Thinking together with Philip Cam:
Theories for practitioners and assessing thinking

Clinton Golding
University of Otago

clinton.golding@otago.ac.nz

Abstract

Philip Cam has been an inspiration to me in his approach to Philosophy for Children, and I have tried to follow the trail he blazed. He is a master of developing what I call ‘practitioner theories’ of Philosophy for Children. These are practical theories designed to be useful for practitioners of Philosophy for Children, rather than abstract theories designed to contribute to the scholarship of Philosophy for Children. I first explain what I mean by a practitioner theory, using Cam’s Question Quadrant as an illustration. Then, for the rest of the article I give a more detailed analysis and elaboration of Cam’s practitioner theory about assessing thinking. This theory first appears in Thinking Together in the form of a table that teachers can use to assess how frequently their students perform different thinking moves. For example, we can assess student thinking based on how often they ask questions, or build on what someone else has said. I will show how this seemingly simple theory captures a great deal of theoretical complexity, combining themes about thinking moves from Splitter and Sharp, making thinking visible from Perkins and Richhart, and habits of mind from Costa and Kallick. I will also show how we can develop Cam’s practitioner theory into a sharper tool for assessing thinking if we incorporate further insights about learning to think, and assessing thinking, from Perkins, Dewey, Piaget, Vygotsky and Bloom.

Key words

assessing thinking, educational theory, inquiry, Philosophy for Children, practitioner theories
My debt to Philip Cam

Philip Cam was also one of the key people who introduced me to Philosophy for Children in the early 1990s. I was taught by him and eventually taught with him. He is an inspiration to me in many ways and I have tried to follow his lead in my own work, building on the many contributions he has made.

In his career Cam shifted from academic philosophy and the scholarly field of Philosophy of Mind to instead focus on practical, useful philosophy, most prominently in his work in Philosophy in Schools. I found this shift very encouraging, and it helped me make the decision to give up academic philosophy in the late 1990s to pursue my own passion for Philosophy in Schools.

Much of my teaching and writing can trace its development through Cam’s work, and he has influenced me in many ways: His written work was the foundation for my understanding of Philosophy for Children, and I used it frequently when I was teaching; He was my teacher in workshops and training sessions, most notably when I was training as a teacher educator in Philosophy for Children; We have had many informal chats at conferences and after hours in week-long training workshops; We have taught together and participated in many Community of Inquiry discussions; He reviewed my own work on Philosophy for Children and offered many valuable suggestions, such as the generous feedback he gave which helped me refine my Connecting Concepts (Golding 2002); finally, my PhD thesis (2010 and summarised in Golding 2009) is full of references to his work.

Building on what Cam said

There was a characteristic pattern to how I built on the contributions offered by Cam. He would offer some new idea, I would experience an ‘ah-ha’ moment, and then spend several years working out the implications and developing the idea to my satisfaction.

The new ideas might emerge when I taught a workshop with Cam, participated in a Community of Inquiry with him, or chatted with him after a session. Or the new idea might come from reading one of his texts where he presented a different way to understand how to teach and learn Philosophy, or a new tool for facilitating thoughtful inquiry.
I would then experience an ‘ah-ha!’ moment where something hazy would suddenly be clear. For example, Cam’s explanation of what counts as a philosophical question was a revelation for me:

Philosophical questions are essentially contentious. They don’t call for the correct answer. They demand further investigation and admit of different answers that may have one merit or another. They point to problems that cannot be solved by calculation, or by consulting a book, or by remembering what the teacher has said. They require children to think for themselves. (Cam 1995, p. 15)

Before I read this I was hazy about how to explain what counts as a philosophical question, or why some questions were not philosophical. But Cam’s account allowed me to discern and explain the important differences, and this also sharpened my practice.

