# An Ecological Approach to Thinking<sup>1</sup>

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## The Tree of Philosophy

n the history of Western thought there are various approaches to the classification of science or human knowledge. The current classification is highly conditioned by the fact that knowledge (more or less scientific) is grouped from within the field of academia, which introduces a certain bias (Goodson, 2014). It is also true that the current classifications tend to seek more interdisciplinary approaches and, when dealing with complex problems, research groups are also interdisciplinary. I leave this topic, which would take us very far off point, and focus on a metaphor by Descartes.

Descartes compared philosophy to a tree: «Thus, all Philosophy is like a tree, of which Metaphysics is the root, Physics the trunk, and all the other sciences the branches that grow out of this trunk, which are reduced to three principal, namely, Medicine, Mechanics, and Ethics. By the science of Morals, I understand the highest and most perfect which, presupposing an entire knowledge of the other sciences, is the last degree of wisdom" (Descartes, n.d.). It is a metaphor that has been interpreted in different ways, but that interests me here insofar as it offers an integrated and interrelated conception of knowledge and at the same time proposes that the highest level is occupied by "perfect Morality", while Metaphysics (First Philosophy) constitutes the roots that sustain and feed the tree. The usefulness of philosophy, its most important contribution, are the fruits of those branches, especially the science of Morals. It can serve us as a thread for what follows about the program of Philosophy for Children as it was designed and elaborated by Matthew Lipman and Ann Sharp (Lipman & Kennedy, 2010), mainly, with a few allusions to the varied programs that have followed.

## **Critical Thinking**

Philosophy for Children was born in the sixties in the United States—more specifically in the New York area—during years of profound and significant social, cultural and political transformation. Education was among those areas of great concern, with many people believing that important changes were needed. In this context, several educational proposals emerged, one of the most important being aimed at improving thinking, with a focus on teaching people to think—on what was

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<sup>&</sup>lt;sup>1</sup> This paper is an updated and extended version of the book chapter: Un approccio ecologico al pensiero. To be published *Propositi di filosofia* n°1, Collana Passaggi, edizioni Mimesis, Milano.

then called *critical thinking*. This was the generic name that referred to a number of theoretical teaching resources, accompanied by evaluation instruments, all of which were aimed at teaching students to think critically for themselves. Undoubtedly, this movement had deep roots, which can be traced back to classical Greece, as well as more recent roots such as the New School movement and, in the United States, John Dewey's educational philosophy, which had practical application in Chicago, at that university's Laboratory Schools (Hitchcock, 2018). What we now understand by critical thinking was first introduced into the educational field through Bloom's taxonomies (Bloom et al., 1956), which included six objectives characteristic of the cognitive domain. This was followed by the work of R.H. Ennis, who identified 13 critical thinking dispositions and 12 abilities (Ennis, 1962).

Matthew Lipman's program, which emerged in the late 1960s (he was joined by Ann Sharp in 1970) (Lipman and Kennedy, 2010) certainly belongs to that movement (García Moriyón and Lipman, 2002). Lipman's first work, written in 1969, was *Harry Stottlemier's Discovery*, which was expressly aimed at teaching students aged 11 to 12 to think critically on their own (IAPC, 2002). This was the starting point of a project that would grow into a consolidated curriculum covering from 4 to 18 years (eight novels and eight manuals for teachers). This curriculum included a teacher training aspect, which was accompanied by educational research on the impact of the implementation of the program, and eventually an international network (the ICPIC) of people involved in implementing the program. At present, the original approach to philosophy for children is widespread throughout the world, with a wide variety of alternative implementations, a large amount of theoretical research and many studies on the impact of the program on the cognitive and affective development of students during childhood and adolescence.

In this paper, I will focus exclusively on how those working in philosophy for children understand thinking—at first critical thinking, then quickly expanding to creative and caring thinking. More than an extension, what has taken place during the almost four decades of intense work (1969-2010) is a deepening of something that was already clearly present at the very beginning—the two creators of the program always had this holistic approach to critical thinking in mind.

