

# The n-Category Café

A group blog on math, physics and philosophy

## December 25, 2013

### The Long Grind of Writing a Book

Posted by Tom Leinster

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



I'm using the quiet of Christmas to finish writing a book, *Basic Category Theory*. It's nothing revolutionary: just a short introduction to the subject, based on courses I've taught. But the process of book-writing is demanding and maddening enough that I wanted to take a moment to reflect on why that is — and why you hear authors complain so much.

Put another way, I'm taking a break from the tedium of writing a book to write about the tedium of writing a book. I hope it's not tedious.

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



I want to try to articulate why writing a book is so much more painful than writing a paper. This isn't something I've thought through; I'm typing this off the top of my head. But I'll see if I can gather some reasons.

First, let me confess that I've been surprised by just how demanding it's been. I've written **one book before** [<http://www.maths.ed.ac.uk/~tl/hohc>], and that was an extremely stressful experience. But this one is a venture of a completely different kind: it's half the length, it's a textbook rather than research (and therefore not nearly so personal), I already had what I thought was a nearly-final draft when I approached the publishers this time, and I'd been polishing the notes up, on and off, for the previous twelve years. What's more, I'm older and, I hope, more able to cope with stress: just as carpenters get calloused hands that make them insensitive to small abrasions, I like to imagine that academics get calloused minds that allow them not to be bothered by small stresses and strains.

So, I went into this aware of the potential stress. I think I successfully removed just about all of it. But what I hadn't bargained for is that when you remove all the stress, what's left underneath is... boredom!

Let me qualify that. When you're writing just about anything, there's an intensely satisfying period when it's all coming together. That's great. But after that, towards the end — and that's the stage I'm at now — there's an awful lot of grind.

Let's start with the obvious. A paper is long if it's 50 pages; a book is short if it's 200. But the crucial thing is that *the pain does not scale linearly*.

For instance, you have to check that you've used notation consistently throughout. The time it takes to check this for each piece of notation is proportional to the length of the book — but so too is the number of pieces of notation. So, the time needed to check consistency of notation is proportional to the square of the length.

You also want to make sure you haven't repeated yourself. (In an earlier draft, I told/reminded the reader what the discrete topology was three separate times.) This amounts to checking that line  $i$  is not too similar to line  $j$  for all lines  $i$  and  $j$ , which again means that the time you need is proportional to the square of the length.

What's more, a book feels different from a paper. Books tend to get more publicity, and people engage with them in a different way. My experience is that if I tell a mathematical friend that I'm writing a book, they're pretty interested; but if I solemnly informed them that I was writing a paper, they'd look at me like I'd told them I had two legs. (I do.) So when you're writing a book, you know that what you're doing is likely to come under more scrutiny. This will bring out all the perfectionism in you.

In my case, this was a big effect. I've taught master's-level category theory courses several times, and I had a polished set of Latexed notes for them. I thought it wouldn't take much effort to turn them into a book. What I hadn't realized is the extent to which I was speaking to *my students* — not particular individuals, but the generic Glasgow master's student that the notes were addressed to. To adapt them for an unknown anyone-in-the-world reader, I've needed to examine and undo a lot of assumptions, and that's taken a lot of work.

On top of all this, there are things you need to do for a book that you don't need to do for a paper. One of them is indexing, which has to be up there among the most boring tasks in academic life. I actually have a **book on indexing** [<http://www.press.uchicago.edu/Misc/Chicago/CHIIndexingComplete.pdf>] (excerpted from the **Chicago Manual of Style** [<http://www.chicagomanualofstyle.org>]), which I bought when I was indexing my last book, in Chicago. It's 65 pages long — and yes, it has an index.

Anyway, I'm happy to say that I've very nearly finished. My deadline is 31 December. Although these deadlines seem to be almost infinitely elastic, I intend to meet this one. After that, there will be a whole lot of to-ing and fro-ing with Cambridge University Press, who are publishing it, and I hope it will be on the shelves some time in the middle of 2014.

Merry Christmas!

