

may be necessary to have another look at formalism and rigor. The same is true for mathematics education. Perhaps something similar to the courageous approach of Louis P. Benezet, later endorsed by Hassler Whitney and Andrew M. Gleason. By the way, I remember the great respect of Hassler Whitney (President of ICMI, 1979-1982) for FLM and the way David Wheeler conceived and edited it.

These issues pose a different challenge to editors of specialized journals. It may be necessary to have a different look at strict peer-review evaluation and to conclusive finalization of papers and to allow for a new style of writing mathematics education. FLM, in the spirit of its founder, David Wheeler, may set the example for this openness, needed and urgent, to make mathematics education a powerful instrument in our fight for the survival of our threatened civilization on Earth.

A subtle journal of sudden enlightenment

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Any journal worth its salt provides and maintains a protected and constrained space, with particular characteristics and values. While the space may not be strictly guarded, it will have guardians: those who keep an eye out for what is taking place, who know about and who care about what has happened there before and what is happening there now, and what may happen there in the future.

Mathematics education suffers acutely from its own version of the forgetful functor, the loss or even deliberate shedding of its past, the important sense that things were not always like this, nor consequently need they be this way in the future. (Textbooks provide one interesting example of this: see Fauvel in FLM 9(1).) This journal comprises an important record of that growing, collective, on-going history, one that remains provocative and protected. To know the past can help to free one from the tyranny of the present. In order to see the future more successfully, a strong sense of the past, as well as a feeling for how things change, can be extremely helpful.

Mathematics education is still a young field, sometimes viewed as too young to have much of a history or to have developed its own internal historians, as opposed simply to those ever-aging elders who have merely lived through it (*pace* the *International Journal for the History of Mathematics Education*). Almost all of those who have ever worked in it are still alive in the memories of the current older generation (including David Wheeler, this journal's founder and long-time first editor). But this will not always be the case and, before too long, many key figures will only be known and knowable through their writing.

One of FLM's characteristics has to do with a profound focus on theme and narrative arc, rather than on method and tradition (and an underlying "study") [1]. This, in conjunction with the moderate length of FLM writing, brought to mind the recent Nobel laureate Alice Munro's short stories.

Here are two comments about her work, comments that reverberate through more than a few of the articles in this journal:

all is based on the epiphanic moment, the sudden enlightenment, the concise, subtle, revelatory detail. (Holcombe, 2008)

Munro's writing creates what amounts almost to an empathetic union among readers, critics most apparent among them. We are drawn to her writing by its verisimilitude—not of mimesis, so-called and much maligned by Heble as "realism"—but rather the feeling of being itself or [...] of just being a human being. (Thacker, 1998, p. 197)

Short stories are not for everyone. In mathematics education, some want more detail, some want more claims, more evidence, more argument. No one really wants more citations, surely. Yet the reference list is sadly the biggest growth area (like an academic hypoxic dead zone). A large list often intimates a defensive nervousness in an author (or a journal) on the one hand and a complete lack of confidence in a taken-as-shared canon of sorts (aware though we both are of the difficulties with this notion) on the other. If there are no books-and-articles-one-can-presume-the-reader-has-read-or-is-at-least-acquainted-with (in the cataloguing vernacular of the opening chapter of Italo Calvino's *If on a Winter's Night a Traveller*), it can result in an unwillingness to *allude*, to gesture, to take-as-read—in case, perhaps, one is taken for a plagiarist or an incompetent.

It does not take too much imagination to conceive of a near future in which all that is published as an article is an alphabetised set of references. But the relentless thud of (name, date) references (to use the telling phrase of past editor, Laurinda Brown) can prove so disruptive to any other sort of rhythm in the writing. It is as if nothing can be permitted to be seen out of the corner of one's eye; everything must be bathed in the often destructive (and blinding) light of full disclosure.

All this citation, of course, relates to indicating what I (as author) purport to know, as well as where and how I position myself in a piece, both in relation to others and to various claims to insight and revelation. But surely there are other, more helpful, ways of doing this besides reference-peppering. In substantial part, FLM articles exhibit a tentativeness that acknowledges this delicate state of affairs. Its authors appreciate, as Munro puts it, "the complexity of things, the things within things" (quoted in Holcombe, 2008). But many articles also exude, at times, a suggestiveness that gestures toward new possibilities. Even if only temporarily, such a tenor can upset current forms of consensus, by refusing to offer certainties and by always remaining open to the way *any* political, didactical or technological decision can create its own blinkers, its own way of promoting one form of awareness over another. With regard to this post-modern predicament, Deleuze's response asserts that all one can do is invent through art. The future of FLM may well lie in its continued commitment to a poetic sensibility, as well as its avowedly "literary" aspirations.

And what of the reader? We believe FLM exhibits a close connection between author and reader, playing a direct role in both educating and incubating new readers *and* writers. For example, we both make extensive use of FLM articles in our

courses, which range greatly in terms of level (undergraduate, masters and PhD) and topic (mathematics, methods of exploration, history and philosophy, research, language issues, teaching and learning, ...). This (admittedly press-ganged) audience includes pre-service teachers, in-service teachers in master's programmes, and doctoral students, and thus spans the so-called theory/practice divide (which, in passing, is neither the only salient one, nor even the most interesting). In fact, one of the reasons we use FLM articles so extensively is that many succeed in avoiding the theory/practice dichotomy—they are neither in need of academic refinement (for a “theory” audience) nor of simplification of discourse (for a “practice” one) [2]. FLM articles invite their audience into a conversation, not an ideology, nor the quicksand of a static, potentially moribund text form.

