

# Observing systems – how do we see what we see?

Laurinda Brown

*University of Bristol, Graduate School of Education*

*...there are always theoretical assumptions involved in research, determining which phenomena are visible and which are invisible and making different educational goals and pedagogical strategies either thinkable or unthinkable. It follows that engaging in the discussion and development of educational theory is not an optional luxury but an essential component of what it means to be an effective educational researcher. (Wegerif, 2008, p. 361)*

Look at these extracts from a transcript and make a note of what you notice. What draws your attention? In other words, what do you see?

- There were some counterexamples to that. Remind me what that is.

~ One that does not fit the conjecture.

- OK, Ben has done something very mathematical. He's gone back and looked again and changed it [the conjecture].

~ [Later in the same lesson.] All two digit numbers will add up to 99. [David's conjecture is written on the board.]

~ I've got another counterexample to Ben's.

- This is how mathematicians work; are there counterexamples? Are two conjectures actually linked and so on.

I have taken these extracts from a report of findings (Brown, 2007, p. 7) . One thing discussions of such 'naked' data have shown to me is the importance of results being accounted for – you cannot see what I saw when reporting this without me telling you!

However, in one session of the working group 'From a study of teaching practices to issues in teacher education' at CERME 5, different participants who had used transcript data in their papers were asked to use their analytical tools and theoretical framework to analyse the same transcript that had been taken from a videotape of a lesson. Those of us who accepted this task knew little about the context of the classroom we were viewing beyond basic information such as the age of the children. The invitation was to share our findings and be articulate about the process we had each gone through and problems we encountered so that these frames could be open to discussion. The striking thing, to me, about that exercise was that, although the frames were richly diverse they all identified one particular part of the transcript as being worthy of highlighting. The interpretations were different, but these different interpretations somehow added to our thinking about a complex situation rather than becoming a focus for argument or people defending their own position as right against the insights of others. What seems important is that we are able to say how we looked and to say what we saw! I am still amazed that the different frames identified a commonly seen important focus in the transcript!

In the lecture at YESS4 I will ask you to share what you saw in the extracts from a transcript above. Will members of the same working group 'see' the same? How do you look? Will people in different working groups who use similar analytical tools 'see' the same? Do we need to see the same? What is truth in educational research? What are your ontological assumptions? (Wegerif, 2008, p. 347).

### **You look and you see more**

A longitudinal-study researcher who worked in my institution before leaving to head up the Teaching and Learning Research Project in the UK, Andrew Pollard, once described being an educational researcher as follows (paraphrased) in a discussion:

You keep looking at what you are interested in and one day you find you see more than anyone else.

I have an image of a wine taster (seeing for me is any senses, linked to growing awareness) who has spent their life tasting – is it a surprise that the distinctions they can make are so much more refined than mine? I can just about do red, white or rose – with a sense of more or less bouquet or smell – what is it that you see in relation to wine? In relation to your research area?

You are on a journey, a process of developing your skills as researchers – you can't escape theoretical, philosophical or methodological discussion.

In the lecture at the conference I will explore these ideas in relation to my own work – sharing my account of what I think learning is – how we come to know more – and how this has led me to an awareness of the making of distinctions as the ground of how we operate as human beings. As a teacher educator, I am confronted by student teachers who do not know how to act in a classroom and so my attention was taken by those writers who linked coming to know (seeing more) with doing such as Bateson, Maturana, Varela, Rorty and Lakoff.

## **References**

Brown, L. (2007) 'From practices to theories to practices ... in learning to teach mathematics and learning mathematics', CERME 5, Larnaca, Cyprus.

Wegerif, R. (2008) 'Dialogic or dialectic? The significance of ontological assumptions in research on educational dialogue', *British Educational Research Journal* Vol 34, No 3, pp347-361.