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Philosophy for preschoolers? A critical review to promote informed implementation of P4C in preschools

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Abstract: Between the elitist “philosophy is for grown-ups” and the demagogic “everyone can be a philosopher”, where does Philosophy for Children (P4C) belong in preschools? What is it assumed, expected, or intended to achieve? How is it implemented? This article reviews the literature evaluating the impact of P4C practices on preschool children (aged 3–6). It identifies the main actual or purported obstacles signaled by educators to argue that philosophy cannot be practiced before age 6. It then appraises, from a cognitive developmental psychology perspective, the reality of these supposed obstacles, considering the underlying developmental skills that very young children may lack compared with older ones. Finally, pedagogical adjustments to P4C school practices are suggested, illustrated, and discussed to adapt this program, initially designed and documented for elementary-school children, to the potential of preschoolers.

Keywords: Philosophy for Children (P4C)¹; preschool age; psychological development; educational adaptations

¹ For convenience, the generic term “P4C” will be used throughout to refer to a set of practices sometimes also referred to as “Philosophy *with* Children” (e.g., Cassidie & Christie, 2013; Haynes & Murrells, 2011; Murrells, 2008) or “Philosophy *by* Children” (e.g., Michaud & Väitalo, 2017).

From what age are human beings able to philosophize, i.e., learn to practice philosophy? School curricula in many countries introduce philosophy late: at age 17 in France, Argentina (Kohan, 2002) and the Central African Republic (Skovoue, 2021), although recent experiments have sought to lower this age to 15 in Benin, Burkina Faso and Cameroon (Kotchop, 2019). Philosophy for Children (P4C), initially proposed by Lipman et al. (1980) in the United States for integration into the school curriculum, and gradually disseminated across the five continents, offers varied responses to this question (e.g., Ab Wahab et al., 2022; Gregory et al., 2017; Millett & Tapper, 2012; Trickey & Topping, 2004; Ventista, 2018; Yan et al., 2018). Lipman and his followers advocate practicing philosophy in the form of a “community of (philosophical) inquiry” (e.g., Echeverria & Hannam, 2017; Gardner, 1995; Haynes, 2020), starting at age 4–5. Their underlying presupposition is that every child is a valid interlocutor, able to ask important questions, and that through the spoken word alone, a collective reflective process can support and underpin individual thoughts (Maire et al., 2019). Philosophy for Children refers not to a body of knowledge that is taught, but rather to an approach that is learned by doing, a *praxis* or a “*practice of reflection on human experience aimed at exploring universal concepts and questions, within a collective discussion mobilizing certain thinking skills*” (Hawken, 2020, p.2). In its simplest form, it is an activity carried out with children or teenagers, in or out of school, who discuss fundamental human topics among themselves (e.g., love, death, or chance). These topics prompt question-asking and a search for ideas, examples, and distinctions, without yielding any definite answers or forging firm opinions.

There is no consensus on a minimum age below which P4C is neither possible nor desirable. However, it is well-established that young children feel a “*hunger for meaning*” (Lipman et al., 1980, p.7), a deep need to mobilize their capacity to ask questions about existence and values, and experience the

power of thinking in ways other than academic (Lévine, 2005). Communities of inquiry are thus precisely the kinds of spaces that enable us to examine and work on authentic questions alongside the usual academic expectations (Beguery, 2012). Asking pertinent questions and then thinking and seeking answers are processes within the reach of very young children. In a world initially devoid of meaning for them, and precisely because they lack the information to understand their everyday environment, they can be particularly receptive to Aristotelian astonishment and eager to philosophize in order to orient themselves and construct meaning around what they perceive and experience, as early as age 3 (Mortier, 2005; Sharp, 1995). The construction of meaning seems to develop in very young children as “provisional thinking”, constantly questioned and reworked, characteristic of the preschool age (Delsol, 2002). Questioning and analyzing the meaning of fundamental notions such as “friend”, “self”, or “life”, for example, would help unify their experience of the world. We note that Sharp proposed a specific support, the novel *The Doll Hospital*, designed to be worked on with preschool-aged children.

From a developmental and educational psychology perspective, the present work examines whether it is possible, and if so fruitful, for preschoolers to practice P4C. To this end, we review the studies examining the effects of P4C at preschool age, and then appraise the validity of the reservations expressed about these practices.

1. Empirically observed effects of P4C on preschoolers

Beneficial effects of P4C have been empirically observed in children of ranging ages: when practiced regularly, P4C promotes intellectual efficiency (García-Moriyón et al., 2005), self-esteem as a learner (Trickey & Topping, 2006), social skills (Giménez-Dasí et al., 2013), prosocial behavior (Colom et al., 2014), self-regulation (Heron & Cassidy, 2018), learning engagement (Leng, 2020), reasoning, and

critical thinking (Zulkifli & Hashim, 2020). However, the literature evaluating these effects at preschool age is scant. In syntheses or meta-analyses concerning impacts of P4C (Ab Wahab et al., 2022; Gregory et al., 2017; Millett & Tapper, 2012; Trickey & Topping, 2004; Ventista, 2018; Yan et al., 2018), most participants were older than 6, and no study included 3-year-olds. Furthermore, age was never investigated as a possible moderator of the observed effects.

