

Navigating Diverse Perspectives: The Longitudinal Development of Children's Intellectual  
Humility in Philosophical Dialogues

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## ABSTRACT

### Navigating Diverse Perspectives: The Longitudinal Development of Children's Intellectual Humility in Philosophical Dialogues

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Developmental accounts of intellectual humility (IH) are currently emerging and thus little is known about how children engage in IH and which contexts may support its development. Further, IH has yet to be operationalized within a dialogic context in childhood. Philosophy for/with Children (P4wC) is a pedagogy that has been heavily theorized to foster epistemic virtues such as IH, and may be an informative context within which to study IH in children. The present study is a longitudinal, instrumental case study analysis of the development of IH in the context of P4wC dialogues among five children who participated in activities associated with a P4wC-based charity over four years between 2015-2018. From a situative analytic lens, this study elucidates how children's participation in P4wC dialogues supports the development of IH. My findings suggest four categories of discursive indicators associated with IH and two broad categories of indicators associated with a lack of IH. The categories associated with IH are: self-correction, openness to others, willingness to doubt and labelling one's own perspective. Categories associated with a lack of IH are: asserting and defense to disagreement. My findings also suggest potential developmental patterns within indicators of IH, such that meta-cognitive or explicit expressions appeared after time and experience. Furthermore, this study demonstrates how dialogue type and facilitator scaffolding impact indicators of IH. Overall, this study provides evidence to suggest that children are capable of demonstrating and developing IH, and that P4wC is a good pedagogical context to foster and study IH in childhood.

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## Table of Contents

List of Figures .....	vii
List of Tables .....	viii
Introduction .....	1
Defining IH .....	2
Why is IH a Disposition Worth Promoting? .....	3
IH in Childhood .....	6
IH and Related Intellectual Capacities in Childhood .....	10
What is P4wC? .....	15
How does P4wC promote IH? .....	19
The Present Study .....	23
Method .....	24
Researcher Description .....	25
Data .....	27
Participants .....	29
Context .....	31
Analysis .....	33
Findings .....	36
IH .....	36
Self-Correction .....	37
Openness to Others .....	46
Willingness to Doubt .....	51
Labelling one's Own Perspective .....	52

Lack of IH.....	55
Asserting.....	56
Defensive Response to Disagreement.....	59
Discussion.....	61
Contributions to Scholarship on IH.....	61
Contributions to Scholarship on P4wC.....	65
Limitations.....	66
References.....	68

## List of Figures

### Figure

1 Categories of Discursive Indicators of IH and Lack of IH in P4wC Dialogues.....	35
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**List of Tables**

**Table**

**1 Dialogue Topic and Year by Participant.....28**

## Introduction

Encountering perspectives and information that clash with one's own worldview is inevitable. Importantly, an individual's ability to coordinate new information with their existing knowledge and beliefs is a central aspect of learning and epistemological development (Hofer & Pintrich, 1997; Kuhn et al., 2000; Schraw & Sinatra, 2004). Yet, psychological research on human cognition suggests that adults may hold an innate orientation towards bias when considering their own beliefs (Bernstein, 2021; Kardash & Scholes, 1996; Nickerson, 1998). Adults tend to overestimate their own knowledge and seek, instead, to prioritize perspectives or evidence that confirm their pre-existing beliefs, rather than reasoning through potentially conflicting information in the pursuit of knowledge advancement or truth (Kunda, 1990; Nickerson, 1998). Therefore, adults may not be particularly well-equipped to meaningfully navigate perspectives that differ or even challenge their own, highlighting the potential need for pedagogical intervention.

Scholars and the general public alike have identified an epistemic disposition that could be a potential antidote to such biased thinking, namely, the epistemic virtue of intellectual humility (IH) (Krumrei-Mancuso, 2017; Owens et al., 2015; Samuelson et al., 2015). While the term virtue is often associated with the moral realm, an epistemic virtue is broadly concerned with beliefs rather than implying social acts (i.e. generosity) (Brady & Pritchard, 2003). Thus, an epistemic virtue can be understood as a disposition that facilitates intellectual flourishing and responsible engagement with knowledge via an individual's active reasoning about what is worth believing (Brady & Pritchard, 2003; Haggard et al., 2018). IH is a disposition that broadly involves acknowledging the constraints of one's knowledge and thoughtfully engaging with differing and even contradictory perspectives. As biased thinking seems to be innate, it may be

particularly critical to cultivate environments and pedagogies that support IH development in childhood. Although epistemic virtues have been considered within philosophical literature for some time, only within the past decade have researchers in psychology made attempts to delineate the positive psychological impact of IH, as well as how it develops in childhood (Danovitch et al., 2019; Hagá & Olson 2017; Leary et al., 2017). Thus, while there is an emerging body of empirical research on IH across development, to date, it has been operationalized and examined in limited contexts and little is known about the developmental contexts which may facilitate IH. In this sense, extant scholarship may not reflect the full breadth of the IH construct itself or the interpersonal situations in which it is most meaningfully developed and exercised. The present study aims to contribute to the emerging investigation of IH in childhood by developing an operational categorization of IH related indicators in an interactional, dialogical context. More specifically, I will explore children's IH expression and development over time within a unique pedagogical context, where the development of epistemic virtues such as IH are actively supported: namely, the Community of Philosophical Inquiry method, as situated within Philosophy for/with Children (P4wC) pedagogical model.

### **Defining IH**

IH is an intellectual disposition which is understood to support good, responsible knowing, and thus has almost exclusively been written about with high regard (Kidd, 2015; Spiegel, 2012; Tanesini, 2018). IH generally reflects a distinction between one's intellect and ego in the pursuit of truth and reasonableness (Krumrei-Mancuso & Rouse, 2016). N. Fletcher (personal communication, March 2020) defined IH as "an epistemic disposition that affects an individuals' relationship with knowledge by making *epistemic goods* such as truth and significance and *epistemic strategies* such as collaboration and self-correction more important

than one's status as a knower". Thus, IH is understood to imply an individual's engagement with knowledge in a manner that emphasizes open engagement with others who may have differing perspectives, and a willingness to reflect critically on one's own beliefs or knowledge. IH has been further operationalized empirically in a variety of different, although related, ways (Leary et al., 2017; McElroy et al., 2014; Samuelson et al., 2015). Some scholars have conceptualized IH simply as the opposite of intellectual arrogance (Gregg & Mahadevan, 2014; Tanesini, 2016). Others, however, consider IH as a golden mean between intellectual diffidence (uncritical acceptance of others' beliefs) and intellectual arrogance (Haggard et al., 2018). Some operational definitions focus solely on the epistemological dimension of IH, such as Whitcomb et al.'s (2017) conception of IH as the acknowledgement of cognitive limitations. Yet increasingly, conceptions of IH have included both epistemological and social dimensions (Hook et al., 2015; McElroy et al., 2014; Samuelson et al., 2015). The epistemological dimension refers to an individual's ability to acknowledge the strengths and limitations of their knowledge, whereas the social dimension captures an individual's ability to represent their knowledge to others and engage with differing beliefs (Danovitch et al., 2019; Samuelson et al., 2015). The present study drew from conceptualizations of IH that included both a social and epistemological dimension as well as theories that posit IH as a golden mean on a spectrum between diffidence and arrogance as a starting point for inquiry (Haggard et al., 2018).

### **Why is IH a Disposition Worth Promoting?**

Research on IH faces a number of challenges as the field is still emergent and widespread consensus on how precisely to operationalize IH is lacking. Only recently have researchers in psychology made attempts to delineate the social and psychological correlates and consequences of IH, as well as how it might develop (Danovitch et al., 2019; Hagá & Olson 2017; Porter,

2015). At present, the majority of empirical studies have been dedicated to identifying the criteria for IH and creating measures with which to study it (Krumrei-Mancuso & Rouse, 2016; Leary et al. 2017; Samuelson et al., 2015). Further, the vast majority of studies have focused on adult populations. Despite the aforementioned challenges, however, the handful of studies that have attempted to examine potential benefits of IH have found promising results with implications in primarily three domains: social behaviour, education, and democratic citizenship (Gutmann and Thompson, 2000; Krumrei-Mancuso et al., 2020; McElroy et al., 2014).

Some research suggests that IH is related to social behaviours that are generally held in high regard and might be particularly useful in regulating and repairing social bonds among people (Farrell et al., 2015; McElroy et al., 2014). IH has been associated with more trust among members of a religious group (McElroy et al., 2014; Meagher et al., 2021). It is also correlated with the big five personality traits of openness and agreeableness, which have been shown to support knowledge creation and social cohesion respectively (Meagher et al., 2015). Krumrei-Mancuso (2017) found that IH predicted a variety of prosocial behaviours and dispositions such as empathetic concern, altruism and gratitude. Furthermore, IH has been associated with an increased likelihood for individuals to extend forgiveness to a perpetrator of harm arising from intellectual disagreement or conflict (Hook et al., 2017; McElroy et al., 2014; Zhang et al., 2015).

With respect to educational implications, Baehr (2016) posited that IH is related to both intellectual curiosity and the desire to increase knowledge. Porter and Schumann (2018) found that individuals high in IH were more motivated to learn about differing perspectives, and spent more time reading evidence that opposed their beliefs than those low in IH. Leary et al. (2017) provided further support for Baehr's (2016) hypothesis as they found that IH was correlated with

openness to different ideas, values and actions. Few studies have empirically examined the direct link between IH and learning, however, one study documented that high school students higher in IH were more motivated to learn and less motivated to simply appear intelligent in front of their peers (Porter, 2015). Additionally, the same study found that intellectually humble students were more likely to reflect on their own understanding of the subject matter they were learning in school and thus coordinate their understanding with their study efforts. This could imply that students exhibiting IH are more aware of where their understanding about course material might be lacking and therefore place an emphasis on such material in their studying. A recent study by Krumrei-Mancuso et al. (2020) confirmed that there is indeed an association between IH and characteristics relevant to knowledge acquisition, such as intrinsic motivation to learn and reflective thinking. University students higher in IH were more likely to be mastery oriented with respect to their learning goals, meaning that they were motivated to learn for the sake of gaining knowledge, and were more likely to give an accurate appraisal of their general knowledge (Krumrei-Mancuso et al., 2020; Porter et al., 2020). Furthermore, IH has been found to be associated with a growth mindset (Porter & Schumann, 2018).

Finally, IH has been posited to be central to responsible participation in a civic society (Grant 1996; Spiegel, 2012). IH may ultimately support children's capacity to participate meaningfully as engaged citizens in a pluralistic democracy (Grant, 1996). Respectful disagreements around important issues are a central tenet to a healthy functioning democracy. Krumrei-Mancuso and Rouse (2016) found that IH predicted open-minded thinking and a greater degree of tolerance to diversity, which are particularly important as all levels of society become increasingly pluralistic (Gutmann & Thompson, 2000). Furthermore, as participants in a democracy, collaborative decision-making is unavoidable. Meagher et al. (2015) examined

individuals in cooperative group work and found that those who were rated as high in intellectual arrogance spoke more frequently and thus dominated the direction of the group; so while IH might facilitate constructive collaborative dialogue, intellectual arrogance might impede it.

### **IH in Childhood**

IH has been historically considered as a facet of wisdom, and since wisdom tends to be associated more with adulthood than childhood, it has been deemed particularly relevant to later stages of the life course (Porter et al., 2019; Tiberius, 2016). This may partially explain why there are only a handful of empirical examinations of children's ability to engage in behaviours directly related to IH. Psychological studies of the developmental underpinnings of IH have suffered methodological challenges and have provided disparate results (Danovitch et al., 2019; Hagá & Olson, 2017a; Hagá & Olson, 2017b). One of the primary methodological shortcomings within the developmental literature is the manner in which IH has been operationalized, especially vis-a-vis the limited contexts in which it has been studied.

Hagá and Olson (2017a) investigated whether elementary school aged children showed a preference for and thus an ability to differentiate between intellectually humble, diffident and arrogant adults. Specifically, children listened to scripted recordings of adults' conversations depicting disagreements about the nature of an ambiguous object (e.g., a candle shaped like a light bulb). Their task was to rate the target adults based on how likeable they seemed. When adults were questioned on what they thought the object was, the possible responses were: "no way this is a candle, you're not right about that" (arrogant), "well it does look like a lightbulb but I guess it might be a candle shaped like a lightbulb, maybe you are right" (humble) and "if you say so then yeah, I guess it's a candle" (diffident). Their findings suggested that across development, starting from four years into young adulthood, children increasingly showed a

preference for intellectually humble adults. By 11 years of age, children consistently favoured the intellectually humble adult over both an intellectually arrogant and diffident adult.

