Thinking as Method

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Abstract: John Dewey is well-known for claiming that school education is all about developing the ability to think. There is nothing else for schools to do so far as students' minds are concerned. Thinking is not only the aim of education for Dewey, however, but the means of achieving it. This is not because it is the method to be preferred. Rather, as Dewey understands it, *thinking is method* so far as intelligent learning is concerned. In 'Thinking as Method' I examine these extraordinary claims and show how Dewey's own discipline of philosophy provides a model for them.

In *Democracy and Education*, John Dewey introduces the topic of thinking in education with the following resolute passage:

> No one doubts, theoretically, the importance of fostering in school good habits of thinking. But apart from the fact that the acknowledgement is not so great in practice as in theory, there is not adequate theoretical recognition that all which the school can or need do for pupils, so far as their *minds* are concerned…is to develop their ability to think.[1]

It is important to note that Dewey almost immediately goes on to make similar remarks about thinking in relation to methods of teaching and learning:

> The sole direct path to enduring improvement in the methods of instruction and learning consists in centring upon the conditions which exact, promote and test thinking. Thinking *is* the method of intelligent learning, of learning that employs and rewards mind.[2]

This claim is all the more striking once you realise that Dewey is not recommending thinking as the method to adopt, as if it were the one most suited to the purpose. Rather, he says that "thinking is

[1] *Democracy and Education*, p. 152.
[2] Ibid., p. 153.

method, the method of intelligent experience in the course that it takes."[3] In sum, then, developing the ability to think is to be the sole aim of school education as well as the method of getting there.

We need to know in more detail what Dewey takes thinking to be, if we are to really make sense of its identification with "the method of intelligent learning" or of "intelligent experience in the course that it takes". Only then will we be able to understand what is involved in the idea that thinking must reign over aim and method in education. Working out what this amounts to may also be aided by seeing how, in more recent years, Dewey's home discipline of philosophy has been reconstructed in such a way as to supply a generic model of thinking applied to the classroom. It has the additional benefit of providing us with a more contemporary illustration of Dewey's conception of aim and method.

I should make it clear at the outset that my aim here is not to vindicate Dewey's sweeping claims, but to see what they involve and to underline their continuing relevance to thinking about pedagogy. More is to be gained from recovering what is of lasting value in his ideas than from trying to defend them up to the hilt.

The development of thought

Dewey was inclined toward the idea of a recapitulation of the historical development of thought in the development of the individual.[4] He claimed that thought passed through a succession of stages in its history and that such modes of thought can also be seen in the development of the individual. These stages can be traced by considering the extent to which society has insisted on certain verities or welcomed doubt and open inquiry. At the one end, we have a society based on settled beliefs and fixed ideas that are meant to regulate conduct, discourage doubt and ward off uncertainty, while at

[3] Ibid.

[4] See 'Some stages of logical thought,' in Dewey's *Essays in Experimental Logic*, pp. 116-138. Dewey's account of the history of thought might be criticised these days as excessively Eurocentric, but we may set that aside for present purposes.

the other we find the constant challenge to knowledge claims that we find in science and in an open and inquiring society.

Along the way, Dewey alights on discussion as the social source of departure from a world of fixed ideas. There comes a time, he says, when ideas inevitably come into conflict with one another, and produce uncertainty in regard to belief and conduct. This calls for a different attitude of mind. It favours dialogue over dictates and sows the seeds of reflection both in society and the individual. Indeed, Dewey suggests that dialogue and discussion aimed at resolving such conflicts, or finding a way forward, is the means by which reflection is born. While social in origin, this mode of thought becomes internalised, forming a habit of mind in the individual:

> No process is more recurrent in history than the transfer of operations carried on between different persons into the arena of the individual's own consciousness. The discussion which at first took place by bringing ideas from different persons into contact, by introducing them into the forum of competition, and by subjecting them to critical comparison and selective decision, finally became a habit of the individual with himself. He became a miniature social assemblage, in which the pros and cons were brought into play struggling for the mastery—for final conclusion. In some such way we conceive reflection to be born.[5]

If true, this theory has considerable educational implications for both theory and practice, as we will see. For now, however, let us simply note that, on Dewey's account, it marks a new stage in the development of logical thought.[6]

From here, Dewey proceeds to mark out two further stages of development. First, we have the kind of thinking that attempts to resolve problems and give meaning to experience by reasoning with reference to established principles. This marks the difference between a mere exchange of views

[5] Ibid., p. 123.

