

# Philip Maini's comments

From: Philip Maini,  
Subject: Paper,  
To: Me.

Dear Johannes,

Unfortunately I only had the chance to skim read your paper (being on the Roy Soc Sectional Committee I have 160 papers to read and assess at the moment) but I think it is so important.

I attach a short paper by Mike Akam showing how biology does not chose the simplest model.

One thing that selecting the simplest model (and identifiability etc) ignore is the fact that biological systems must have a certain amount of redundancy built into them for the sake of robustness. This means that if one parameter is a bit low, then making another one a bit higher should compensate. So, I think the idea of looking at structural behaviour through symmetries is a more biology-friendly way of model selection.

Also, you probably know this paper:

<https://doi.org/10.1101/2021.06.22.449499>

which might be one to quote alongside Philip G's paper.

best wishes,

Philip