In a second study, Hagá and Olson (2017b) aimed to examine children's confidence in their own knowledge, and whether they were willing to update their knowledge in two different contexts. The first context was in relation to (a) objects that would have been known and familiar to the children (e.g., scissors), (b) objects that children thought they knew but were actually something else (e.g., a chocolate shaped like a hammer) and (c) an object that was completely unknown (e.g., 360-degree camera). The second context assessed children's engagement with knowledge regarding the colours of two crayons, one in which the colour name was familiar (e.g., green), and another in which the name of the colour was previously unknown (e.g., chartreuse). The results obtained from the study demonstrated that children of all ages overestimated their knowledge of the unfamiliar objects/colors as they placed more confidence in their responses than might have been warranted. Additionally, another primary finding was that younger children, ages 4-5, were simultaneously very overconfident with their beliefs and particularly willing to revise their knowledge when corrected. Thus, the negative association between these aspects of IH may become more evident with age.

Taken together, the operationalizations of IH in these studies are limited because they do not test children's engagement in IH under circumstances where children might be expected to have strongly held personal beliefs, and therefore in which beliefs are known to be less flexible (Wainryb & Ford, 1998; Wainryb et al., 2004). The stimuli used in the studies largely focused on children's understanding of knowledge pertaining to the physical world. The trajectory of children's epistemological development varies substantially across domains of knowledge (Carpendale & Chandler, 1996; Chandler et al., 2000; Kuhn et al., 2000; Mansfield & Clinchy,

2002; Wainryb et al., 2004). For example, children are less tolerant of interpretive diversity vis-a-vis moral issues (e.g., value judgments) as compared to personal preferences (e.g., pleasingness) or aesthetics (e.g., beauty). That is, children come to acknowledge the subjectivity of beliefs regarding aesthetics more readily than issues of moral salience where they are more likely to adhere to beliefs in one objective and unchanging truth (Wainryb, 2004). Furthermore, adults tend to be vulnerable to confirmation bias, such that they seek out evidence that confirms their pre-existing beliefs and minimizes disconfirming evidence (Nickerson, 1998). Additionally, among adults, exhibiting IH appears to be more difficult when one cares about the issues at stake; individuals are more likely to seek to confirm their perspectives rather than learn about those of others while discussing topics that are important to them (Taber & Lodge, 2006). Since the argued benefits of an IH disposition are related to an ability to navigate divergent perspectives on topics that are of central importance in an individual's life and society at large, in the effort to combat biased thinking and reasoning, it is difficult to generalize such results when they are obtained using reasoning about everyday objects such as candles or cameras. As such, the results from these studies do not speak directly to the development of children's IH when faced with differing perspectives on important issues in their lives, such as those implicating moral issues like fairness or harm.

In another relevant study, Danovich et al. (2019) measured both the epistemological and social dimensions of IH through a knowledge self-assessment and by monitoring children's willingness to consult an expert to obtain information, respectively. To measure the epistemological dimension, children were asked to rate their explanatory knowledge regarding topics in biology (e.g., why fish can only live underwater) and mechanics (e.g., how an elevator works). In turn, the social dimension of IH was measured by whether or not children delegated

answers to questions, again regarding biology or mechanics, to an expert on the relevant topic, or conversely whether they opted to answer the questions based on their own (limited) knowledge. One of their primary findings was that the social dimension of IH was more developed than the epistemological dimension in children between the ages of 6 and 8. Similar to Hagá and Olson (2017), however, IH was examined within the context of specialized factual knowledge rather than topics that most children can meaningfully weigh in on. Factual knowledge involves objective truths and therefore affords less opportunity to discuss and consider differing but nevertheless legitimate perspectives. As noted above, the topics of mechanics or biology may not be personally meaningful and emotionally-laden for children and thus it may be less challenging to maintain an IH disposition in these contexts. Furthermore, demonstrating social and epistemological facets of IH would likely manifest differently when facing a group of experts rather than peers, because experts are given a particular status with regard to the information under question. Therefore, these results cannot be generalized to children's willingness to engage meaningfully and respectfully with their peers about issues that are important to them and that allow for interpretive diversity or a range of reasonable viewpoints.

In sum, the sparse available evidence regarding IH in childhood seems to suggest that it is possible to examine some potential IH related behaviours in children. Nevertheless, because studies in this area are limited, there are not yet clear accounts of whether children have the epistemic maturity to engage with their own knowledge in an intellectually humble manner. Beyond research directly on IH, however, other work on children's social-cognitive development provides some additional clues about children's capacities that may underlie an IH disposition.

## **IH and Related Intellectual Capacities in Childhood**

Despite there being little empirical evidence of how children show IH in middle childhood, there is reason to believe that they do have intellectual capacities that might be foundational to IH. Substantial empirical work has focused on the epistemological changes children undergo, which might speak to potential age-related developments in skills that are implicated in IH (Carpendale & Chandler, 1996; Mansfield & Clinchy, 2002; Rafetseder et al., 2013). Middle childhood, specifically ages 6 and 8, is a period when children become more realistic in assessing their knowledge and beliefs, skills which may be particularly critical to IH (Mills & Keil, 2004). Drawing upon literature examining theory of mind and epistemological development, specifically false-belief understanding, interpretive theory of mind, counterfactual thinking and coordinating subjectivity and objectivity, this section will discuss such potential foundational capacities.

IH concerns an individual's ability to evaluate their own knowledge and engage meaningfully with differing beliefs in order to update their knowledge when warranted. Given this, presumably a knower must have a basic proficiency in understanding the nature of knowing and the nature of knowledge to demonstrate IH. The nature of knowing describes the processes whereby one comes to understand the origins of knowledge and how it is acquired, whereas the nature of knowledge describes the ability to evaluate the validity of various types of knowledge, which are the products of knowing (Hofer & Pintrich 1997; Kuhn, 2000). Arguably, metacognitive abilities pertaining to reasoning about how beliefs originate, how individuals may come to acquire them, and how to judge correctness or truth of knowledge are particularly relevant to IH.

By the age of 5 or 6 years, most children demonstrate an understanding that people may hold beliefs that are false (Wellman et al., 2001). False belief understanding signals an emergent recognition that there are individual and internal elements (i.e., access to information) that influence the beliefs that one holds. This lays the foundation for an understanding that individuals might form beliefs based on their perceived reality or social experiences. However, false belief understanding is just the beginning, as it demonstrates only that knowing is contingent upon perceptual exposure to relevant information (Kuhn, 2000). Presumably, understanding one's own epistemological limitations and revising one's beliefs when faced with compelling new evidence requires understanding that individuals could arrive at different conclusions on the basis of factors beyond ignorance or misinformation. In order to be able to consider such possible alternatives and further to update knowledge, an understanding of the interpretive nature of thinking is required, beyond solely an acknowledgement that people may hold beliefs that are based on their perceptual reality (Carpendale & Chandler, 1996). Lalonde and Chandler (2002) found that children begin to understand the interpretive nature of beliefs around 7 years of age; that individuals might arrive at different conclusions about the same scenario or regarding the same set of facts (e.g., different interpretations of ambiguous images). Carpendale and Chandler (1996) also found that, between the ages of 7 and 8 years, children began to recognize that certain issues required justifications that were grounded in objective evidence, whereas others such as aesthetics or personal taste, did not. Similarly, issues of moral salience have been found to be particularly difficult for children to acknowledge interpretive diversity (Wainryb, 2004). Nevertheless, children at this age become increasingly willing to consider that different people could arrive at varied judgments on the basis of different factual beliefs across varied domains (Wainryb & Brehl, 2006). By this point in development, then,

children are beginning to understand that knowledge is generated based on individual, internal factors such as available information or experience, but they also acknowledge that different types of beliefs require varied levels of justification (Lalonde & Chandler, 2002).

The ability to navigate justifications and evidence in the face of multiple interpretations of the same phenomenon might be particularly relevant for IH because presumably, one would consider the nature of the issues at hand and thus use evidence and justifications to decide whether to update one's knowledge or not. Therefore, inasmuch as children in the later years of middle childhood begin to understand that people may arrive at different conclusions given the same experience or knowledge, and that some forms of knowledge require more evaluation of evidence than others, this may also support an emergent capacity for IH. Mansfield and Clinchy (2002) found that as children grew older, they were better able to express uncertainty regarding an information source, and draw conclusions about their own uncertainty based on the source.

Given that the ability to evaluate knowledge might play an important role in whether or not one decides to accept knowledge as true, how do children come to evaluate different sources of information? Middle childhood is a period wherein developments in counterfactual reasoning progress significantly (Rafetseder et al., 2013). The development of counterfactual reasoning might play a significant role in children's ability to navigate a variety of differing beliefs (Rasga et al., 2016). Counterfactual reasoning involves the ability to consider or envisage various possible alternatives to a scenario or a set of facts. Beck et al. (2011) found that children aged 6 and 7 years begin demonstrating the ability to make spontaneous comparisons between an actual event and potential alternative outcomes, thus signaling an ability to cognitively switch between reality and possible alternatives. Counterfactual reasoning has been primarily examined within the context of alternative outcomes of an event and as related to experiencing emotions such as

regret or guilt (Beck & Crilly, 2009; Rafetseder et al., 2013; Rafetseder et al., 2010; Weisberg & Beck, 2010). Despite this, counterfactual reasoning suggests an ability to take into consideration and imagine different sets of facts that can be brought to bear on a situation and actively consider the implications of each simultaneously, which bears similarity to abilities that may be necessary for IH.

Building upon the foundational developments within the theory of mind literature, children additionally refine their understanding of the certainty of knowledge and knowledge structures as they develop more mature epistemologies. In addition to emergent understandings of the nature of knowing, children also begin to understand the nature of how knowledge is structured and accepted. At the forefront of children's epistemological development is the process of distinguishing and coordinating between subjective and objective knowledge (Chandler et al., 2002; Kuhn et al., 2000; Mansfield & Clinchy, 2002). The process of coordinating subjective knowledge with objective knowledge is crucial for IH to thrive. In particular, a context-sensitive application of IH might require an understanding that certain topics may afford a greater degree of relativity where multiple perspectives are possible and legitimate, such as personal preferences, while others incorporate more universal or factual truth, such as truth judgements about the social and physical world. Further, not only do some topics implicate more objective factual truths, but the source of such truths might bear on the validity of such beliefs. For example, some sources of knowledge may produce more accurate perspectives, such as information sourced from scientific understandings rather than anecdotal information. Therefore, developments in the coordination of subjectivity and objective knowledge may help children to navigate which types of beliefs can be held personally and do not require justifications, and which beliefs do require some form of evidence and justification, and for

which some evidentiary sources might bear more truth than others. Taken together, these developments may not directly reflect IH, but they do reflect facets of cognitive flexibility that are necessary for children to navigate different sources and types of knowledge, in addition to the ability to consider alternative perspectives and interpretations (Sodian & Barchfeld, 2011). Cognitive flexibility in adults has been found to be correlated with IH (Zmigrod et al., 2019), and thus while the direct link between these processes and IH has not been documented, the development of abilities associated with cognitive flexibility may also signal development of the potential for IH.

By 7 years of age, children are able to provide justifications for their beliefs and reason from second-order beliefs, which are, in effect, beliefs about beliefs (Astington et al., 2002; Donaldson & Westerman, 1986). Astington et al. (2002) argue that reasoning about second order beliefs is fundamental to epistemological development as it underscores children's ability to understand evidence, truth, and inference. Mansfield and Clinchy (2002) found that as children developed more sophisticated methods for constructing knowledge they became better able to recognize criteria for truth, and therefore showed an increased understanding of the nature of knowledge and how their own knowledge might be constrained.

The literature reviewed above speaks to the potential of children possessing at least foundational skills related to the epistemological dimension of IH beginning around 6 to 8 years. However, the development of IH is likely to be a gradual process, meaning that children will continue to sharpen abilities related to IH over time and may show foundational aspects of this disposition prior to more sophisticated ones. What is less often addressed within the theory of mind and epistemology literature, however, is the development of the more socially oriented dimension of IH. In other words, how does interaction with other individuals inform one's

knowledge acquisition and evaluation? Because the social dimension of IH is as crucial as the epistemological dimension, taking an interactionist-constructivist perspective might help to illuminate the social processes involved (e.g., Dahl, 2019). That is, how do children negotiate their beliefs with others and what is the role of social interactions in their acquisition of new knowledge and beliefs? IH development might be *interactionist* in the sense that it is fostered in the context of interactions between children and their environments, and *constructivist* in that it is premised on children's active efforts to evaluate evidence and synthesize different perspectives and ideas.

Thanks to advances in other areas of intellectual development, we can reason that it is possible to consider the emergence of IH in children as young as 6 years of age. Considering developments in theory of mind and epistemology from an interactionist-constructivist perspective (Dahl, 2019) may emphasize the collaborative nature of the construction of beliefs; that is, beliefs are constructed from developments in metacognitive epistemological skills, and they are supported via experiences or interaction with others particularly when others express divergent viewpoints. In the next section, I will elaborate on a pedagogical context that was designed with these issues in mind, and thus may be an ideal social setting to promote IH in childhood.