[6] While Dewey is here concerned with the development of what he calls 'logical thought', his conception of the logical is so wide-ranging that it encompasses the whole field of what he elsewhere takes to be thinking in education.

and rational discussion. If there are general principles, bodies of law, or tenets of faith, upon which the parties can agree, then disagreement or uncertainty about particular cases may be resolved by appealing to them. We see this in ancient societies that developed bodies of law or incorporated organised religions. Indeed, we may say that the rise of the rule of law, both civic and religious, marks a turning point in the history of thought. This method of resolution is still in evidence today, of course. For illustration, we need look no further than our courts of law, where the determination of a case involves an examination of its particulars with regard to the relevant laws.

In more narrowly logical terms, this is the kind of thinking associated with syllogistic reasoning and such things as geometrical proof from axioms. Aristotle and Euclid are obvious touchstones for this in Greek antiquity, but the deductive mode of logical thought is very much with us still, including in formal education. Mathematics, in particular, is a core area of school education that provides an extensive training in deductive reasoning.

Beyond deduction or proof from first principles, Dewey finally comes to the development of inductive reasoning from evidence, associated with the growth of science. The role of inductive reasoning in science has since become a matter of controversy, but that need not detain us here. The fundamental shift concerns the primacy of experience, rather than of first principles, axiomatic truths, or dogma, in the quest for knowledge. Even though subjecting ideas to the test of experience was nothing new, the extensive development of scientific methods of investigation and discovery raised it to heights undreamt of before the modern age.

While science in all its variety has advanced these methods in sophisticated ways, Dewey's ultimate concern is with the cultivation of this mode of thought in everyday life. Given the role of education in the cultivation of thought, nowhere is this concern more pressing than in the kind of thinking to be developed in schools. In Dewey's day more than our own, knowledge acquisition in school education was essentially a matter of "quiescent acceptance"—a form of knowledge transfer reminiscent of the first of Dewey's four stages in the development of thought. To this, Dewey opposed

the educational method of gaining knowledge though active investigation, or inquiry-based experiential learning—a mode of knowledge acquisition in keeping with the age in which he lived.

It is important to note that these so-called stages of development are to be understood as a matter of growth rather than of outright replacement as one stage succeeds another. That is as true of society as the individual. Social stability would be threatened if everything were constantly open to question. Discussion remains commonplace in both formal and everyday settings. Issues and problems are still resolved by reference to rules and principles. As for the individual, even the quintessential scientific researcher, whose working life is dedicated to empirical investigation, will still have settled attitudes and beliefs, carry on discussion about sundry matters, and engage in deduction. Having said this, Dewey clearly believed that a mind unschooled in the mode of thought that crystalised in scientific method was a poor fit for the modern world. This becomes all the more apparent when we turn to his views about thinking in education.

The nature of reflective thought

Having looked at Dewey's conception of thought from a developmental point of view, let us see how thought is supposed to operate as "the method of intelligent experience in the course that it takes." This is the form of thought upon which Dewey's educational aims and methods turn, with other kinds of thought being merely ancillary. So, we had better be clear about its nature.

Dewey wrote extensively about this mode of thought. The main work is his monumental and much neglected *Logic: The Theory of Inquiry*.[7] For our purposes, however, we could not go past the book on this topic that he wrote with education in mind, entitled *How We Think*.[8] This work is still of considerable educational value more than 100 years after it was written. I will take the opportunity to highlight some of its lessons in the next section of my talk, but first let us explore the conception of thought on which the book centres. Dewey calls it 'reflective thought' and defines it as the "(a)ctive,

[7] John Dewey, *Logic: The Theory of Inquiry* (New York: Henry Holt, 1938).
[8] John Dewey, *How We Think* (Buffalo, NY: Prometheus Books, 1991).

persistent, and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it, and the further conclusions to which it tends".[9]

We can easily discern the kinds of activities involved in reflective thought as thus defined. First, there are the characteristics of being active, persistent and careful in the consideration of some matter. Activity here does not mean merely that thinking is going on, but suggests an energetic or lively engagement; persistence implies a determination to keep at it until the matter has been adequately dealt with; and carefulness connotes being attentive and meticulous in the manner of its consideration. This is the way in which the facts of the case are to be sought for, studied, and reviewed.