Cam’s thinking stories (Cam 1993, 1994, 1997) and his work on the inquiry process of Philosophy for Children (Cam 1995, 2006), showed me the underlying process of philosophical inquiry: (1) problematic situation, (2) initiating, (3) suggesting, (4) reasoning and conceptual exploration, (5) evaluating, and finally (6) concluding (Cam 2006, p. 12). This led me to the important insight that philosophical inquiry could be stimulated in multiple ways, and so Philosophy for Children need not start with reading a Lipman story like Harry (1982). It also led to the insight that thinking proceeds by various moves: agreeing, disagreeing, giving examples, giving reasons, etc.

These insights from Cam were not merely bright sparks that quickly faded, but torches I could use to ignite further insights and to illuminate practice. Cam has never presented his work as the final answer about philosophical questions or the inquiry process, but rather as a helpful way to understand, which we can later refine and sharpen. As such, Cam takes a Deweyan approach where he seeks fallible, revisable conclusions that we are warranted to use for further inquiry, and he avoids final settled answers (Dewey 1938).

When I engaged with the insights offered by Philip Cam, it was like he and I (and many others) were (and still are) participating together in a long-term, international Community of Inquiry. Cam has contributed many ideas to this Community of
Inquiry so that others can build on what he has said. This ‘thinking together’ approach stimulated me to inquire further, to clarify and elaborate the insights I had as a result of Cam’s work.

So, I am indebted to Cam as a major influence on my own work. I built on the insights Cam had shown me, and came up with more and more handy practical theories for teaching and learning Philosophy for Children. For example, Cam’s work on philosophical questions is the foundation for my account of different kinds of philosophical questions and ways to distinguish philosophical questions (Golding 2007, 2014a), and his work on philosophical inquiry is the basis for my account of thinking moves and making philosophical progress (as presented in Golding 2009, 2014a).

**Philip Cam, master of the practitioner theory**

Cam is a master of developing what I call ‘practitioner theories’ (Golding 2014b). I will explain what this means using an illustration from Cam’s work (the question quadrant), and then I will explore another of Cam’s practitioner theories, his theory of assessing thinking, and show how this might be elaborated.

I coined the term ‘practitioner theory’ to describe practical theories designed to be useful in practice, as distinct from abstract theories designed to contribute to a scholarly field (Golding 2014b). My distinction between practitioner theories and abstract, explanatory theories is similar to Schön’s (1983) distinction between practical ‘fundamental theories’ which have the ‘optimal fuzziness’ necessary for navigating messy practice, and abstract theories which are characterised by ‘unusable precision’ (Schön 1983, pp. 319-320). Practitioner theories are ‘fertile’

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1 While all scholarly fields might be described as an international Community of Inquiry, where scholars build on the work of other scholars and contribute to an ongoing conversation, I suggest that the international Community of Inquiry around P4C may have been a little special. The scholarly work around P4C was often conceived as ‘our’ project jointly developed by an international community working together, and as such, even though there are prominent voices, it is harder to tease out who made what contribution. This is different from the more normal situation where researchers compete with each other so they can be seen as making the next important contribution. Furthermore, even though there is disagreement in the P4C international Community of Inquiry, it is frequently in the spirit of advancing our collaborative inquiry, rather than in spirit of attacking and defending positions, as is more common elsewhere.
rather than ‘straight-jacketing’ (Thomas 2007, p. 46). So, a Philosophy for Children practitioner theory is a systematic body of knowledge and principles which is handy for practitioners (Golding 2014a), rather than scholarly rigorous.

Both Cam and I are indebted to the pragmatist influence of Dewey for this way of thinking about theory. This conception of practitioner theories also has important parallels in neo-pragmatist views of philosophy, such as Goodman’s description of theories that have efficacy in world-making and understanding. Under this view, a practitioner theory is:

Proposing a categorisation or scheme of organisation, calling attention to a way of setting our nets to capture what may be significant likenesses and differences. Argument for the categorisation, the scheme, suggested could not be for its truth, since it has no truth-value, but for its efficacy in world-making and understanding. An argument would consist rather of ... pointing out obscurities and confusions that are clarified by this association ... For a categorical system, what needs to be shown is not that it is true but what it can do. Put crassly, what is called for in such cases is less like arguing than selling. (Goodman 1978, p. 129)

Kekes (1980) also captures something important about practitioner theories in his description of ‘interpretations’. A practitioner theory ‘provides a possible way of thinking about a segment of reality’. They can be thought of ‘as issuing a conditional: if you think of reality in this way and act accordingly, then what was previously problematic will no longer be so’ (p. 115). And finally, D’Agostino (2007) explains other important facets of practitioner theories:

We are trying to design a tool for use by certain kinds of agents to accomplish certain sorts of purposes in a certain kind of environment, and our problem is one of practical functional design, not of conceptual analysis or metaphysical speculation about The Good or The Right.