Our aim was to examine the effects of P4C specifically in preschool-aged children. We conducted a staged review of the literature with no temporal restrictions. Three main databases were used (PsychInfo/PsychArticle, Semantic Scholar, Google Scholar) with no specific inclusion or exclusion criteria, except for the language in which the article was written (only English and French). Only 20 publications on children aged 4–6 were identified. Table 1 presents their main results, highlighting some beneficial effects of P4C. Some research focuses on academic skills, with a positive influence of P4C on verbal reasoning (Säre et al., 2016), meaning-making and literacy (Jo,

2011) and problem solving (Isiklar & Öztürk, 2022). P4C also appears to foster the development of non-academic skills such as emotion understanding (Pons et al., 2019; see also Daniel et al., 2005), creativity (Mohammadi et al., 2019), moral reasoning (Auriac, 2006; Leleux, 2014; but see Leleux, 2009), and empathy (Ventista, 2018). Improvement of critical thinking through P4C, on the other hand, has not been established, as there was no control group (Karadağ & Demirtaş, 2018) or pre-test (Gasparatou & Kampeza, 2012) in the empirical studies addressing this issue. Finally, in Daniel et al.'s study (2012), decentering seemed to occur faster in the experimental group than in the control group, with increasingly less egocentric epistemological perspectives. However, this was observed only in older children, but not in 4–5-year-olds, where the exchanges were essentially anecdotal, with the use of pronouns reflecting the concrete and the particular, and their epistemology generally maintained within the perspectives of pre-relativism and egocentrism (Daniel et al., 2012) (see Table 1 for a summary).

	Children's country	Age (years)	Sample size	Time and/or frequency of P4C	Assessed skills/abilities	Main results in preschool-aged children	Limits
Auriac (2006)	France	5 to 11	<i>N</i> = 66	Not specified	Moral judgment	In 5-year-olds, P4C accelerated the development of moral judgment in the sense of conformity to moral standards.	
Daniel et al. (2003)	Canada	5	Not specified	Practice for 7 months	Ability to interact with peers Representations of basic emotions: joy, fear, sadness, anger	P4C seemed to promote ability to dialogue with peers and to move from a <i>non-representation</i> of emotions to a <i>socializing</i> representation of emotions.	No control group
Daniel et al. (2005)	Canada, France	5-6	<i>N</i> = 53	30 to 45 minutes a week for 8 months	Representations (non-representation, egocentric representation, socializing representation) of basic emotions (joy, fear, sadness, anger) assessed by individual interviews based on word association	For all four emotions, emotion representations evolved faster (from non-representation to socializing representation) in the P4C group than in the control group.	
Daniel & Delsol (2006)	Canada	5	<i>N</i> = 20	45 to 60 minutes a week for 3 months	Oral language skills Intellectual autonomy Types of exchanges (anecdotal, monological, non-critical dialogic, semi-critical dialogic, critical dialogic)	Students practicing P4C made progress in terms of oral language skills (increase in the number of words spoken per student over the course of the sessions), intellectual autonomy (essentially in the case of advanced speakers) and type of exchanges (shift from anecdote to dialogic or semi-critical dialogic).	- No control group - Measurements only during discussions. No assessment of any transfer of skills to other contexts.
Daniel & Gagnon (2012)	Canada	4 to 12	<i>N</i> = 13 classes	45 to 60 minutes a week for 7 months	Dialogical critical thinking: - Thinking modes: logical, creative, responsible, metacognitive - Epistemological perspectives: egocentric, post-egocentric, pre-relativist, relativist, post-relativist/pre-intersubjective, intersubjective	- In preschoolers with one or two years of philosophical practice: - thinking modes: logical and creative ways of thinking predominated in preschoolers. - epistemological perspectives: a pre-relativist perspective predominated in preschoolers. - Both factors (children's age, number of years of P4C practice) influenced their progress in argumentation: they progressed faster with P4C and reached higher levels with age.	- Restricted sample - No pre-test, no repeated measurements over years - Measures taken only during discussions, with no assessment of the transferability of skills to other contexts
Daniel, Pettier & Auriac-Slusarczyk (2011a)	France	4-5	Not specified	Not specified	- Thinking modes: logical, creative, responsible, metacognitive - Types of exchange: anecdotal, monological, dialogical - Linguistic markers: "I"/"me", "we", specific "he"/"she", generalized "they", "you" - Epistemological perspectives: egocentric, post-egocentric, pre-relativist, relativist, post-relativist/pre-intersubjective, intersubjective	Children who had practiced P4C engaged in monological exchanges and made greater use of the generalizing pronouns "they"/"them", whereas children in the control group mainly used anecdotal exchanges with the pronoun "I".	No pre-test
Daniel, Pettier & Auriac-Slusarczyk (2011b)	France	4-5	<i>N</i> = 26	Not specified	Discursive skills (including presence/absence of a common problem to solve, centering/decentering of thought, complexity of interventions, cognitive skills, etc.), language skills assessed by the - Types of exchange: anecdotal, monological, dialogical - Linguistic markers: "I"/"me", "we", specific "he"/"she", generalized "they", "you"	Children who had practiced P4C engaged in more diversified types of exchanges (anecdotal, monological, dialogical), with a predominance of the monological type, and made greater use of the generalizing pronouns "they"/"them", whereas children in the control group mainly used anecdotal exchanges with the pronoun "I".	
Daniel et al. (2012)	France	5	<i>N</i> = 26	30 minutes a week for 10 months	- Types of exchange: anecdotal, monological, dialogical - Linguistic markers: "I"/"me", "we", specific "he"/"she", generalized "they", "you" - Epistemological perspectives: egocentric, post-egocentric, pre-relativist, relativist, post-relativist/pre-intersubjective, intersubjective	- For the children in the control group, the exchanges were essentially anecdotal, i.e., focused on their own experience such as "me, I..." (linguistic markers indicating a tendency towards decenteration and abstraction: fewer specific "I" and "he", more generalized "we" and "they", marking a rise in generality; more "you", marking an address to others and an evolution towards the dialogical).	The size of the observed differences needs to be nuanced: at ages 4 and 5, whatever the group, "[the] exchanges are mainly situated in

