Towards a dialogic theory of how children learn to think

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ABSTRACT

This paper develops a dialogic theory of thinking and of learning to think that has implications for education. The theory is offered as a contrast to theories that are based on both Piaget and Vygotsky. The paper proceeds by unpacking and interweaving three key concepts: dialogue, thinking and learning in order to argue that learning to think can be understood as a shift in self-identification towards becoming dialogue. This theory is then applied to the context of primary classrooms through the analysis of three short episodes of interaction. These analyses offer evidence that a dialogic theory of learning to think can offer new and valuable insights into classroom interaction with the potential to inform pedagogy.

1. Introduction

In the centenary conference of the birth of both Piaget and Vygotsky held in Geneva in 1996 Jerome Bruner gave a keynote in which he claimed that research into how children learn to think could all be located on a continuum with Piaget on one end and Vygotsky on the other (Bruner, 1996). In 2011, some 15 years later, this still seems to be the case with many articles on how children learn to think tracing their intellectual sources either to Piaget or Vygotsky. At the same time the assumption apparently shared by both Piaget and Vygotsky, that the development of thinking could be adequately described in terms of essentially mathematical or logical structures and procedures, has recently been heavily challenged by neuro-science research (e.g. Damasio, 1994; see Wertsch, 1996; Wegerif, 1999, 2011, for a more detailed account of the rationalist assumptions shared by Piaget and Vygotsky). As Shaun Gallagher brings out in a recent paper, the latest cognitive development and neuroscience research indicates not only that infants learn to think in the context of relationship and interaction but also that their thinking is an aspect of those relationships and interactions and cannot easily be abstracted from them (Gallagher, in press). In the light of these developments we need a new and different way of conceptualizing thinking and what it means to learn how to think. In this paper I sketch out a dialogic theory of learning to think which offers a radical alternative to both neo-Piagetian and neo-Vygotskian theories because it is entirely described in terms of the quality of relationships without reference to 'cognitive structures'. I progress the argument through a conceptual analysis of three key terms: dialogue, thinking and learning. I then illustrate the potential value of this theory for understanding how children learn to think with analyses of episodes of classroom interactions.

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2. Part 1: The argument

2.1. Question 1: What is a dialogue?

Below I unpack the concept of dialogue, outlining 6 key features of a dialogic approach to education.

2.1.1. Dialogic as the experience of being on the inside of dialogues

When we think of dialogues we probably think of empirical dialogues that occur at a certain place and time between particular people. In doing this we are looking at dialogues as if from the outside. But dialogues also have an inside. On the inside of the dialogue we might be talking about people who are not present, distant places and past or future events. From the outside dialogues are always situated in space and time but when lived from the inside dialogues establish their own space and time. This is what distinguishes a dialogue from an interaction. Robots can interact but their interactions remains in external space. When humans enter into dialogue there is a new space of meaning that opens up between them and includes them within it.

The distinction between taking an external view of dialogues and an internal view is so obviously a part of human experience that it hardly needs justification. It is at the heart of all theories that could be called dialogic. Socrates, for example, distinguishes between living words that are carried on the warm breath of relationships and the dead words of written accounts that are like seeds left on flagstones in the sun (Plato, 2008). This distinction is picked up by Paul in the New Testament in the resonant phrase 'the letter kills but the spirit brings life' (New Testament, 2 Cor 3:6) and is clear in Buber's distinction between the attitude of objectification, 'Ich-Es' ('I-it') to the attitude of dialogue 'Ich-Du' ('I-thou') (Buber, 1958; New Testament, 2011). The external 'objective' view that locates things in their proper place is 'monologic' because it assumes a single true perspective. The internal view that takes the other seriously is 'dialogic' because from this perspective meaning always assumes at least two perspectives at once so it is reason through and across difference ('dia' from the Greek is mostly translated as 'through or across' so 'dialogic' could be translated as something like 'logic across difference' or perhaps as meaning emerging from the interplay of different perspectives).

2.1.2. Dialogic space

I first found the term Dialogic Space useful when trying to answer the question why some groups of children were more successful in solving reasoning test problems than others. The more successful groups seemed to be listening to each other, asking each other for help and changing their minds as a result of seeing the problem as if through the eyes of the others. In less successful groups children related to each other differently either competing as individuals to see who could get the right answer or not challenging or criticising each other in order to maintain group solidarity.

The term 'space' here is a metaphor and metaphors can be misleading. It could equally be called 'Dialogic Time' or, in Bakhtin's term, a 'chronotope' (i.e. a 'space–time') and is similar to Bakhtin's notion of 'Great Time' which he proposes as the 'space' of dialogue between the voices of all times and places explaining why he, a 20th century Russian could fruitfully engage in dialogue with voices from ancient Greece (Bakhtin, 1986, p. 170). The metaphor of 'space' here is not so much from physical space as described by Aristotle and Euclid but from the use of the term 'space' to refer to any multi-dimensional map or graph, like the idea of a 'Search Space' in computing which is the set of all possible solutions for a search, the idea of a Hilbert Space in mathematics or the widely used idea of a Design Space, which maps the many dimensions required for the design of any given artifact (Boden, 1990; Sharples, 1999). The main difference between Dialogic Space and these other kinds of spaces, is that each position in a Problem Space, Hilbert Space or a Design can be completely specified. The specification of the exact meaning of each position in a dialogue depends on succeeding utterances and so can never be closed down (Bakhtin, 1986, p. 171). In other words 'Dialogic Space' is more of a dynamic continuous emergence of meaning than a static 'space'. Perhaps the term space is misleading and the single term 'eventing' might be more apposite (Badiou, 1988) but the metaphor of space allows us to speak of the opening, closing, widening and deepening a space all of which moves prove to be useful in the classroom.

2.1.3. Inside-outness outside-inness of dialogic

One important defining feature of a dialogue is the presence of the other on the inside of the formation of my utterances even before I open my mouth to speak. If my son Danny and I are playing with Lego and he shows me a Roman catapult he has made and I say: 'That is pretty cool, but I think it needs something: let's try putting a bar here to stop the arm going too far.' You might think it is obvious that my utterance starts with me saying, 'That is pretty cool,' but even as I framed that utterance Danny was there on the inside because I was speaking to him. The words 'That is pretty cool' came quite naturally but I would probably not use these same words if my boss, Sir Steve Smith, the Vice-Chancellor of Exeter University, showed me his latest report on how the university is going to reach its research income targets. In other words I naturally use Danny's vocabulary and style because I am responding to him. In any dialogue the person you are speaking to, the 'addressee', is always already there at the beginning of the utterance just as you are there already on the inside when they frame their reply to you. In any dialogue we do not just address ourselves to the other as a physical object but we address a projected image of them, which includes our idea of how they are likely to respond to what we are saying (Linell, 2009; Rommetveit, 1992).