doi: 10.12957/childphilo.2019.43296

collaborative problem-solving and citizenship education: a philosophical escape in the age of competencies[1]

marina santi[2]
università di padova, italy
orcid id: https://orcid.org/0000-0002-2658-3473

abstract
Starting from the Italian results of the PISA 2015 surveys as regards the competence of young students in collaborative problem-solving, in this paper we conduct a critical analysis of the concept of competence, as seen through the lens of the Capability Approach. The Philosophy for Children curriculum is presented as a pedagogical and didactic proposal capable of re-conceptualizing the constructs of 'problem-solving' and 'collaboration'. In the light of 'Complex Thinking' theory and the 'community of inquiry' classroom methodology, the general theoretical frame of the PISA and DeSeCo approach to problem-solving has been criticized for its focus on what has been defined in terms of "internal mental structures in the sense of abilities, dispositions or resources embedded in the individual". The proposal of Philosophy for Children and its 'community of inquiry' methodology are considered and discussed. This educational curriculum provides a real opportunity to rethink citizenship education by concentrating on the value and power of collective agency and the ability to wonder about our world. The pedagogical implications are significant because this means that we should be aiming to align academic education not with what society is, but with what it could or should be. To achieve this, education policies and planning actions need to focus on values and principles, on matters such as freedom, social equity and participation. These matters are not exclusive to the realms of individual endowment and performance. They have fundamental ethical and cultural components. Philosophy for Children can be considered as an opportunity to work towards the educational and political goal of creating "flourishing communities".

keywords: competence; collaborative problem-solving; philosophy for children; citizenship education.

solución de problemas colaborativos y educación para la ciudadanía: un escape filosófico en la edad de las competencias

resumen
A partir de los resultados italianos de las encuestas PISA 2015 con respecto a la competencia de los jóvenes estudiantes en la resolución de problemas en colaboración, en este textorealizamos un análisis crítico del concepto de competencia, visto a través de la lente del enfoque de capacidad. El currículo de *Filosofía para niños* se presenta como una propuesta pedagógica y didáctica capaz de reconceptualizar los conceptos de "resolución de problemas" y "colaboración". A la luz de la teoría del "pensamiento complejo" y la metodología en clase de "comunidad de investigación", el marco teórico general del enfoque de PISA y DeSeCo para la resolución de problemas ha sido criticado por su

[1] This paper is partially based on content already published in Santi, M. (2019). Problem Solving collaborativo e Philosophy for Children. Una proposta "oltre" la competenza, tra complex thinking e capability approach, *Scuola Democratica*, 1, pp.83-101.

[2] E-mail: marina.santi@unipd.it

enfoque en lo que se ha definido en términos de "estructuras de mentalidad interna en el sentido de habilidades, disposiciones o recursos incrustados en el individuo". Aquí se considera y discute la propuesta de *Filosofía para niños* y su metodología de "comunidad de investigación". Este currículo educativo ofrece una oportunidad real para repensar la educación para la ciudadanía al concentrarse en el valor y el poder de la agencia colectiva y la capacidad de preguntarse sobre nuestro mundo. Las implicaciones pedagógicas son significativas porque esto significa que debemos apuntar a alinear la educación académica no con lo que la sociedad es, sino con lo que podría o debería ser. Para lograr esto, las políticas educativas y las acciones de planificación deben centrarse en los valores y principios, sobre asuntos como la libertad, la equidad social y la participación. Estos asuntos no son exclusivos de los ámbitos de dotación y rendimiento individuales. Tienen componentes éticos y culturales fundamentales. *Filosofía para niños* puede considerarse como una oportunidad para trabajar hacia el objetivo educativo y político de crear "comunidades florecientes".

palabras clave: competencia; solución colaborativa de problemas; filosofía para niños; educación para la ciudadanía.

educação para cidadania e solução colaborativa de problemas: um escape filosófico na era das competências

resumo
Partindo dos resultados italianos da avaliação PISA 2015 sobre a competência de jovens estudantes em solução coletiva de problemas, conduzimos neste artigo uma análise crítica sobre o conceito de competência, observado através das lentes da Abordagem das Capacidades. O currículo da Filosofia para Crianças é apresentado como uma proposta pedagógica e didática capaz de reconceituar as construções 'solução de problemas' e 'colaboração'. À luz da teoria do 'Pensamento Complexo' e da metodologia de sala de aula como 'comunidade de investigação', o quadro teórico geral da abordagem do PISA e da DeSeCo sobre solução de problemas tem sido criticado pelo foco que dá ao que define por "estruturas mentais internas, no sentido de habilidades disposições ou recursos intrínsecos ao indivíduo". Aqui se considera e se discute as propostas da Filosofia para Crianças e sua metodologia de 'comunidade de investigação'. Este currículo educacional oferece uma oportunidade real de repensar a educação para a cidadania concentrando-se no valor e potência da ação coletiva e da habilidade de se admirar com o nosso mundo. Suas implicações pedagógicas são significativas, porque isso significa que deveríamos estar visando alinhar a educação acadêmica não com o que a sociedade é, mas com o que poderia ou deveria ser. Para tanto, políticas educacionais e ações de planejamento precisam focar em valores e princípios, em assuntos como liberdade, equidade social e participação. Estes tópicos não são exclusivos aos âmbitos de aptidão e rendimento individuais. Eles possuem componentes éticos e culturais. Podemos considerar a Filosofia para Crianças uma oportunidade de trabalhar por um objetivo educacional e político de criar "comunidades florescentes".