**Posted at December 25, 2013 3:28 PM UTC**

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## Re: The Long Grind of Writing a Book

Regarding consistency of notation, what I have found helpful is using latex macros. For example, when writing about a random process  $X^\epsilon$  I defined `\newcommand{\resamplede}{X^\epsilon}` so that I didn't have to remember whether the epsilon was sub- or super-script. You can also use this technique for more complicated examples.

**Posted by: Tom Ellis on December 25, 2013 5:25 PM | Permalink | Reply to this**

### Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



Yes, that certainly helps. One difference between a book and a paper is the importance of systems: with a paper, you can get away with holding more or less everything in your head, but with a book, you really have to be systematic.

I thought I was a big user of macros until I collaborated with **Marcelo Fiore** [<http://www.cl.cam.ac.uk/~mpf23/>] and saw his Latex. He put me to shame.

**Posted by: Tom Leinster on December 25, 2013 5:30 PM | Permalink | Reply to this**

### Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



Most of my approach to dealing with complexity comes from from the discipline of programming. (I have more experience of writing programs than writing maths). For example I have happily used distributed version control (specifically darcs) for collaborative paper writing.

**Posted by: Tom Ellis on December 25, 2013 7:45 PM | Permalink | Reply to this**

## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



An index is one of the first things I look at when looking at a new book, and I cannot tell you how important I think it is to compile a good one. So all those tedious efforts certainly don't go unappreciated.

I believe (just about) *every* book should have an index. Including (or even especially!) novels, collections of short stories, etc. I wonder whether I'm alone in that belief.

**Posted by: Todd Trimble on December 25, 2013 10:53 PM | Permalink | Reply to this**

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## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



Thanks! That (and Christmas chocolate) will help to spur me on.

I tend to make intensive use of indexes too, much more than contents pages. There are some excellent textbooks that are really let down by their indexes, I think, and I'm determined that mine won't be. But it's less straightforward to write a good index than one might think. Do you go for "dog, shaggy" or "shaggy dog"? If the former, do you also put in "shaggy, see dog"? And so on and on and on.

Not sure what I think about indexes for fiction. Searchable electronic files change the game, of course.

**Posted by: Tom Leinster on December 25, 2013 11:04 PM | Permalink | Reply to this**

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## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



You're certainly not alone; Tolkien actually went ahead and did index a lot of things (the need for a good index was one of the delays in preparing a *Silmarillion* text, ranking closely behind obsessive revision) and young Christopher Tolkien has made a point of indexing his editions from the JRRT corpus. Of course, the academic inclination in both of them is keenly evident as well.

**Posted by: Jesse C. McKeown on December 26, 2013 5:59 AM | Permalink | Reply to this**

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## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



I can't count how many times I've wished for indexes in novels. As for nonfiction, the index is also one of the first things I look at. I think, though, that I mainly appreciate a good index in a passive way — the indexes I specifically *remember* anything about are usually the bad ones. (Of course there are a few, like Körner's indexes, which are memorable for other reasons.)

**Posted by: Mark Meckes on December 27, 2013 8:27 AM | Permalink | Reply to this**

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## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



I don't know of any fiction that has an index, but I do know some fiction *about* an index. Here are **a few pages** [[http://www.maths.ed.ac.uk/~tl/cats\\_cradle\\_indexing.pdf](http://www.maths.ed.ac.uk/~tl/cats_cradle_indexing.pdf)] from Kurt Vonnegut's very enjoyable novel ***Cat's Cradle*** [[https://en.wikipedia.org/wiki/Cat%27s\\_Cradle](https://en.wikipedia.org/wiki/Cat%27s_Cradle)]. Sample:

I showed this index entry to the Mintons, asking them if they didn't think it was an enchanting biography in itself, a biography of a reluctant goddess of love. I got an unexpectedly expert answer, as one does in life sometimes. It appeared that Claire Minton, in her time, had been a professional indexer. I had never heard of such a profession before.

She told me that she had put her husband through college years before with her earnings as an indexer, that the earnings had been good, and that few people could index well.