## More Than Critical Thinking: A Holistic Philosophical Thinking

All those who have developed critical thinking-based educational approaches, including Lipman himself (1987), have shown a decided interest in specifying competences or abilities—preferably cognitive—that can be clearly defined, applicable to education and evaluable with a certain rigor (García et alia, 2002). However, although these approaches coincide in many important ways, there are also discrepancies that, without undermining the vitality of this broad educational trend, prevent reaching a shared understanding of them. In other words, there is no clear agreement as to what the fundamental competencies or dimensions of critical thinking should be or as to the instrumental bias of any educational approach to critical thinking (Biesta, 2011). More generally, there is little agreement on what we should understand by thinking. This should come as no surprise, given the complexity and extension of the concept—a concept with somewhat diffuse semantic and pragmatic contours. Such disagreement, however, is also present in the field of the psychology of intelligence and personality. Yet in both fields, important agreements have been reached, for example, around the

concept of intelligence or personality, with standardized tests that allow for its evaluation and development (Colom Marañón, 2018). This agreement does not prevent the existence of a variety of proposals in the areas of psychology of personality and intelligence—some of which have little empirical evidence in their favor, but are widely accepted—as is the case of the multiple intelligences proposal in the field of cognitive dimensions, or psychoanalysis, in the field of personality in general. These two proposals, for example, are suggestive, but not rigorous from the perspective of psychological research.

In Lipman and Sharp's specific contribution, the basic nucleus of their understanding of critical thinking and education was very clear from the beginning of the curricular development. In 1969, Lipman published his first novel, *Harry Stottlemeier's Discovery*. Over the next ten years, Lipman, together with Ann Sharp and Frederick S. Oscanyan, published the seminal books: four novels (*Harry, Lisa, Suki* and *Mark*), two instructional manuals for teachers (*Philosophical Inquiry* and *Ethical Inquiry*) and two theoretical books, *Philosophy in the Classroom* and *Growing Up with Philosophy* (IAPC, 2002). They presented the theoretical underpinnings of the program, as well as guides for teachers to implement the program in their schools, along with research on the results of its implementation in schools (Lipman, Sharp & Oscanyan, 1980, pp, 217-224).

These seminal books—from which the rest of the curriculum was articulated—did not contain a systematic or orderly exposition of the cognitive and affective competencies or dimensions that the program intends to develop, but they do contain four central ideas that offer a good description of the program. The first of these posits that wondering (as a starting point) and the search for meaning (as a goal to be achieved) are central features of human learning, and that we must recover and reinforce them through the use of philosophical inquiry in the classroom (ibid., pp. 11, 32). Secondly, those works present a series of competencies linked to the central objective of becoming more reasonable and reflective in our deliberation and decision-making processes (although said competencies may not be completely coherent) (ibid., 51-129). Thirdly, they stress that all cognitive development must be accompanied by moral growth, that they cannot be dissociated—in the same way that the enhancement of cognitive and affective competencies can only be achieved when they become habits and behaviors (ibid., pp. 153-188). Finally, the authors consider that philosophy is the most appropriate discipline for achieving these ends both for its specific argumentative competences (philosophizing, or philosophy as an activity) and for its contents (philosophy as subject matter).

It's very important to remember that all the novels of the IAPC curriculum were written by taking into account the philosophical topics that should provoke philosophical inquiry in the classroom, although cognitive competences (good reasoning) also play a certain dominant role. Although cognitive (good reasons) and affective (good feelings) competencies have a certain predominance, content or themes that have been dealt with in the Western tradition, as well as "philosophical" topics from other cultural areas are no less frequent. The manuals explain to teachers—who are assumed to have very little philosophical training—what those issues are, along with their most commonly discussed and debatable aspects. This is even clearer in the teachers' guides, which offer an exhaustive enumeration of the philosophical themes that are present in each chapter and section of the novels. A look at Lipman's work on the sources and references used in *Harry* 

Stottlemeir's Discovery (Lipman, 1992) and those used in Pixie (Reed and Sharp, 1996) provides good examples of this.

