approach that can be used both on its own and integrated by different programs in both schools and universities. CT skills are now more an integrated part of the curriculum in both schools and universities, such as in science education, nursing courses, and evidence-based medicine rather than as a stand-alone program.

P4C further focuses on both cognitive and affective aspects of thinking by including multidimensional thinking which includes critical, creative, and caring thinking. Creative thinking was

⁶⁸ Ibid.

⁶⁹ Ibid.

considered an implicit part of critical thinking although it excludes emotional thinking. P4C once claimed to be a program designed for teaching thinking to children as a separate subject matter in primary schools, but not anymore. This program seems to be perfectly suitable for detecting and re-evaluating the person's belief system about their personal and communal life through reasoned dialogical inquiry with their peers in any subject matter. Since cooperative learning has become the main way of learning in almost every aspect of education, the methodology of P4C known as Community of Inquiry (COI) has become more popular as a method which reflects the dialogical character of philosophical thinking.

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