We can also immediately see that reflective thought is highly inferential. On the one hand, there is consideration of the grounds upon which the belief or knowledge in question is based. Logically speaking, these supply the premises on which the proposition before us is taken to depend. Consideration of them involves judging both their reliability and the degree of support they lend to the conclusion. On the other hand, attention is paid to that proposition's implications, what it signifies, leads to, or suggests. Of special note in this direction of inference are those consequences that must attain for the proposition in question to be sustained. They offer both the prospect of further support and the potential for rejection.

Beyond this, Dewey claims that there is an underlying pattern to episodes of reflective thought, regardless of the context in which they occur. It is the pattern of thinking that we need to nurture in the classroom in order to satisfy his educational objectives. In the simplest terms, reflective thought begins with (i) a felt difficulty that (ii) leads to an analysis of the problem, is followed by (iii) suggestions for its resolution, (iv) reasoning about their implications, and then (v) testing this against experience or a wider knowledge base, so as to find a way forward and resolve the difficulty. Let us look briefly at each phase of this process.

(i) The first thing to notice is that reflective thinking does not occur unless there is something that we feel the need to reflect upon. Doubts as to the truth of some matter, concern arising from an

[9] Ibid., p. 6.

unforeseen problem, the feeling that there is an issue with a proposal, uncertainty as to what course of action to take--these are among the familiar ways in which felt difficulties arise. If we do not have doubts, are not aware of problems or issues, or are blind to the possibility of alternatives, then we are not motivated to reflect.

(ii) It is always possible for people to respond to these concerns in other ways. Doubts may be met by appeals to authority, problems downplayed, issues set aside, and actions undertaken from habit or on impulse. If we are to reflect on these things, however, then we need to be clear about the difficulty that confronts us. Why has the doubt arisen? What exactly is the problem or issue? What is causing uncertainty in this situation? In other words, rather than dismissing our concerns or shutting off inquiry, we need to suspend judgment, stay our hand, and analyse the matter.

(iii) From analysis, we turn to the question of how to respond. How are we to resolve this doubt? What solutions might there be to this problem? How could we best resolve the issue? What alternatives are open to us? While analysis provided conditions that any proposed response will need to satisfy, this phase of reflective thought consists in coming up with ideas that look to fill the bill. It consists in ferreting around, seeing possibilities, and following up leads, and in order to firm up corresponding suggestions.

(iv) In order to more clearly see what suggestions amount to, we need to reason about them. If we are to determine whether a suggestion is true, a solution sound, or an alternative acceptable, as the case may be, then we need to know what it implies. A suggestion may look to bolster a belief, but turn out to depend on unjustified assumptions when we consider it more closely. Something that appeared to be a genuine solution to a problem may have serious problems of its own, which we would likely have discovered if only we had thought the matter through more carefully in the first place. What seems to be the best alternative may, upon further consideration, turn out to have unwanted implications that change our minds.

(v) The evaluation of suggestions, to which I have just alluded, represents a further phase of the process of reflective thinking. It involves such things as checking whether the implications of our

proposals or hypotheses are consistent with what we already know, as well as gathering further facts that bear upon the issue. It some cases it will turn on the outcome of experiments in carefully controlled conditions. In everyday life as in science, all such efforts are directed at resolving the matter to which we have responded. After all, that is the aim of our inquiries and the reason we go to such pains in the first place.

Educational implications

Having outlined Dewey's account of the development of thought and described the process of reflective thinking, in which it has its flowering, let us turn to their educational implications.

Dewey's account of the development of thought underscores its social basis. Nowhere is this clearer than in the role that he assigns to discussion. The suggestion that the historical origins of reflective thought lie in discussion, and that it is the root of reflection in the individual, could hardly be of greater educational significance. If true, discussion should be a prominent feature of school education, particularly in the early years.