						- The epistemological perspectives of the experimental group, “while remaining anchored in egocentric perspectives, began to become more complex, taking into account a plurality of units of meaning to arrive at a more general and abstract understanding of a concept” and were more pre-relativistic and less egocentric in nature than those of the control group.	<i>anecdotal narration, the use of pronouns reflecting above all the concrete and the particular, and their epistemology is generally maintained within the perspectives of pre-relativism and egocentrism.”</i>
Delsol (2006)	France	5	N = 1 class	Not specified	Qualitative and descriptive study. “A minority rarely ask to speak, or if they do, they stand up with the microphone and stand there for about ten seconds. - Phonetically: many express themselves with difficulty, with hesitant or erroneous elocution (apart from dyslexic problems), and poor pronunciation of certain sounds (...). This can lead to embarrassment for other children. - Linguistically: when a child tells a story or launches into an explanation, he or she rarely masters or knows the logical connectors to produce a clear, constructed statement. Their presentations are often a succession of short, simple sentences with no obvious logic. Often, their statements consist of a series of words with no formal syntax. - Cognitively: children lack the habit of thinking before they speak. Their sentences are unfinished, they wait to be guessed at, and verbalizing their thoughts is an effort. When they speak, they express themselves more than they express a speech. Their attention is labile; often a child asks to speak, then seems flabbergasted, saying: “I can't remember what I wanted to say.” (pp. 86-87)		- No precise measurement of skills - No pre-test or post-test - No control group
Gasparatou & Kampeza (2012)	Greece	5-6	N = 30	9 or 10 sessions for 4 months	Critical thinking assessed by logical marker words (because, why, in order to, hence, namely, since) present in philosophical discussions	P4C children tended to use more logical connectors than the control group, but this difference was not statistically significant.	- No pre-test - Measures taken only during discussions, with no assessment of the transferability of skills to other contexts
Giménez-Dasí et al. (2013)	Spain	4-5	N = 60	60 minutes a week for 8 months	- Emotion comprehension assessed by <i>Test of Emotion Comprehension</i> - Strategies for interaction with peers assessed by <i>Knowledge about Strategies for Interaction with Classmates</i> - Social skills assessed by sociogram	- At age 5, children in the P4C group made greater progress in understanding emotions, strategies for interacting with peers and social skills than children in the control group. - At age 4, children in the P4C group improved their strategies for interacting with peers and their social skills more than children in the control group.	
Isiklar & Öztürk (2022)	Turkey	5-6	N = 40	2 sessions per week for 10 weeks	- Critical thinking assessed by <i>Critical Thinking Scale through Philosophical Inquiry for Children 5-6 Years Old</i> - Problem-solving skills assessed by <i>Problem-Solving Skills Scale for Children</i>	- For critical thinking, there was no difference in pre- vs. post-test progress between children in the P4C and control groups. - For problem-solving, the P4C group made greater progress than the control group.	
Jo (2001)	Korea	5	N = 54	1 session per week for 24 weeks	Literacy, meaning construction assessed by: - Kim & Song (1997) <i>assessment of Young Children's Story Construction From Picture Books</i> - a picture book without letters, Mercer Mayer (1967)'s <i>A Boy, A Dog and A Frog</i>	Practicing P4C helped young children build meaning and improved literacy.	
Karadağ & Demirtaş (2018)	Turkey	5-6	N = 30	Not specified	Critical thinking assessed by <i>Scale of Critical Thinking through Philosophical Inquiry</i>	Performance in critical thinking increased.	No control group
Leleux (2009)	Belgium	5 to 12	N = 400	1 session per month for 8 months	Moral judgment assessed by moral dilemmas, with coding of responses according to Kohlberg (1981)	The evolution of moral and civic judgment was stronger in all classes that had practiced P4C compared to their control class, except for 5–6 year-olds, where the practice was deemed “counter-productive”: “In the control group, 5- and 6-year-olds progressed more than in the experimental group (+50% vs. +25% and +14%	