She said that indexing was a thing that only the most amateurish author undertook to do for his own book. I asked her what she thought of Philip Castle's job.

"Flattering to the author, insulting to the reader," she said. "In a hyphenated word," she observed, with the shrewd amiability of an expert, "*self-indulgent*.' I'm always embarrassed when I see an index an author has made of his own work."

"Embarrassed?"

"It's a revealing thing, an author's index of his own work," she informed me. "It's a shameless exhibition — to the *trained* eye."

**Posted by: Tom Leinster on December 28, 2013 3:35 PM | Permalink | Reply to this**

## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]

For fiction with an index, there's always Nabokov's *Pale Fire* (1962). How *useful* that index is—or which character is responsible, and how far into the undiscovered country they have traversed—is, like most things about *Pale Fire*, up for debate.

**Posted by: Blake Stacey on January 3, 2014 5:51 AM | Permalink | Reply to this**



## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]

A friend of mine once told me it takes a heck of a lot of effort even to write a bad book. So a good one is worse. I did some of the index for my book by automated search. I used a search and replace to add an index for any thing in `\emph` and then said yes or know.

**Posted by: Benjamin Steinberg on December 26, 2013 1:12 AM | Permalink | Reply to this**

## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]

We experienced a lot of the same issues writing the HoTT Book. Of course, we didn't have a publisher to deal with, so that source of stress and pain was removed.

Regarding notation, we made the decision at the very beginning to use only macros for various notations. The importance of this was obvious because of having many different authors, along with the fact that at the time we started writing, we hadn't completely settled on what notation to use for certain things. So using macros allowed



us to postpone those decisions, as well as to ensure eventual consistency. (It was, however, sometimes a bit difficult to ensure that all the authors did use the macros as intended.)

In looking for repetitions (and errors, remaining notational inconsistencies, etc.), we benefited a lot from having more than one pair of eyes — not just all the authors, but all the readers. By self-publishing through lulu, we've been able to continue to accept corrections from anyone even after "publication", and to update the posted versions as they come in. I think the knowledge that this would be possible also significantly reduced the stress of perfectionism for me. Of course, already-printed copies can't be updated, but at least newly purchased printed copies can benefit from the corrections.

Indexing was definitely the most annoying part of the whole process, but it was also satisfying — the process of indexing revealed a number of repetitions and inconsistencies that we hadn't previously found. Andrej wrote (and I tweaked) a **little script** [<https://github.com/HoTT/book/blob/master/other/index-helper.py>] which looked through all the files and outputted a list of "uncommon" words together with each of their occurrences. That gave us a good starting point to look through manually and decide which words needed to be indexed. But it was still very time-consuming, and there's probably no way around that.

**Posted by: Mike Shulman on December 26, 2013 4:59 PM | [Permalink](#) | [Reply to this](#)**

## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



It's funny, I was thinking earlier today about the HoTT book project. What I was thinking is that even if you're writing a book on your own, it's as if it's a collaborative venture between several people. Because of the scale of the thing, you have to put systems into place to compensate for the fact that you can't hold it all in your head at once.

Of course, we didn't have a publisher to deal with, so that source of stress and pain was removed.

I'm not actually getting any stress or pain from the publisher. CUP have been very relaxed and accommodating. I've already missed two deadlines, which of course is no big deal; it happens all the time. One of their editors told me that a couple of CUP authors have been under contract with them, and continually promising to submit their manuscript, for the last twenty years!

I'm actually hardly stressed at all. The imminent deadline is no more than a useful motivating factor. I'm simply *bored*, grappling with a to-do list of tedious final tasks that seems like it will never get finished. But I know it will, and Todd's words are helping me along.

**Posted by: Tom Leinster on December 27, 2013 1:55 AM | [Permalink](#) | [Reply to this](#)**

## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



It's a collaboration between you and future you.

**Posted by: Tom Ellis on December 27, 2013 8:04 AM | [Permalink](#) | [Reply to this](#)**

## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]

I'm not actually getting any stress or pain from the publisher.

That's great! Sorry, I misunderstood your fourth paragraph.