It is worth noting that this internalisation of social practices by the individual, is of a piece with Vygotsky's well-known claims about children's development. According to Vygotsky:

> Every feature of the child's cultural development appears twice: First on the social level, and later, on the individual level; first *between* people (*interpsychological*), and then *inside* the child (*intrapsychological*)…. All the higher psychological functions originate as actual relations between human individuals.[10]

While Dewey's hypothesis takes us into familiar educational territory, it is the internalisation of a particular form of social discourse that interests us here. On the inter-psychological level, we are dealing with collective deliberation and decision-making in which the participants contribute their ideas and subject them to critical comparison. On the intra-psychological level, this transforms into a

[10] L.S Vygotsky, *Mind in Society: The Development of Higher Psychological Processes*, edited and translated by M. Cole, V. John-Steiner, S. Scribner and E. Souberman. Cambridge, MA: Harvard University Press, 1978, p. 57.

way of thinking in which the individual looks at things from different points of view, or considers various possibilities, in attempting to address issues or problems and evaluate ideas. The educational task, then, is to make collective deliberation so integral to teaching and learning that it establishes this habit of mind in the individual.

The attempt to do this must contend with other forms of discourse that have traditionally dominated interaction in the classroom. In their narrowest form, they involve the teacher as the dominant speaker, with student response limited to answering a teacher's question or making requests for assistance. More broadly, they are characterised by the ubiquity of teacher-student interactions, and the dearth of exchanges between students. These traditional forms of interaction are appropriate so long as the teacher is primarily the conveyor of set material, but not when the development of reflective thought comes to the fore. Appropriate forms of discourse need to be methodically integrated into teaching practice for it to take hold.

To focus on collaborative inquiry is not to downplay the idea that education is essentially concerned with attaining a knowledge of subject matter. On the contrary, it is to call for more robust engagement with it. To raise questions about some matter, explore its problems and issues, see what its particulars assume and imply, and explore related concepts and ideas, is to treat the subject as something to be thought about and not just so much stuff to be committed to memory. Given time constraints, of course, there is going to be an inevitable trade-off between depth of understanding and the amount of material that can be covered. Even so, to sacrifice depth of understanding on the altar of accumulated information is a travesty of education and an insult to intelligence. At its extreme, it is to adopt quiz-show criteria as a standard for education.

The same is to be said for modes of thought that predate the ascendence of modern ways of thinking. Of particular note is the emphasis traditionally placed on deductive operations in mathematics. There is no question of neglecting deduction, but rather of ensuring that it feeds into reflection. That may be anything from students using it to deal with practical problems embedded in their studies, to application to both experimental and theoretical problems in the science curriculum.

To treat mathematical operations as tools for thought is to appeal to "the method of intelligent experience in the course that it takes". It is the antithesis of teaching them as operations to be carried out as if the student were to do nothing more than simulate a computational device.

This observation about mathematics has parallels in other subject areas when it comes to developing students' powers of reflective thought. If the danger in teaching predominantly logical subjects like mathematics is the neglect of application to a wider domain of investigation, then those concerned with proficiency of performance, as in the early years of reading and writing, can all too easily concentrate on the development of technical proficiency to the neglect of reflection. If the development of skilled performance in such things is not a matter of thoughtful engagement, says Dewey, then it "makes the subjects *mechanical*, and thus restrictive of intellectual power."[11] Dewey reinforces this point by making a claim about the tie between the way that skills are acquired and their subsequent use. "Practical skill, modes of effective technique, can be intelligently, non-mechanically *used*," he tells us, "only when intelligence has played a part in their *acquisition*."[12] This may be overstatement on Dewey's part, but the general tenor of the remark is well-taken.

Dewey also points to the danger in other subjects of amassing information to the neglect of thought and judgment. Again, this is not to downplay the need for students to be informed. Students ignorant of some matter can no more adequately think about it than they can make informed judgments. "But there is all the difference in the world," says Dewey, "whether the acquisition of information is treated as an end in itself, or is made an integral portion of the training of thought."[13] It makes an enormous difference to pedagogy, of course, but Dewey's point is really another variant of his thesis about the relationship between acquisition and use. According to Dewey, information must be acquired with the aid of intelligence if it is to be used that way. That is a bold claim, but Dewey could settle for a lesser one. Schooling that concentrates on the acquisition of information coupled with scant attention to the capacity to think about it will produce a markedly different outcome in the

[11] *How We Think*, pp. 51.
[12] Ibid., p. 52.
[13] Ibid.

capacity to use that information in a context that calls for more than recall. That hypothesis is pretty much guaranteed to be true.

