

# LAYING OUT YOUR RESEARCH

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According to an opinion piece in *PNAS* ([www.pnas.org/content/112/12/3585.full](http://www.pnas.org/content/112/12/3585.full)), it's time scientists began to see writing a lay summary (a brief summary of a journal article emphasizing the significance of the research in language accessible to a lay audience) as a routine part of publishing the results of their research. The idea was taken up by *Nature* ([www.nature.com/news/petition-calls-for-lay-summaries-in-ecology-journals-1.17246](http://www.nature.com/news/petition-calls-for-lay-summaries-in-ecology-journals-1.17246)) and a Royal Society blog ([www.blogs.royalsociety.org/publishing/fssc-scientist-layperson/?-Layperson/](http://www.blogs.royalsociety.org/publishing/fssc-scientist-layperson/?-Layperson/)).

## LAY SUMMARIES ARE GOOD FOR YOU!

It's great to see that communicating to a non-scientific audience using lay summaries is being recognized as an important – even essential – element of the publication process. I'm pleased to say that *Functional Ecology* authors are required to write a lay summary for their papers, and have been for five years now. So it seems like a good moment to offer a few words on the subject. The benefits of lay summaries are described in the *PNAS* piece, so there's no need to repeat them in detail here, but essentially lay summaries are good for you (and by 'you' I mean authors). Despite fears to the contrary, scientists who communicate their work to the public find their scientific reputations enhanced and tend to be more academically productive. At *Functional Ecology*, we find that after the actual articles and author guidelines, our lay summaries are our most visited web page.

Also, as the Royal Society blog notes, a lay summary not only communicates your research to the public, journalists and decision makers, it also spreads the word to scientist colleagues outside your immediate discipline. We are all in favour (in theory at least) of interdisciplinary research, so why is there so little of it? Could it be that potential collaborators

outside our own narrow area of research have no idea what we are up to?

But lay summaries are also good for you in quite another way. As any schoolteacher will tell you, you only know that you truly understand something when you can explain it to a class of 10-year olds so that *they* then understand it. Or, as the Royal Society blog notes: 'We have all experienced that moment of epiphany when the very act of explaining a tricky concept to a friend or relative helps simplify a complicated problem, even understand it more deeply.' Writing a lay summary forces you to get to the core of what your research is really about in a way that the convoluted, obfuscatory, long-winded text of a traditional scientific paper does not. On the rare occasions that *Functional Ecology* authors really struggle to produce a decent lay summary, it often turns out that their ideas were not exactly transparent in the original paper.

## CAN WE REALLY TRUST SCIENTISTS TO DO THIS?

One comment on the Royal Society blog asks: 'Are you proposing that scientists themselves will write the lay summaries, checking themselves for hype & jargon?' You can almost hear the incredulity; can we really trust scientists to do this?

Elsewhere there are suggestions that maybe the journals themselves should write the summaries, or that professional journalists should be paid to do it. No, definitely no, to both suggestions; we – scientists – can do this.

But not without some help. My experience at *Functional Ecology* is that the great majority of authors approach writing a lay summary in the right spirit, and generally produce something usable, after some copy-editing. But a significant minority are unable, or maybe unwilling, to write a lay summary, at least at the first attempt. I say 'first attempt', but in reality a really bad lay summary looks more like an attempt to avoid the work involved, often by submitting a slightly modified abstract. But as our guidelines say, a lay summary 'is not simply a modified version of the paper abstract; indeed, unless your paper is written in an unusually simple and straightforward style, it's rare for any part of an existing paper to be suitable, even in modified form, for inclusion in a lay summary'. One author recently submitted a lay summary consisting of a paragraph lifted from the introduction, followed by another lifted from the discussion. Was it any use at all? No, it was not. Did that author write a good lay summary in the end? Yes, they did.

## SO, WHAT MAKES A GOOD LAY SUMMARY?

However much you may plan to tinker with it, my advice is not to begin with any part of the actual paper. Start instead with a blank sheet of paper and write something completely new, focused on the 'why?' and the 'so what?' of your research. Imagine you're trying to explain it to your Mum, or to a mate down the pub. I know we're probably going to be OK when a submitted lay summary begins: 'Would you rather be bitten by a big dog or by a small dog?' (a real example). Of course it doesn't have to be quite like that; these are good beginnings too: 'Many animals use impressive color patterns to communicate with other members of their species', and 'Desiccation-tolerant organisms are able to recover from long periods of desiccation, during which they acquire a "death-like" appearance and dramatically decrease metabolic rates.'

I've been editing *Functional Ecology's* lay summaries from the start. So finally, should you find yourself writing one, a plea – in fact, two pleas! Think carefully about jargon, and especially about words and phrases that may be so familiar that you no longer realise they are jargon. For example, please eschew (among many, many others) 'stoichiometry', 'frugivore', 'semelparous', 'epigenetic', 'scaling exponent' and 'agonistic'.

When I started to edit *Functional Ecology's* lay summaries, I sometimes largely re-wrote a bad summary by going back to the original paper. But as I've become older and even grumpier, I've decided that life (my life anyway) is too short for that. Now, if a summary is hopeless I just ask the author to try again or, in reality, to really try for the first time. So, let's all accept that lay summaries are an essential part of science communication, take writing them seriously, and save everyone's time by getting it roughly right first time around. It gets easier with practice (trust me), and you may even find you enjoy it.



***“Imagine you’re trying to explain it to your Mum, or to a mate down the pub.”***



***“...it gets easier with practice”***

You can view all lay summaries ever published on our website [www.functionalecology.org/summaries](http://www.functionalecology.org/summaries) or in the Supporting Information of the relevant article on Wiley Online Library.