**Posted by: Mike Shulman on December 27, 2013 4:13 PM | [Permalink](#) | [Reply to this](#)**



## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]

Tom has been very kind to share a draft version of his *Basic Category Theory* with me, which I gave to an undergraduate thesis student to read this fall.

I'm writing to report that she gave it the highest praise: very clear and easy to understand and written in an engaging style.

I'll admit I didn't read along myself, but I can nevertheless add extra depth to my student's assessment. In our weekly meetings, she'd stand at the board and tell the thing she'd learned in the past week's reading. Many times, I was listening to her introduce  $X$  I'd think "I should ask her about  $Y$  because this would be the perfect point to go on digression  $Z$ ." Then the next two things she'd tell me about was  $Y$  and  $Z$ .

**Posted by: Emily Riehl on December 27, 2013 11:19 PM | [Permalink](#) | [Reply to this](#)**



## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]

Wow. Thanks.

Speaking of sharing, the deal I made with CUP is that the book won't be downloadable at first, but 18 months after publication it will not only be freely downloadable (on the arXiv) but also freely *editable* (with a Creative Commons licence). **Sasha Borovik** [<http://www.borovik.net/>] convinced me a while back that making textbooks editable was really worth doing. And since it's not research, I don't mind not making it downloadable immediately.

**Posted by: Tom Leinster on December 28, 2013 3:18 PM | [Permalink](#) | [Reply to this](#)**



## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]

That's excellent!

**Posted by: Mike Shulman on December 28, 2013 6:18 PM | [Permalink](#) | [Reply to this](#)**



## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]

Which CC licence will it be? (and congratulations on the book!)



**Posted by: David Roberts on January 3, 2014 3:11 AM | [Permalink](#) | [Reply to this](#)**

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## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



Tom, I'd be very interested to know how you would feel about getting help from others. If you put your book on github and declare that you accept help with unresolved issues (you'd list them on github), what would you be willing to give in return?

Suppose these were mostly technical issues like cleaning up notation, help with discovering inconsistencies and repetitions, grammar, but not actual content of the book. That ought to take a lot of boredom away from you, and working in a team is more satisfying than working all alone.

In return there would be an acknowledgment of all people who helped, but they would not get authorship (and that would be made clear to everyone from the start, namely that authorship has to be negotiated ahead of time, before contributions are made). I wonder if anyone would be willing to help. There must be some category-theory groupies out there.

**Posted by: Andrej Bauer on December 28, 2013 10:16 AM | [Permalink](#) | [Reply to this](#)**

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## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



That's a very interesting idea. Unfortunately it's too late to apply to this project, as I'm going to submit it in the next few days. But maybe someone else reading this will pick up on your suggestion and apply it to something they're writing.

What you describe sounds like a more systematic, high-powered version of what this book has already been through (in common with other books that have evolved from course notes): first, the eyes of students taking the class, then, checking by a kind colleague, **François Petit** [<http://www.maths.ed.ac.uk/~fpetit/>].

**Posted by: Tom Leinster on December 28, 2013 3:26 PM | [Permalink](#) | [Reply to this](#)**

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## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



For a brilliant example of a novel with an index, see Georges Perec's "Life: A User's Manual". Perec had a day job as a scientific archivist, and was known for his extremely clever approaches to organizing information.

**Posted by: Charles G Waldman on December 28, 2013 2:39 PM | [Permalink](#) | [Reply to this](#)**

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## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



Am delighted to announce the delivery of a baby manuscript at 8:20am today, 31 December 2013.

Father exhausted but proud. Baby weighs 189 pages; first pic **here** [<http://www.maths.ed.ac.uk/~tl/bct/contents.pdf>].

Thanks to all for moral support.

**Posted by: Tom Leinster on December 31, 2013 8:27 AM | [Permalink](#) | [Reply to this](#)**

## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



Congratulations!

**Posted by: Mark Meckes on December 31, 2013 3:25 PM | [Permalink](#) | [Reply to this](#)**

## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



Yes, great, congratulations!

