Selected fragments from

Writing for the learning of mathematics

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to appear in for the learning of mathematics

[I begin by speaking about the inaccessibility of our academic writing to those for whom it is meant: teachers, parents and general public]

In these times of communicational explosion, when one is bombarded with way too many messages to ponder for long on any of them, there is little tolerance for obscurity, and opaqueness is no longer forgiven, let alone revered, as a sign of knowledgeability.

Against this background, it may be surprising to find out that in the current issues of our various journals, the research-practice divide appears as alive and well as ever. This impressive resilience implies that strong change-inhibiting forces must be at work. I can see two such forces, one of them inherent in our research endeavor, and thus unavoidable; the other one generated by the social context of our work as researchers, thus theoretically removable, but, in practice, as strong and harmful as an uncontrollable force can be. Whereas the first of these coercive factors leads to afflictions that are relatively easy to cure, the other one may cause damage beyond repair.

The first force originates, somewhat paradoxically, in our genuine intention to do something helpful for the learning of mathematics. If you are a researcher, this wish is accompanied by the desire to be convincing and accountable for what you say. Some would call this latter factor “the concern for scientific reliability”. To do your job as researcher properly and shape practice in responsible ways, you need to communicate more effectively and with greater precision than everyday discourses make possible. Everyday words are ambiguous and may carry unwanted entailments, so you cannot do without specialized, operationally defined vocabulary. And you would not be able to produce ever new stories without periodic structural changes that condense the discourse, that is, that increase its expressive power and make it possible to say more with less. No discourse-squeezing mechanism is more effective than the transformation
known as reifying, that is, rewriting stories about processes as narratives about objects. In addition, the well controlled, unambiguous, precise form of arguments made possible by the rigorous use of words and strict adherence to the rules of logic is the necessary condition for being able to stand behind your words and to defend your findings whenever necessary. When you observe all these principles, you may be losing in accessibility, but you are gaining in accountability.

The most important thing, therefore, to note about this first force, is that a certain inaccessibility in our scholarly writing is an almost inevitable side-effect of our wish to do our job as well as possible. Fortunately, this problem is tractable, at least in theory. First, we can minimize the side-effects of “scientificity” by observing a number of simple principles: restricting the use of specialized vocabulary to the necessary minimum, avoiding long compound sentences, helping oneself with such literary devices as metaphors and analogies and, above all, eschewing objectification whenever possible. Academic text composed according to these rules may be a work of art. ..... Another doable step in our attempts to counteract the side-effects of “scientificity” is to always make sure that the academic publications are followed by their more widely accessible versions. This is, at least, what I keep reminding myself: as long as I am publishing in academic journals only, my job remains half done.

The second divide-preserving force is at play whenever one is motivated by the prospects of being published more than by the desire to contribute to the learning of mathematics. Unfortunately, this order of preferences seems to be increasingly common these days. More generally, our fight against the research-practice separation wall is frustrated by a certain discord between our two goals, that of improving mathematics education on the one hand and that of nurturing our own academic identities on the other. The constant tension between these two desires prevents any substantial move.

At the first sight, this claim may appear surprising. On the contrary, the two objectives may be expected to support and reinforce one another. In our recent struggle to institutionalize research in mathematics education, our crowning argument was that the academic status would have a beneficial impact on our ability to make a difference. The underlying assumption
appeared self-evident: if placed in the university and turned into a regular academic discipline, mathematics education would grow in depth, quality and prestige, thus improving our ideas and increasing our executive power. Today, however, when our struggle for academization is well behind us, it turns out that our painstakingly earned nobility is a double-edged sword.

Nowhere is the move-fettering tension between our different goals more visible than in publishing, around which our academic lives revolve. In this enterprise, we are torn between two audiences, and these audiences’ differing expectations push us in different directions. While writing for the learning of mathematics, and genuinely so, we converse with people “out there” and try to make sure that the stories we tell contribute to the worldwide effort of bringing mathematics closer to everybody’s minds and heart; while writing for the publication in a prestigious journal such as FLM, we risk addressing the closed community of academics, and our academic identities may then become our principal concern. Thus, in order to sustain our double role of practice shapers and of academics, we need to alternate between two different, possibly incompatible sets of rules.

It is not easy to live among all these pulls and pushes, and understandably, many of us make a choice. Most of those who do seem to opt for nurturing their academic identities. Some go so far as to banish anything practical from their lives altogether. Indeed, it is only natural for the does-not-benefit to turn into does-not-befit. Having read hundreds, if not thousands, of academic texts in mathematics education I conclude that all too often, those who write do not seem to care about the question of whether their papers will be translatable into a helpful, reliable advice for practitioners. ....

In this latter case, I sadly conclude that the author, in spite of her explicit declarations, was saying something about herself rather than about the learning of mathematics. By using “heavyweight” words the only function of which is to mark her “heavyweight intellect” (Billing, 2013, p. 45) and by constructing intricate sentences, this writer was trying to convince the reader that she was a competent, perhaps even outstanding player of the game known as “academic writing”. Mathematics education researchers for whom their identity as academics is the primary concern are comparable to those mathematics learners who put a premium on
performance rather than understanding, and thus have recourse to memory and imitation. In both cases, the person performs rituals instead of aiming at a genuine exploration, tries to meet other people’s expectations rather than following her own goals, and strives at making an impression rather than at getting wiser or solving a problem. It seems natural to call the resulting genre scholarly scribble, or schoribble, for short.

What is the reason for the current epidemic of the schoribble? The main culprit, it seems, is the new game that has been overtaking the academia practically all around the globe. The title of Billig’s book, *Learn to write badly: how to succeed in social sciences*, tells much of the story. More specifically, our academic identities are now built almost exclusively of numbers. No longer unified by beliefs in higher forces or in the ultimate truth, we hold to numbers as the last avatars of the phantom-like creature called "objectivity". In effect, these are quantities, not qualities, that tell us who is good enough to stay in academia. And since numbers are almost all we are forced to care about, everything around us must become measurable, just as everything around King Midas had to become golden. In many journals, quantifiability and comparability are secured by strict templates, to be used by anybody who wishes to see her name among the published authors. For instance, the *question-method-findings-discussion* pattern, even if meant to help in preserving scientific rigor, inevitably encourages ritualization. Add to this the overgrown peer review procedures, by the end of which authors feel obliged to cut off anything that may antagonize any of the reviewers, and you can be sure that everything and everybody will end up fitting into the same mould. Most importantly, when one tries to adjust to a collectively produced Cinderella shoe, outstanding ideas tend to fall victim at the outset (provided there were such ideas in the first place). After all, in the constant effort to insert our CVs into the Guinness Book of Records, we may not have time to fill our words with content, and the reviewers may not have time to notice.

**References**