### **What is P4wC?**

Philosophy for/with Children (P4wC) is a pedagogical model for teaching thinking and reasoning skills to children through philosophical dialogue (Lipman, 2003). P4wC was created in an effort to promote multidimensional thinking in children, that is critical, creative and caring thinking, in addition to supporting the development of epistemic virtues such as IH (Lipman, 2003). Philosophers Matthew Lipman and Margaret Ann Sharp founded the P4wC pedagogical approach in the late 1970s (Lipman & Sharp, 1978). Lipman initially conceptualized P4wC with

the intention of transforming philosophical argumentation into a thinking skills pedagogy positioned to profoundly shift the learning environments for children, by teaching them how to think, rather than what to think, and by giving intellectual autonomy to children in their learning environments and validating them as epistemic agents (Reznitskaya & Wilkinson, 2017; Turgeon, 2015). Sharp extended Lipman's initial vision by emphasizing the communal and caring nature of thinking within the pedagogy and thus, the P4wC model encourages children to constitute themselves as a Community of Philosophical Inquiry (Sharp, 1987). In practise, the P4wC model engages children in a structured dialogic inquiry on a given topic wherein a group of children, with the support of an adult facilitator, work together to co-construct answers to philosophical questions that are (a) central to their lives, (b) contestable, in that they are open to a range of reasonable viewpoints and (c) common to individuals regardless of their varied life experiences (Lipman, 2003). In a Community of Philosophical Inquiry session, questions are typically selected democratically by the group, as inspired by a stimulus shown to the children prior to the dialogue. Traditionally, stimuli have been philosophical novels which portray thinking modes representative of philosophical concepts and thinking, however modern streams of P4wC might use videos, images, or articles to inspire the dialogue (Lipman, 2003). The group then creates philosophical questions related to themes explored in the stimuli, based on the criteria listed above, to guide the inquiry. Philosophical questions are meant to invoke reasoning based on practical wisdom and lived experience, rather than scientific or factual knowledge, where different perspectives contribute meaningfully to the inquiry (D'Olimpio & Teschers, 2017).

A central tenet of the P4wC method is the emphasis on dialogue over debate to seek possible answers to philosophical questions (Daniel, 2007; Kennedy, 1999). That is, the purpose

of individual participation within P4wC dialogues is not to persuade or convince but rather, to collaborate and integrate various perspectives and uncover the complexities or nuances of universal phenomena. Thus, each dialogue invites children to share ideas from their own lived experience, and in turn, they must be attentive and accountable to the diverse lived experiences of others. This emphasis on collaboration and reason ensures that each individual's contribution helps develop the perspective of the entire group (Cassidy & Christie, 2013).

Another central component in P4wC is that finding the most reasonable answer does not necessarily require consensus from the group (Splitter & Sharp, 1995). Rather, children collaboratively construct notions of what is worth believing and valuing, all whilst acknowledging that multiple reasonable viewpoints are possible. Thus, the responsibility of P4wC participants is primarily to the inquiry and to the progression towards a reasonable answer as a community, rather than to any individual participant or perspective; what is best for the inquiry may not necessarily intellectually satisfy any or all individuals. The P4wC model provides the opportunity for children to safely explore and engage with a multitude of perspectives, and to engage with knowledge as an end in itself. Thus, in sum, P4wC is necessarily a self-corrective practice, which is thus what makes IH a necessary disposition, as without IH one cannot be open to, or capable of, self-correction. To this end, when practiced properly, P4wC implicates epistemic dispositions such as IH.

To ensure that the dialogues progresses towards the most reasonable answer, and to assist children in building on each other's ideas, a trained facilitator guides the children using procedural prompts (Lipman, 2003). The role of the facilitator is to be an impartial guide such that they do not provide content to the inquiry, but rather provide structure for the dialogue. Facilitators provide procedural prompts throughout the dialogue which can include offering

summaries of others' contributions, inviting the children to consider missing perspectives, challenging certainty, and helping to bridge the children's contributions (Kennedy, 2004). In these ways, P4wC aims to facilitate complex thinking and epistemic virtues through social intellectual interactions situated between the children, the facilitator, and the P4wC pedagogy itself (Quinn, 2018).

Empirical research regarding the benefits of P4wC has focused on the effects of P4wC on critical thinking or argumentation (Daniel & Gagnon, 2011; Karadağ & Demirtaş, 2018), as well as other outcomes such as self-esteem (Trickey & Topping, 2006), mental health (Malboeuf-Hurtubise et al., 2021, Malboeuf-Hurtubise et al., 2021) and effects on different school subjects (Gagnon & Sasseville, 2008; Lafortune et al., 2003). Conversely, despite long-standing theoretical claims about the impact of P4wC on epistemic dispositions such as IH, these links have been less often investigated. Existing quantitative research has relied heavily on pre/post assessments which have sought to determine specific incremental outcomes of experience with P4wC (Topping & Trickey 2007a; Topping & Trickey 2007b; Trickey & Topping, 2004). For instance, Topping and Trickey (2007a) found significant gains in verbal and non-verbal aspects of reasoning from pre to post assessment after a P4wC intervention. In a follow up study, Topping and Trickey (2007b) investigated whether the post-test gains in cognitive abilities found in the previous study were maintained two years after the P4wC intervention. Furthermore, Topping and Trickey (2014) examined how experience with P4wC changed the dynamics within a classroom. They found that children increased their usage of rational underpinnings for their ideas and responded more frequently to their peers.

Simultaneously, some qualitative inquiries into P4wC have attempted to provide detailed examinations of dialogical processes broadly related to epistemological development over time.

Daniel and Gagnon (2011) examined the development of dialogical critical thinking among groups of children in a P4wC setting, and the progression of epistemological perspectives within dialogues. They found that participants' reflexive thinking (as reflected in their ways of co-constructing representations and meaning) increased in epistemological sophistication as children aged and gained experience. In a cross-sectional analysis of P4wC that examined groups of students from preschool to grade 5, they found that children increasingly showed evidence of decentering their contributions: grade 5 students' contributions more frequently acknowledged their peers' perspectives and integrated them into their own perspectives. Further, grade 5 students most frequently demonstrated the ability to reason from perspectives of people who were not immediately present or known to the children. Daniel et al. (2005) examined children's participation in P4wC over one year, and found evidence that suggested experience with P4wC resulted in increases in open mindedness towards a multitude of perspectives and more frequent engagement in self-corrective thinking. Based on these studies, P4wC may support children's increasing ability to reason from perspectives more distant from their own, an openness to diverse beliefs and a willingness to self-correct their beliefs. Despite this, further longitudinal evidence over a longer time span would be instrumental in solidifying the role of P4wC in supporting epistemic virtues. Nevertheless, available evidence suggests that epistemological abilities which may be related to IH appear to develop over time, with exposure to the P4wC method.

### **How Does P4wC Promote IH?**

P4wC provides a unique context for children to deliberately practice skills that are related to both the epistemological and social dimensions of IH (Murriss, 2008). The P4wC model encourages children's engagement with central topics in their lives and exposes them to not only

different viewpoints but also a manner of engaging meaningfully and respectfully with different perspectives in a structured environment. In other words, the structure of P4wC is well suited to the promotion of epistemic virtues in general, and IH in particular. According to Daniel and Auriac (2011), in practice, the progression of thinking skills manifests through children's increasingly sophisticated ways of co-constructing meaning throughout P4wC dialogue, which they may achieve over time. The process of co-constructing answers to philosophical questions necessarily requires the exposure to, and the synthesizing of differing perspectives, which thus fosters an environment where children exercise epistemological flexibility (Fletcher, 2019), and epistemological flexibility is closely interrelated with perspective-taking (Sodian & Barchfeld, 2011). Experience with P4wC may broaden and deepen children's ability to reflect empathically on variations in what people deem worthy of value. Fletcher (2016) argues that one of the most significant benefits of the P4wC approach is that it may facilitate children's deliberate moral imagining. P4wC invites children to imagine various possible framings for scenarios, and thus identify missing perspectives which might bear significantly upon topics under discussion and thus are important to consider when seeking well-reasoned answers to life's questions. Furthermore, cognitive skills that underlie such perspective-taking are linked to cognitive flexibility (Sodian & Barchfeld, 2011). Zmigrod et al. (2019) found a significant positive correlation between cognitive flexibility and IH. Therefore, as children actively engage in and are supported through practices that require cognitive flexibility, IH may develop via experience and scaffolding.

In P4wC, children are initially guided by a trained facilitator who may provide procedural prompts to the children to ensure that the inquiry maintains focus and continues to progress towards possible answers (Lipman, 2003). There is evidence to suggest that children rely less

heavily on scaffolding from the facilitator as their experience with P4wC grows. Children demonstrate more complex reasoning, intersubjective references and metacognitive awareness after experience with P4wC which is initially scaffolded by the facilitator. However, as children become more experienced, scaffolding from adults becomes less evident (Daniel et al., 2005). Similarly, although dispositions related to IH might first be explicitly prompted by the facilitator (e.g., via prompts to consider missing perspectives), perhaps over time children may either learn the conventions of the P4wC method or genuinely develop sharpened skills to engage with their own and others' knowledge and ideas. However, Gagnon and Sasseville (2008) conducted semi-structured interviews with adolescents who had participated in P4wC-style dialogues regularly for four years to determine whether the dialogues had an impact on their performance on various school subjects (i.e history). The authors inadvertently discovered that participants reported that the philosophical practices learned via their participation in the dialogues enabled them to better navigate discussions and disagreements in their everyday life. Therefore, these results provide evidence to suggest that the skills and dispositions practiced during P4wC dialogues may impact contexts beyond the dialogues themselves.

In terms of empirical support, only very recently have empirical studies begun to specifically examine outcomes related to IH. A recent mixed-methods study is one of the first to directly attempt to examine IH outcomes in P4wC, and they found promising but inconclusive results (Anderson et al. 2021). Anderson et al. (2021) administered a self-report scale which measured different facets of IH to children who enrolled in a week-long P4wC based summer day camp, for 5 years. Children completed the self-report scale both before and after the camp. Additionally, they conducted semi-structured interviews with the children about their evolving understanding of concepts discussed in the dialogues. While their small sample size might have

complicated the quantitative analyses, their results overall from pre- to post-test were not statistically significant. Results from their between-subjects analysis showed a potential pattern among children who attended the camp across multiple years, such that their mean scores on measures of IH were higher than the mean scores of children who attended the camp only once. However, their within-subject analyses for the latest year of camp (2020) found that mean scores from pre-test to post-test slightly decreased which would signal a decrease in IH. These results run in contrast to their qualitative findings, as they found that children progressed in their demonstrations of IH in reference to the philosophical concepts discussed in the dialogues. For example, they found that among children who participated in camp each summer for five years progressed from statements of self-certainty to statements that suggested more nuance, and that they attributed this growth to the philosophy camp. Therefore, if IH is indeed developing over experience with P4wC dialogues, as suggested by the qualitative findings, then this study raises questions regarding whether the self-report IH scale used to evaluate IH in P4wC quantitatively is sensitive to the actual development of IH grounded specifically within the dialogues. These results further underline the need for an operationalization of IH as observed within children's actual dialogues.

Relatedly, studies that have examined dispositional indicators that may be relevant to IH have found that the structure of P4wC dialogues supported constructive communicative interaction among children (e.g., Cassidy et al., 2018). Specifically, after experience with P4wC within the classroom, children were more able to actively listen and engage with each other's contributions, and appeared to have created more connections between their peers' ideas. Therefore, P4wC may increase children's interest and confidence in engaging with their peers. As engagement with differing viewpoints allows children the opportunity to self-correct or

nuance their own point of view (Fletcher, 2016), experience with philosophical inquiry can arguably promote a recognition of the limitations of one's own knowledge, as well as a willingness to seriously engage with the viewpoints of others.

### **The Present Study**

The present study aims to contribute to empirical research on IH and in turn, P4wC. The few studies to date that have examined epistemological dispositions such as IH in childhood have done so in limited contexts which may not capture the full breadth of IH in interactional contexts where the benefits associated with IH may be particularly important (Danovitch et al., 2019; Hagá & Olson, 2017a; Hagá & Olson, 2017b). Therefore, the present study aims to inform future research into IH by expanding operational definitions via identifying discursive indicators of IH as grounded within children's actual dialogues with others about issues that matter to them.

An additional goal of the present study is to elucidate whether and how children's experience as members of a Community of Philosophical Inquiry may support intellectually humble dispositions, via a nuanced qualitative analysis of children's recorded contributions to P4wC dialogues over time. In addition to providing key empirical evidence in relation to theories regarding the value of P4wC for children's development of IH, the present study can thus inform pedagogical development and facilitator training by identifying relevant factors within the dialogues that might contribute to IH development. Taken together, examining contexts which facilitate IH in childhood can potentially contribute to our understanding of how to facilitate IH across development in the effort to combat epistemological rigidity in adults that is associated with biased thinking.