Following from D’Agostino (2007), the method for creating a practitioner theory might be termed ‘pragmatist conceptual analysis’ because the aim is to design useful concepts—concepts that will help solve the problems of practice—rather than discover the concept already out there. I have previously called this method ‘bricolage’:
I use ‘bricolage’ as Brandon (2004) does, to describe the practice of devising and using conceptions that are accurate enough for their intended function, where more accurate, precise or comprehensive conceptions would be unwieldy, or overly complex for this function. This is different from how Levi-Strauss (1966) uses ‘bricolage’ to describe an inferior practice of making do with whatever is at hand. The bricoleur in my sense is not restricted to what is already at hand and can fashion new conceptions, but the conceptions they are interested in are those that are good enough to be efficacious in the current situation, rather than conceptions that will work in all situations for all people. (Golding 2010, p. 23)

Developing practitioner theories seems fundamental to Cam’s approach to Philosophy for Children, and I have tried to emulate this approach in my own work in Philosophy for Children, educating for thinking, and in education in general. Like Cam’s, my work is primarily designed to be ‘handy’ (Golding 2014a) and to provide guidance for practitioners (Golding 2013a).

When Cam writes about Philosophy for Children he tends to be a practitioner-researcher, mindful of the issues of practice, rather than an ivory tower researcher. His theories are firstly for practitioners rather than scholars of Philosophy for Children, as reflected in the fact that most of his publications are for practitioners. But this practitioner focus should not be seen as a sign of ‘inferior’ scholarship. As I argue in Golding (2014b), we need to legitimise theories developed to contribute directly to practice rather than developed to contribute to the abstract scholarship.

To illustrate what I mean by a practitioner theory I will give a brief account of Cam’s Question Quadrant (See Diagram 1). This theory provides an extremely handy way to conceptualise different kinds of questions, which Philosophy for Children teachers can use in their practice. It may not be the most precise analysis of questions, and there will be exceptions, but if it were more precise it would not be as useful for teaching. As Cam says:

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2 I don’t mean to imply a dualism between practitioner and abstract theories here. There is a continuum of work from pure practitioner theories written solely for practitioners through to pure abstract theories written solely for scholars. Obviously Cam has work written to guide practitioners (e.g. Cam 1995, 2006), and work written to contribute to scholarly fields in education (e.g. Cam 2009, 2010), and he has produced work in the middle which might have been designed for advancing a scholarly field, but which has practical implications (Cam, 2002). All I am claiming here is that Cam’s work is typically closer to the practitioner end of the continuum, and it is this kind of work that I am paying homage to in this article.
I do not claim that it exhausts all possible questions that students might raise, or that its compartments are completely watertight. Nevertheless, I have found it good enough for practical purposes. (Cam 2006, p. 34)

I would go further and argue that it is necessary for such practitioner theories to be imprecise and incomplete, so that they can be useful in the classroom.

Figure 1: The question quadrant (adapted from Cam 2003, 2006)

The question quadrant summarises a theory about the classification of different kinds of questions, which is enormously useful for practitioners. By classifying questions as basic comprehension, factual research, speculation, and intellectual inquiry, teachers can more clearly discern important differences between different kinds of questions, and their various uses and drawbacks in the classroom and in philosophical inquiry.
The question quadrant is a good example of a practitioner theory because it enables teachers to see and to do things differently. Using this quadrant, teachers are able to understand something complex and contestable that might otherwise remain mysterious. They are able to see the differences which were otherwise not apparent. And the quadrant also helps teachers to do something which they could not do without the theory: they can now ask the intellectual inquiry questions which lead to philosophical inquiry, and they can enable their students to learn how to ask these questions.