As Dewey notes, it is no more possible to have students investigate every proposition that comes before them than to impart all the information that may be relevant to a subject. It is rather that, in designing and implementing a curriculum, we need to blend these things together in such a way as to ensure that we develop the ability to think. To keep the outlines of that outcome in clear sight, we could hardly do better than focus our minds on Dewey's own summation of it, according to which it is the office of education "to cultivate deep-seated and effective habits of discriminating tested beliefs from mere assertions, guesses, and opinions; to develop a lively, sincere, and open-minded preference for conclusions that are properly grounded, and to ingrain into the individual's working habits methods of inquiry and reasoning appropriate to the various problems that present themselves."[14]

A great deal more could be said about the educational implications of Dewey's account of thought. In the limited time available here, however, it is better to supplement these brief remarks with an illustration of classroom practice that will give concrete form to what has been said so far. I am referring to a program of Philosophy for Children, which has diversified in many ways as it has spread around the world, but was begun by the philosopher and educationalist, Matthew Lipman, who knew Dewey and was inspired by him.

Philosophy as a model

The guiding idea behind Lipman's work is that of the classroom as a Community of Inquiry. In more familiar terms, it involves inquiry-based teaching and learning in which students think about subject matter collaboratively. While Lipman's model of inquiry is primarily drawn from philosophy rather than science, his treatment of the inquiry process resembles Dewey's and the tools of inquiry that he introduces are sufficiently generic to find a place in almost any school subject. On the community side,

[14] Ibid., pp. 27-28.

the Community of Inquiry centres on discussion. Emphasis is placed on class discussion, but Lipman also makes frequent use of small group discussion and discussion in pairs.

Dewey never thought of using philosophy to help place thinking at the heart of school education, and it is Lipman's great insight that Dewey's home discipline could be reconstructed for that purpose. While he must be given the credit for having worked this out in both theory and practice, the debt to Dewey is evident. It is no coincidence, for example, that Lipman's most extensive treatment of thinking, *Thinking in Education*, takes its title from the chapter on that topic in *Democracy and Education*.[15] The book is a sustained attempt to show how Dewey's quest can be realised. The debt is also freely acknowledged in Lipman's autobiography, *A Life Teaching Thinking*,[16] with Lipman being drawn to philosophy by reading Dewey and then seeking out his guidance in New York late in Dewey's life when Lipman came to Columbia.

For present purposes, however, we may focus on the practical workings out of Dewey's quest in Lipman's philosophical novels and the voluminous teacher's manuals that he and his colleagues developed to accompany them. These formed the basis of the workshop programs that he and his colleagues at the Institute for the Advancement of Philosophy for Children ran for decades and used to promulgate Philosophy for Children around the world.[17] The novels are driven by dialogue and discussion between children, which is stimulated by philosophical problems and issues that arise in their everyday lives. In thinking about these things together—by asking questions, examining the evidence, coming up with ideas, and reasoning about them—Lipman's fictional characters provide a model for children in the classroom. The novels also include scenes from the classroom, providing

[15] Matthew Lipman, *Thinking in Education* (New York: Cambridge University Press, 1991).
[16] Matthew Lipman, *A Life Teaching Thinking* (Montclair, NJ: IAPC, 2008).
[17] Lipman's novels include *Harry Stottlemeier's Discovery, Pixie*, *Kio and Gus*, *Elfie*, *Lisa*, *Suki* and *Mark*, each coming with an extensive manual to guide their use in the classroom. For publication details and a brief description of most of these works, see my article on Philosophy for Children in *Oxford Bibliographies*.

Lipman with the opportunity to depict the teacher as a co-enquirer, prompter and guide, who helps children to explore issues and ideas, rather than presenting them with cut-and-dried material.