## Method

The present study is a qualitative examination of the longitudinal development of IH in the context of P4wC dialogues among children who participated in activities hosted and facilitated by a non-profit, educational charity. My aim was to identify discursive indicators of IH and examine how such indicators might change over time within the P4wC context, which appears to strongly implicate epistemic dispositions. We also explored specific dialogical circumstances whereby children might demonstrate, or fail to demonstrate, IH related indicators within the P4wC context. The present study was guided by the following questions:

1. How might IH manifest in the dialogical context of P4wC dialogues?
2. How might indicators of IH in P4wC dialogues appear over time and experience?
3. How are features of the P4wC method related to IH indicators?

I explored these research questions in the tradition of instrumental case study. Case studies are used to generate in-depth understanding or exploration of phenomena within their naturally occurring context and with little intervention from the researcher (Stake, 1995; Yin, 2014). According to Crowe et al., (2011), this method is best suited for instances where experimental designs cannot be undertaken. Instrumental case studies, in particular, focus on a particular case to gain a broad appreciation of a phenomenon and contribute to theory building (Crowe et al., 2011). A careful analysis of P4wC is well poised to provide detailed insights in IH development and instructional methods that facilitate them in childhood. An in-depth understanding of IH in P4wC dialogues can not only provide insights into how IH might appear among children in a dialogical pedagogical context, which can inform to conceptualizations and operationalizations of IH, but it can also speak to children's capacity for IH. The present study also sought to elucidate how specific features of the P4wC pedagogy may support IH (or not).

The method of the present study was adapted from Krist (2020), and explored manifestations of IH within P4wC dialogues through a situative analytic lens. From the situative analytic lens, learning is viewed as a product of the dialogical relationship between individual and environment (Kumpulainen et al., 2003). In the context of the present study, IH development is viewed as a product of the dialogical relationship between the child, and the P4wC pedagogy. The situative view focuses on practices in which participants have learned to participate, and is premised on the notion that learning to think is a situated social practice whereby participants eventually become an autonomous participant within the community (Lave & Wenger, 1991). Therefore, in the present study, indicators associated with IH were considered as an emergent outcome of the interaction between the child, the facilitator, and the P4wC pedagogy.

### **Researcher Description**

Both the concept of IH and the P4wC pedagogy were new to me prior to embarking on this project. At the time, I had an intuitive understanding and interest in behaviours that can be described as characteristic of IH, but I did not know that such behaviours had been named and that the empirical study of them was burgeoning. My interest in studying IH in the context of P4wC arose because I had never before encountered a context where I could see so clearly what it meant to be intellectually humble, in practice. Upon being first introduced to the P4wC pedagogy, I was genuinely struck by the ease with which the children appeared to engage with each other's sometimes conflicting ideas, negotiate their beliefs openly and constructively disagree with one another in the pursuit of understanding our world. The opportunity to study IH, and particularly in the context of P4wC, appeared to present me with a chance to pursue a deeper understanding of a disposition that deeply resonated with me. Studying IH in depth in a context where associated indicators and thought processes appeared to be on full display, felt as though it

could provide me with a sense of liberation and empowerment in the way in which I engage with knowledge in my everyday life. Serendipitously, my supervising professor, Dr. Holly Recchia, had access to an existing data set of pre-recorded dialogues, provided by an expert P4wC practitioner who is also a scholar and founder of an educational charity that provides P4wC programming to children.

I entered the Master's program with a Bachelor of Arts Honours in Psychology, in addition to having worked professionally as an administrator of after-school programs and summer camps for an international non-profit organization for approximately 6 years. My Honours thesis sought to evaluate programs for mental health outcomes in the non-profit organization in which I worked at the time. Bridging the gap between community organizations and scholarly research, in service of a given community, has always been a primary academic interest of mine.

In terms of the specific subject matter under investigation, at the outset, I approached this research primarily as an outsider, new to studies in the area of philosophy, new to the P4wC pedagogy, and new to the literature and conceptualizations of IH. However, as I progressed through my program I had the opportunity to become involved in P4wC style philosophical dialogues both in connection with the charity and otherwise. Because the P4wC pedagogy was new to me when I entered the program, these experiences were useful in gaining a more in-depth and practical understanding of P4wC and its overall structure and goals. This awareness was helpful throughout the analysis, as I made note of any specific observations or insights I gained through my participation in the dialogues, as a means of considering my reflexivity and my evolving understanding of the pedagogy. In terms of the broader context that the dialogues occurred in, I approached the present study with prior experience both as a front-line worker and

subsequent administrator of summer day camps, therefore I was an insider in terms of the summer day camp type environment and administrative work in non-profit organizations. Nevertheless, I approached the present study with deep curiosity towards learning and discovering more about IH and how P4wC works to potentially support this disposition.

Throughout this project, I worked in collaboration with the P4wC scholar and expert facilitator seeking input at various stages throughout the conceptualization and analysis of the present study to minimize researcher subjectivity and enhance trustworthiness. This individual holds a PhD in Philosophy and has published 22 academic articles and book chapters on P4wC, in addition to a forthcoming book. She has been a certified expert practitioner for over 15 years, and is the founding director of the P4wC educational charity from which the data that form the basis of the present study originate.

### **Data**

The charity regularly audio-records and transcribes dialogues that take place as part of their educational activities. The present study draws upon a sub-sample of a larger corpus of such dialogues. Specifically, this study is based on 19 transcripts of audio recordings, documenting children's participation within P4wC dialogues and collected over four years as part of their participation in the charity's summer day camps and youth board meetings. Of the 19 audio recorded dialogues, two occurred in 2015, eight occurred in 2016, four occurred in 2017 and five occurred in 2018. Each dialogue is centred around a specific theme, such as hope or friendship. Additionally, 12 dialogues overlap between two or more of the focal children, whereas the remaining seven are distinct (see Table 1). The children have been assigned pseudonyms to protect their identities.

### **Table 1**

*Dialogue Topic and Year by Participant*

Dialogue (Year)	Child					Total
	Bridget	Jodie	Julia	Mo	Morgan	
Fear (2015)	X			X	X	3
Imagination (2015)	X	X	X		X	4
Experience (2016)			X			1
Incentives (2016)		X	X	X	X	4
Free Will (2016)	X				X	2
Rights (2016)	X		X	X		3
Friendship (2016)	X					1
Freedom of Expression (2016)	X			X		2
Personality (2016)			X			1
Play (2016)			X		X	2
Time (2016)		X	X	X	X	4
Words (2017)	X			X		2
Humour (2017)		X	X	X		3
Voice (2017)	X	X	X		X	4
Hope (2018)	X		X			2
Discomfort (2018)	X					1
Happiness (2018)					X	1
Success (2018)					X	1
Intelligence (2018)		X				1
Total	10	6	10	7	9	

The data were collected by personnel associated with the charity. The founder of the charity was the facilitator for each dialogue in the sample, and personally set up audio recording equipment prior to each dialogue. The facilitator, then, recorded the dialogues on an audio recorder, and they were subsequently transcribed verbatim for analysis by staff associated with the charity, after which I received the transcripts for analysis. Therefore, I was not involved in the data collection or transcription process. Participant identification and the study's analyses were largely limited to the contents of the transcripts alone, as I received audio recordings of the dialogues once analysis had been completed. While the analysis was largely based on the transcripts, I checked for accuracy of our identified codes against the audio recordings once received. Upon receiving the transcripts, I immersed myself by reading each one thoroughly and completing attribute coding which involved creating a spreadsheet of the basic characteristics and demographics of each dialogue. This included, for instance, how many children were in each dialogue, the topic and the year, in addition to noting any preliminary thoughts or comments.

### **Participants**

This study received approval from the Concordia University Human Research Ethics Committee (certificate # 30009835). The present analysis focused on five children who participated in dialogues associated with a P4wC based registered Canadian charity based in Montreal, Canada over the course of four years. The participants were enrolled in programs associated with the charity by their parents. Informed consent was sought from parents when children were registered for programs, and children also provided verbal assent to participate in the research aspect of the programming. The participants were selected because they participated

in the highest number of dialogues in the set of transcripts available, across the longest time span (2015-2018).

The present study includes five focal children, four girls and one boy. The children started the program between the ages of 7 and 9 years. The group of children attended P4wC dialogues during the school year both as part of youth board dialogues and during the summer as part of day camp dialogues. In order to increase accessibility for children from a wide variety of backgrounds, the camp offered bursaries for new immigrant, refugee and disadvantaged families, and also supported the integration of individuals with exceptionalities. One of the participants in the present study received bursaries to attend camps and related activities, and one was diagnosed with autism spectrum disorder a few years into their involvement with the charity. In addition to attending summer day camps each year from 2015-2018, all five of the participants were also part of the charity's youth board. In an effort to protect the identities of the focal children, I have elected not to provide specific demographics or background information about individual participants.

Regarding the researcher-participant relationship, I have not had direct contact with the focal children in the present study and therefore I have no relationship with them beyond my interactions with the transcripts. I have, however, been working in collaboration with the facilitator of the dialogues who has been in contact with these children over the entirety of the years 2015-2018.

### **Context**

As previously mentioned, the present study is based on data sourced from an educational charity that aims to promote critical literacy, social responsibility and self-efficacy through engaging children and youth in P4wC dialogues and creative projects (Fletcher, 2020). The

organization was founded in 2007, became a registered charity in 2011, and delivers programming based on an approach to the P4wC model called Philocreation. The trademarked Philocreation approach was developed by the charity and seeks to cultivate youth agency through the fusion of philosophical inquiry and creative experimentation, notably, deliberate imagining techniques (Fletcher, 2020). The Philocreation approach integrates creative experimentation at each stage of the dialogic process and emphasizes both playfulness and rigour (Fletcher, 2020). The charity runs youth day camps during the summer months, and provides P4wC-based workshops in partnership with schools and community organizations throughout the school year. The majority of dialogues in the sample occurred as a part of summer day camps ( $n = 12$ ) and the remaining dialogues occurred as part of youth board meetings ( $n = 7$ ).

In addition to each dialogue having a specific theme, the summer camp is structured such that each week also has an overarching theme (e.g., identity, power, social justice, innovation) that relates to the themes of individual dialogues (e.g., happiness, authority, imagination, free will). Centering around the weekly theme, children participate in philosophical inquiry dialogues as well as other games, physical activities, and creative projects. Each dialogue is approximately one hour long, featuring between 6-12 children, in addition to one adult senior facilitator and teen junior facilitators. While the broad aim of each inquiry dialogue is to co-construct answers to philosophical questions, the dialogues might be formatted in a variety of different ways according to the various dialogue types that make up the Philocreation approach. For example, some might begin with a story circle, which involves children each sharing a past experience with a particular theme; alternatively, the children might explore a thought experiment, being placed in teams, where they must come up with a collective stance to discuss with the group. In-depth discussion and description of the various dialogue formats are presented in conjunction

with the findings of the present study. Dialogues are often followed by opportunities for children to engage in self-reflections and creative projects based on the progress they made towards answering the central philosophical question (e.g., illustrations to contribute to a shared zine on the topic). Throughout the dialogues, children are supported by a facilitator who engages in procedural prompts to support the children in progressing towards the most reasonable answer. Each dialogue that formed the focus of the current analysis was facilitated by the same individual, who is both the founder of the charity and the collaborator on this project.

In addition to the summer camp, the participants also sat on the charity's youth board. The youth board was developed by the charity's founder as a means to have regular contact with the youth throughout the school year and to ensure the charity's programming was truly youth-driven, notably through the choice of themes for workshops and camps. The youth board met approximately three to eight times during the school year for approximately four to eight hours over a given weekend.