palavras-chave: competência; solução colaborativa de problemas; filosofia para crianças; educação para a cidadania.

collaborative problem-solving and citizenship education: a philosophical escape in the age of competencies

some premises and preconceptions

The OECD (Organization for Economic and Cooperation Development)-PISA 2015 (Programme for the International Student Assessment) survey on collaborative problem-solving is interesting from at least two standpoints, one theoretical, the other practical. Its theoretical interest lies in the nature of the construct investigated, which combines the two notions of *problem-solving* and *collaboration*, and tests them in terms of *competencies*. It is of practical interest for its educational implications, in that it would lead teachers to identify pedagogical actions to nurture these skills, conceived in the *Definition and Selection of Competencies* (DeSeCo) project of 2001-2003 as some of the "key competencies of the 21st century", and among the priorities when it comes to the "social and civic competencies" needed to build a better society.

These areas of interest are consistent with those of the OECD as an international body. They are essentially of an economic nature, but have a political role when they influence government agendas, and policies for education and professional training in particular. The collaborative problem-solving assessment contains nothing particularly new in the way it is framed to justify the unexpected and worrisome results obtained in Italy. As in other areas of interest to the DeSeCo project, it adopts the same pro-social and proactive notion of competence as in the OECD definition of priorities for economic growth. The "skills model" is explicitly assumed to refer to individuals' demonstrable ability to use their personal, social and/or methodological knowledge, skills and aptitudes at work or in their studies, and for their professional and/or personal development. These capabilities are initially described in terms of personal responsibility and autonomy, as a know-how deriving from the combination of an individual's knowledge and skills. They are interpreted, however, in social and civic terms, as individuals' deliberate and effective use of their own restructured conceptual

heritage in tasks of citizenship and their active lives. They put individuals in context through their own actions and decisions.

Just like any other ability we might wish to investigate and test, collaborative problem-solving skills must be measurable, both effectively and universally. The survey defined this type of expertise so that it could fit in with the general constraints of its test format, while retaining and integrating the core elements of the two notions of problem-solving (as a cognitive behavior) and collaboration (in its attributive and cooperative sense). The construct was intended to express the dual economic and social-civic vocation typical of the key competencies of the DeSeCo project. It acknowledged that teamwork and leadership are some of the soft skills most in demand in today's job market and human exchanges, in very heterogeneous and competitive settings. While it confirmed the value and fundamentally "creative" feature of problem-solving in a market that consumes originality and innovation at an ever faster pace, businesses and civic institutions see its collaborative dimension as a key feature of the top performer. Collaborative problem-solving demands a methodological, procedural and functional approach to management tasks and citizenship, and serves as a tool for managing the conflictuality endemic in human coexistence productively, effectively and efficiently (even on the emotional plane).

The desirable social and civic capabilities considered in all national academic and training programs refer to the OECD guidelines, and have tended more recently to emphasize the "soft skills" at school and in higher education. This has not entailed any actual changes to the teaching programs, however, because such skills are seen as "transversal" to the curriculum, and essentially "content-free". Teachers have vaguely interpreted them as characteristics, abilities and aptitudes that should be nurtured in an "interdisciplinary" way, by means of projects involving real-life situations and with the aid of various "innovative" methods (classroom discussions, work groups). The focus is not on learning any specific content, but on the epistemological nature of the different school subjects, and on various "social skills", which can be brought down to two main theoretical concepts. One is *cooperative learning*, emphasized in its organizational component

and revolving around relational and communication group dynamics (distributing roles, optimizing resources, positive interdependence, negotiation and conflict management). The way the material is arranged into forms of "collaboration" refers explicitly to the *jigsaw* in its various methodological facets. The other concept is *emotional intelligence* (Goleman, 1996), with a strong motivational and psychological connotation, and it has to do with self-esteem, and with empathy as a factor of individual and social well-being.

Consistently with the general theoretical frame of the PISA and DeSeCo, collaborative problem-solving is conceptualized as "internal mental structures in the sense of abilities, dispositions or resources embedded in the individual" (Rychen & Salganik 2003: 44). It combines cognitive skills, intellectual abilities and knowledge base with social and behavioral (emotional, motivational) aspects and values that can presumably be acquired through learning, assimilated and applied to complex tasks. In the case in point, assessing problem-solving skills is complicated by the gradual introduction of the inter-personal component, i.e. relationships with others that individuals must be able to handle, coordinate and exploit effectively and productively to achieve results. This collaborative dimension is included in the PISA 2015 tests in the notion of "social and cooperative skills" in an effort to counteract the widespread emphasis of school systems on learning as an individualist, competitive effort, rather than as a constitutive element of a heuristic and epistemic process of co-construction of meanings.