						vs. +12% respectively), as if children in these two age groups had been 'let go' by these DVPs, as if, in other words, the 'zone of proximal development' advocated by Vygotski (1977, p. 351) had not been respected in the DVP. This observation could be paralleled, for example, by that of Jacques Lévine, who believes that "too early a discussion (in kindergarten, for example) would not give the child the time to elaborate his own internal thought, preoccupied as he would be with reacting to the opinion of others. The children express themselves in her device, but with little interaction between them: we witness turns of the table (for volunteers) where everyone thinks as if out loud." (Tozzi, 2005)" (p.79).
Leleux (2014, R1)	Belgium	5-6	N = 50	50 minutes a week for 9 weeks	Moral/normative judgment assessed by moral dilemmas, with coding of responses according to Kohlberg (1981)	- Progress in moral and normative judgment was greater in the P4C group than in the control group. - Qualitatively speaking, 5-year-olds very often made normative judgments justified by the need to avoid punishment.
Mohammadi et al. (2019) ²	Iran	5-6	N = 20	2 x 45 minutes a week for 7 weeks	Creativity assessed by a visual version of the Torrance test	P4C tended to promote creativity in all four of its components: originality, expansion, fluidity and flexibility.
Pons et al. (2019)	Canada, France	5	N = 112	30 to 45 minutes a week for 8-9 months (total: 15 hours)	Emotion understanding assessed by Test of Emotion Comprehension	Participants in the P4C group made more progress in understanding emotions than those in the control group. However, the P4C intervention had no effect on the differences in classification between the children, i.e., it did not alter the order in which the children could be "classified". (But the P4C intervention did appear to reduce the stability over time of these inter-individual differences).
Säre et al. (2016)	Estonia	5-6	N = 125	1 session per week for 8 months	Verbal reasoning skills assessed by Younger Children Verbal Reasoning Test, including a coding of: - Incoherent response - "I don't know" or no answer - Direct description of the picture - Association based on reality - Connection between the words: analogy, comparison, contrast, justification - Sense-making explanation: causal connection, understanding about mental states - Answer "because of that" (as a concept) - Talkativeness (i.e., number of words)	Compared with children in the control group, those who practiced P4C gave significantly more reasons, including comparisons, analogies, justification, "because..." and causal connections.
Schleifer et al. (2003)	Canada	5	N = 81	460 minutes a week for 6 months	- Moral autonomy - Judgment, ability to see similarities and distinctions between images (i.e., animate/inanimate, violent/nonviolent behaviors) - Empathy - Recognition of emotions: happiness, sadness, fear, anger	Compared with children in the control group, children in the P4C group made greater progress in empathy and, in the judgment test, in judgments relating to violence. Progress in moral autonomy, judgment and recognition of emotions was similar for both groups.

Table 1. Summary of empirical studies on philosophical discussion with preschoolers.

² As this text is available only in Arabic, non-Arabic-speaking authors list it only as its abstract published in English.

Given these few contrasting results, we examined the possible obstacles, real or claimed, underlying a reluctance of preschool educators to practice P4C.

2. Identifying obstacles cited by educators

P4C appeals to many educators, but it can also elicit reluctance, whatever the age of the children. Both real and perceived obstacles are presented here.

Some reticence may be linked to the content of the communities of inquiry. Teachers may be unfamiliar with the practice or find it useful but feel incompetent and unqualified to implement it in their own classrooms, having themselves practiced or studied philosophy very little (Brénifier, 2001). For instance, they may be afraid they will lack rigor, or be unable to distinguish between philosophical and non-philosophical questions and so fail to conduct a truly philosophical discussion (Daniel, 2003, 2005). This cautiousness is sometimes justified: even teachers seasoned in facilitating dialogue in the classroom may find it difficult to do so when the discussion is philosophical in nature, and not a simple conversation (Gardner, 1995; Turgeon, 2013). Since a community of inquiry need to be “*centered on and controlled by the demands of truth*” (Gardner, 1995, p.102), the difficulty for educators to keep this truth-oriented focus may be exacerbated when practicing with very young children, often described as less self-regulated and more prone than their elders to mind wandering and attentional lapses (e.g., Barker & Munakata, 2015). Difficulty may also lie in determining clear objectives and how to fit this practice into a pedagogical progression. Purely pedagogical questions then arise: what learning situations need to be devised upstream to ensure that P4C workshops are fruitful with very young children? how can we work on what may hinder spoken expression (e.g., sparse lexicon, weak thinking skills such as giving examples,

justifying, comparing, inferring consequences, defining; Gagnon & Sasseville, 2008)? what productions (written, drawn, etc.) need to be envisaged downstream? Finally, learning outcomes are often perceived as intangible, evanescent, and difficult to evaluate (Maheri et al., 2010).³