Consider, for example, Dick Tahta's “About geometry”, from 1(1). When we offer articles like this in our courses, we engage in the mathematics that is offered—in this case, a lovely geometric exploration that involves examining what happens to the mid-point of a segment that joins the end-points of two segments of varying length rotating at varying speeds around a fixed point. The group can compare their own experiences of working on this problem with those of Tahta's students, and then use this as a starting point to discuss his provocative way of “defining” geometry and showing how it contrasts with algebra. Audiences of all backgrounds express surprise at the fact that they have never asked themselves what constitutes algebra or how they know they are doing geometry instead of algebra. A very particular, recognisable experience becomes both spring- and sounding-board for reflections upon and epiphanies concerning the nature of geometry and its learning.

FLM also aims to promote a many-faceted conversation between its home turf of mathematics education and the variety of cognate fields from which ours borrows, including psychology, psychoanalysis, linguistics, sociology, history, philosophy and mathematics itself. Consider the articles by Reviel Netz, in 18(3), William Thurston, in 15(1), and Jan Zwicky, in 30(1), for instance, in which each author writes engagingly and thoughtfully about matters pertinent “for the learning of mathematics”. Netz's historical work can educate a broad audience, providing an accessible but serious introduction to his subtle ideas about the role of diagrams in proofs and the epistemological status of diagrams in mathematics, allowing readers to consider the importance of helping learners create and decode diagrams. Thurston's article provides an enlightening glimpse into the world of a research mathematician, including his way of making sense of mathematics and his understanding of the values that motivate and sustain the discipline: “what we [professional mathematicians] are doing is finding ways for *people* to understand and think about mathematics” (p. 29; italics in original). Zwicky's provocative piece, on poetry and philosophy in relation to mathematics, gestures directly and informatively at the essential core of metaphor lying near the heart of both of these disciplined activities, broadening the locus of Thurston's activity beyond professional mathematicians.

In awarding the 2013 Nobel prize for literature to Alice Munro, Peter Englund (permanent secretary of the Swedish Academy) observed, “What we call *world literature* is generally rooted in the local and individual”. This comment seems true of FLM,

arguably among the most international of “international” mathematics education journals [3]. In a field at times neurotically obsessed with the general and generalisable, it is important to be reminded (and constantly so) that the particular, the specific, the local and the unexpected also have their place in our field. As Stephen Brown (1981, p. 11) has remarked, “One incident with one child, seen in all its richness, frequently has more to convey to us than a thousand replications of an experiment conducted with hundreds of children”. And various authors have written about appropriability as an important value quite separate from generalisability: as Munro says about her stories, she wants her readers “to think of them as related to their own lives” [4].

The different “feel” of this journal, with a continuity reaching back to the first issue in 1980, underscores the values we adduce: an artisanal look, an activist and interventionist editorial team (soliciting pieces, shepherding submissions, two-stage review, editing for both form and content, reviewer comments taken at least as much for the editor as for the individual author, resisting them when necessary) and an eclectic, literate and educated approach to whatever such guardians deem significant, or potentially so, in our field.

There is a classical tradition that attempts to characterise goals for cultured and cultural writing: for instance, Cicero's Orator speaks, “in order to demonstrate, delight and move” (21, 69). In his *Ars Poetica*, Horace asserts, “poets want either to do good or to give pleasure” (333). Then there is Racine, “the central principle is to entertain and to move” (preface to his *Bérénice*) [5]. Finally, the former aims of the Canadian Broadcasting Corporation (CBC) were “to inform, educate and entertain” [6]. Rather than the more legalistic standards of “rigour, conviction and truth” that seem to obtain elsewhere, we both see this journal's primary aim as promulgating writing that informs and educates (and, at times at least, entertains). Were FLM ever to have a motto, it could do far worse than to adopt this one.

Notes

- [1] The conventional “structure” of an academic article in our field certainly suffers from the weight of the dead hand of tradition. For mathematics, see Leron in 5(2).
- [2] For instance, FLM has had a historical and on-going willingness to take issues of mathematics in elementary mathematics education seriously. Here is a short list of FLM authors whose work one of us used with a recent masters cohort: Mara Boni, Mariolina Bartolini Bussi, Helen Featherstone, Dave Hewitt, Julie Long, Arthur Powell, Valerie Walkerdine and Marcy Wood. All of these authors live in and beyond both “worlds” (of theory and practice), traversing them elegantly and fruitfully.
- [3] Following up on the statistics last reported in 23(2)'s editorial: in the previous 31 issues before this one, there were 297 articles and communications by 413 authors from 37 (institutional) countries.
- [4] Nobel prize interview — see www.nobelprize.org/mediaplayer/index.php?id=1973, accessed 1 January 2014.
- [5] In her Nobel prize interview (see [4]) Munro says something similar, declaring her aim is: “not for someone to say ‘isn't that the truth’, but to move people, to feel some kind of reward from the writing”.
- [6] Depressingly, only the last one now features in current CBC discussion and documents.

References

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