

to be gone beyond

The ordinary day of a ICME 8 participant

My normal day at ICME 8 began at 8:30 a.m. with the Working Group and finished after midnight with an andalusian dinner, preferably outside in a courtyard ventilated by some tiny emanations of freshness. Besides lunch for 600 pesetas in a small restaurant next to the campus, my day was punctuated by breaks devoted to refreshments, to meetings, to visits to exhibitions. The non-commercial exhibition was for me an oasis between two sessions. It allowed me to meet colleagues, and to discover new publications. I also used the strategic position of a small bench at the crossing-point of the alley by the maths and physics buildings and the one that led to the commercial exhibition: I looked for known faces in the flow of participants. I simulated reading the congress daily newspaper, "Diario de Sevilla", but in fact studied the wave of people that flowed close to me. One morning the two pages devoted to veterans (participants that have attended all the ICME congresses, "old hands" in English) nevertheless captured my attention to the point that it distracted me from my supervision. Not one woman in the eight or ten veterans! "Beards" could have been used instead of "hands", following the sexist French way of speaking. I knew them all, and nevertheless could not recognize their faces on the photograph taken during the first ICME at Lyon in 1969.

New trends

The specificity of this ICME resided in the dialectic contrast between internationalism and hispanism.

The Web constitutes without any doubt the greatest novelty since ICME 7. The three Ws have become a classic ornament at the bottom of name cards. Servers of associations and various organisms are now flourishing. The Web results in some new possibilities for communication within the community of mathematics educators and the appearance of new bibliographical data-bases, such as that of *Thales*, the Spanish association of mathematics teachers, and the French data-base regrouping publications on mathematics education in the French language (two demonstrations took place).

The principle of drawing on international solidarity to enable less wealthy countries participate in ICME began to operate in Quebec in 1992. It was taken a certain extent further at Sevilla where more than 7% of the delegates (260 delegates from 65 different countries) were subsidized through a 10% surcharge on the standard registration fee.

ICME 8 was marked by a strong Spanish imprint: the thick air of the andalusian heat, the meals schedule that challenged the Anglo-Saxon and Helvetic traditions, and the resonance of the language, infinitely more present than French was at ICME 7 (900 Spanish participants, 554 from Latin America).

The history of ICME is forged over the course of time. Concluding the Congress, Mogens Niss, secretary of ICMI, sketched this evolution: *from* attention to problem solving and to curriculum design *towards* more interest in cognitive aspects, meaning and making sense, in teachers' and students' attitudes and beliefs, in the professional development of teachers, in proof and geometry, in teaching at university level.

Such reflections that take for their object a process in which one is personally involved are not without the effect of provoking a light dizziness of anxiety mixed with a shiver of curiosity. Where are we situated in this evolution, to what extent do we contribute to the constitution of this history, are we valiant heroes or resigned and perhaps resentful characters? I ask you the question too.

Final resolution

Four years remain for me to start learning Japanese.

The lore of large numbers: The verbal and social fabric of big conferences

DAVID PIMM

*In halls the people come and go,
Talking of Ubi D'Ambrosio*

ICME occurs only once every four years. The social pressures to attend mount in the run up to the conference. And many past attendees do return, though this possibly reflects once again a triumph of hope over experience. Due to the time-lag since the previous one, hard-won knowledge about ways of contending with such a meeting is lost. This includes how to function when there is insufficient room for everybody, with simple individual choice a poor allocator; how to behave when there is a need to target specific talks and create space around them in order to be near the front of a queue; whether to adhere to a narrow and constraining, but frustration-avoiding, policy of "only go to people you already know speak well or interestingly". The halls in Sevilla rang with complaints of people unused to not getting what they wanted.

There are so many people. And there is such a weak allegiance to any possible speaker, group, or whole, that what occurs is rampant individualism, unfettered by any responsibility to a larger entity than themselves. There is so much going on, that *surely* something more interesting than where they currently are *must* be happening somewhere else. So much of what felt like gentle air conditioning in the lecture theatres was actually caused by the constant flow of people in and out of every point during a talk.