Other reservations concern the required posture: swapping the vertical posture of the teacher, a dispenser of knowledge and an embodiment of authority, for the horizontal posture of a facilitator can be perceived as upsetting the usual balance of relationships, or even as an insecure or destabilizing deconstruction (e.g., Murriss, 2008). Because this shift can be experienced as a loss of control or power of the educator over the learner (Haynes & Murriss, 2011), many teachers are uncomfortable operating at the child’s physical and psychological level. It is essential to accept a free flow of utterance, but this can be experienced as aimless improvisation (Zorzi, 2020), along with a fear of ridicule or loss of face in the eyes of the learners (Maheri et al., 2010). Indeed, younger children often ask more unexpected questions than their elders (Haynes & Murriss, 2011), and educators need to “properly” deal with this amplified unpredictability of exchange content. Silence or the monopolization of discourse by a few articulate children, iteration, and digression all need to be managed (Gardner, 1995; Lipman, 2005), especially when praxis is not yet established in learners. Relative distancing, between reserve and facilitation, also jostles school habits: it can be hard to resist the temptation to inject disciplinary elements and teach by expounding and arguing a thesis. However, although children are generally less experienced and less knowledgeable than adults, in philosophy the positioning is more “horizontal”: while some will certainly be better informed, be easier to approach, or have more vocabulary than others, in the end no-one really knows more than anyone else. Philosophical discussion

³ As this text is available only in Arabic, non-Arabic-speaking authors list it only as its abstract published in English.

enables us to experience this radical equality of the human condition. Teachers can also be reluctant to implement P4C because the changes in posture it implies, for both them and their students, take a long time to put in place (Haynes & Murriss, 2011). Moreover, this reluctance may be particularly strong when facing preschoolers, whose vital need for security and protection is provided, among other things, by *vertical* relationships (often with their caregivers or teachers) (Hartup, 1990).

Finally, other reservations may be linked to conditions outside the school institution: lack of time, training, skepticism about P4C, relevance or legitimacy of P4C not recognized when it does not appear in the curriculum, or fear, when it does appear, of confusion with civic and moral education (Auriac-Slusarczyk et al., in press; Chesters & Hinton, 2017; Maheri et al., 2010).

Whatever the age of the pupils, we consider that these causes of reluctance can be partially overcome through training and exchanges of practice (e.g., Chesters & Hinton, 2017; Gagnon, 2005; Gardner, 1995; Turgeon, 2013). However, the young age of the children may in itself be perceived to be a major or even prohibitive obstacle to successful practice and fidelity to the founding objectives of P4C in preschool.

3. A critical examination of supposedly inadequate skills of children aged between 3 and 6: seven possible obstacles

In a recent survey of the general public on their perception of P4C practices in preschool settings, Auriac-Slusarczyk et al. (in press) identified seven possible age-related barriers. It is suggested that children aged 3-6 may be unable to (i) see any interest in philosophical topics, (ii) feel entitled to question or challenge opinions, (iii) think about abstract things, (iv) construct an authentic opinion, (v) imagine alternative viewpoints, (vi) have enough vocabulary to express their thoughts accurately, and (vii) generalize from personal examples and anecdotes. We will now examine each of these potential obstacles.

The first possible obstacle is motivational: preschoolers may not be interested in philosophical subjects. However, on the contrary, findings suggest that very young children have a natural affinity for philosophy; immersed in a world full of novelty, they need to construct explanations for themselves, and finding such explanations is their main motivation for exploration (Lipman, 2005). From their very first year of life human beings possess fundamental, pre-language core knowledge for the concepts of objects, numbers, space and actions (Spelke & Kinzler, 2007); areas specifically addressed by philosophy, such as logic, morals, and epistemology, are developed in turn. Literature has shown that infants have complex, coherent, and abstract intuitive representations of the world and its causal structure. Infants have even been compared to detectives or scientists, apparently “pre-programmed” for asking questions; they form mental models of the world, assessing plausibility on the basis of observations, manipulating probabilities, and spotting ambiguities when faced with multiple interpretations (Gopnik & Schulz, 2004). Children are thus precociously motivated at an early age to learn not only *about* but also *why* (Ronfard et al., 2018), and so are especially fit to participate in a community of philosophical inquiry.

The second possible difficulty stems from children’s alleged reluctance to query, doubt, or challenge the veracity of certain assertions. Some young children may feel an unwillingness to ask questions, possibly associated with a fear of learning (feeling of devaluation, fear of reprimand), which may or may not be linked to family, psychological, or cultural factors (Boimare, 1999). As a potential source of uncertainty and discomfort, question-asking, whether reflexive or addressed to others, can be experienced as anxiety-provoking, and so avoided. This inhibition of the ability to voice doubt can be heightened by the school context (which rarely welcomes dissent) in which P4C often takes place. Owing to the imbalance in speaking time between learners

and teacher, and the nature of exchanges (controlled by the teacher who asks a question and then evaluates the answer given by learners), school can be perceived by children as a place where answers are given rather than one where questions are asked (Michaels et al., 2007). Driven by a growing sensitivity to social context between 3 and 6 years of age, this inhibition of question-asking at school can increase with age. However, preschool-aged children are known for asking ‘why?’, a query motivated by their eagerness for explanations. From early in development, they exhibit *explanation-seeking curiosity*, i.e., an affective drive state that motivates learning how or why something is the case. This state is selective, depending on various triggers (e.g., how closely their current observations fit their prior beliefs, adults’ surprise, expected utility of acquiring explanations, etc.), and may drive question-asking (Liquin & Lombrozo, 2020). Preschoolers demonstrate a growing appetite for epistemic questions, i.e., the intentional use of questions to seek information that bridges a knowledge gap or resolves uncertainty (Ronfard et al., 2018). It is noteworthy that the nature of epistemic questions evolves with age: from ineffective, vague and irrelevant at age 3, they become more effective at age 5, targeting people who are experts in the field they are interested in (Mills & Landrum, 2016; Mills et al., 2011). This targeting is a double-edged sword. On the one hand, it can be considered an advantage since it obtains higher-quality answers. On the other hand, in a community of inquiry, addressing a question to someone identified as competent means probably targeting the teacher exclusively and systematically, rather than peers, who are not perceived as experts. Yet it is only through a certain horizontality, taking peers into account as valid interlocutors and developing a shared way of thinking, that P4C can be

fruitful for children. Orienting questions toward experts from age 5 could therefore be counter-productive, as it would (re)verticalize the dynamics of exchange in a usual school habitus.