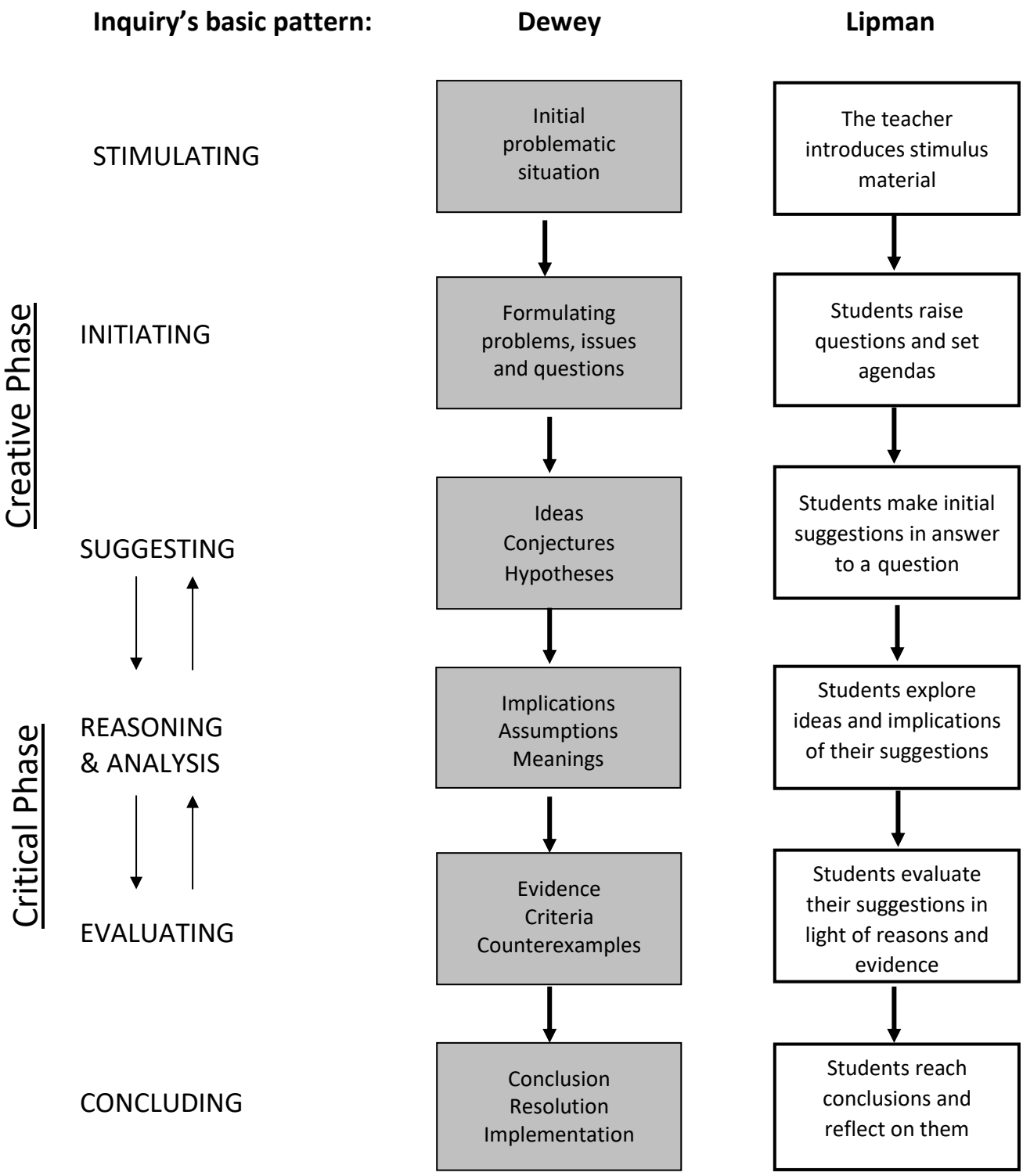

Figure 1

That Lipman's model of thinking and its development in the individual is primarily social, takes us back to Vygotsky, and that influence cannot be denied.[18] Even so, when confronted with Lipman's work, we cannot help but think of Dewey's claim about discussion being the origin of reflective thought and of the pattern of inquiry outlined in *How We Think*. Let us return to the latter, setting the pattern of inquiry formulated by Dewey alongside the process of classroom inquiry to be found in Lipman (see Figure 1). I will provide some illustrations along the way.

Just as Dewey says that inquiry begins in a problematic situation, Lipman has the teacher stimulate inquiry by introducing a chapter or section of a philosophical novel seeded with issues and problems in situations with which students can identify. Here's a snippet from *Pixie*:

> Anyhow, my chin was resting on my hand, and my elbow was on the desk.
> I don't know how long I sat like that, but it must have been a long time. All of a sudden, I remembered I was in class. And then I realized something funny. Do you know what?
> My arm had gone to sleep.
> I still can't figure it out. If all of me was awake, how could part of me be asleep?
> It was asleep, all right. I couldn't use it. It just sort of hung down off my shoulder. I couldn't even feel it, except maybe a little tingle.
> Have *you* ever had *your* arm go to sleep? Isn't it weird? It's like it doesn't even belong to you! How could part of you not belong to you? All of you belongs to you!
> But you see, that's what puzzles me. Either my body and I are the same, or they're not the same.
> If my body and I are the same, then *it* can't belong to *me*.
> And if my body and I are different, then who am *I*?
> It's beginning to sound like *I'm* the one who's some sort of mystery creature![19]