Oh, I'm definitely interested in taking a closer look. I've only just glanced at the table of contents (not the index yet, ha!), but I get a strong impression that this is definitely the way to go as a very basic introduction to pure category theory.

It reminds me very much of my initial *experience* when first encountering Mac Lane's book, where the whole yoga of universal properties, representables, the Yoneda lemma, and adjunctions were absolutely mandatory to figuring out what was really going on in the subject. I think you are absolutely right to give a strong story line that centers directly on those concepts; everything else is a spin-off from those core ideas (which should be mastered by anyone who uses category theory).

**Posted by: Todd Trimble on December 31, 2013 3:45 PM | [Permalink](#) | [Reply to this](#)**

## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



Thanks! Am going to do some not-work for a while now.

Todd, yes, it's definitely meant to be stripped-down and basic. The first iteration of this was to Cambridge Part III students, but when I moved to Glasgow I had to pare it down a lot. That's good; it should make it suitable for a wider readership.

**Posted by: Tom Leinster on December 31, 2013 5:02 PM | [Permalink](#) | [Reply to this](#)**

## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



I'm sure you understood what I meant perfectly well, since after all you use the exact same word, but I'll say anyway that for me, 'basic' should convey more the sense of 'fundamental' than 'entry-level', and I expect you felt the same way as you named your book. It carries both meanings of course, but it can wind up sounding like a slight put-down, depending on the intonation (like, "that's so basic!").

Weil wrote a famous book titled "Basic Number Theory", and in his case it's never been clear to me that he *didn't* mean to slyly suggest he thought it was kid stuff. If he had titled it "Basic Arithmetic", then I'd *know* he was having a laugh about it. :-)

**Posted by: Todd Trimble on December 31, 2013 8:13 PM | Permalink | Reply to this**

## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



The invaluable **Bluffer's Guide To Mathematics** observed, IIRC, that the further on you go in mathematics, the *easier* the titles sound. So British schoolkids have textbooks at 17 with titles like "Advanced Mechanics" which they study for their A(dvanced)-Levels, and may eventually run into the likes of "Basic Homological Algebra".

**Posted by: Yemon Choi on January 1, 2014 11:41 PM | Permalink | Reply to this**

## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



Hi Todd. I took your comment as entirely positive (but was replying in haste). I'd sort of forgotten that "basic" could be a put-down.

There's actually something funny going on here. I believe it's going to appear in the series of grey Cambridge books called *Cambridge Studies in Advanced Mathematics* (which contains e.g. Johnstone's *Stone Spaces*, Taylor's *Practical Foundations of Mathematics* and Weibel's *Intro to Homological Algebra*). The first sentence of the preface had been "This is not an advanced text." Then I realized that this didn't sit well with the series title, so I changed it to "This is not a sophisticated text."

I didn't know about Weil's title. The other "basic" books that were floating about in my mind were Kelly's *Basic Concepts in Enriched Category Theory* and some online lecture notes of Jaap van Oosten's also called *Basic Category Theory*.

Happy new year!

**Posted by: Tom Leinster on January 1, 2014 2:13 AM | Permalink | Reply to this**

## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



Happy New Year!

You should take a **gander**

[[http://golem.ph.utexas.edu/category/2007/01/animals\\_that\\_are\\_also\\_verbs.html#co2o749](http://golem.ph.utexas.edu/category/2007/01/animals_that_are_also_verbs.html#co2o749)] at Weil's book sometime – it is a sophisticated text (or at least it so appears to me). It's more or less an exposition of class field theory with strong emphasis on the approach through simple algebras.

But don't quote me on this! because I've never managed to get very far reading it; usually I'm held in thrall by about the first 25 pages or so, which is very foundational stuff on adelic matters. It's great, but I find it somewhat intimidating. I expect your book is much more reader-friendly. :-)

**Posted by: Todd Trimble on January 1, 2014 3:05 AM | [Permalink](#) | [Reply to this](#)**

## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



I see nothing contradictory about a basic text on advanced mathematics. Complementarily, I have a colleague who used to teach a course for high school mathematics teachers, which he described as being on advanced topics in elementary mathematics.