The third possible obstacle, which we contest, is that young children have difficulty thinking about abstract things (Maheri et al., 2010). It is well-established that the concreteness of material positively affects its memorization, even in older learners, because ideas formulated in concrete language are more conducive to the development of mental images than abstract ideas: for example, a “volcanic eruption” elicits a more precise mental image than a “geological event” (e.g., Sadoski, 2001). However, what predicts the memorization of an idea does not necessarily predict its comprehension, nor its appropriation and subsequent reinvestment or transfer to another context. The intuition that children prefer to think systematically about concrete things is an adult prejudice that results in depriving them of abstraction when they crucially need it (Lipman, 2005). Piaget (1968) indicated long ago that all learning requires increasingly complex abstraction, linking the three levels of *empirical*, *reflective*, and *reflexive* abstraction, preceding metacognition, the ability to take one’s own reflection as an object, reflection on reflection (Leleux, 2005)⁴. From age 4, “*against the standard view of children as concrete thinkers (...) children have an early tendency to search for hidden, non-obvious features. There are remarkable commonalities between the concepts of children and those of adults.*” (Gelman, 2004, p.404; see also Gelman, 2013). Compared with 6-year-olds or adults, a 4-year-old is more effective at openly learning abstract causal principles from observations of reality, through a high degree of cognitive flexibility and a spontaneous tendency to explore (Gopnick et al., 2015; Seiver et al.,

⁴ The first level is that of *empirical* abstraction. By acting on the environment, children extract the essential properties or attributes of an empirical object or situation. For example, by weighing objects of different sizes, they can see that the heaviest are not necessarily the most voluminous. The second level is *reflective* abstraction: children extract properties from an action and its results. For

example, they arrange pebbles in different ways, count them and realize that their numerical sum is independent of their arrangement in space. The third level is *reflexive* abstraction, i.e., the construction of an operation on previous operations, in other words, reflection on reflection (Leleux, 2005).

2013). Similarly, other findings suggest an early aptitude, or even eagerness, for abstraction and kind-based information (e.g., Cimpian, 2016; Cimpian & Park, 2014). At preschool age, thinking and questioning emerge in terms of categories rather than specific entities. Children are more likely to seek out and remember facts about kinds (e.g., “monkeys hunt for birds”) than individuals (e.g., “this monkey likes to sing”), highlighting the importance of kind-based information in human cognition. When given the choice to learn about kinds of entities (e.g., “Do you want to learn about pangolins?”) or individual entities (e.g., “Do you want to learn about this pangolin?”), children chose to learn about kinds, even with unfamiliar entities such as a pangolin (Cimpian & Park, 2014). This preference reflects a universal cognitive bias toward kinds and kind-relevant information (global and abstract) compared to individual (specific or local, and concrete), and serves as a “guide” for children in their immense challenge of deciding what to learn (see Cimpian, 2016). It is likely that this appetite to prioritize the learning of kind-relevant information: i) relies on an already existing ability to extract properties from objects in the world (traits, characteristics...), including *abstract* properties, and ii) aims at inductive *generalization* based on deriving kind-level information (even though only instances of kinds are available to our senses, never kinds themselves, Gelman & Coley, 1990). As a “*reflection on human experience aimed at exploring universal concepts and questions*” (Hawken, 2020, p.2), P4C may overlap with, and even exploit, young children’s cognitive appetite towards both *abstract* and *general* information. Taken together, these studies suggest that from age 4, children are far from being ill-equipped for philosophical conceptualizing, but are instead fully ready for it.

A fourth possible obstacle is the difficulty constructing a personal and

authentic opinion at preschool age. Reflection based on everyday life is akin to a form of “magical thinking”, playful and strongly tinged with prefabricated thought, mixed with what the child believes to be the opinion of others (Lévine, 2005; Rosengren et al., 1994). Constructing an authentic opinion means breaking away from ready-made thinking and ambient prejudices. It may even be that a preschoolers’ community of inquiry will strengthen this “merger” between “personal ego” and “group ego” (Lévine, 2005). According to a psychoanalytical approach, this may paradoxically be what makes it possible to develop “*the will to order what comes from these plural, often divergent sources*”, and may underpin the motivation to develop philosophical thought (Lévine, 2005, p. 80). Another obstacle to expressing an authentic opinion in a group context could also be reputational insecurity (i.e., sensitivity to the gaze of others), which distorts, filters or even inhibits children’s self-expression from an early age (Botto & Rochat, 2018, 2019). Prior work suggests that preschoolers begin to show self-presentational concerns and even try to manage their reputation⁵. For instance, they tend to become more altruistic when a third-party observer is watching them, for example by sharing more resources, being more helpful, stealing less, or cheating less (Engelmann et al., 2012; Engelmann & Rapp, 2018; Leimgruber et al., 2012; Piazza et al., 2011; Shinohara et al., 2019, 2021), and demonstrate their ability to improve how others evaluate them (Asaba & Gweon, 2022). During collective discussions, concern for reputation can take the form of adherence to a majority opinion or a standardized discourse (perceived as socially desirable or the “right answer”) meant to make a good impression rather than approach a truth.