Here again, it is easy to see the "metaphysics" behind the OECD-PISA tests, based on what Greeno (1989) calls "personal and social epistemologies" concerning the location, features and resources of thought processes. In line with a deeply-rooted Cartesian rationalism, as regards location we assume that an individual's mind thinks individually and independently of the context, and this legitimizes the researchers' efforts to "isolate" the thinking individual's cognitive activity. The features of human thinking are ideally conceived as uniform and evenly distributed, not quantitatively (otherwise drawing comparisons would be pointless), but ontologically and phenomenologically, so it would be recognizable

and constant wherever it takes place, and whoever is doing the thinking. This assumption of uniformity satisfies the DeSeCo project's criterion of universality for the purpose of identifying and comparing "key competencies". It is also supported by the third epistemological factor relating to an individual's thinking resources, which are conceived as being available for use in a linear, cumulative process of improvement of the individual's cognitive skills, from the simplest to the most complex. This improvement process is basically a matter of time and of planned reinforcement, which is generally achieved (one would hope) at school (Santi, 2006). Hence the "operational mandate" and the concern raised by international surveys ranking presumably homogeneous samples of students.

The 2015 PISA international assessment caused quite a stir in Italy because the country's students ranked only 32nd out of 51 countries. Though it was the first time this test was administered in Italy, the result came as something of a surprise. It was seen as the sign of a sort of emergency, given the far better results obtained in an apparently similar survey on individual problem-solving skills as part of the PISA 2012 survey.

The findings of the INVALSI (Istituto Nazionale per la Valutazione del Sistema di Istruzione) 2017 Report referred to Italian students are easy to interpret in a prescriptive sense as a shortcoming of Italy's education system and a generational emergency, given the huge gap separating Italian results from the three top performers - Singapore, Japan and Hong Kong. But, using our common sense, it is hard to see these three countries' students and scholastic culture as excelling in creative collaboration and problem-solving, and worth imitating. In the PISA surveys 2012-2015 there may be a sort of asymmetry between what is seen as important in solving real-life problems in participative settings - defined by the WHO's International Classification of Functioning (ICF, 2003) as involvement in the context of life and existence - and a standardized measure of an individual's capacity for collaborative problem-solving (which is only a complementary, partial qualifier of functioning, according to the ICF). This type of expertise has to do with a number of particular skills and personal aptitudes that facilitate the effective and efficient solution of problem situations. This may

involve: exploring the context of the problem; understanding the information useful for delineating the problem; interacting with this information, representing it and formulating coherent hypotheses; planning practicable and strategically controlled solutions; monitoring the effects; obtaining feedback and reflecting on the outcome. Thus defined, problem-solving demands "individual" skills that can be cultivated by "thinking subjects", who apply their cognitive resources to identifying the "constraints" of the problem to solve. The PISA 2012 Analytical Framework used a cognitive matrix to define the concepts of "problem" and "problem-solving" (drawing on Polya's studies in 1945). There is a strong correlation between the architecture of the cognitive system, the knowledge base on which it operates, and the control processes it implements. This correlation orients the identification of actions to render a goal pursuable, albeit in the presence of obstacles, and can lead to solutions that are not self-evident. Individual action is still goal-driven even in a collaborative setting, and it relies essentially on the same cognitive processes, though the cognitive burden may be lighter. This "finalist reductionism" enables the relational "variables" introduced in the computer simulation of the interaction proposed in the test to be controlled, systematized and presented in order of greater or lesser preferability, and in a closed system of predictability. The collaborative facet of the problem-solving competence being measured does not affect the previously-mentioned epistemological beliefs. The fundamental components and assumptions are explicitly maintained, set in a matrix in which the particular features of the collaboration take shape in three basic components: establishing and maintaining a shared understanding; taking appropriate action to solve a problem; and establishing and maintaining a team organization.

Stability, resourcefulness, appropriateness and organization are the features of a collaborative "performer", in line with how the third category of core competences needed to work in groups is described. At the heart of this way of functioning there is the ability to interact with others who differ from us. This is explained, however, in rather Darwinist terms, based on objectively acknowledging a subjective interdependence: for our physical and psychological

survival, our self-esteem, sense of identity and social standing, we need connections with other human beings throughout our lives. Such connections may sometimes be conflictual, however, and we have to learn how to manage them, and negotiate. In this sphere of social action, being able to cooperate enhances our chances of reaching our personal goals as part of human groups on which the "sense" of our lives depends.

a different hermeneutical possibility through capability approach and complex thinking

This "structuring" (in the sense used by Bourdieu) of the field of investigation reveals the lexicon and symbolic constructs, and the syntax and signs typical of the concept of "human capital" (Bourdieu, 1986). This logic, with its particular dominant categories and material variations, permeates the sense of the PISA surveys, and serves as a hermeneutical key to interpreting the "immaterial" data produced by the assessment. The local and global impact of a poor test performance on a given area is presented in "objective" terms of a capacity "subtracted" from the economy and the capitalized society. But Bourdieu warns against yielding to the charm of an "order of things" and mistaking the changing power of the "symbolic capital" of culture for something natural and inevitable (Bourdieu & Wacquant, 1992). There is good reason for concern, so a creative effort is needed to evade the constraints of this interpretation and propose other frames of meaning, paving the way to a different type of symbolic capital, and possibly to a different idea of what is important in education.