**Posted by: Mark Meckes on January 1, 2014 10:43 AM | [Permalink](#) | [Reply to this](#)**

## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



Late to this, but just popping by to say I'll be putting this on the shopping list, if not the library list.

Are there any (co)ends? That was one thing I never really "got", but all those integral signs make me feel I really should know more, or take more interest.

**Posted by: Yemon Choi on January 1, 2014 11:24 PM | [Permalink](#) | [Reply to this](#)**

## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



Yemon, you've just inspired me to write something about **ends**

[<http://golem.ph.utexas.edu/category/2014/01/ends.html>]. I don't know if you have the time or inclination to look at it, but it's there.

**Posted by: Simon Willerton on January 5, 2014 7:26 PM | [Permalink](#) | [Reply to this](#)**

## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



Hi Yemon. No, there's no end in sight — until you look at Simon's post. In fact, the book is a proper subset of the course you took from me at Part III.

**Posted by: Tom Leinster on January 7, 2014 11:55 PM | Permalink | Reply to this**

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## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



Excellent! I'm looking forward to it. I've certainly used your lecture notes with students to good effect.

Looking at the first picture, I am heartened by the brevity of your book. I mentioned to John Baez my vague intentions to write some sort of book on enriched category theory and his main comment was that I should try to write something short. There is certainly something appealing about a short introductory text. It is easy to get intimidated by large tracts.

I also like the idea of a "Note to the reader": it imparts the feeling of cosy fireside chat.

**Posted by: Simon Willerton on January 3, 2014 12:02 PM | Permalink | Reply to this**

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## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



Happy New Year!



Congratulations on the book, Tom! And *double* congratulations for making it free after a while. The math world will be very grateful.

I'll definitely make my students buy it. They can't wait 18 months... they need it *now!!!*

There are some excellent textbooks that are really let down by their indexes, I think, and I'm determined that mine won't be.

Great!

A lot of lazy authors include the number of the page where a concept is first defined but not the pages where interesting things are said about it. And then when you're thinking "where *was* that cool theorem about hyperfinite factors?" the index is absolutely useless. It's infuriating! 🤬

Ideally pages where terms are defined would be shown in boldface, or italics, but all the other really important pages would be listed too.

Of course this is tricky: to take an extreme case, we don't want a book on measure theory to say

Measure: **3**, 4–286.

**Posted by: John Baez on January 1, 2014 2:42 AM | Permalink | Reply to this**

## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



The book sounds like it'll be great!

Ideally pages where terms are defined would be shown in boldface, or italics, but all the other really important pages would be listed too.

This is how Donald Knuth did the index to the original TeX manual.

**Posted by: Blake Stacey on January 3, 2014 5:45 AM | Permalink | Reply to this**

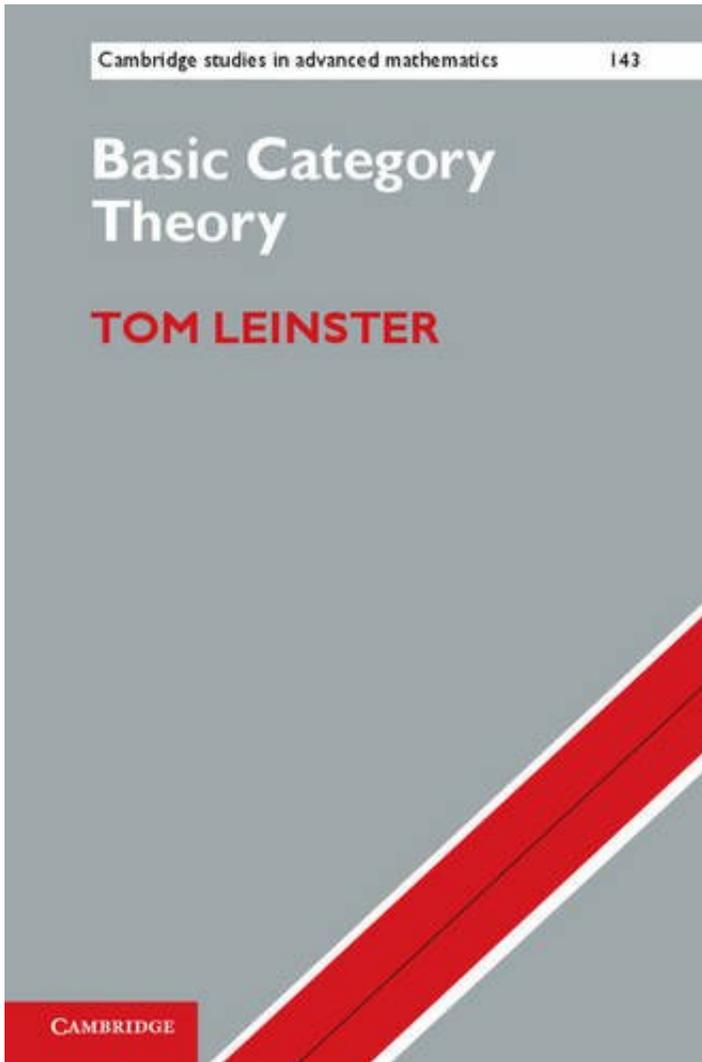
## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



