Damgaard (TREES)

This paper addresses the effect of measurement error in model parameterization.

I agree that drawing attention to this problem is a topic worthy of a Forum article in TREES. But I found the paper difficult to understand, and thus difficult to evaluate.

I generally have difficulty understanding Bayesians. I don't know whether I am representative of the journal audience. Those who understand Bayesian approaches will understand this paper, but probably those readers also already include uncertainty in predictors in their models, and thus I don't think they are an important part of the intended audience. For those readers who, like me, do not plan to undertake Bayesian analyses, then this will not help them. Perhaps younger readers, early career scientists, will be inspired to take it up. If that were the goal, the paper should be pitched differently.

If the goal of the paper is to illustrate the importance of accounting for uncertainty in the predictor variables, then I think it would have more traction if it also used other methods to demonstrate this.

In the interest of full disclosure, my experience with Bayesian collaborators has been mixed. I spent a couple of years tearing my hair out in a failed attempt to publish a paper with a Bayesian analysis, admittedly with an inexperienced scientist from outside my field. My collaborator could never explain to me what had been done in terms I understood, and I was not willing to publish a paper I could not understand.

I appreciated the appendix explaining hierarchical modeling, which defined the (horrendous jargon) terms "measurement equations," "latent variables," "process equations" (whoever coined these terms had no respect for grammar, which I will admit puts me off Bayesians who had nothing to do with choosing these terms and are now saddled with them). I'm not sure "joint posterior distribution" or "hyper-priors" was defined. Oh, I don't know whether it was intentional to avoid the term "Bayesian," perhaps because it has a bad name, but I think it would be better to be up front about it.

There are other issues with language; I don't know whether the journal provides English language editing. Some of the errors might not be obvious to an editor who is not a scientist. There is a problem with "Variation among the measured variables" – "among" would seem to refer to relationships among multiple variables. I believe you mean variation "in" the measured variables. If you mean something else you will need to make it more explicit. I didn't like the hyphenation of "measurement- and sampling error", but any copy editor will notice this. What they won't know is that the phrase can often be omitted. We know that these are the sources of uncertainty in the error term. In fact, it's probably worth only one sentence somewhere to point out that sampling error includes measurement error, so after that you can call it sampling error. Is there such a thing as sampling error without measurement error?

I found it irritating that the examples came only from the author's own work. It shouldn't be hard to find other examples. And it will expand your audience.

I apologize for not trying harder