A guide to assessing thinking

For the rest of this article I will focus on the practitioner theory which underpins Cam’s method for assessing thinking. This practitioner theory has had less attention than Cam’s Question Quadrant, and is less well-known, but it is very fruitful and deserves more attention.

Tucked away in the appendix of Thinking Together is ‘A Guide to Assessment’ (Cam 1995, pp. 101-103). The method he presents in this Guide is deceptively simple, and deliciously fruitful, which is ideal for a practitioner theory: We can assess thinking by how frequently students demonstrate the thinking moves associated with philosophy (see Table 1).

Table 1: Assessing student thinking based on the frequency of thinking moves

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<th>Rarely</th>
<th>Sometimes</th>
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<td>Do the students ask fruitful questions?</td>
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<td>Do they explore alternatives?</td>
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<td>Do the students clarify meanings?</td>
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<td>Do they give helpful examples?</td>
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<td>Do they explore disagreements?</td>
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The heart of this theory is Cam’s insight that any kind of thinking might be assessed via the behaviours that indicate, or are associated with, that thinking. Thinkers do certain things like ask questions, clarify meanings and give examples, so we can tell if thinking is occurring based on whether our students are making these thinking
moves or performing these thinking behaviours. But the insight Cam offers also offers hidden treasures. There is rich theoretical depth under the surface.

**Digging out some rich theoretical depth**

Cam’s practitioner theory for assessing thinking tacitly captures six important theoretical insights about learning to think, and about discerning thinking:

1. *Thinking is an action*. Cam’s theory has similarities to Bloom’s taxonomy of the cognitive domain (Bloom et al. 1956). Different kinds of thinking are associated with different verbs or different actions, for example, applying involves ‘solving’, evaluating involves ‘ranking’. The thinking moves that Cam describes are a different way to identify the verbs associated with different kinds of thinking and different ways of thinking together.

2. *Thinking actions can be described as ‘thinking moves’*. Cam’s theory also links to other theoretical work in Philosophy for Children, in particular the idea that thinking is expressed in what students say, do and ask: their ‘thinking moves’. This idea of ‘thinking moves’ is suggested in Dewey (1933), and developed by others in the Philosophy for Children tradition who identified and described various philosophical moves (Lipman et al. 1980, pp. 110-128; Lipman 1988, 201-206; 2003, ch8; Splitter & Sharp 1995, 9-10). I sometimes call them thinking behaviours (Golding 2005).

3. *To make thinking assessable, we have to make it visible*. Cam’s insight was to assess thinking based on what we can see and hear the students doing. Writers like Ritchhart and Perkins express this same insight in a different way: teaching and assessing thinking depends on making that thinking visible (Ritchhart & Perkins 2005; Ritchhart, Church & Morrison 2011). Cam has chosen to make thinking visible by identifying thinking moves. What students say, do and ask is the means of making thinking visible.

4. *The heart of assessing thinking is discerning thinking*. Cam’s account of assessing thinking is about how you can discern whether thinking is occurring. This is essential for summative assessment, but it is much broader than this. We also need to discern student thinking for any informal assessment, such as observing student thinking or giving formative feedback (Golding 2013b, 2016, 2018).
5. We should assess whether students are thinking (not merely whether they know how to think). Cam’s practitioner theory also allows us to assess whether student are philosophical thinkers, not merely whether they know how to do this thinking. This is a similar insight to that expressed in the work on habits of mind (Costa & Kallick 2000) and thinking dispositions (Perkins, Jay & Tishman 1993; Tishman, Jay & Perkins 1993). You are a thinker when you do the thinking. It is not sufficient to know how to think, or merely to have the skill of thinking. For example, mathematical thinking occurs when I solve mathematical problems. If I know how to solve mathematical problems but never attempt these problems, then I am not a mathematical thinker. Cam taps into this insight by assessing thinking based on the frequency of thinking moves. If students rarely ask questions they are not yet questioners. If they frequently do so, they have developed a questioning disposition or a habit of mind of questioning—they are questioners.