People do indeed travel hopefully rather than arrive, and do so with little awareness of their fellow travellers. An intellectual territorial imperative seems to pull them to roam rootlessly, nomadic hunter-gatherers adrift in a new and unfamiliar terrain. I too moved from place to place only to find I had remained in the same land, that of the reciting in public of pre-prepared written text, in most cases more or less tinged by the unaware imperialism of the native English speaker. Language choices also contain political traces. For example, Luis Puig had been asked by the ICME planning committee to speak in English rather than his native tongue. There were a considerable number in his audience who thought he should be speaking in Spanish (some of whom believed he would be, having been misled by an ambiguously-placed asterisk marking the single Spanish-language lecture in that time slot). Despite being invited to leave before the talk began, those preferring Spanish waited and left in concert a few minutes after he started to speak — a

mass exit to make a political point. Alas, much of the force of this protest was muted by the replacement rush to fill the vacant places, and the continual arriving and departing of academic nomads throughout the remainder of the session.

This ICME was, as usual, about public and private words. The public ones were mostly in English, the rest in Spanish, and the former seemed evenly divided between native and non-native speakers of English, despite the participants not being so divided. The private exchanges occurred in the ingenious polyglot mix that the geographic and linguistic diversity of such a global meeting requires.

How words are offered always matters. What audiences were often faced with were unstoppable fast-flowing streams of talk, where the features of the form frequently swamped the content. They were continually met by non-native speakers of English unnecessarily apologising despite their excellent spoken English, while I felt that many monoglot English speakers should have apologised for their inability to speak comprehensibly in public. How can it be that once again so few “experienced” presenters seemed able to master the basics of talking to an audience of more than twenty? (In particular, what is an OHP transparency for? whose visual space is it, the audience’s or the speaker’s? if the former, why does the speaker stand in front of it? is it legible even a quarter of the way back in the room?)

I heard speakers say things like: “Tell me if I am talking too fast”, or “I’ve been told I talk in 9-point type”, or “Do please interrupt me”, all of which seemed to show the presenter’s self-awareness. Yet, even when speakers were repeatedly asked to slow down or speak louder by an audience, such superficial “awarenesses” disappeared inside ten seconds at most. More is required for action to be influenced; there are no self-awareness points to be worn merely by mentioning the possibilities.

I have never been more aware of the rigid syntax of most meeting rooms, and how inflexible seating and spaces can shape what can and cannot occur. This became clearest in the Working and Topic Group sessions, one contributing factor to the common complaint that: “This is supposed to be a working group not a listening group”.

Despite the actual presence of so many people delivering so many words “live”, the most engaging and stimulating encounter and attention-commanding presence for me (and a number of others to whom I spoke), came with the projection of a half-hour videotape orchestrated predominantly by Ubi D’Ambrosio in an audience with Paulo Freire, who was unable to travel to Sevilla due to ill-health. We could hear the Portuguese being used, yet also benefit from a spoken translation subsequently recorded on top of the original sound track — the best of both linguistic worlds.

Freire spoke of children needing to discover a mathematical way of being in the world *before* knowing, for example, what 4×4 is. He gently bemoaned the fact that he had not made time to awaken the mathematician dormant within himself, but added: “I know that if he had woken up, he would have been a good mathematics teacher”.

There were some lovely verbal resonances, whether also there in the Portuguese, or arising simply as a consequence of a particularly felicitous translation. He spoke of spurring students into “assuming” themselves as mathematicians (which reminded me of the need for this assumption above all before mathematics in school is possible), and of the importance of the ontological “inconclusiveness” of human beings. The lack of a conclusion, and hence the openness to things being otherwise, is a property of all living things, but humans can additionally be aware of their inconclusiveness, and so act differently. Both “assumptions” and “conclusions” have mathematical overtones, with unexpected links to what he was discussing. He claimed that education rests on “assuming one’s aware inconclusiveness”. “How incongruous to be inconclusive”, Freire gently opined. He is currently working on a book with the working title: “The education of teachers in necessary fundamental awarenesses”. I sincerely hope that this tape, specially prepared for ICME-8, is made widely available to the global mathematics education community.

This short piece is inconclusive too. It records a few simple reactions to being at ICME-8. I am left wondering where I shall be in the summer of the year 2000.

(I would like to thank those I spoke to about their experiences in particular Eileen Phillips — DJP)

Science is crude. life is subtle. and it is for the correction of this disparity that literature matters to us

Roland Barthes