For Dewey, the inquirer next needs to identify the problem or issue and see what needs to be asked about or looked into if an adequate solution or resolution is to be found. For Lipman, the critical step in this phase of classroom inquiry is question formation. A question here is a probe into a problem domain. To ask such a question is to put your finger on a problematic aspect of the situation that will direct the course of inquiry. This may be done as a whole class, or in small groups, as befits the situation, and results in students setting their agenda.

> How could part of you not belong to you? (Roberto, Nathan, Ryan)
> Is your arm being asleep like you being asleep? (Ebony, Ross, Liam)
> What does it mean to say that you belong to yourself? (Jay, Andrew, Anne, Sophie)
> Are we the same thing as our bodies? (Natalie, Dan, Amber)

[18] See Matthew Lipman, *Natasha: Vygotskian Dialogues* (New York: Teachers College Press, 1996).
[19] Matthew Lipman, *Pixie* (Montclair, NJ: First Mountain Foundation, 1984), pp. 5-6.

Could there be a person who had no body? (Mike, Abbey, Rachael)
Are you still you when you go to sleep? (Seth, Roger, Naomi)
Could Pixie have a different body and still be Pixie? (Daniel, Alan, Banjo)
Who am I *really*? (Elspeth, Dorothy, Clair)

Depending on the case, the class may be asked to explore connections between their questions, to identify underlying themes or issues, or to vote on which question or group of questions they would most like to discuss.

Lipman is well aware that teachers may need to supplement student's questions in order to more fully explore matters. His manuals are full of discussion plans on almost every conceivable topic devised for that purpose. Many of the questions in the sample above circle around the question of what makes you the person that you are, and here is a set of supplementary questions that the teacher could use to extend that discussion, if necessary.

DISCUSSION PLAN: What is it that makes you *you*? [20]
Would you still be you if

a. you had a different name?
b. you had a different face?
c. you had a different body?
d. you had a different mind?
e. you had different fingerprints?
f. you had different parents?
g. you were born and raised in China?
h. everyone in the world thought you were someone else?

Once the investigation into these matters gets underway, both Dewey and Lipman recognize that we enter into a cycle of making suggestions and evaluating them by way of evidence, reason and analysis. This is to say that the exploration and evaluation of suggestions in an inquiry is not usually a single step-wise sequence. It tracks backwards and forwards as suggestions encounter difficulties and fresh suggestions are made. Moreover, episodes of reasoning, analysis and the pursuit of evidence may come to the fore at almost any time in the conduct of inquiry. In the classroom context, discussion may reveal that the very question being addressed is in need of clarification, for example, or a suggestion might employ a concept that needs to be better understood before we can evaluate it.

[20] Matthew Lipman and Ann Margaret Sharp, *Looking for Meaning: Instruction Manual to Accompany* Pixie (Lanham, NY: University Press of America, 1984), p. 23.

Again, an argument against a suggestion may be immediately forthcoming, or students may not alight on crucial implications until the discussion is well underway. Similarly, while students may present their evidence in making a suggestion, it can take a good deal of digging around for relevant facts to emerge. The thing that matters here is not so much the ordering of these things, but the fact that they serve interlocking functions in evaluating a suggestion.

Lipman is mindful of the fact that reasoning and analysis are skilled performances and that students need a good deal of practice to develop those skills. His manuals are replete with exercises to help develop conceptual and reasoning skills. Let me extend the text from *Pixie* for a few more lines to give the context for an example of conceptual exploration:

> Afterwards, when I talked to Isabel about it, she said, "Pixie, you worry too much. Look, there's really no problem. Your body belongs to you and you belong to your body."
> "Sure," I said, "but do I belong to my body *in the same way* that my body belongs to me?"[21]

Here's the exercise, where Lipman takes up the word 'way' and has students try to discern its uses in varying linguistic contexts:

EXERCISE: Ways[22]
Match the way that the word "way" is used in the expressions on the left with the phrases on the right.