### **Analysis**

My analyses were loosely guided by constructs from pre-existing literature in addition to observations from the P4wC scholar/facilitator, and my analytic strategy was inductive in nature. The analysis occurred over three distinct phases, a preparation phase, a categorical aggregation phase and finally, a pattern identification phase. At the outset of the analysis, a second coder was brought onto the project and coded the first two phases of data analysis alongside me. The first phase consisted of thoroughly reading each dialogue twice and then preparing the data for categorical aggregation coding by identifying excerpts within the dialogues that appeared to reflect IH or a lack of IH. The purpose of the first stage was to select the relevant excerpts to be analyzed in the subsequent coding phases. We selected excerpts based on conceptualizations of

IH from previous discussions with the P4wC scholar/facilitator, in addition to operationalizations by Hagá and Olson (2017a) and Danovitch et al. (2019). While the conceptualizations that we used to guide our analysis have considerable overlap, they each illuminated a dimension of the concept which appeared to be relevant to the goals of the present study. For instance, Hagá and Olson (2017a) provided an operationalization of a lack of IH. They provided insights into what either intellectual diffidence or intellectual arrogance might look like, which enabled us to consider potential related indicators. Danovitch et al. (2019) primarily contributed a distinction between a social and epistemological dimension of IH. Finally, conversations with the P4wC scholar/facilitator provided insights into what they viewed IH to mean within the context of the dialogues. Therefore, we approached phase one with these conceptualizations guiding our selection process. Because the dialogues also included contributions from other children as well as contributions that were not directly relevant to the goals of the present study, relevant excerpts were compiled and thus formed the basis of further analysis. In order to achieve triangulation among researchers, the research assistant and I independently identified relevant excerpts from two to three dialogues per week over a two-month period in the fall of 2020 using the software Dedoose. At the end of each week, we met to discuss and consolidate the excerpts we had identified for the relevant dialogues, as well as discuss any relevant notes, disagreements or ideas that arose throughout the process. As much as possible, each week we worked on dialogues that were recorded in different years. Upon completion of this stage, the relevant excerpts in all the dialogues were compiled in a master document which included the researchers' analytic memos, providing relevant contextual information for each excerpt to help inform the subsequent stage of coding. After the first round, we identified approximately 125 excerpts within the transcripts as potentially displaying an indicator associated with IH or a lack of IH. At this point in the

analysis, the results of stage one were summarized based on the broad indicators that were identified, including preliminary ideas for phase two coding (categorical aggregation). This summary was presented to the P4wC charity founder/facilitator for input in January of 2021.

After discussion with the P4wC facilitator, who provided insights into potential categorizations of the excerpts, we began preparing for the second phase analysis. In the second phase, guided primarily by feedback from the P4wC scholar/facilitator, we performed categorical aggregation coding to identify codes for the excerpts that we identified in the first phase. Simultaneously, while assigning codes to each excerpt, we began solidifying broad categories and subcategories of indicators IH. The research assistant and I met once per week to discuss the codes we assigned to a given subsection of the excerpts until each was labelled over a month and a half period between February and March of 2021. We reached a consensus on appropriate codes for each excerpt and associated categories prior to moving onto phase three. After phase two was complete, 12 excerpts were removed from our list as we determined that they did not reflect an IH related indicator, and our categories of indicators were finalized with a final total of 113 excerpts. In sum, the second stage focused on generating codes for specific indicators that were identified in the first stage, in order to track and determine IH codes in stage three and to determine the overall categories.

In the third stage, I employed longitudinal pattern identification coding to explore developmental trends and evidence of integration. This phase occurred over a one month period between March and April 2021. I examined the previously coded indicators of IH and lack of IH for broad patterns, such as the frequency of codes, increases or decreases in codes and emergence or disappearance of codes. Similarly, I examined potential evidence of integration of the IH disposition by identifying patterns in the extent of facilitator involvement and how this

may have changed over time. Finally, I examined the codes for differences across format, by examining whether certain codes appeared more or less frequently based on the format of the dialogue, for example whether IH might be displayed differently based on different pedagogical exercises embedded in the dialogues. Notably, at the end of March 2021, I received the audio files for the dialogues in our sample, at this point I checked the audio associated with our coded excerpts in order to determine whether our interpretations were supported by the audio or not, I found the audio to corroborate our coding.

I attempted to bolster methodological integrity by establishing trustworthiness in two primary ways, through triangulation of researchers via consensus coding and by returning the findings to the facilitator at two crucial points during the analysis for input and feedback. As previously stated, I worked with a research assistant at each phase in the analysis. In addition to meeting with a second coder after each stage of the analysis to discuss and reach agreement on the excerpts and codes identified in the previous stage, I also had regular meetings with my supervising professor to discuss codes, provide updates on the analyses and to discuss any questions that arose during the coding process. Her feedback was also integrated into the analysis at each stage.

Additionally, we shared the preliminary findings with the facilitator of the dialogues at crucial moments throughout the analysis. The facilitator provided input at two different points: between stages one and two, and while drafting the results section of this thesis. At the first input point, the facilitator provided feedback for the second stage of coding. At the second point of input, the facilitator reviewed a draft of the final results and interpretations, and her comments were taken into account in the reporting of findings. Importantly, the facilitator of the dialogues is also a P4wC scholar, and therefore she is also considered an expert in the field, so her insight

into the findings reflect both her experience as the facilitator of the dialogues and her knowledge of extant scholarship on P4wC.

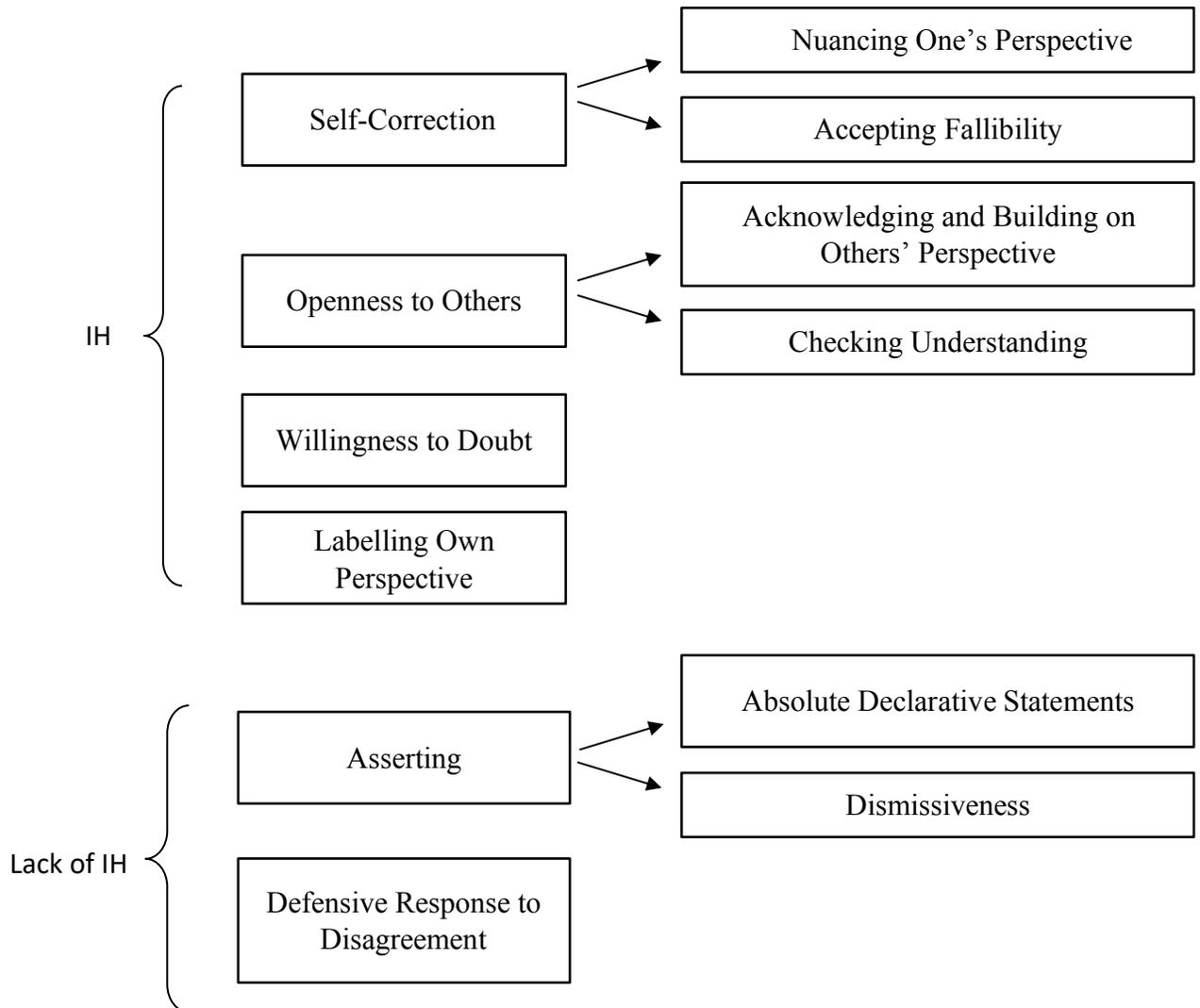
## **Findings**

### **IH**

We identified four broad categories of dialogical indicators that were deemed to be relevant to IH from the dialogues. As shown in Figure 1, the four categories were: self-correction, openness to others, willingness to doubt, and labelling one's own perspective.

**Figure 1**

*Categories of Discursive Indicators of IH and Lack of IH in P4wC Dialogues*



### ***Self-Correction***

Self-correction encompasses instances where the children appear to update their knowledge or beliefs, or demonstrate an understanding of the limitations of their knowledge, which are indicators particularly associated with the epistemological dimension of IH (Lipman,

2003). Within the umbrella of self-correction, children's IH related indicators were further classified into either nuancing one's perspective or accepting fallibility.

**Nuancing One's Perspective.** The sub-category of nuancing one's perspective encompasses instances where a child demonstrates that they have changed their mind, or nuanced their initial position. Excerpts that were classified under this subcategory occurred either explicitly, implicitly or as facilitated.

*Explicit.* Instances of explicit nuancing of one's perspective were coded when children verbally expressed elements of their thought process that suggested the child had nuanced or altered their perspective or stance on the topic. Consider the following contribution by Mo:

Mo: Umm [exhales], I agree because actually now that I think about it, fear and hope aren't really connected. (Fear, 2015)

The topic of this dialogue was fear and the question that the children were working towards was whether hope and fear were connected. After two children weighed in on the question, the facilitator asked Mo for his opinion and he responded with the above comment. Although Mo did not explicitly articulate his perspective prior to this excerpt, the language that he uses implied that he had reevaluated his perspective and made the decision to update his current stance. This particular example displays the main feature of this category, as Mo's metacognitive reflection about his thinking clearly indicates that upon further consideration, his perspective has shifted.

Other examples of explicit nuancing of perspective were evident as a result of the structure of some of the dialogues. Many of the dialogues used in the study were from Philocreation dialogue types that are structured such that children are asked to indicate their position on a continuum from yes to no (the "Perspectrum" dialogue type), or across two or more

categories such as appropriate or inappropriate, for a specific question (the “Categorilo” dialogue type). These dialogic structures reflect pedagogical tools (e.g., the “Perspectrum”) that seem to be linked to the development of IH as they encourage children to consider their stance on a given topic, and how this stance might change as the dialogue progresses, while seeing the visual representation of different possible perspectives. Often, the children each had an object like a name tag or image card to mark their position on the continuum, which served to visually represent their perspective, and allowed them to move their object throughout the dialogue in accordance with their current stance. These dialogue types afforded a nonverbal means to track consistencies and changes in perspectives, thus relying less on the children verbalizing metacognitive thought processes. Nonetheless, oftentimes the children did provide metacognitive reflections in addition to referring to their position on the continuum. The following example from a dialogue about freedom of expression illustrates this:

Bridget: Originally it would probably be in the middle because if you get everybody to get pumped up because there’s an issue that they didn’t all agree on, then I think, if it didn’t hurt anybody in a bad way, then it should be fine. But if it was hurting people, like a war, then it should be prohibited.

Facilitator: So as long as it’s not hurting anybody then it’s ok? (Freedom of Expression, 2016)

Prior to this example, Bridget is asked to explain the reasoning behind the placement of her object. When Bridget describes “the middle,” she is referring to a particular place on a continuum between yes and no about whether lying should be prohibited. She appears to be narrating her thought process in how she came to nuance her perspective in reference to the placement of her object on the continuum. She says originally she would have placed the object

towards the middle of the spectrum but upon further thought she decided it should be towards the “no” end of the spectrum. In this case, Bridget explicitly discusses the progression of her thought process, however she does so in reference to the continuum upon which the object visualizing her stance was placed.

The distinction between the two forms of explicit contributions, explicit and structure-prompted explicit, is significant. The former represents what might be considered as an internalized form of nuancing one’s perspective implicated in IH where the child appears to be cognizant of their thought processes and deliberately nuances their stance. By contrast the latter form demonstrates how one of the tools embedded within the P4wC structure may prompt children to practise different ways of engaging with their own beliefs, ultimately with the intention that this process becomes internalized and autonomous over time. Importantly, the majority of the excerpts that were coded as explicit were structure-prompted.

***Implicit.*** Explicitly nuancing one’s perspective was associated with verbal cues, often metacognitive in nature, that confirmed a shift in perspective had occurred. However, the coding also revealed more implicit instances where it appeared as though the child had nuanced their perspective but they did not verbalize that they had done so.