A fifth possible difficulty for young children is to consider alternatives by imagining things from another viewpoint, and in particular by adopting other people’s.

⁵ From the age of 2, children: a) implicitly assume that their behaviour or appearance can be evaluated positively or negatively by others, and b) prefer, by default, to elicit a favorable evaluation

(i.e., give a good image of themselves) rather than an unfavorable evaluation from others. (Botto & Rochat, 2018, 2019).

Around age 4, the ability to infer mental states in others, such as beliefs, desires, emotions, or intentions, called “Theory of Mind” (ToM), emerges (e.g., Gallese & Sinigaglia, 2011; Wellman, 2011; Wimmer & Perner, 1983). In a community of philosophical inquiry, ToM would enable children to access third-party viewpoints. If ToM is a prerequisite for P4C, then practicing P4C before the age of 4 should be impossible. However, this theoretical concept seems far from unified, is often equated with perspective-taking, cognitive empathy, or mind-reading, and is strongly correlated with other emerging skills such as executive functions, episodic memory, language, and symbolic skills (e.g., Astington & Baird, 2005; Hugues et al., 2005; Lillard & Kavanaugh, 2014; Perner et al., 2007). There is also a methodological uncertainty regarding its assessment, as the tasks used are highly heterogeneous (e.g., Osterhaus & Bosacki, 2022; Quesque & Rossetti, 2020). If ToM is considered as a skill acquired gradually, with very early developmental grounding such as imitation, joint attention, or pretending rather than as an “all-or-nothing” skill (i.e., any child who passes the classic false belief task has acquired ToM), then “philosophy for preschoolers” should be feasible.

The sixth possible obstacle is language: preschool-aged children may lack vocabulary to express their thoughts accurately. Yet the development of language and thought are linked (Vygotski, 1962; Xu, 2002), with the refinement of language skills corresponding to conceptual understanding of the world and vice versa (Jisa, 2005, p.258). Clearly, the stock of expressive vocabulary is very small at the start of the preschool period: in French, for example, at age 3, it comprises 300-800 words, rising to around 2,000 words at age 4-5 and reaching 10,000 words at age 6 (by comparison, an “average” adult has a stock of around 30,000 words; Bassano, 2000). However, although this fact must be taken into account, it does not seem to be a prohibitive limit for P4C practice at preschool age. Comprehension

vocabulary is 4–5 months more advanced than production vocabulary, suggesting that even the least talkative children can benefit from discussions. Moreover, there is an overlap between the key terms probed by philosophers and those used by young children: for example, terms such as “good”, “just”, “loyal”, in moral philosophy, “true”, “possible”, in epistemology, “beautiful”, in aesthetics, “reason”, “means”, in logic, or “person”, “life”, “world”, in metaphysics, are used universally (Lipman, 2005).

Finally, a seventh possible difficulty for young children is overcoming their childish egocentricity, not limiting themselves to personal anecdotes and becoming more general in what they say. While personal examples are important and useful for illustrating or refining a more general idea, they are not enough to qualify a discussion as “philosophical” (see Daniel, 2003). Literature in cognitive psychology reports that human beings seem to be, by default, self-biased: the default cognitive state (i.e., the contents of cognition in the absence of contrary task demands) is focused on self (Cunningham & Turk, 2017), even in children. When information is related to themselves, they perceive it more acutely and process it more effectively (*self-prioritization effect*, e.g., Maire et al., 2020), and they also memorize it better (*self-referent effect*, e.g., Cunningham & Turk, 2017; Ross et al., 2011). They also prefer toys an experimenter tells them are theirs over identical replicas (Gelman et al., 2012). In general, association with oneself, for example through ownership, grants objects a special status in reasoning and memory (Gelman et al., 2014), and affects children’s information-seeking behavior: they are more interested in acquiring fine-grained information about objects they own than about objects that they do not own (Mattos et al., 2022). These results echo observations made during philosophical discussions, which show a progression in epistemological perspectives (Daniel et al., 2011b, 2012). Young children’s perspectives are essentially egocentric, marked in discourse by numerous

first-person singular pronouns. A focus on simple, concrete elements linked to the child's personal experience and expressed without justification or nuance, certainties, and dualistic representations of the world are also reported. Perspective gradually becomes post-egocentric, then pre-relativistic, and then reflected in the utterances by pronouns such as "they", "them" or general "we", with beginnings of generalization (albeit often concerning the child's environment), attempts at nuance, and attempts at justification (albeit often implicit, circular, or erroneous) (Daniel & Gagnon, 2012). This bias towards egocentrism, insofar as it is not specific to the youngest children, seems to us to be a real but not prohibitive hindrance to the practice of P4C with 3-6-year-olds.