1. As the President arrived, the police made *way* for him.
2. Ed said, "Jim's nice, but I don't like some of his *ways*."
3. The baby screamed, and his mother said, "He just wants to have his *way*."
4. Jack said, "The *way* up the mountainside is very rough."
5. China is a long *way* from Chile.
6. Within a few minutes, the ship was under *way*.
7. "Well," Jill exclaimed, "that sure is the *way* of the world."
8. "You skate your *way*," said Joanne, "and I'll skate mine."
9. Frank said, "You go this *way*, Cindy, and I'll go that."
10. "Out our *way*," said Marie, "the weather's real bad."

a. a means of passing from one place to another, such as a road or path
b. forms of conduct
c. the usual or customary manner in which things happen
d. a method or manner of doing something
e. direction
f. an opening, as in a crowd
g. a district, region or area
h. the beginning of a movement, as of a train being "under way"
i. wish or desire
j. distance

[21] *Pixie*, p. 6.
[22] *Looking for Meaning*, p. 26. The influence of Wittgenstein on meaning and use is evident here. Those who have an eye for it will be able to detect a wide variety of philosophical views and ways of working in Lipman.

Finally, here's an example of a reasoning exercise. It relates to confusion about family relationships that arises a little later in *Pixie*:

EXERCISE: Inferring family relationships[23]

1. If Mary is the sister of Alex, is Alex the sister of Mary?
2. If Carl is the older brother of Gwen, is Gwen the older sister of Carl?
3. If Debbie is Frank's niece, is Frank Debbie's uncle?
4. If Toby is Edgar's cousin, is Edgar Toby's cousin.
5. If some of your cousins are boys, does that mean that
    a. all your cousins are boys?
    b. some of your cousins are girls?
    c. none of your cousins are girls?
    d. none of the above?
6. There are two brothers. Mike and Luke Jones. Each has a sister. Does that mean there are two brothers and two sisters in the family?
7. If you are your mother's oldest daughter, must your sister be your mother's youngest daughter?
8. If you are an only child, does that mean that your father's father is your only grandfather?
9. If you are the youngest of 20 children, does that mean that you have sisters?
10. Are your grandmothers related to one another?

In coming to the final phase of the inquiry process, I should take the opportunity, however belated, to draw attention to a difference between Lipman and Dewey that could hardly be overlooked. The essentially verbal nature of Lipman's approach to classroom inquiry is obviously at variance with Dewey's use of practical activity. Anyone acquainted with Dewey's Laboratory School at the University of Chicago will be aware of his reliance on workshops where students' inquiries largely approach problems hands-on and work with materials to address them. The results here often take physical form. In Lipman's case, the outcome of an inquiry is more likely to be a better understanding of an issue, appreciation of a different point of view, or having changed one's mind about something on the basis of reason and evidence.

Dewey's insistence on application in the training of thought is of a piece with his resolve to connect what happens in school with the life of the child and of society beyond it. I mention this because Lipman also went to some lengths to connect what children discuss in the classroom with their lifeworld. This is to say that, in the wider scheme of things, the outcome of Lipman-style inquiries

[23] *Looking for Meaning*, p. 90.

is not simply an intellectual training for academic purposes, but one that has more general bearings on their conduct beyond the classroom. So, the contrast with Dewey is not so great as it may seem.

In sum, we can see that Lipman has followed Dewey very closely. He has adhered to Dewey's Vygotskian thesis that reflection grows out of discussion and, more broadly, to the idea that thinking and inquiring together is the means by which students learn to think and inquire for themselves.[24] Looking at the overall educational outcome, it would be reasonable to sum up by saying that Lipman's project is clearly a Deweyan one.

Although a mere after-word here, it is to those who have projected a line from Dewey through Lipman into the contemporary world of education that we must turn in order to appreciate the extent to which Philosophy for Children has carried the torch for Dewey. Since time is up, I cannot even begin to give an account of the extensive literature that comes out of this movement. The best I can do is to point to my selective survey of the literature as a starting-point for anyone who is interested.[25] Beyond that, are the numerous organisations and countless schools and individual classrooms around the world where his influence is felt. Through adaptation and creative reworking, the movement that has grown out of Lipman's work is evidence that Dewey's quest to place thinking at the heart of school education is still alive and well.

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[24] It is typical of Lipman that even strengthening exercises like the ones above are meant to involve discussion.
[25] See Philip Cam, Philosophy for Children, in *Oxford Bibliographies*.

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