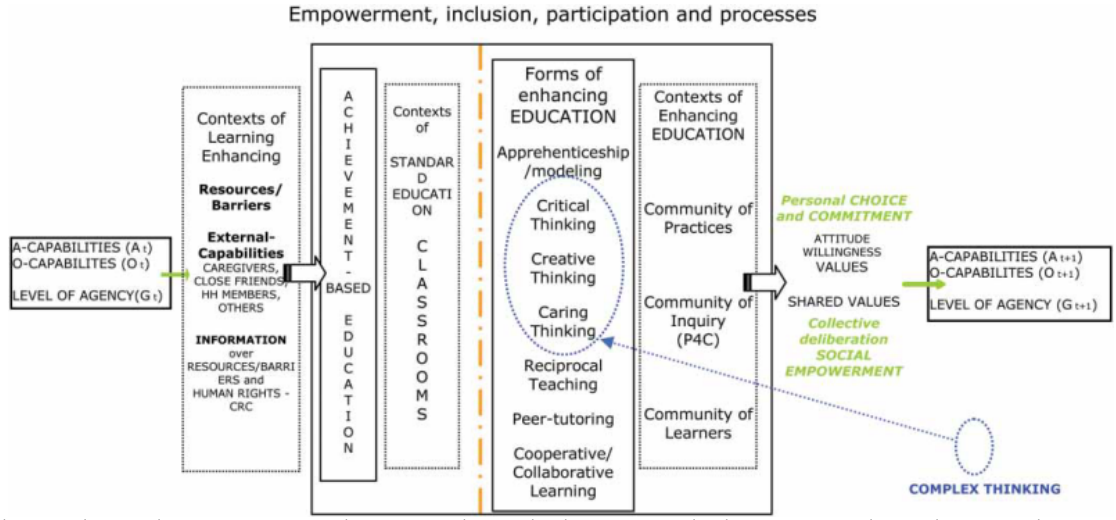
Going beyond the negative features of the OECD-PISA surveys' frame of reference - and leaving aside any explicit "anti-government" complaint against the commercialization of scholastic culture, and the criticism of "lifelong learning" (Biesta, 2010) as a pervasive and all-encompassing mutation of the nature and purposes of education - there remain the dangers inherent in its "reductionism". Our education systems, being driven by alternative economic approaches to the human capital model, may avoid or at least balance this risk. Human development and the *Capability Approach* (CA) are important in the contemporary debate and a hermeneutical opportunity worth mentioning briefly here. Starting from the CA

alone may prove risky, but helps us to place in context the concerns raised by tests like PISA 2015, and the priorities of OECD programs such as the DeSeCo or the Sustainable Development Goals, without trivializing them or backtracking, but with a genuine proactive commitment. The CA is "a broad regulatory framework for the evaluation and assessment of individual well-being and social arrangements" (Robeyns, 2005: 94). At the heart of its constructs is human agency, or our freedom to be and do in our lives, the individual and collective capabilities and actions that make communities flourish. Rather than as a criticism of the human capital model, the CA can be seen as striving for a different goal - human development. This makes it an interesting, additional way to assess the potential of populations and their generativity.

As Lozano et al. (2012) explained, adding the CA to the "skills-based" approach gives the latter a more proactive dimension, reducing its drawbacks, especially for its educational implications. Instead of the functionalism intrinsic in perceiving "competence" as expressing the knowledge, skills and aptitudes (cognitive and non-cognitive psycho-social prerequisites) that individuals can deploy in their actions and decisions to get the best results in complex tasks (Rychen & Salganik 2003: 43), the CA considers an ethical normativity. It is concerned less with the results, and more with people's capacity for agency, and opportunity to use it in choosing and behaving according to what they freely judge to be worthwhile for themselves and the community (Sen, 1999). It follows that the external demand for competence that focuses the educational action on training the skills needed to solve externally-generated problems, whereas the CA is internally oriented and cultivated indirectly, providing the "conversion factors" needed for life projects. Education systems centered on well-being and well-becoming (Biggeri & Santi, 2012) convert an anonymous sample into a set of free-thinking single agents capable of aspiring to a dignified life worth living alongside other, free and different agents. It takes a participatory and inclusive perspective, generating positive, non-selective attitudes to diversity. According to Sen, human agency is "what a person is free to do and achieve in pursuit of whatever goals or values he or she regards as important" (Sen, 1985: 203).