Excerpts were identified by following the thread of the child’s contributions and noticing moments when a child had clearly shifted the orientation of their perspective despite not having verbally identified that they had done so. However, whether the child was or was not conscious of the shift in their perspective is indiscernible within the excerpts coded as implicit. In this sense, implicit nuances in perspective may be interpreted as earlier forms of the more metacognitive and deliberate interaction with knowledge that was evident in the explicit excerpts. According to the facilitator, although the shift from implicit to explicit is not evident

within the dialogues themselves, it is sometimes highlighted by the creative projects that follow the dialogues, and thus may become visible in the broader PhiloCreation approach which combines philosophical inquiry with creative projects. Kuhn (2000) argues that the nature of the developmental course of metacognition is ultimately one towards explicitness, such that metacognitive thinking increasingly becomes under conscious and deliberate control over time and experience. Given that indicators of IH are often accompanied by metacognitive statements, children may engage implicitly with IH prior to demonstrating more advanced or metacognitive indicators of IH. Therefore, the distinction between implicit and explicit is significant in terms of development. Advanced forms may emerge with practice as a result of structural elements in the dialogue (as noted above) in addition to those supported by the facilitator, as I will explore in the subsequent paragraphs.

In addition to the explicit and implicit forms of nuancing one's perspective, there were moments within the dialogues whereby the facilitator explicitly marked instances in which children appeared to have nuanced their perspectives. Importantly, in these instances, the facilitator brought attention to what the child had already done, and in most cases, the child confirmed that their perspective had indeed been nuanced. In other words, the facilitator mediated the child's metacognitive awareness regarding their shift in perspective. Consider the following example:

Facilitator: You wish to know what situations count as an experience.

Julia: ...But, it depends... one of the groups said that doing nothing is officially like you're never doing nothing, you're just sitting somewhere staring at something. It's an experience.

Facilitator: So, you changed your mind?

Julia: Yes, because it is so hard to count life being an experience. But, I don't agree it has to be a new experience. (Experience, 2016)

As seen in this example, the facilitator appears to have recognized that Julia had nuanced her perspective even though Julia did not verbalize that she had done so. Initially, Julia said that she believed sitting around was not an experience, however in the above excerpt that occurred later in the dialogue, she appears to share a somewhat different perspective. In the interim, several other children had provided their perspectives on whether such actions were considered experiences. Thus, it appears as though exposure to different positions on the issue may have prompted a shift in Julia's position as well. Further, this excerpt illustrates the integral role that the facilitator sometimes plays in developing metacognitive awareness of skills related to IH in the dialogues. The theoretical framework of P4wC is influenced by Vygotskian social constructivist learning theories (Vygotsky, 1978). That is, the role of the facilitator is said to be akin to a guide who scaffolds, and encourages awareness of the thinking skills associated with P4wC's pedagogical aims, in this case drawing the child's attention to the fact that they had nuanced their perspective (Fletcher, 2018). Furthermore, according to the facilitator, by making explicit what an individual child has done, P4wC facilitation is beneficial not only to the individual child, but also to the group as it may become a more global learning moment. As it relates to the scaffolding of epistemic virtues such as IH, children can come to recognize and name various types of behaviours and processes, as guided by a trained facilitator whose interventions are aimed at helping the children become self-aware and intentional in their engagement with diverse perspectives.

With regards to change over time, instances of nuancing one's perspective first appeared in the dialogues in 2015 and were observed each year between 2015-2018. Some explicit

examples were identified as early as 2015, with the majority of excerpts either being prompted by the facilitator or expressed as a function of the dialogic structure. According to the facilitator, however, some children have trouble nuancing their perspectives even with the structure, therefore the structure alone may not suffice in facilitating children's meta-cognitive awareness.

**Accepting Fallibility.** The subcategory of accepting fallibility included instances where a child appeared to acknowledge the limitations of their knowledge by openly expressing gaps in their understanding. Notably, children demonstrated an acceptance of their fallibility with respect to different aspects of themselves and their knowledge. The following three examples will each display this category with respect to different types of knowledge. The first example demonstrates an expression of uncertainty with respect to an idea that was shared by another person in the dialogue.

Facilitator: Well it's kind of like the french word "recompense" except that you have to do something to get it. Say you're an Olympic athlete and you really want to get a gold medal, your incentive could be wanting to get a gold medal but the gold medal is the reward but you really want everybody to know that you're the best then your incentive would be to work really hard.

Jodie: I don't follow you. (Incentives, 2016)

When Jodie states "I don't follow you" it appears that this is in response to the facilitator's explanation of the meaning of the word incentive. In expressing that she does not follow, Jodie appears to be comfortable with prioritizing her own learning over the perception of appearing knowledgeable to others. The second example, in turn, reflects a willingness to accept fallibility with regards to oneself and self-improvement in the context of participation in the dialogical activities:

Jodie: I feel like something that we should all work on including myself because sometimes I forgot to always look at your puppet. I sometimes forgot to do it because you think that if we're going to do different personalities kids need to understand which one is which. Keep it not dying on the floor. It's true some people leave the puppets on the floor like that. (Humour, 2017)

At the end of each dialogue, the facilitator takes a moment to ask the children to self-reflect on how they think they, and the group, did in answering the questions of the dialogue, referred to as a “meta-moment” within the Philocreation approach. While this reflection is typically done after each dialogue, it was not always transcribed for analysis. Within the dialogues that did include a transcription of the self-reflection, this practice appeared to support metacognitive reflection regarding themselves as co-inquirers in the group and further the overall goal in P4wC to foster intentional engagement, which is ultimately the intent of the practice. Thus, the above example is Jodie's response to being prompted to evaluate her performance in the dialogue.

A third context for accepting fallibility was in reference to factual knowledge vis-a-vis the philosophical moves in the exercise. For example,

Julia: I got a card but I didn't know what it meant. What does analogy mean? (Humour, 2017)

In this case, Julia refers to not knowing what an analogy is, which was followed by the facilitator providing a definition of the word. It is important to note in this example that Julia is not referring to the content of the focal topic in the dialogue, rather she is responding to the pedagogical exercise titled “MetaMission-Cards”, a meta-cognitive aid within the philocreation approach. As previously outlined, in the aim of conducting a philosophical dialogue, relevant

thinking tools are actively supported through pedagogical exercises and facilitator scaffolding. In this case, the facilitator distributed cards which each depicted a specific thinking tool that serves as the bases of forming philosophical positions, for example, making analogies, identifying distinctions, or giving counter-examples. Apart from making progress on thinking about the themes of the dialogues themselves, an important goal of P4wC is learning to use philosophical thinking tools with intention. Thus, this exercise facilitates children's understanding of the thinking tools that align with the aims of philosophical inquiry, such that children can ultimately employ the thinking tools deliberately.

IH has been operationalized in a previous study as a child's willingness and ability to appeal to an expert on topics involving factual knowledge (Danovitch et al., 2019). The acceptance of one's fallibility in the context of deferring to an expert may be more predictable given the more objective and factual nature of the knowledge under question, in combination with the presence of a philosophical "expert." Accepting fallibility in this particular context might be more predictable while also not necessarily as challenging as doing so in other two contexts discussed above. Therefore, a distinction between accepting fallibility in this context versus others is particularly important, and underlines the limitations of examining IH exclusively in this type of context. Contexts where topics are open to interpretative diversity, are personally meaningful or morally-laden, accepting one's fallibility has been found to be more difficult (Wainryb, 2004).

Based on the above three examples, it appears that these children are accepting fallibility in reference to different aspects of their knowledge or even their behaviours within the context of the dialogue with varied difficulty and significance. Each example seems to serve a purpose that

further the acknowledgement of gaps in knowledge and the pursuit of knowledge and understanding.

Codes identified as accepting fallibility began appearing in the dialogues in 2016, with the majority of excerpts appearing in 2017. A single excerpt was coded in 2016: this excerpt was related to expressing a misunderstanding with regards to an idea presented by another participant in the dialogue. The excerpts coded in 2017 reflected accepting fallibility in regards to factual knowledge and their own behaviours. The single excerpt coded in 2018 reflected an acceptance of fallibility in a more philosophical sense, that is with regards to the meaning of concepts.

### ***Openness to Others***

The second overarching category of indicators associated with IH that we identified from the data is openness to others. Openness to others is primarily associated with the social dimension of IH, although this category also appears to be closely linked to the epistemic dimension. The excerpts coded within this category encompass a child's interactions with other children and how these interactions influence or bear on their own knowledge. The category of openness to others has two primary sub-categories: acknowledging and building on others' perspectives, and checking understanding.

**Acknowledging and Building on Others' Perspectives.** This sub-category encompassed instances where children verbally indicated that another child's contribution triggered an expansion in their thinking. In this sense, to have been coded in this category, some level of metacognitive self-reflection was required in order to identify the impact of another child's contribution on one's own thinking. Nevertheless, there was some variability in the degree to which children explicitly articulated their self-reflection. Take the following two examples, which both clearly illustrate metacognitive self-reflection:

Jodie: BB used words that made me think. BB used the words “cheer up a child”. But you don’t have to cheer up a child with humour. Maybe you cheer him up by buying him a toy or a snack or a movie to watch. You don’t necessarily need to use humour to make him not think about his injury or the medication that they have to take. (Humour, 2017)

Jodie: I just thought of something building on what she said. I think we’re all intelligent but for example if you’re better at math then you’re going to be able to catch on more quickly and maybe for you working with numbers is going to be easy. If you’re intelligent and art is easier for you you’re going to be able to be at work with paint easier. I think your intelligence makes you better at some things. (Intelligence, 2018)

In these examples, Jodie is clearly stating that another child’s contribution made her potentially re-think her original perspective. Both examples imply metacognitive reflection regarding how another perspective had impacted her thinking about the concepts being discussed. Notably, then, Jodie is narrating thought processes which might be integral to both the social and epistemological dimensions of IH. In both examples, she seems to engage in authentic consideration of others’ ideas and is willing to genuinely co-inquire about the topic at hand with her peers. Researchers and theorists have discussed the vital role of metacognition with regards to individual epistemology within P4wC dialogues (Daniel, 2007; Fletcher, 2018). According to Daniel (2007), metacognitive contributions in dialogue are representative of a participant’s ability to interact with new information in an intersubjective manner and is thus emblematic of a decrease in epistemological egocentrism. In other words, these contributions might signal increasingly sophisticated engagement with, and integration of, diverse perspectives.

Not all excerpts coded as acknowledging and building on another’s perspective, however, were as explicit. Another type of excerpt coded in this category was characterized by a child

acknowledging another's contribution and subsequently adding onto it without a direct reference to their thought process. In the absence of a specific meta-cognitive indicator, the excerpts coded in this category must have included a reference to another child's idea in conjunction with language that reflected an expansion of the idea. For example,

Julia: In terms of not wanting to learn, E brought up a very good point of not wanting to go to school. Also, if you don't want to learn then you're just listening to your teacher talk and it's harder to actually do so. I think that not wanting to learn is just like hitting your head on the desk. (Rights, 2016)

In this particular example Julia appears to acknowledge a point made by another child, E, and then proceeds to add her own thoughts or interpretation to E's point, as evidenced by her use of the word "also." The extension of another perspective is significant inasmuch as it echoes a type of discursive move that has been identified as supportive of learning in the moral-developmental literature; namely, operational transactive discourse. Operational transactive discourse is characterized by instances where a child transforms or extends another child's reasoning; engagement in this form of discourse has been positively associated with socio-moral cognitive development (Nucci et al., 2015). Within the context of IH, this form of transactive discourse might signify a meaningful engagement with the perspectives of others. Thus, it is important to note that engagement in less deliberate forms of acknowledging others' perspectives, whereby a child might simply agree or disagree with an idea in the absence of adding new considerations did not qualify for inclusion in this subcategory.

Excerpts coded under this sub-category began to appear in my sample of dialogues in 2015. A single excerpt was coded in 2015, and the transactive codes that appeared in 2015 and 2016 did not include metacognitive expressions. Codes with metacognitive elements of

acknowledging and building on others' perspectives began appearing later on in my sample, in 2017 and 2018. The early dialogues in the sample, from 2015, appeared to be conducted such that each child individually in turn provided their own perspective on the question of interest, heavily mediated by the facilitator with less direct interaction between the children. Conversely, the later dialogues included more direct interaction between the children and thus less mediation by the facilitator. According to the facilitator, this is a fairly normal occurrence within beginner groups; in later groups at least a few children had experience with P4wC which helped scaffold the other children. Both empirical and theoretical accounts suggest that experience with P4wC supports children's interest and confidence in engaging with their peers which is emblematic of decreases in the facilitator's involvement over time and experience (Cassidy et al., 2018; Murriss, 2000; Daniel et al., 2005). Therefore, it appears as though the emergence of more deliberate transactive and metacognitive expressions of IH occurred with experience in the P4wC dialogues, and perhaps as a result of the children becoming more engaged in the P4wC process with less direct involvement from the facilitator.

