

ics 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. The British sociologist Michael Billig seems to be of a similar opinion. In his recent book devoted to academic writing (Billig, 2013), he lists numerous discursive characteristics indicative of the fact that today's academic writers are preoccupied with their identities more than with the state of the objects of their study. In a nutshell, if one aims at a real-world impact and has been working hard to understand the relevant phenomena, this person is likely to make the utmost effort to communicate her findings and conclusions clearly, exactly and unambiguously. This will show in the precision of her language, in the relative simplicity of her sentences, and in the recurrent attempts to explain things. If, on the other hand, the writer allows herself to use words that not many can understand, and is writing with complexity much greater than necessary, this can only mean that she is not really trying to communicate ideas. For me, the ultimate evidence of the writer's don't-care-about-ideas attitude is that however hard I try as a reader—and believe me, I do not give up easily—my search for a comprehensible message ends in fiasco.

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” (Billig, 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 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 proce-

dures, 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.

If I have chosen to write about these distressing phenomena in the anniversary issue of FLM, it is because I believe that to fully appreciate FLM's qualities, one needs to see it against the general landscape. When considering FLM in this overall context, you realize how unusual and far from self-evident they are. FLM is the journal to turn to whenever one needs a break from the schoribble. It is here that I usually find what I am looking for when reaching for a mathematics education journal: inspiration and food for thought. There are no templates here that would filter out original ideas; the editorial team is small enough to never lose the freedom of movement; and the amount of seriousness is just right to ensure good quality without its being mistaken for humorlessness.

Considering the present business-like atmosphere in academia, I see all those singular features of FLM as ever more precious with every passing day. Aware of how difficult it is to struggle with headwinds in the longer run, I have just one wish to make for the future of FLM: let this gem of a journal stay the way it is, and let us, as a community, continue being inspired by FLM in our work for the learning of mathematics.

References

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Is FLM an enactivist journal?

DAVID A. REID

Any consideration of FLM must begin with a fundamental principle: FLM is David Wheeler's journal. For the first fifty issues he edited, managed, promoted and defined the journal. Since that time, the editors have been given the difficult task of maintaining the character of the journal as it was under David Wheeler's editorship. So the character of the journal is not defined by the personality of its current editor (unlike some journals), but instead by the personality of its founding editor. It could be said that in FLM a part of David Wheeler's personality lives on.

The editors chosen for this difficult task are not selected because they lack strong personalities of their own. This is clearly not the case. Rather they are selected because they have the capacity to understand a wide range of perspectives while remaining true to their own. This allows them to see what FLM's authors intend to say, to feel if it fits in David Wheeler's FLM, and to do so from a solid foundation in their own thinking.

This means that FLM is not an enactivist journal, although it has published its share of important articles written from an enactivist perspective, and some of the editors and board members have been known to use enactivism in their own work [1]. It is David Wheeler's journal. And David Wheeler was not an enactivist. David Wheeler was David Wheeler. I don't think he was an anything-ist.

Enactivism is a theory of cognition, life and being. A sort of epistemiology. A key concept in enactivism is summed up in the aphorism "Everything said is said by an observer" (Maturana, 1987). This concept is related to the idea of *structure determinism*: "A structure determined system is a system such that all that takes place in it, or happens to it at any instant, is determined by its structure at that instant" (Maturana, 2002, p. 15). So if an observer says, "FLM is not an enactivist journal," that does not directly tell you anything about FLM, but it does tell you something about the structure of that observer, which determined that they should say that.

While what happens to a structure determined system is determined by its structure, it does interact with its medium. Changes in the medium may trigger changes in the system. A reader of FLM may read the words "FLM is not an enactivist journal" printed on a page, but the effect on the reader of reading the words is not determined by the words themselves, but rather by the structure of the reader at the moment of reading the words. Two or more structure determined systems can interact recursively, so that actions by one trigger actions by another that trigger actions by the first. At every instant the actions are determined by the structures of the systems involved, but if their structures allow, their interactions can trigger structural changes that allow for further interactions: "The history of interactions between two or more structure determined systems becomes a history of spontaneous recursive structural changes in which all the participant systems change together congruently until they separate or disintegrate" (Maturana, 2002, p. 16). This pattern of recursive interaction is called *structural coupling*. An observer of structurally coupled systems observes a coordination of actions over time, such as, for example, a couple walking down the street together.

A special kind of coordination of actions is *languageing*. An observer observes that two or more languageing systems interact recursively. The actions of one trigger actions of others such that the interaction continues. But the actions of languageing also trigger actions outside of language. Languageing is "a flow of coordinations of coordinations of consensual behaviors or doings" (Maturana, 2002, p. 27). It is a coordination of actions that are about other actions. When one person walking down the street says to another, "There's an interesting restaurant," they interact on two levels. The sounds one makes are perceived as having significance by the other due to the hearer's structure, and the second person makes other sounds in reply. But also, they change the direction of their walking (assuming a history of interactions in which interesting restaurants are goals) in a coordinated way.

This recursion of coordination of coordination of actions can occur at additional levels. I can observe the couple's languageing where "observing" means having a structure that

can be triggered by their languageing, so that there is coordination of actions at a level above their languageing. And I can language with others, as I am doing now, about my observing, thus engaging in a coordination of actions about observing about languageing about doing.

What has this got to do with the question "Is FLM an enactivist journal?"? Gregory Bateson (1979) points out that many observations make sense only when described by a logic of metaphor, summed up in this "syllogism in grass": "Grass dies; Men die; Men are grass." As everything written in FLM is written by an observer with awareness and everything said in enactivism is said by an observer with awareness, this logic suggests FLM is an enactivist journal.

Folding an origami duck is a coordinated action that I engage in as a structure determined system structurally coupled to a structure determined piece of paper. Teaching a child to fold an origami duck is languageing (coordination of coordination of actions) I engage in as a structure determined system structurally coupled to a structure determined child. Publishing a research report about teaching a child to fold an origami duck is acting as an observer. And I could publish a research report about teaching a child to fold an origami duck anywhere. Publishing an article about teaching a child to fold an origami duck in FLM is acting as an observer who is aware of himself as an observer. And if I publish an article about teaching a child to fold an origami duck in FLM it will not be about teaching a child to fold an origami duck.

Articles in FLM are not about what they say they are about. They are about the people who write them and the people who read them. FLM is a history of recursive structural changes in which all the participant systems change together congruently. The readers change, the authors change and the articles change. FLM, its readers and its authors are structurally coupled.

Because of this coupling, it matters that FLM comes printed on paper in a bound volume. A single FLM article does not stand alone; it is a part of the issue in which it appears and this issue is a part of the complete sequence of issues. When an article appears in FLM it does not merely occupy its pages, it changes the whole issue. And when a new issue of FLM comes out it does not simply add to the series at the end, it changes the whole. With that in mind, I celebrate the first 100 issues of FLM.

Notes

[1] The first paper in mathematics education to make significant use of enactivist ideas, by Susan Pirie and Tom Kieren, was published in 9(3). And some years later the word "enactivist" occurred for the first time in the title of a mathematics education article, by Brent Davis, in 15(2). The third and fourth editors of FLM (Laurinda Brown 2003-2006, and Brent Davis, 2006-2009) have called themselves enactivists. And the present advisory board includes seven members who have engaged in research from an enactivist perspective.

References

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