These first considerations indicate the need to distinguish between performance in terms of results (in problem-solving, for instance) and performance in terms of agency focused on a goal that is judged important. Teaching agency thus becomes a priority and orients towards an active form of citizenship (Santi & Di Masi, 2014; Di Masi & Santi, 2016) in which "people who enjoy high levels of agency are engaged in actions that are congruent with their values" (Alkire, 2008: 3). As Lonzano et al. (2012) put it, in terms of the skills required, the agent's will to act and intentionality are irrelevant, whereas it is essential for the individual to be able to cope with "problematic" external demands by responding with effective and efficient actions. The agent's personal motivation becomes essential - not in terms of self-esteem or competitiveness, but of the reasons behind an action, and its goals. The educational element lies in the emergence and use of capabilities, in people's faculty to understand, to want, to shape their own destiny, and to make a difference in their communities. Sen explains what he means by the term *agent*: "I am using the term of agent as someone who acts and brings about change" (Sen, 1999: 19). He also adds that: "people have to be seen [...] as being actively involved - given the opportunity - in shaping their own destiny, and not just as passive recipients of the fruits of cunning development programs" (Sen, 1999: 53).

The pedagogical implications are significant because we should be aiming to align academic education not with what society *is*, but with what it *should be* (Lonzano et al., 2012). Schooling is asked to pragmatically solve an antimony (Bruner, 1996) expressed in a "dual constraint": while aiming for a functionalist, highly-selective training of students' skills, it must also widen its field to pursue an inclusive mass education based on didactic variation and differentiation. To achieve this, education policies and planning actions must focus on values and principles such as freedom, equity and participation, that are not exclusive to the realms of individual endowment and performance but have fundamental ethical and cultural components. Merely acquiring knowledge and skills through individual learning in a given field of application tends to fit what Bourdieu (1992) would call "habitus", or the structures that tend to repeat and perpetuate practices



adapted to the patterns that produced them, and then to judge them adequate, appropriate, legitimate and consistent. Competence, though it has a certain applicative complexity that sets it beyond knowledge and skills, would still only serve as a habitus, as the "generator principle of regulated improvisations". Bateson would say that it still only leads to "reproductive" learning or, at best, to a "deuteron-learning" that helps people "learn to learn" in a given field, and that Habermas (1968) would limit to a typical "technical interest" of the knowledge society.

But it is the society of cohabitation that appears to be more in difficulty today, and less satisfied with the domain of technical interests. Today's society could benefit more from education systems designed to focus on practical and emancipatory factors like those at the heart of approaches like the CA. Elsewhere, together with the economist Biggeri (Biggeri & Santi, 2012), we investigated the risks of human agency being impoverished by education policies that focus excessively on acquiring knowledge and strengthening skills as the way to develop "competent thinking". We proposed an alternative "joint" model in which CA is put in dialogue with a unique curriculum - *Philosophy for Children* (P4C) - which gives support for people's capacity/ability for participation and citizenship. This is combined at school with real opportunities for everyone to activate what Lipman calls "Complex Thinking" (Lipman, 2003) and thus generate a fundamental "functioning" in the exercise of freedom to think and act.

Table: The *Capability Approach* (CA) and *Complex Thinking* (CT), from Biggeri & Santi, 2012, p. 381 (Figure 2. Evolving capabilities and education for enhancing children's flourishing)

a-capabilites: abilities; o-capabilities: opportunities; p4c: philosophy for children

The idea of Complex Thinking (CT) was inspired by Lipman (2003), whose "*Thinking in Education*" certainly owed much to his pragmatist teacher, John Dewey, but also drew on the culturalist and sensitive approach of Vygotskij. Lipman identifies three fundamental components of Complex Thinking – i.e., critical, creative, and caring thinking – which are all simultaneously and synergistically involved in higher-order thinking of the kind needed in collaborative problem-solving.

Critical thinking is not only about logical, formal and informal reasoning abilities, as generally found in conventional programs for developing thinking skills. While acknowledging that reasoning "skills" have a functional role to, Lipman (2003) sees thinking along the lines of a fourfold priority: sensitivity to the context; releasing on the criteria; self-correction; and orientation towards discovery. All these characteristics are activated during investigation processes, which implicitly involve the need or wish to arrive at a judgment or gain an idea about what we want to believe or do. Lipman's critical thinking is not just a skill or competence, but an experience that stems from the original encounter with the doubt, rather than from a prior knowledge and certainty of the outcome.

Creative thinking is not an additional dimension, but a facet associated with critical thinking. All the priorities of critical thinking coincide with those of creative thinking, which involves: imagining possibilities and consequences; generating alternatives and perspectives; bearing the risk of originality; and daring to go against the rules. These are all particularly challenging aspects of adult life, and a spontaneous part of childhood. That is why Lipman believes that creative thinking - like all other components of complex thought - can be nurtured from an early age, when we start to experience wonder and curiosity about our world.