**Checking Understanding.** The checking understanding subcategory is characterized by instances where the child attempts to check whether they have understood an idea by requesting feedback from the group, typically by asking some form of question. Checking understanding demonstrates the child's commitment to promoting their understanding, in combination with comfort asking others for help as it pertains to their own knowledge. The excerpts that were coded in this sub-category typically occurred as a metacognitive statement coupled with an open question. For example,

Jodie: I just want to make sure I understand. When you say everybody's brain works differently do you mean that everybody has their own type of intelligence or that that's separate? (Intelligence, 2018)

As seen in this example, Jodie starts off by stating her desire to understand the ideas presented in the dialogue; this suggests that she is monitoring her understanding. She then asks the group for clarification to ensure that she is following the ideas as they have been presented. This indicator implies a humble orientation towards her own knowledge, in addition to a regard for others' perspectives.

What follows is a second example, in a similar vein:

Bridget: So, would it be fair to say that when you feel physically uncomfortable, you're gonna do something to try to fix it, like naturally your body is gonna try to do something to make it comfortable? Interesting... Okay, thank you. (Discomfort, 2018)

In this example, Bridget is engaging in a behaviour similar to Jodie in that she is attempting to check her understanding with the group. It is possible that this sub-category might reflect a more advanced or challenging form of IH as it incorporates elements of epistemological and social dimensions of IH in addition to explicit metacognitive reflection. Epistemologically, seeking clarification from the group suggests a willingness to prioritize one's understanding over an appearance of being knowledgeable; meanwhile, it may also signal a commitment to accurately following the direction of the dialogue. Socially, this behaviour appears to demonstrate that the child values others' input and is rendering herself accountable to the group. To further support the notion that this might reflect a more advanced expression of IH, this particular sub-code appears in my sample of dialogues only in 2018, after three years of participation in P4wC dialogues. Alternatively however, the facilitator may have begun

facilitating in ways that directly encouraged asking for help and clarification, which according to her, she began doing deliberately in 2017. Nevertheless, each coded instance within this category contained an expression of metacognitive reflection, which still might further signal a more complex IH related behaviour.

### ***Willingness to Doubt***

The category of willingness to doubt is characterized by moments within the dialogues where children appear to comfortably express uncertainty with respect to their perspective. While this subcategory bears similarity to accepting fallibility in that similar language such as “I don’t know” may be used, these two categories are distinguished by the context in which these phrases are used. Willingness to doubt is characterized by a child’s expression of the provisional nature of their own belief, thus appearing to be comfortable with some intellectual ambiguity. Consider the following example,

Mo: Other language, they don’t know words, some (people with other languages) only think in pictures. A sign is a word. So I don’t know. But also, I agree. Is it possible or not? Well it is possible, because they don’t have signs or words, but they still can think. (Words, 2017)

In this example, Mo is expressing his idea, but it also appears that he may still be working through his perspective regarding whether all people think with words. He expresses part of his idea and interjects it with “so I don’t know” suggesting that this particular belief may still be under construction and thus some comfort with uncertainty is implied. An additional example is,

Bridget: It's only for certain, like if you're being sarcastic, if you're having a bad day, you can say, "I'm having a greeeeat day." So you're probably not. But how do you, how would that work? I'm not sure. (Freedom of Expression, 2016)

Similarly to Mo, Bridget expresses part of an idea and then subsequently acknowledges that there are still elements of her perspective which are not yet developed. Drawing on the broader scholarly literature on IH, Pritchard (2020) regards the ability to balance doubt and conviction as an ideal expression of IH as it facilitates an individual's ability to reason through different perspectives without being overconfident in one's beliefs or simply defaulting to another belief without critical reflection. He notes that conviction in one's beliefs does not necessarily suggest a lack of IH, as conviction might be an appropriate response in some cases; rather, he argues that conviction coupled with a comfort with uncertainty might be an optimal combination in the pursuit of knowledge or truth. Excerpts coded as willingness to doubt began appearing in the dialogues in 2015 and were identified each year until 2018.

### ***Labelling Own Perspective***

The category for labelling own perspective represents instances where children tag their perspective as their own. Contributions labelled with one's own perspective appear to demonstrate an acknowledgement that one's perspective is their own, as opposed to presenting their belief as a statement of fact. Labelling one's own perspective can potentially signify that the speaker is cognizant of other interpretations or perspectives and is thus grounding their contribution within their own knowledge and experience. Additionally, this type of language can also be interpreted within the psychological framework of mental state language, which has been found to be associated with general socio-cognitive development and interpretative understanding (de Rosnay & Hughes, 2006). The highest number of coded excerpts (77) fell

within this category, compared to the rest of the IH categories combined (36). Labelling own perspective primarily manifests as children using phrases such as “I think” immediately prior to sharing their perspective on an issue, as in the following example:

Julia: I think that a voice belongs to that person and is that person and it’s not really, maybe it’s not, like for Donald Trump for example, his voice, you don’t need to hear but you don’t need to agree with it. (Voice, 2017)

Another manifestation of labelling one’s own perspective appeared when children used phrases adjacent to “I think” such as “in my opinion.”

Mo: In my opinion lifting weights isn’t a sport even though they have it in the Olympics but I wouldn’t say it’s a need because sometimes it’s kind of useless. Shooting is considered a sport and it’s useless. (Hope, 2018)

To illustrate the qualitative difference between contributions that are labelled with one’s own perspective and those that are not, consider the following exchange between Julia, the facilitator, and Mo.

Julia: I just want to say that lots of us don’t even want to go to school. In Africa a lot of people are very poor so many people can’t send their children to school. Here we don’t understand that and we don’t want to go to school. I would say it’s a need and a right because you need to go to school to survive and I think it’s also a right because you’re going to live poorly and have splinters all over your feet if you don’t go to school.

Facilitator: So you’re right in the middle.

Mo: So there’s something called homeschooling and there’s online learning. I would put it in the middle.

Facilitator: Because there are alternatives? What would happen if you don't go to your online school?

Mo: Well it's online so you don't have to go anywhere and you're just wasting money.

Facilitator: Should you be allowed to not do any of it? Is that a right or a need?

Mo: No, because you still need to learn. (Hope, 2018)

Julia presents her idea using phrases such as "I think" and "I would say" whereas Mo does not. The manner in which one presents their ideas, particularly in a way that reflects an acknowledgement of individual interpretation, has been proposed as central to regulating arrogance and thus promoting humility (McElroy et al. 2014; Hook et al., 2015). The above example demonstrates how labelling one's own perspective has the potential to change the tone of a contribution, and thus contribute to a tone of a dialogue. Julia appears more humble in her contributions whereas Mo, who does not label his perspective, appears more absolute when sharing his perspective.

Despite these examples, however, recall that this category includes the highest number of codes. It is likely that not every usage of "I think" would be a definitive representative of a humble disposition, however, teasing apart the different intentions behind "I think" were sometimes beyond the means of the current study. This is especially the case inasmuch as data analysis relied on primarily transcripts, rather than video-recordings that might provide richer contextual detail. Nevertheless, the data might suggest various dimensions that influence this behaviour.

The latter two examples occurred within the same dialogue from 2018, with Mo using phrases like "In my opinion" earlier on in the dialogue, suggesting that his tone has changed. As the dialogue progresses, the specific questions and topics of discussion evolve simultaneously. In

Mo's first example, he is discussing which athletic activities can be considered sports, whereas in the second example he is making a distinction between different types of schooling. It is possible that the topic of schooling has greater personal significance for Mo, which may influence the manner in which he speaks about it. Additionally, it appears that phrases such as "in my opinion," might more directly reflect IH than "I think," which could conceivably be used out of habit or even potentially as a behaviour associated with a lack of intellectual confidence or diffidence in some contexts.

Furthermore, the number of coded excerpts in labelling one's own perspective varied across focal participants. For example, Bridget, who participates in the highest number of dialogues (10 of 19) contributes only nine of the 77 coded instances, meanwhile Jodie who appears in the smallest number of dialogues (6 of 19) contributes 21 of the 77 coded instances. While this code appeared each year from 2015-2018, the highest number of codes occurred in the latter two years (2017/2018), with only two codes appearing in 2015. Taken together, this may suggest that the usage of "I think" could be associated with the characteristics and habits of individual children and across time in relationship to the topics discussed in the dialogues, in addition to signaling a potential IH disposition.

### **Lack of IH**

In addition to categories that reflected IH, categories reflecting a lack of IH also appeared within the data. Overall, there were far fewer coded references that implied a clear lack of IH (11 coded excerpts), as compared to the presence of IH (113 coded excerpts). Children also appeared to demonstrate a greater range of indicators associated with IH than a lack of IH, and over a longer time span. We identified indicators associated with IH between 2015-2018 versus between 2016-2018 for Lack of IH. Further, only one excerpt was coded for Lack of IH in 2018,

versus 35 IH excerpts. As shown in Figure 1, the instantiations of a lack of IH that we identified in the data fit into two broad categories: asserting, and lack of openness to others.

### *Asserting*

The category of asserting broadly encompassed instances in which the child appeared to assert their belief within the dialogue in a way that was inconsistent with an intellectually humble disposition. Asserting consists of two subcategories, absolute declarative statements and dismissiveness.

**Absolute declarative statements.** The sub-category of absolute declarative statements encompassed instances where a child appeared to make a statement that sought to declare an absolute truth, in response to another child's or the group's contribution(s). For the excerpts coded in this subcategory, due to the interpretative nature of the topics being discussed in the dialogues, presenting one's perspective as an absolute truth is typically out of place within the context of P4wC. That is, the nature of the philosophical questions discussed in the dialogues are selected in part on the basis of their contestability. Thus, these instances encompass indicators that seek to establish one legitimate truth and thus render other perspectives as less true or untrue. Such a stance can be interpreted within the epistemological framework of absolutism. According to Kuhn et al. (2000) epistemological absolutism is characterized by an adherence to an objective way of knowing which emphasizes objective truth and minimizes interpretive diversity. An absolutist stance may characterize divergent perspectives or beliefs as necessarily reflecting a misunderstanding or misinformation (Kuhn et al., 2000). This category is reflected primarily in the children's choice of words and it typically appears in combination with a perspective that runs counter to their own. To illustrate, the following excerpt was taken from the 2017 dialogue on the topic of humour:

Facilitator: Okay so you're bringing a different perspective than Jodie. Jodie was concerned about family members being disrespected but you're actually thinking that a person can't be all bad. There's always something redeeming about the person.

Mo: So what Jodie said is not okay because maybe [Hitler's] family thinks that he was a great guy. The six million Jews were killed in camps. I'm sure they thought he wasn't good so he deserves a little bit of disrespect. (Humour, 2017)

Immediately prior to this excerpt, Jodie and Mo had begun engaging in what appeared to be a passionate discussion about whether or not it would be appropriate to laugh at Hitler's funeral. Jodie says that it would be inappropriate because there is some good in everyone, and presumably he has people who cared about him despite the horrors he caused. On the other hand, Mo argues that it would be appropriate to laugh at Hitler's funeral precisely because of the pain that he has caused. In the above example, Mo appears to firmly draw a line with his beliefs. In itself, this may not necessarily reflect a lack of IH as one can be intellectually humble and strongly endorse a particular stance (Pritchard, 2020). Nevertheless, the manner in which he appears to denigrate Jodie's efforts to contribute to the dialogue in a well-reasoned way, and seeks to declare that what Jodie is saying is "not ok", implies an evaluative judgement which reflects a manner of engagement suggesting an absolutist stance on an issue which can be interpreted in a multitude of legitimate ways, and therefore a lack of IH. The topic of the appropriateness of laughing at Hitler's funeral is contestable and thus Jodie's perspective should be allowed equal consideration although Mo appears to attempt to discredit it. Notably, absolutism as an epistemological stance tends to be more common in certain domains of knowledge than others, for example, in the moral domain where beliefs have been found to be particularly resistant to change (Kuhn et al., 2000). Therefore, Mo might be engaging with Jodie

in this way in this particular conversation because children have been found to have strongly held personal beliefs and therefore can be less flexible in their thinking around topics in the moral domain (Wainryb, 2004). Nevertheless, it is important to note that, according to the facilitator, declarative statements are considered important by some P4wC scholars as a way of stating a bold claim so that evaluation can be possible. Therefore, if the child is aware that they are doing so, these statements may not reflect a lack of IH per se, since they reflect deliberate use of a particular dialogical move. However, this is indiscernible within the coded excerpts. Excerpts coded as absolute declarative statements appeared primarily in 2016, with the exception of one coded excerpt in 2017.

**Dismissiveness.** The subcategory of dismissiveness was observed when children appeared to dismiss the contribution of another child. Consider the following example:

S: I think there is a difference between general hope and the hope where you're aligned to ... So general hope requires positivity. And regular hope is when you're trying to trick yourself.

Julia: You said general hope and regular hope, they're the same thing.