In a way, the most innovative aspect of the program is not its objective to teach critical thinking, nor is it to transform classrooms into communities of inquiry—something that was already being done in other pedagogical currents. These are, indeed, central objectives that occupy and guide the entire educational proposal of Philosophy for Children. Neither is it to resort to philosophy, since in countries of the "Latin" cultural sphere (Italy, France, Portugal, Spain, Mexico, Argentina, etc.) philosophy was already an important discipline, partly focusing on good thinking. The true innovation is to link everything (critical thinking, community of inquiry and philosophy) in a coherent way and to propose that it is possible to do philosophy from as early as three or four years old. It is an approach that shatters the Piagetian paradigm of cognitive development, which considered children's intelligence as pre-operational and concrete, thus postponing the emergence of abstract and formal thinking to the beginning of adolescence. It also breaks with a long European philosophical tradition, dating back to Plato himself, for which philosophy could not be practiced until the end of adolescence.

## **Higher-order and Complex Thinking**

The effort to expand upon and to further detail this particular educational proposal continued over the following years. The manuals for the following novels are a good reflection of this deepening, especially those written for earlier ages, from 4 to 11 years old: Pixie (1981) and Looking for meaning (1982); Kio and Guss (1982) and Wondering at the World (1986); Elfie (1987) and Getting Our Thoughts Together (1987); Nous (1996) and Deciding What to Do (1996). In the book Thinking in Education (Lipman, 1991), Lipman points out that an educational approach aimed at developing reason and critical thinking should be based on understanding rationality (being rational) as reasonableness (being reasonable), that is, a kind of reasoning that performs the cognitive movements that lead to the formulation of good judgments, to making the right decisions and putting them into practice. That is what Lipman calls complex, or high-level thinking, formed by the combination of critical thinking and creative thinking, a type of thinking that takes into account the procedures—the method (formal and informal logic)—and the contents, the philosophical issues on which one argues. He summarizes it in a very clear table in which he points out the characteristics of complex thinking or higher order thinking (ibid., p. 35)

Critical Thinking	Creative Thinking	Complex Thinking	
Governed by criteria	Sensitive to criteria	Concerned with both	
	(particularly binary)	procedural and substantive	
		considerations	
Aims at Judgment	Aims at judgments	Aims at resolution of	
	problematic situations		
Self corrective	Self-transcendent	Metacognitive (inquiry into	
		inquiry)	
Sensitive to context	Governed by context	Sensitive to context	

In the same book, he groups cognitive skills into four major groups (ibid., pp.40-45)

- 1. *Inquiry*: a self-corrective practice with the aim of discovering or inventing ways of dealing with problematic situations. *The products are judgments*.
- 2. Reasoning: orders and coordinates what has been found or invented through the inquiry, and finds ways of extending and organizing it. It is interested in truth.
- 3. Concept formation: organizes information into clusters and analyzes and clarifies it so as to get a better understanding and basis for judgment. It focuses on forming principles, criteria, arguments and so on.
- 4. Translation: carries out the meanings from one language to another in different languages and contexts, retaining their sense and meaning, sometimes through interpretation. It is primarily concerned with the preservation of meaning.

It is a debatable classification of cognitive competencies, but it is evidently a well-oriented effort for its application in the classroom. Very importantly, it makes clear (ibid. Ch. 14, pp. 229-241) that all this formation of complex thinking takes place in the setting of a classroom transformed into a community of inquiry (never forgetting that, even if he does not explicitly say so, he is always talking about philosophical inquiry), a central concept in which Ann Sharp's contributions are also fundamental (Sharp & Splitter, 1995, Ch. 5; Gregory & Laverty, 2018). The community of inquiry is the environment in which acts and mental states become epistemic moves, i.e., behavioral habits that manifest robust learning in critical, creative and caring thinking. This theme is further developed in the second edition of the book (Lipman, 2003).