Feeling amazed, intrigued, afraid or amused are all emotions that, together with our affect and values, innervate and nurture our capacity for *Caring thinking*. This is not about managing our emotions, but a sentimental and ethical orientation of our thinking in relation to ourselves as human beings in the world, and being in

the world with other human beings. Others are not a source of unavoidable conflict or need to negotiate and compromise, or a resource to be exploited. They are an alternative presence in the dialogue, a creative presence in our relational, discursive way of thinking. Lipman (1995) distinguishes between several types of caring thinking (without suggesting that this is an exhaustive list): validating or valuational thinking; affective thinking; active thinking; and normative thinking. Each of these facets of caring thinking goes against the image of "top collaborative problem-solver" that emerges from PISA 2015 as a model to which a better society should aspire. To explain the valuational sense of thinking, Lipman refers to Dewey, who simply refers to the readily-recognizable experience of "pricing" as opposed to "appreciating", or "esteeming", or "evaluating" and "valuing?), where second word in each pair involves caring. To explain the affective meaning of thinking, Lipman mentions how we feel indignant in reaction to an offensive comment. Indignation is an emotion, but our indignation is prompted not just be the comment itself, but also by our judgment of it, that can and does move us to act with courage. This is consistent with the third active declination of complex thinking: according to Buchler (a great source of inspiration for Lipman), an act is always an expression of the person performing it. It reveals, or "narrates" the person in her "*vita activa*" - as Arendt would say (1998) - never vice versa, and they are never separable. A good example of normative thinking comes from Lipman's statement that: "Those able to consider the world as it is should be helped to consider the sort of world they want to live in and the sort of world they ought to want to live in. Such agenda may well occupy them for the larger parts of their lives, but it will be time well spent." (1995). In a note on these words, and in his comments on caring thinking, Lipman refers explicitly to Martha Nussbaum, thus bringing the CA closer to his idea of CT.

philosophy for children as ct operazionalization

The three facets of complex thinking are not only inside the thinking individual, but are also situated in the "community of inquiry", the methodological core of the Lipman's P4C Curriculum. In P4C community of

inquiry is intended not as a setting for cooperative group research, but as an authentic experience of participation in an "investigation community". From the etymology of the word community, which contains the dimension of sharing (cum) and that of the gift (*munus*), comes the political-social aspiration behind this educational approach. It is precisely the gratuitousness of the amazement we feel when we look at our world that unites us and draws the "arc of inquiry" from certainty to doubt. While cooperative group research tends to optimize individual contributions to reduce the effort needed to solve problems, the "community of inquiry" tends to favor collaboration as an opportunity for everyone to do everything possible - everyone contributes possibilities. The need to collaborate with others is seen in the PISA 2015 approach as a further complication for problem-solvers having to deal with "ill-structured" problems. In the community of inquiry, on the other hand, the multiple points of view facilitate a "de-structuring" of problems, or the problematization of the obvious. Unlike the group's cooperation, the quality of the generative flow of the process in the community's collaboration is more important than the result. The interaction aims to multiply the symbols of the dialogue, to deconstruct its syntax and welcome neologisms, expanding the opportunities for relationships, and the possible actions. The community serves not only as a context, but also becomes the intersubjective constituent of complex thinking - just as the investigation is not only the means, but the very purpose of the exercise.

The community of inquiry is therefore not just a "learning environment" for students to develop their collaborative problem-solving skills, and acquire a know-how considered useful, or even indispensable, in the job market. The community of inquiry is a "conversion factor" of collective capabilities. It enables available resources (personal endowments or contextual elements) to be converted into real faculties and agency opportunities in the democracy of thought. The practice of philosophizing for and with children, as proposed in the P4C curriculum, is the pars costruens that Lipman offers as an effective opportunity to build what Sen calls "flourishing communities" as opposed to productive societies. Inquiry is seen as humanity's starting point, driving force and destiny.

As a collective, historical and symbolic construct, it inspires Lipman's whole educational project, blending the critical, creative and caring value of wonder with the constructive, playful and authentic prerogatives of childhood. Lipman's original project, influenced by Ann Sharp's "feminine" contribution, concretely embodies the pedagogical, economic and ethical-political issues proposed by the CA rather than the logic of the OECD-PISA tests. Going against the spirit of our time, the P4C proposes a different assessment approach: instead of seeking to measure what we already know and want, we should focus on an authentic "wandering"/"erring", an aptitude for exploring that prizes ignorance, invention and improvisation over known solutions (Kohan, Santi & Wozniak, 2017). The concept of wandering also contains the chance to wonder and to err - in the sense not of making a mistake, but of having the opportunity to explore alternatives and otherness. Erring is never pointless, and it protects us from the inherent dangers that Arendt (1998) saw in making thought coincide with cognition, reducing it to logical rationality, turning human beings into homunculi (Arendt, 1998: 172) readily replaceable with "intelligent machines". Separating thinking into skills and specialized cognitive processes is an economic expedient that serves the purpose of making the individual accountable for his curriculum vitae – a far cry from Szymborska's genial poetic image of "balance of competences" (2009). Worse still, it becomes an ethical device enabling more or less coercive forms of control over lifestyles and the labor market (Malabou, 2004), reiterating the ideology of the identical.