Thanks! Just as your picture suggests, a bottle of bubbly was opened the night you wrote your comment (although it might just have been for some other reason).

As you may know, one of the oddities of writing a book is that Amazon starts selling it before it's even finished. Click, for instance, on this:



[[http://www.amazon.co.uk/Category-Cambridge-Studies-](http://www.amazon.co.uk/Category-Cambridge-Studies-Advanced-Mathematics/dp/1107044243/)

[Advanced-Mathematics/dp/1107044243/](http://www.amazon.co.uk/Category-Cambridge-Studies-Advanced-Mathematics/dp/1107044243/)]

With my first book, I discovered its Amazon page by accident, *well before I'd finished writing it*. I fantasized about buying a copy and thereby saving myself the pain of having to actually compose the final part — I could just discover what I was supposed to write by reading it.

With this one, I went looking for it deliberately. Still, it's the first time I've seen the cover or the final form of CUP's marketing blurb.

**Posted by: Tom Leinster on January 8, 2014 12:05 AM | [Permalink](#) | [Reply to this](#)**

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Read the post **Ends** [<http://golem.ph.utexas.edu/category/2014/01/ends.html>]

**Weblog:** The n-Category Café

**Excerpt:** End your ignorance of ends

**Tracked:** January 5, 2014 7:13 PM

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## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



The best way to get a book indexed is to get a professional experienced indexer to do it. For those over the water you've got the American Society of Indexers to help you find someone with the appropriate experience for your subject matter - see <http://www.asindexing.org/>

For those on this side of the pond we have the Society of Indexers - see <http://www.indexers.org.uk/index.php?id=244>

**Posted by: Nicola on January 6, 2014 5:18 PM | Permalink | Reply to this**

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## Re: The Long Grind of Writing a Book

[<http://golem.ph.utexas.edu/~distler/blog/mathml.html>]



The best way to get a book indexed is to get a professional experienced indexer to do it.

I'd be interested to know the justification for that statement. When I was indexing, I'd certainly have liked to have a professional indexer on hand to ask some questions. John's **joke**

[[http://golem.ph.utexas.edu/category/2013/12/the\\_long\\_grind\\_of\\_writing\\_a\\_bo.html#co45430](http://golem.ph.utexas.edu/category/2013/12/the_long_grind_of_writing_a_bo.html#co45430)] about "Measure: **3**, 4–286" makes the point that there are some tricky judgement calls.

On the other hand, I find it very hard to imagine that someone who didn't understand the content of the book could write a good index. For a research monograph, usually the only person who really understands it at the point of publication is the author. Mine is a textbook for students at about master's level, so it's easier — but still, even most professional mathematicians don't know this material. So it's *very* unlikely that a professional indexer would understand it.

How do you get round this problem?

**Posted by: Tom Leinster on January 8, 2014 12:12 AM | Permalink | Reply to this**

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