In this further development, he clearly lays out the idea of a third level of thinking—caring thinking (ibid., Ch. 12, pp. 261-272)—an idea that he had previously presented in a paper (Lipman, 1995). It is interesting because in this approach he directly takes up what they, Lipman and Sharp, had already stressed in 1973-1977: the importance of meaning and of the ethical dimension of reasoning. Yet this time he gives it a new treatment by speaking of caring thinking. As we can see in the table prepared by Lipman, it is a triadic approach to philosophical thinking that has been present in the Western philosophical tradition, including medieval scholasticism.

Lipman	Greek Philosophy	Aristotle	Kant
Critical Search for truth	Truth	Theory	Pure Reason
Creative Build meaning	Beauty	Poiesis	Judgment
Caring Value-oriented	Good	Practice	Practical Reason

There are two articles from Sharp that offer a good insight into the community of philosophical inquiry. In one of them, she attributes an aesthetic dimension to the philosophical research community (Sharp, 1997a), which leads us to consider that each class is a work of art, a performance. In the other, she talks about each session being a religious experience, following Dewey's ideas (Sharp, 1997b), a topic she addressed in two other articles focused on spirituality that remained unfinished when she passed away. Peter Shea (2018) exposes these ideas of Sharp very well and includes a quote from his article (Sharp, 1997b) that correctly expresses this integral sense of education that is proposed in the philosophy program for children:

John Dewey made a very suggestive comment in his book A Common Faith that each time a community gets together to engage in deliberation, active inquiry into matters of importance, they are engaging in a ritual, a ritual that celebrates the ideals of goodness, truth and beauty. These ideals do not exist somewhere in another world, but are human projections that regulate our inquiry and motivate us to move the actual (that which is) to what we think it 'ought to be', a world in which the ideals are incarnated. This movement toward the ideal is God or, even better, what Mary Daly calls "godding" (Shea, o.c, p. 165).

#### Social Identity and Bibliographical Identity

The above approach, which pays attention to the dimensions, or modes of thinking that we can differentiate, should not make us forget that the Philosophy for Children (P4C) approach pays attention to each individual person who is part of the community of inquiry. Thus, we must emphasize that the program states, from the beginning, that the personal growth of the students must be treated in a global and integral sense. From an analytical or even methodological approach, it is good to clearly distinguish the cognitive and affective dimensions of the personality, and also to point out that cognitive improvement cannot be separated from moral improvement. It is also important to differentiate between specific first and second-order dimensions in which both cognition and affectivity are manifested, something that may have some parallels with factorial studies of personality (Garcia et alia, 2002). However, what should be clear is that every human being is a complete entity, and the educational approach should always be oriented to the person as a whole. This idea is well illustrated by the metaphor of the chain and the cable that Lipman himself uses in the novel Lisa: the important thing is that we form with all our personal dimensions a well-braided and solid cable, because a chain will always be as weak as the weakest of its links. All our personal effort to achieve a full life is animated by the search for meaning (García Moriyón, 1992), which is also deeply rooted in the Western philosophical tradition and in other non-Western traditions.

This holistic understanding of human beings also takes into account G.H. Mead's contribution. According to Mead, "the self is a social process," meaning that there are a number of actions that take place in the mind to help formulate one's complete self. Mead presented the self and the mind in terms of a social process. As *gestures* are taken in by the individual organism, the individual organism also takes in the collective attitudes of others, in the form of gestures, and reacts accordingly with other organized attitudes. (Mead, 1967) This process is characterized by Mead as the *I* and the Me. The 'Me' is the social self and the 'I' is the response to the 'Me'. In other words, the 'I' is the response

of an individual to the attitudes of others, while the 'Me' is the organized set of attitudes of others which an individual assumes. Mead develops William James' distinction between the 'I' and the 'Me'. The 'Me' is the accumulated understanding of "the generalized other," i.e. how one thinks one's group perceives oneself, etc. The 'I' is the individual's impulses. The 'I' is *self as subject*; the 'Me' is *self as object*.