The aesthetics of the unexpected in a jazzing pedagogy (Santi & Zorzi, 2016; Santi, 2017) give rise to a creative tension directed not towards innovating the original for the consumer market, but towards re-inventing the original in "improvising communities" (Ingold, 2014). This creative tension thus becomes an "ex-active" rather than "ad-active" prerequisite for humanity's evolution (Gould & Vrba, 1982, Gould, 1991). Creativity, with its immense "cipher" and vocation for disorder, can become the paradoxical "measure of all things". As Arendt warns, certainly that measure cannot be neither the impelling necessity of biological life and work, nor the utilitarian exploitation of manufacturing and use (Arendt,

1998). These concepts are implicit in the initial provocative stance of the CA, which sees educational proposals like P4C (based on Socratic and participatory dialogue), as a concrete opportunity for democracy in the intersubjective construction of knowledge and values (Nussbaum, 2006). As Lozano et al. (2012: 146) wrote: "participatory teaching methodologies acquire value not only because they have proven more efficient in their learning orientation than the traditional master classes, but they are a way of demonstrating how to approach the solving of collective problems, starting with basic principles such as equity, diversity, empathy, tolerance and solidarity". Taking this approach, teaching and learning processes are not just the engine behind "work", embedded in technocratic curricula with closed and globalized sets of established competences. They are community practices and ways of living (Hogan: 2003) that can combat new forms of servitude – like the oligarchy of management that has replaced the old clericalism.

The problem-solving activity of a community of inquiry using the P4C approach more closely resembles that of the physics student in the "anecdote of the barometer" than that of a top-performer in the PISA tests. Asked how to find the height of a skyscraper using a barometer, the student had a number of imaginative solutions to suggest before giving the expected "correct" answer relying on the law of pressure. He proposed: tying the barometer to a piece of string, letting it down to the ground from the roof, and measuring the length of string; or dropping it and measuring the time it took to hit the ground; or comparing the lengths of the shadows cast by the barometer and the skyscraper; or using the barometer like a ruler to mark off the height of the building while walking up the outside emergency stairs; or simply ringing the lodge and offering the porter the barometer in exchange for the necessary information (which seemed the "nicest" solution, as he would meet someone who knew a lot of other things about the skyscraper).

The anecdote makes the point that knowing the "right" answer to a problem is not necessarily an indication of a thorough understanding (Reusser, 1986), and underscores the fundamental role of "going beyond the logic of things".

Creativity can generate alternatives, not so much in the solution of problems as in the problematization of solutions, an aspect that makes it hardly very "efficient" because it generally lengthens the response times. The community of inquiry of the P4C approach is intended as a place of leisure in learning (from the Greek *skhole*), unconstrained by external demands, that internalizes the value of dialogue as a social premise of reasonableness, not vice versa (Mead, 1966). Dialogue as a constitutive element of thinking (that Lipman also absorbs from the Russian tradition, from Vygotskij to Bachtin) is operationalized in all materials (stories and manuals) and working methods (agendas and philosophical discussions) in the P4C curriculum, firmly anchored to a paradigm that overturns rationalist beliefs about the location, features and resources of thought. Lipman takes the historical-cultural perspective and a semiotic idea of higher thought as a "mediated activity" that lends superiority to the community, not individual skills. What is experienced in the community of inquiry concerning the problematization of the world is far removed from what is acquired from a learning environment organized around problem-solving. The shared experience it entails has nothing in common with the idea of "collaboration" tested with the computerized simulations of cooperative interaction proposed by PISA 2015.

a prolusion as conclusion…

To sum up, increasing the precision and clarity of test measures seems to overshadow qualities that are not readily apparent, widening the gap between what is easier to measure, but less significant for change and what is more important but less measurable (Unterhalter, 2017). The centrality of assessment processes in our times seems to bring us back to the neo-positivists' big question of the "great Vienna" (Janik & Toulmin, 1996) on language, suggesting an analogy with Wittgenstein's famous corollaries in his *Tractatus*. It might seem that what we cannot measure should be ignored, but we know that this would mean disregarding all those actions of pausing, imagining, perceiving, sensing, believing that subjectively matter most to us. This brings us to the more general question of how to measure the immeasurable in education, that Unterhalter (2017: 2) frames

in introducing an interesting debate on the topic in an issue of *Comparative Education*. So, what should we look for when we try measure the immeasurable? How do we try to grasp it with measures and indicators? When is the immeasurable revealed in measurements? Perhaps, drawing on Wittgenstein again, what is important to us emerges in the wonder expressed by children - while we are busy measuring something else. Maybe the inescapable difficulty of defining what fits inside our box of competences really serves to identify the immense understanding outside it. The best way to seek an answer is to rise to the challenge, to wander bravely, keeping open the door to the cage of our academic world. We should try to alternate between or combine assessment systems and criteria, devise new ways to give value to the experience of human growth, and invent neologisms, mixing and stirring them up to reveal something important "as difference", like "negative capability" (Unterhalter, 2017: 1). Eventually, as Wittgenstein again suggests, we should throw away the ladder (and the test rankings), but only after we have climbed it.

references

Alkire, S. (2008). *Concepts and Measures of Agency* (OPHI Working Papers from Queen Elizabeth House, University of Oxford).