This overview suggests that despite a few well-found age-related limitations, most of them are not prohibitive. Consequently, we propose that P4C can be practiced from age 4-5, provided the implementation is adapted to the specific features of this young audience.

4. Conclusion and possible pedagogical adjustments for enlightened preschool practice

Spatial, temporal and material conditions must be adapted. Like with older pupils, we recommend circular, square, or rectangular seating, with all pupils facing each other and the teacher integrated into the group without an assigned place. The aim is to create a horizontal relationship between adults and children, so that everyone can see and hear each other. But as with preschoolers, it's common that some of them remain totally silent during the community of inquiry, it may be useful to add a few drawing or writing tables at the end of the session in order to provide them alternative ways of expressing ideas or emotions not previously voiced. With 3-6-year-olds, the story that serves as a starting point for the philosophical discussion can be told in a motor room, where the action of each character is accompanied by the children putting it into practice. This set-up takes account of young children's strong need

for movement and helps them gain awareness through physical experience (Daniel, 2002). Sessions should be regular, and shorter with preschoolers than with older pupils: (i) conciseness is necessary owing to young children's attentional limits: a session should last between 10 and 20 minutes, and (ii) it is preferable to set up "philosophy time" as a ritual (weekly, for example), because regularity and the certainty of a full time slot are essential to install the philosophical exchange in the children's imaginations (Galichet, 2004), especially in very young children, for whom routines play a crucial role in their cognitive development (e.g., Ren et al., 2022). This ritualization can be marked by opening and closing announcements (e.g., "*the discussion will begin... the discussion is finished*"), possibly marked by a candle lit at the beginning and extinguished at the end. If a regular praxis is set up, then roles may gradually be assigned with 5-6-year-olds: session chairperson, reformulator, discussants, drawers, speech distributor with talking stick (but rewording will have to be done with the help of several children, for example: "*How else could you say what X has just said?*") (Delsol, 2006). The number of learners should be small with 3-6-year-olds: between 9 and 13 (Säre et al., 2016, 2017), or even between 6 and 8 (Beguery, 2012; Lévine, 2005). The nature of the philosophical question addressed should be appropriate, starting with questions related to preschoolers' experiences (e.g., "*Why do we go to school?*", "*Are a child and an adult the same thing?*", Lévine, 2005). The material used is often children's books or short stories, with relatively simple vocabulary and syntax, accompanied by photos or drawings to facilitate comprehension (Chirouter, 2011; Pettier & Chirouter, 2012; Leleux, 2014). Compared to those used with older children, the steps can also be revised: for example, the gathering of questions can be replaced by an oral collection of problems and interests, as not all 5-year-olds are yet able to phrase a question (Leleux, 2014). Finally, rules must be restated at the start of each session and ranked. The simplest rules, such as not

interrupting, not making fun of a classmate, listening, or rephrasing, are relevant for setting up the discussion framework from age 4 (Brénifier, 2007; Delsol, 2006). Other more complex rules required of older children, such as talking about the subject or not repeating what has already been said, make no sense for very young children. Some flexibility is required: rules and procedures can evolve over the course of the year (Brénifier, 2007).

The adult's postures must also be adapted to the specific needs of preschoolers. Their interventions should be short and restrained. They can include open-ended questions inviting children to clarify their thinking (e.g., "*What do you mean by that?*", "*Can you explain why you say that?*", "*Can you explain that to me in other words?*", Säre et al., 2017), which help children to explore and construct their own opinions, and to distinguish "*the thinking of 'we', made up of truisms, trivial obviousnesses that commit no-one, and the thinking of 'I', which requires a wrenching away from commonplaces, an awareness of my irreplaceable, inalienable responsibility in the choices I make, the values I give myself*" (Heidegger, cited by Galichet, 2004). The adult's interventions can also include closed questions addressed to the rest of the group (e.g. "*Does everyone agree with what X has said?*", Daniel & Delsol, 2006), reformulations that may prompt "frugal talkers" to express themselves or to restate some of what has just been reformulated (e.g., "*If I understand right, you're saying that...*", Delsol, 2006), objections to theses or ideas put forward, clarifications, or explanations ("*Basically, what you're saying means that...*", "*When you say that, you're assuming that...*"), partial syntheses ("*If I take everything we've said so far, it all comes down to...*") or intermediate or final conclusions (Leleux, 2014) to specifically target the "zone of proximal development" (Vygotsky, 1962). Five-year-olds can also be encouraged to produce oral wisdom to regulate their emotions (Leleux, 2014). The adult must adopt a reserved posture to

unblock speech, lend support, and refocus on the theme without thwarting utterance (Galichet, 2004), especially for younger children, who need time and a secure, even re-assuring, environment to express themselves. Finally, practicing philosophy with very young children means fully accepting their "poetic" way of thinking, often imbued with a magical, animistic vision of the world (Delsol, 2006). Rather than repressing their imagination, children should be taught how to own it and make it conscious, so that poetic ways of thinking and the development of reasoning work together in harmony.

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