

Communications

A comment on “Audience, style and criticism”

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In this issue of FLM, Pimm and Sinclair examine the relationships between the style of mathematical texts and processes – ideological, editorial and inspirational – of producing them. The anthropological field known as the ethnography of speaking addresses the related role of the creative individual who performs texts for the enjoyment and evaluation of a community. Linguist John Gumperz and anthropologist Dell Hymes framed the ethnography of speaking in the 1960s at the nexus of cultural anthropology, folklore and linguistics. Style in verbal art is a central concern of the field, because it helps account for the ways in which performers and audiences interact as they recreate and modify traditions of their culture.

For Pimm and Sinclair, the aesthetic features of mathematical writing contribute to the discipline’s “sense of decontextualised authority” (p. 23). This observation anticipates research in the ethnography of speaking. While a great deal of anthropological poetics seeks to understand connections between an expression and its context, later work in the ethnography of speaking considers features of texts that allow them to be decontextualized, that is, removed from one situation and presented again, perhaps by a new speaker, in a new situation (Bauman and Briggs, 1990).

Some texts are closely tied to context and are unlikely to become the basis of a new performance. If a teacher tells a class, for example, “Use any method you like when you complete Thursday’s homework on quadratic functions,” the text is too situational to be repeated appropriately by many other speakers. Taken literally, this text will probably not become a discursive resource for any community. On the other hand, some texts are constructed so that they can be removed from the immediate context, and performed again by a different person at a different place and time. Folkloric, ritual and religious expressions often have formal features that make them relevant during multiple presentations. The same might be said of mathematical proofs. The form of proofs help to ensure that texts are decontextualizable and that they are meaningful when presented by others. Clearly, a mathematical idea can be established as true within a narrative framework, so creating decontextualizable texts is less about their truth and more about establishing the way in which authority is regarded in the discipline.

In some ways, the denial of the narrative voice in professional mathematics discourse resembles the denial of authorship of many religious discourses around the world in which the human medium is the performer but not the

author of the text. Of course, we do keep track of authorship in mathematics through named theorems and published papers. However, the absence of the first-person voice in specialists’ expressions is a way to construct the agency of the few in both mathematics and in religion. Are mathematicians creators who pose as prophets? In spiritual discourses, whether in global or small-scale traditions, we can find many cases of metaphorical or stylized speech – the “broad brushstrokes” that are only fully understood by a few (p. 26).

Bauman’s analysis of communicative ideologies of 17th century Quakers in *Let Your Words be Few* provides a point of comparison. The mathematician’s “sense of solitariness in communion with an apparently pre-existing entity” (p. 27) is reminiscent of Quakers’ public, collective, but silent worship. In this time period, a Quaker congregation sat silently together, each person waiting to receive an *opening* – a message from the deity that was directed to the members of the audience rather than the individual. Only then would a person speak. By avoiding inaccurate or personally motivated speech, a Quaker congregation maintained the integrity of each individual’s connection with the greater spirit. Besides silence, the other major communicative symbol was plainness in speech. One wasn’t artful (compare writing a proof). For Quakers, plain speaking was a marker of identity and a method for being truthful.

Quaker communicative ideologies differ from those of contemporary mathematicians, however, in the value placed on texts. Quakers’ radical egalitarianism led them to regard scriptures as merely historical documents, no more authoritative as the word of God than the spontaneous speech of a parishioner sharing an opening with a congregation. Producing decontextualizable texts was not valued. In both mathematical and Quaker traditions, the audience attended to style as a marker of authentic inspiration, but different attitudes towards authority compelled the two communities to embody knowledge differently.

For mathematics educators, Pimm and Sinclair’s paper is significant because it outlines a method of analyzing the production of texts, either verbal or written. This will allow a better comparison of professional and student practice. Mathematics does not have much of an expressive or critical tradition – a shared language – for mathematical competencies like strategic thinking, adaptive reasoning, and productive disposition (National Research Council, 2001), so it is difficult for teachers to identify them consistently and for students to learn to value them. Many educators invite these varieties of speech, but the discipline lacks a tradition regarding how they sound. Tracing the relationships among text structure, criticism, and audience authority will expose the patterns of speaking and silence within our discipline.

References

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