Arendt, H. (1998), (first edition, 1958). *The Human Condition.* Second Edition, Chicago-London: The University of Chicago Press.

Biesta, G. (2010). *Good Education in the Age of Measurement. Ethics, Politics, Democracy.* London and New York: Routledge.

Biggeri, M., Santi, M. (2012). The missing dimensions of children's well-being and well-becoming in education systems: capabilities and philosophy for children. *Journal of Human Development and Capabilities*, *13*(3), 373-395.

Bourdieu, P. (1986). *The Forms of Capital*. New York: Greenwood.

Bourdieu, P., Wacquant, L. (1992). *An invitation to Reflexive Sociology.* Chicago-London: The University of Chicago.

Bruner, J. (1996). *The Culture of Education*. Boston: Harvard University Press.

Di Masi, D., Santi, M. (2016). Learning democratic thinking: philosophy for children as citizens, *Journal of Curriculum Studies*, Vol. 47(6), pp.136-150.

Goleman, D. (1995). *The Emotional Intelligence.* New York: Bantam Book.

Gould, S.J., Vrba, E.S. (1982). Exaptation – a missing term in the science of form. *Paleobiology*, 8: 4-15.

Gould, S.J. (1991). Exaptation: a crucial tool for an evolutionary psychology. *Journal of Social Issues*, 47(3), pp.43-65.

Habermas, J. (1968). *Erkenntnis und Interesse*, Frankfurt a. Main: Shurkamp.

Hogan, P. (2003). Teaching and learning as a way of life, *Journal of Philosophy of Education*, 37(2). pp. 207-223.

Ingold, T. (2014). The creativity of undergoing, *Pragmatics & Cognition,* 22(1), pp.124-139.

Janik, A., Toulmin, S. (1996) (first edition, 1973). *Wittgenstein's Vienna*. Chicago: Ivan R. Dee.

Kohan, W. O., Santi, M., Wozniak, J. (2017). Philosophy for teachers: between ignorance, invention and improvisation, In: (Eds): M. R. Gregory, J. Haynes, K. Murris (Eds.), *The Routledge International Handbook of Philosophy for Children*. London and New York: Routledge.

Lipman, M. (1995). Caring as thinking. *Inquiry. An International Journal of Philosophy*. 5(1), pp.1-13.

Lipman, M. (2003). *Thinking in Education*. Cambridge: Cambridge University Press.

Lozano, J.F., Boni, A., Peris, J., Hueso, A. (2012). Competencies in higher education: a critical analysis from the capabilities approach. *Journal of Philosophy of Education*, 46 (1), 132-147.

Malabou, C. (2004). *What Should We Do with Our Brain?* New York: Fordham University Press.

Mead, G.H. (1934). *Mind, Self and Society*. Chicago: University of Chicago Press.

Nussbaum, M. (2006). Education and democratic citizenship: capabilities and quality education, *Journal of Human Development*, 7, pp.385-395.

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

Polya, G. (1945). *How to Solve It*. Princeton: Princeton University Press.

Reusser, K. (1986). Problem solving beyond the logic of things. Textual and contextual effects on understanding and solving world problems. Paper presented at the Annual Meeting of the American Educational Research Association, 70th, San Francisco, April 16-20, 1986.

Rychen, D.S., Salganik, L.H. (2003). *Key Competencies for a Successful Life and a Well-Functioning Society*. Gottingen: Hogrefe and Huber.

Robeyns, I. (2005). The capability approach: a theoretical survey, *Journal of Human Development*, 6(1), pp.93-114.

Santi, M., Oliverio, S. (2006). *Educating for Complex Thinking through Philosophical Inquiry. Models, Advances and Proposal for a New Millennium*. Napoli: Liguori.

Santi, M. (2017). Jazzing philosophy for children. an improvising way for a new pedagogy. *Childhood & Philosophy*, Vo.13, No. 28, 631-647.

Santi, M., Zorzi, E. (2016) (Eds.). *Education as Jazz. Interdisciplinary Sketches on a New Metaphor*. New Castle: Cambridge Scholar Publishing.

Santi M., Di Masi D. (2014). Pedagogies to develop children's agency in school, in Saroijni Hart C., Biggeri M., Babic B., *Agency and Participation in Childhood and Youth. International Application of the Capability Approach in Schools and Beyond*, London: Bloomsbury, pp.123-144.

Sen, A. (1985). Well-being, agency and freedom, *Journal of Philosophy*, LXXXII (4), pp.169-221

Sen, A. (1999). *Development as Freedom*. Oxford: Oxford University Press.

Szymborska, W. (2009). *La gioia di scrivere. Tutte le poesie (1945-2009)*. Milano: Adelphi.

Unterhalter, E. (2017). Negative capability? Measuring the unmeasurable in education. *Comparative Education*, 53(1), pp.1.

received in: 08.05.2019

acceeted in: 15.06.2019