6. We can discern and assess student thinking based on how frequently they use the thinking moves. For example, a good questioner frequently asks questions, while a poor questioner rarely does. This captures all of the above five theoretical insights into one, the heart of Cam’s practitioner theory for assessing thinking.

I do not suggest that Cam was explicitly influenced by the published theories that are associated with these six insights. Sometimes were not fully formed or published when he was developing Thinking Together, though he must have at least been influenced by the work of Lipman. However, I do suggest that he was tapping into the same insights that are the foundations for these other theories, and that this theoretical richness is already tacitly built into Cam’s theory.

Building on what Cam said about assessing thinking

Cam’s practitioner theory about assessing thinking is useful for practitioners, but it also suggests further ways in which practitioners might assess thinking. By building on Cam’s six theoretical insights we can make the practitioner theory even more useful, or to use a different metaphor, we can sharpen Cam’s theory. This has been my aim for the past 20 years, subsequent to reading Thinking Together, as I have pursued my own inquiry into how to assess thinking. As a result, I developed my own account of thinking moves and milestones (Golding 2009, 2014a), and I
summarise my most mature account of assessing thinking in Golding (2013b, 2016, 2018).

Cam shows how we can discern and assess student thinking based on how often students employ different thinking moves. This is based on the insight that we learn to think by engaging in the thinking—the more frequent and habitual, the more we have developed as thinkers. But if we also add further insights about how we learn to think, we can extend Cam’s theory of assessing thinking, and so show additional ways in which we might discern and assess student thinking. As well as looking at the frequency of thinking moves, we might also assess thinking based on the complexity of the thinking moves, how flexibly students employ them, or how independently, or even the complexity of the task or issue to which students apply a thinking move.

**Complexity**

We can assess any particular kind of thinking based on the complexity of the student thinking moves. We know that novice thinking can be very simple, while an experienced thinker might make some very sophisticated thinking moves. For example, a novice at giving reasons might give reasons merely by using the word ‘because’ followed by a reason (or even ‘just because’), while someone more experienced might not only use the word ‘because’ but also give reasons for and against a position, before weighing them up to make a final judgement.

This criterion is developed by adding insights from theories such as Bloom’s taxonomy (1956) and Biggs and Tang’s Structure of Observed Learning Outcomes or SOLO (2007, pp. 76-81). Both these theories distinguish different kinds of thinking according to the complexity of the thinking, with more complex thinking being associated with ‘higher-order’ thinking. Evaluation is ‘higher’ than merely remembering because it is more complex, and indicates a more sophisticated expression of thinking. Thus, complexity is one way to distinguish ‘better’ and ‘worse’ kinds of thinking.

However, although Bloom’s taxonomy and SOLO indicate that we can distinguish better and worse thinking according to the complexity of the thinking, this does not allow us to distinguish between better and worse expressions of the *same kind* of
thinking. For examples of this we need to turn to theories such as Mezirow’s (1991) dimensions of reflective thinking.

Mezirow argues that we can distinguish between better and worse reflective thinking by looking at the sophistication or complexity of what students do. Simple, ‘superficial reflection’ involves merely making use of existing knowledge. Complex reflection, which he calls ‘critical reflection’ or ‘premise reflection’, involves evaluating why we perceive, think, act and feel as we do, and leads to transforming deep-seated beliefs (Mezirow 1991, p. 108).

We can apply Mezirow’s (1991) model to any kind of thinking and thus assess, for example, ‘building on ideas’ by the complexity or sophistication of the thinking moves employed: someone who was poor at building on ideas might simply say ‘I agree’, while someone who was good at building on ideas might also give examples to illustrate the other idea, as well as identifying the implications.