Lipman expressly takes up this vision of the self as part of a network in the novel *Mark*, and there are several activities and discussion plans in which he and Ann Sharp emphasize this relational sense of identity that implies a global vision of the subject. In these relations, Lipman also includes relations with things (Lipman & Sharp, 1980, Ch. III, id. 15). We are therefore faced with a program that encourages us to see the person as a whole, not as his or her specific competencies or dimensions: sometimes one can't see the wood for the trees. This is a synchronic approach to personal integrity, one that focuses on every moment of human life.

There is another holistic or integral approach—the diachronic. Personal identity is also an unfolding of the identity along a life cycle: it is a biography, a story that we write day by day. To a large extent we are what we do; it is our actions that define our identity (García-Moriyón, 1992). We can look at the building of our personal identity as telling a story, the story of our own life. Following Ricoeur's ideas about time and story, and his suggestions about the conflict of interpretations, it would be possible to describe personal identity as the result of intertwining both sides of the self, *idem* and ipsum (Ricoeur, 1988). Idem is something that you cannot change and you are not accountable for; ipsum, points to the area in which it is up to you to decide the kind of person you would like to be the one that you are constructing, and how you construct it is a personal decision...no one can decide for you. The ipsum is the area of interpretation, where many interpretations are possible. The idem is the background and the limit for those interpretations: many of them are possible, but not all of them. As a matter of fact, you can, and ought to, make a work of art out of your personal identity, but you can also fail, you can deceive yourself. The hermeneutical circle is a good analogy for understanding how we must go from the idem to the ipsum, and then back to the idem. Thus, nothing is decided from the very beginning; you have to tell your story, to put together all the pieces in order to have your own biography. And you never can give up on the search for truth and for meaning.

## Comprehensive and Ecological Thinking

Philosophy for Children is not the only program that talks about integral education, or that focuses on an integral vision of knowledge, one that is linked to an integral conception of the person. There are several well-founded and articulated proposals, such as that of Sternberg, who, beyond his triadic theory of intelligence, proposes a close relationship between creativity, intelligence and wisdom (Sternberg et alia, 2019), defending a balanced theory of wisdom (Sternberg, 1998). There are other programs such as that of complex thinking developed by Edgard Morin, which gives coherence to an education structured in seven knowledge areas (Morin, 2000). We also have Gardner's theory of multiple intelligences, which suggests teachers to accept multiple intelligences, up to 8 or 9, and teachers should pluralize their teaching attending to the specific strengths of each singular student. Jacques Delors, as President of UNESCO, led an important report produced by the UNESCO

Commission on Education for the Twenty-first Century (UNESCO, 1996). This report identifies four pillars of lifelong learning: "learning to know", "learning to do", "learning to live together" and "learning to be". Since that time, this report has continued to be an important influence on the discourse of lifelong learning and can be found in almost all official reports and education legislation worldwide.

Philosophy for Children brings a specific approach in line with the previous educational projects. In this more general framework, I think we can give another name to the holistic thinking promoted by P4C—ecological thinking. This connects with Sternberg's concept of wisdom "defined as the application of tacit knowledge as mediated by values toward the achievement of a common good through a balance among multiple (a) intrapersonal, (b) interpersonal, and (c) extra personal interests in order to achieve a balance among (a) adaptation to existing environments, (b) shaping of existing environments, and (c) selection of new environments" (Sternberg et alia, 2019).

It is clear that the term ecological has become highly relevant today due to the serious environmental crisis that threatens all of us. Picking up the Greek meaning of the word, oikos (οἶκος)—the house in which we live—ecological thinking would be that which is in charge of its own house and also is responsible for looking after and caring for that house, in order to ensure that our life becomes a full life. But care of the environment is not only centered on nature as the fundamental environment, but also starts from oneself, in the sense that both my physical body and mind constitute my own house in the strictest sense, abandoning any dualistic conception of human beings. This house of one's own is not a closed sphere, impermeable to the exterior, but is closely related to everything that surrounds it. The limits of this house expand in successive concentric circles or in a network of relations similar to that which Harry spoke of (Lipman, 1980, ch. 3)—thinking that our identity is constituted precisely thanks to this network of relations without which we could not speak of a personal self.

