



NEIL MERCER

Why I study...

interthinking

I HAVE had a special interest in the study of language and thinking ever since I was a student. One reason back then, perhaps, was that the ‘big names’ in the field seemed particularly colourful characters – Chomsky, with his politics; Whorf, talking with the native Americans; Wittgenstein, who worshipped Carmen Miranda; Bruner, the charismatic; Bernstein, so controversial; and Vygotsky, the James Dean of developmental psychology. And, as that multidisciplinary list illustrates, the fact that the topic could not be contained within psychology seemed a sign of its significance. At first, I was a laboratory-bound psycholinguist, but the attraction of trying to make sense of what people did with language in real life drew me outside.

Beginning work at the Open University made me realise just how immensely productive, and problematic, team-based activity could be. So I began trying to describe and evaluate the ways people use language to pursue joint intellectual activity: when they are solving problems together, creating a product, trying to reach some shared understanding, or engaging in teaching-and-learning. Most of my research has been based on recordings made in educational settings, but I have also used data from counselling sessions, offices, workshops, courts of law, living rooms, phone calls and e-mail exchanges.

This experience has persuaded me that the usual conceptions of language employed in psychology do not adequately recognise its most distinctive and important function, which is as a tool for thinking collectively. In evolutionary psychology, for example, the importance of the emergence of language in the history of our species is usually explained in terms of our ancestors becoming able to transmit complex information with great precision. So Steven Pinker (1994, p.15) writes: ‘Simply

by making noises with our mouths, we can reliably cause precise new combinations of ideas to arise in each other’s minds.’

Of course humans do use language to share information in this way and succeed quite well, on the whole. Yet on a practical, everyday level we all know that we do not reliably make people understand exactly what we mean. Misunderstandings regularly arise, despite our best efforts, because there is rarely one unambiguous meaning to be discovered in what someone puts into words. As a system for transmitting specific factual information without any distortion or ambiguity, the sign system of honey bees would probably win easily over human language every time. As Guy Browning, *The Guardian’s* commentator on everyday life, pointed out:

A shoal of a million fish might not be able to write Romeo and Juliet between them, but they can change direction as one in the blink of an eye. Using language, a human team leader can give an instruction to a team of six and have it interpreted in six completely different ways. (The Guardian, 6 March 1999)

It’s also important to note that variations in the interpretation of words are not always ‘misunderstandings’. When we are dealing with complex, interesting presentations of ideas, variations in understanding are quite normal and sometimes are even welcomed. Great minds don’t think alike: how otherwise could there be new interpretations of works of literature or the results of scientific experiments, and why would we be interested in them?

In cognitive psychology, language is usually treated as an abstract system of rules, functioning within individual heads. Discursive psychologists treat it as a rhetorical tool for accountability and

implementing social action. Though these positions are radically different, they both miss what is for me language’s crucial function – and the one which really gave us our advantage in the evolutionary struggle for survival – which is that it enables humans to combine their intellects into a mega-brain, a problem-solving device whose power can be greater than that of

‘language does not only enable us to interact, it enables us to interthink’

its individual components. With language, we are able not only to share or exchange information, but also to work together on it. We are not only able to influence the actions of other people, but also to alter their understandings. By talking with a teacher, you may learn; through hearing a good argument, you may change your mind. Language does not only enable us to interact, it enables us to ‘interthink’ (Mercer, 2000).

One of the problems in studying language and thinking is, of course, that only the language used is ‘visible’. But while we cannot observe directly what people think and how this changes, we can describe the communicative strategies they use when working together; we can observe what mental resources they contribute, through speech, to a common problem-solving task; and we can evaluate the effectiveness of their attempts. Everyone picks up ways of using language to work intellectually with others, but – as with any communicative and intellectual skill – they may not be aware of what they do, or be succeeding as well as they could.

In observational research on groups of children working together in primary schools, my colleagues and I found that some kinds of dialogue were associated with more effective problem solving than were others. Building on this, we worked with teachers to help children recognise and use the most effective strategies for

WEBLINKS

The Open University Centre for Language and Communications:

www.open.ac.uk/education-and-languages/centres/clac/research

‘Thinking Together’: www.thinkingtogether.org.uk

'interthinking'. As a result their group-based activity in class became more productive, and we were able to demonstrate that this was associated with qualitative and quantitative changes in their language use (Mercer *et al.*, 1999).

What is more, we found that after this training in using language for collective reasoning, children improved their individual problem-solving capabilities (their scores on Raven's test of nonverbal reasoning were raised to a statistically significant extent, compared with controls). This finding has significance for developmental psychology as well as education, because it supports Vygotsky's (1978) theoretical claim of a developmental link between the social plane and the psychological plane, between the 'intermental' and 'intramental'.

Although I have also done some studies of occupational counselling and work-related problem solving, the potential of this approach for other areas of applied psychology has still to be properly explored. On a more theoretical level, it could offer the basis for a new line of enquiry into the relationship between social, communicative activity and individual cognition. I would welcome some interthinking about where we might go from here.

■ Neil Mercer is Professor of Language and Communications, and Director of the Centre for Language and Communications at The Open University, Milton Keynes, MK7 6AA. Tel: 01908 653843; e-mail: N.M.Mercer@open.ac.uk.

References

- Mercer, N. (2000). *Words and minds: How we use language to think together*. London: Routledge.
- Mercer, N., Wegerif, R., & Dawes, L. (1999). Children's talk and the development of reasoning in the classroom. *British Educational Research Journal*, 25(1), 95-111.
- Pinker, S. (1994). *The language instinct*. Harmondsworth: Penguin.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.