**Flexibility**

We can assess any particular kind of thinking based on how flexibly students use the particular thinking moves. A poor thinker follows a process of thinking using inflexible, predetermined patterns regardless of the circumstances, while an experienced thinker is able to improvise new patterns in response to the circumstances. For example, someone who was poor at finding reasons to support a position might mechanically employ the thinking move for agreeing, ‘I agree with [name] because [reason]’, and this is the only way in which they can give reasons to support a position. However, someone who was more advanced at giving reasons is able to agree in different ways, sometimes inventing new thinking moves when the situation demands. For example, ‘I partially agree because …’, ‘I agree with [idea] because [reason]’, ‘One reason I agree is … but a reason I disagree is …’

This criterion for assessing thinking is based on research about how we develop metacognitive control or regulation of our thinking (e.g. Flavel 1979; Zohar & David 2009), or how we learn to be reflective in our thinking (Perkins 1995). We start as novice thinkers who cannot manage our thinking processes and instead merely react, then we develop some control over our thinking (perhaps by following a prescriptive process which we apply for all situations), until finally we learn to
monitor and manage our thinking and choose appropriate strategies for each situation.

**Independence**

We can assess any particular kind of student thinking based on how independently they use the thinking moves. This criterion is similar to flexibility. A poor thinker can only use a thinking move when they are told to, while an experienced thinker uses it autonomously. A poor thinker has to be told when and how to use a thinking move, while an experienced thinker notices when it might be a good time to use the thinking move, and judges whether and how to use it. For example, someone who is inexperienced at giving examples has to be told, ‘Now you need to give an example to illustrate your idea that it is difficult to be a friend. Remember how we give an example? We say ‘An example of how it is difficult to be a friend is …’ and then you describe an example of one time when it was difficult for you to be a friend’. Someone who is experienced at giving examples, on the other hand, would have offered an example of their own accord, unaided and unprompted, and they would do this whenever the situation calls for an illustrative example.

This criterion for discerning or assessing thinking is based on the process of learning to think which Dewey calls ‘experimental copying’ (1933, ch.14, §1), and which Vygotsky (1978) calls ‘internalisation’. The process involves a learner internalising social interactions so they become part of their personal cognitive processes. This is also similar to Ritchhart’s (2002) idea of using ‘thinking routines’ as a means of internalising thinking moves. Thinking routines are very similar to thinking moves. By regularly and frequently (routinely) being asked to use a thinking move like ‘An example is …’, and by hearing others use this same routine, a student eventually internalises it until it becomes a routine but conscious way for them to think.

**Complexity of application**

We can assess any particular kind of student thinking based on the complexity of the task or issue to which they apply their particular thinking moves. A poor thinker can only apply their thinking moves to simple subject matter, while a more experienced thinker can apply it to more complex subject matter. For example, a student who is inexperienced at clarifying and paraphrasing might only be able to paraphrase what
someone said to them if it were one sentence or less and about something concrete that they saw or heard. Someone who is more experienced might be able to paraphrase a one-hour discussion about abstract issues into five main themes or arguments.

This criterion for discerning or assessing thinking has its roots in Piaget’s (1978) theory of cognitive development. For Piaget, less sophisticated thinking is concrete, and only applied to concrete, observed situations, while more sophisticated thinking is abstract, and can be applied to abstract ideas. We can use Piaget’s insight that concrete thinking is less sophisticated than abstract thinking as a criterion to discern or assess particular kinds of thinking, without having to accept Piaget’s other claims that there are fixed, age-based stages of thinking.

**Conclusion**

My aim in writing this article was to acknowledge the debt I owe to Phil, and to illuminate his contribution, as well as highlighting further work that he has inspired. First, I argued that one of the special contributions Philip Cam makes to Philosophy for Children is his practitioner theories such as the Question Quadrant, which are designed to be handy guides for practitioners. Then, I focussed on his practitioner theory for discerning and assessing thinking. I unpacked some of the theoretical complexity built into the simple idea that we can assess thinking by how frequently students say and do the things that thinkers say and do. I then expanded this practitioner theory, adding in further criteria for assessing thinking besides frequency: We can discern and assess student thinking based on the complexity, flexibility, and independence of their thinking moves, and on the complexity of the subject matter to which they apply their thinking moves. Although I wrote this article, I hope it might be seen as an example of thinking together with Philip Cam.

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