The first circle is constituted by our individual being, our body and mind, our affective and cognitive dimensions. Hence the importance of metacognition, that is, reflecting on one's own thinking. Caring for our thinking implies thinking well in the double sense: thinking according to the rules of good reasons, without biases, fallacies or prejudices; thinking with good information and avoiding bad and harmful thoughts. The main guiding question for this area of ecological thinking is: what kind of person do I want to become? In this sense, the program's priorities are for people to think for themselves and make well-argued and well-founded autonomous decisions. And to become good people, people who seek a fulfilling and meaningful life (García Moriyón, 2018).

The second circle of this wide network of relationships is the family and, what is fundamental in an educational approach, the classroom and the school as a space for educating and learning together. Clearly aware of the importance of this context, the program aims to transform the classroom into a community of inquiry and the entire school into a democratic school. It is in this environment that the development of behavioral habits should be encouraged, both cognitive and affective, to generate a relationship in which problems are faced cooperatively, trying to reconcile different proposals, based

on different convictions. Thus begins the step towards the second fundamental question—what kind of world do we want to live in, as we become aware that what we want to become is closely linked to the world in which we live. This requires us to take care not only of our own individual person but also of the community, starting with the two immediate ones—the school and the family—then moving on to more and more extensive areas that end up encompassing the whole world. As both Lipman and Sharp and practically all the people involved in the program insist, it is a strong and radical commitment to democracy (Daniels, 2003, c. III; Sharp, 1993).

## Conclusion: The Metaphor of the Tree of Philosophy

I return to Descartes' tree. If we had to present an image that could serve as a metaphor for the way to understand the improvement of thinking that the philosophy for children program proposes, Descartes' tree of philosophy would be a good one. What matters is the whole, without neglecting the parts. If we look at the aims of the curriculum, fostering higher order thinking, the whole is ecological thinking: an attentive philosophical reflection on oneself, one's community, and the entire world, in a continuous and fallible search for truth, beauty and goodness.

In the face of the cognitive dispersion that can result from an education fragmented into diverse disciplines, it is fundamental to defend some roots, along with the sap that gives sustenance and coherence to all the branches that will grow later on. That is indeed the contribution of philosophy to the curriculum—the development of high-level complex thinking. It requires its own space and time, but it must also vivify all the disciplines that are being learned, disciplines which must also include philosophical reflection in its own domain. A living tree, properly nurtured, ends up bearing its highest fruit, Descartes said, in morality, that is to say, contributing to the growth of fulfilled people in a world worth living in.

The tree becomes a metaphor for the program in a double sense: it represents the unity of human reflective activity that encompasses all the dimensions of knowledge and personal identity. At the same time, we can compare the pedagogical proposal to gardening, so that the classroom as a philosophical community becomes a garden, in which each plant must receive from its always attentive, careful and patient gardeners all that is necessary for it to grow according to its specific and unique personal configuration (Hannam, 2017; Biesta, 2015, ch. 1).

There is yet a third way of interpreting the comparison between Descartes' tree and philosophy for children. A good article by Sharp in 1995 (and carefully edited by Gregory and Laverty) captures very well that integral sense of the education of higher-level thinking in the title: the role of intelligent sympathy in the education of a global ethical consciousness (Sharp, 1995). The tree of philosophy for children, which sinks its roots into rigorous philosophical activity, points towards its most valuable fruit: a global ethical conscience that takes its place within oneself, then the immediate community (the neighbor), those that are near (the polis) and those that are distant (the whole planet Earth). From this point of view, once again following Sharp (1997 a and b), philosophy for children is linked

to a global consciousness that is similar to another classic philosophical current, the so-called *philosophia perennis*—in search of a universal and universalizable wisdom, which is open to the influence of other cultures (Leibniz and Huxley). Interesting as it is, this last step takes the risk of going beyond philosophy to a different level, more mystical than philosophical.

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