S: Well I can't find the words... (Hope, 2018)

As illustrated in the above excerpt, Julia appears to be dismissive of S's contribution by asserting that regular hope and general hope are the same thing. S's response appears to reflect that they indeed view these two types of hope as different, however was not able to find the words. S did not continue on to explain the distinction that they had been trying to make in response to Julia's dismissive comment thus signaling a behaviour that inhibits productive dialogue. In the context of literature on intellectual arrogance, Tanesini (2016) posits that behaviours associated with a lack of IH can be detrimental to individuals and the dialogue

overall due to their potential to foster intellectual servility or timidity in epistemic agents. The opposite may also be true, such that dismissiveness could foster combativeness or defensiveness in fellow agents and thus create impediments to productive dialogue in the direction of arrogance, in addition to diffidence (Tanesini, 2016). This particular example demonstrates how such indicators can potentially affect productive dialogue as well as create an imbalance of power among epistemic agents in the direction of diffidence. The above example is the only coded instance of dismissiveness, and occurred in 2018.

### *Defensive Response to Disagreement*

The category of defensive response to disagreement is characterized by instances within the dialogues where a child appears to respond to other children in a manner that reflects a lack of openness to their perspectives or contributions. Excerpts that were coded in this category illustrate moments in which another child's contribution triggered a defensive response from one of the focal children, typically in response to an opposing perspective. Consider the following exchange,

Bridget: Yes and no. It depends on the conditions. Like ours is yes, as long as it's not hurting anybody. But it's no if it is hurting somebody. Those are the conditions...

S: No. We are not free to say whatever we want. Because if we were, we could hurt people's feelings, we could say things that aren't so nice, just in general. So I kinda disagree with Bridget saying yes and no because even if you're not hurting anybody, you might be hurting something in general.

Bridget: That is why I said hurting something, not just somebody. (Freedom of Expression, 2016)

In this example, S mentioned that they disagree with the point that Bridget had previously made. Bridget appears to respond by firmly implying that S's comment reflected a misunderstanding of her initial point, rather than a potential attempt to contribute and highlight complexity within the dialogue. Bridget's response appears to be directly connected to an overt expression of disagreement on behalf of another child. As evidenced by Bridget's first contribution it appears that she did, indeed, use the phrase "somebody" despite her response to S. Taken together, this may symbolize an engagement which reflects a discomfort with having been disagreed with, and thus an attempt to take back control of her initial contribution.

The above example was taken from a dialogue involving a thought experiment. The children were divided into small groups and given cards that reflected both a topic related to the dialogue theme (lies) and a particular stance on that topic (lying should be prohibited). Children were then asked to appoint two representatives from each group who would present summaries of their discussion to the larger group. Together, the representatives shared both the group's real thoughts about the stance outlined on the card and the opposite point of view of the stance. Therefore, children were asked not only to discuss their own thoughts and perspectives on the issue but also imagine and discuss potential opposing viewpoints. Therefore, it appears that this particular dialogic format might encourage disagreement by bringing to light divergent points of view. This format also highlights the significance of fostering a Community of Philosophical Inquiry, wherein children are supported in reasoning through various perspectives in pursuit of what is most reasonably worth believing. While this particular structure of dialogue may invite defensive responses, as seen in the above example, not all children in the dialogue reacted to disagreement in a way that reflected a lack of IH. Further, not all excerpts coded within this

category occurred during this particular pedagogical exercise, as some occurred more spontaneously.

Similarly to absolute declarative statements, excerpts coded as defensive responses to disagreement appeared in 2016 and 2017. The majority of coded excerpts within this category were found in 2016 with a minority appearing in 2017.

## **Discussion**

The findings from this study inform literature on both IH and P4wC. Firstly, in reference to IH, we identified categories of discursive indicators of IH that document children's ability to engage in ways reflecting IH in an interactional context wherein they are exploring philosophical issues that matter to them (P4wC). Secondly, we identified indicators that may reflect more and less deliberate or advanced forms of IH and how such indicators change over time. Thirdly, this study contributes to scholarship on P4wC by providing empirical evidence in support of the P4wC pedagogy as a good context for promoting IH in children. I discuss each of these sets of contributions in turn.

### **Contributions to Scholarship on IH**

How children demonstrate and develop intellectually humble dispositions is not yet well documented in the empirical literature. Consistent with previous developmental studies (Danovitch et al., 2019; Hagá & Olson, 2017a), my findings suggest that children can, indeed, contribute to dialogue in ways implying IH. Our categorization reflects four broad categories of discursive indicators that can be traced back to both previous conceptualizations or operationalizations of IH as well as ideologies of the P4wC facilitator/scholar. Upon first glance of the categories, a distinction between a social and epistemological dimension of IH is apparent (self-correction and openness to others), as outlined in previous research (Danovitch et al., 2019;

Samuelson et al., 2015). While this distinction is perhaps helpful in conceptualizing IH more broadly, upon a deeper examination of our categories, the distinction between the social and epistemological dimension becomes less clearly defined. For instance, within the sub-categories of openness to others—checking understanding, for example— it is clear that while indicators coded in this category appear to be heavily oriented towards the group (asking the group for assistance), a strong epistemological component (monitoring one’s understanding) is also involved. Additionally, my findings introduce categories of IH that do not neatly fit into either dimension, for instance, willingness to doubt and labeling one’s own perspective. Therefore, this study provides insight into the interrelations between the two dimensions of IH and thus calls for expanded operationalizations of IH for use in a structured dialogic setting, such as P4wC.

In addition to identifying categories of discursive indicators of IH, my findings outline types of indicators associated with a lack of IH. Recall that Haggard et al. (2018) conceptualized IH as the golden mean on a spectrum between intellectual diffidence and intellectual arrogance. We were able to reliably identify dialogical indicators that may be associated with intellectual arrogance, however, it is important to note that it is indiscernible whether such indicators truly reflect arrogance or whether the children are responding with insecurity that they made a mistake in front of others or felt “disproved.” So, while it may come across as arrogance, it could alternatively be an expression of insecurity. Nevertheless, it proved more challenging to identify clear indicators associated with intellectual diffidence, which represents an uncritical acceptance of others’ beliefs. According to previous operationalization of intellectual diffidence (Hagá & Olson, 2017a), associated indicators may appear as “if you say so” or others related to the absence of reasoning through others’ contributions while accepting them as true. The absence of these indicators in the dialogues may be, in part, due to the foundational aims and values of the

P4wC pedagogy, such that it is premised on honouring children as autonomous epistemic agents who each have a unique vantage point when considering the philosophical questions in the dialogues. Differing perspectives are deemed valuable in the pursuit of reasoning through philosophical questions. In addition to being invited to share their own thoughts and experiences in an environment where their unique thoughts and experiences are of central importance, since complexity is emphasized over consensus, the children are thus often encouraged to consider the questions from the vantage point of perspectives that might be missing from the dialogue. Taken together, it may be that this particular context may lend itself less to intellectually diffident indicators, as the incentive to agree with peers or adopt their beliefs is not actively promoted or implied. However, it may be that additional data sources, such as video recordings or interviews with the children, may have provided additional context within which to interpret the children's thought processes during the dialogues. Nevertheless, clear accounts of intellectual diffidence within this context may warrant further study. For example, it might be useful to explore these issues among children who are first exposed to these types of dialogues rather than those who have already developed considerable expertise, as in the present study.

I also identified potential patterns in how IH might be expressed over time. My findings suggest similar patterns of development of IH in P4wC dialogues that have been identified in the literature on the development of critical thinking in P4wC and epistemological development more broadly. The predominant longitudinal pattern that emerged from the data is a distinction between metacognitive or explicit indicators of IH versus less metacognitive or implicit indicators. Within the category of openness to others, indicators of IH that included evidence of metacognitive reflection appeared in the later years of the sample (2017-2018). While potential longitudinal patterns within the category of self-correction were less clear, we were also able to

distinguish between implicit codes and explicit codes, specifically in the sub-category of nuancing one's perspective. These findings may suggest that, similar to the developmental trajectory of metacognition, within the context of P4wC dialogues, children may exhibit IH prior to their awareness that they are doing so. Thus, more advanced forms of IH might be predicated on metacognitive development, in addition to facilitator and pedagogical scaffolding. It is useful to note here, that all coded instances of IH required verbal cues; children could be engaging in IH related behaviours without specifically verbalizing that they had done so, therefore the future research could also aim to examine the relationship between IH and meta-cognition.

My findings also indicated that the knowledge domain may be an interesting factor to consider in the context of IH development. Scholarship on children's epistemological development outlines the trajectory of children's knowledge acquisition, and how the trajectory might vary according to knowledge domain (Carpendale & Chandler, 1996; Chandler, et al., 2000; Kuhn, et al., 2000; Mansfield & Clinchy, 2002; Wainryb et al., 2004). Central to these accounts is that children come to acknowledge the subjectivity of beliefs regarding certain domains such as aesthetics more readily than issues such as scientific facts. My findings indicated a potential distinction between accepting one's fallibility in reference to different domains of knowledge, with acceptance of fallibility in relation to factual knowledge appearing in 2017 and subsequently conceptual knowledge appearing in 2018. As conceptual knowledge may involve more interpretative diversity, these patterns suggest that some categories of IH may be more or less challenging depending upon the relevant knowledge domain in relation to the setting. Future research could examine IH development in the context of different knowledge domains.

## **Contributions to Scholarship on P4wC**

Empirical evidence to support or refute the claims of P4wC's effectiveness at facilitating epistemic virtues such as IH is only beginning to emerge (Anderson et al., 2021). The present study contributes to this body of scholarship by demonstrating how pedagogical tools and facilitator involvement may be linked to indicators of IH or lack of IH. These elements of the dialogues appeared to be related to multiple categories of IH. Notably, for the category of self-correction, the majority of coded instances appeared directly in conjunction with either the facilitator scaffolding or structural elements of the dialogues. Therefore, the current study provides empirical support for theoretical accounts of P4wC's efficacy at promoting positive intellectual dispositions. Findings also pinpoint the particular forms of facilitation as well as specific dialogue types and pedagogical aids that may be most relevant to supporting these dispositions, many of which are particular to the Philocreation model. By illuminating specific dialogical processes which contribute to manifestations of IH within the P4wC setting, after having been validated and replicated in larger-scale studies, these types of findings can inform practice for P4wC facilitators and program development as well as promote P4wC as a useful educational pedagogy for practicing IH in childhood.

Overall, one of the primary contributions of this study to the literature on P4wC and IH is methodological. We have identified discursive indicators of IH in P4wC dialogues that could be charted in future research. That is, the categorizations identified in the present study may ultimately inform a coding scheme which can serve as the basis of quantitative examinations of how indicators of IH change over time in a larger sample of dialogues. For instance, quantitative research could be used to test hypotheses about which indicators emerge first and which later,

whether these variations are more closely linked to age or experience with P4wC, and how they vary across formats and topics of dialogue.

### **Limitations**

The present study has two primary limitations. Firstly, initial analyses were based upon transcript data, although later review of the audio files generally corroborated interpretations of transcribed dialogue. Nevertheless, it is possible that important contextual details, such as information gleaned from body language or added interviews, that could inform the findings were not adequately incorporated. Therefore, I was not able to achieve triangulation among different data sources, which could have provided additional depth to my findings and bolstered overall trustworthiness. Future studies could incorporate additional forms of data, such as video recordings or facilitator interviews. Secondly, the possibility remains that some potential changes over time identified within the data might be, in part, related to cognitive developments by virtue of ageing. Future studies could attempt to disentangle these effects by contrasting children at the same age with varied experience with philosophical dialogues, to determine to what extent developments in indicators of IH are due to factors beyond experience. In a similar vein, regarding transferability, the present study cannot determine whether potential IH demonstrated is a result of learning the conventions of the P4wC method or whether it provides evidence of an internalized IH disposition. Children may come to learn how to participate in the P4wC dialogues, that particular epistemic virtues are ideal within the setting, and thus display IH within the context of P4wC but perhaps not yet in the context of everyday life outside of P4wC settings. To examine how the disposition transfers to contexts beyond the dialogues themselves, future research could examine whether indicators of IH identified in the present study predict independent assessments of IH separate from the P4wC dialogues.

In sum, P4wC appears to be a meaningful context within which to examine children's ability to engage in and thus develop IH. Clear displays of facilitator scaffolding and pedagogical structures create a context where indicators of IH can be carefully tracked and examined to illuminate both the nature of IH, and how to actively promote it in childhood. The promotion of IH in childhood may have the potential to empower deliberate and intentional engagement in belief formation and thought. As for the final word on IH, I leave it to Bridget:

But that's the thing. Unless you already know everything, then you're going to be wrong about something. And being wrong doesn't feel very good. But you have to accept a tiny thing of being wrong in your life, if you want to learn things better. That's what being humble is about... Instead of avoiding this discomfort, I think we should embrace it. Maybe every time we feel uncomfortable, it's a chance for us to grow, to become a better person. (Discomfort, 2018)

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