SEMIOTICS WORKING GROUP

A report on the meeting at the Institute of Education 9th November 1996
Convenors: Paul Ernest, Exeter University; Adam Vile, South Bank University.

This was the first meeting of this group and was very well attended. It is clear by the level of interest in this group just how fore grounded semiotic issues are becoming within our community. The aim of the group is to bring together those mathematics educators with an interest in semiotics in a context in which ideas, approaches and perspectives can be shared and developed. The spirit of this first session was certainly one of discussion and there was clearly a need to make sense of certain theoretical ideas and notions.

Paul Ernest began the session with a brief theoretical introduction which prompted many questions and much discussion around some difficult ideas. Parallels and differences were drawn between Peircian and Structuralist semiotics and it became clear that in a future session these theoretical perspectives will need further exploration. Reference was made to the work of Vygotsky, much of his theoretical work concerned semiotic notions and specifically semiotic terminology and analysis. Although his work was not discussed in detail at this meeting it will certainly be examined at a future meeting.

A first bibliography of related works was distributed (this may now be found on the www site). Paul then went on to give an example of one way in which a structuralist semiotic approach could be used to assist the analysis of an extract of a student's mathematical writing.

Analysis of text from this perspective is well established in linguistics yet there was much discussion around the question of the formal nature of this methodology. On the one hand it was suggested that there was little benefit to be had from abstracting to more symbolic representations of a discourse yet there was a feeling that the simplification that this abstraction brought assisted in the interpretation of the underlying structure of the text. This issue, the nature and value of formal analysis was flagged as an item for further discussion in future meetings.

An example of an alternative approach to an analysis of text was then presented by Adam Vile. This involved a diachronic look at a number of writing extracts from the history of one student. Initially members of the group were asked to work in groups to attempt an analysis based upon their own reading of the signs and then a partial

analysis and a framework for such an analysis was offered by Adam. This form of analysis, in a sense, owns up to subjectivity yet provides a framework for asking questions which may help in "reading the signs".

It was suggested that as an empirical methodology semiotic analysis offers a way of "seeing", discussing and of making new sense of phenomena and that its value may lie in its ability to create useful descriptions. Of course, as is the case with all qualitative methodologies, there are questions of trustworthiness, consistency and credibility of readings of signs and text in any semiotic analysis. The question of how exactly to establish such credibility for semiotic analysis (and how researchers may become better readers of signs) was raised. This is clearly an important issue and one which will be discussed in greater detail at a future meeting.

In summary Paul re-iterated the commitment of the working group to make progress in the clarification and presentation of semiotics in mathematics education. The names and e-mails of the participants were collected and all participants will be contacted before the next meeting for comments and proposals for that meeting.

Future plans of the group:
After the initial meeting, in which the nature of the discussion was general, seSSIOns will be planned with specific foci. For example :

- Semiotic theory
- Semiotics as a research methodology
- Forms of semiotic analysis.
- Possible influences of a semiotic perspective on teaching and learning

Other issues and questions may arise from our survey of participants. We hope to encourage contributions in the form of short presentations, demonstrations and discussion groups.

There is a semiotic working group World Wide Web page at the following address:
http://www.sbu.ac.uk/-vileawa/Semiotic_WG/ .
This will act as the focal point for the group. On this page will be a statement of purpose, description of activities, bibliography, any papers that the group produces, emails and links to other semiotic sites. Of course discussion may also continue via the mathematics education mailing list.

The working group will meet again at the next BSRLM meeting.