

GUEST EDITORIAL

GETTING PUBLISHED IN JTFS

Francis S. P. Ng

A-9-5 Menara Menjalara, 52200 Kuala Lumpur. Email: fng@pc.jaring.my

Getting published, particularly in a peer-reviewed journal, is vital to a scientist's professional reputation. However, the needs of authors have to be balanced against the expectations of readers. The task of maintaining a balance rests with the journals, their editors and their reviewers. Of course, authors, readers, reviewers and editors can be the same people wearing different hats at different times—it is not a matter of 'them' versus 'us' but all of us trying to find the best balance in the interests of science.

Editors would love to spot and publish 'cutting-edge' papers, but whether or not a paper is 'cutting edge' is for the future to decide. Editors cannot really tell. We have to be humble about this because truly cutting edge papers usually get very rough reviews and are often rejected in their first or second submissions because they go against prevailing knowledge. Journals perform their best service by doing something quite mundane and more feasible—declining the manuscripts that do not satisfy the minimum conditions for publication. It is relatively easy to set and justify the minimum standards and once we know what these standards are, we can adjust our work accordingly.

Of the manuscripts offered to the *Journal of Tropical Forest Science* (JTFS) for publication, about half are declined by the editorial office without being sent out for review. These do not meet the minimal requirements for originality, relevance and completeness.

INSUFFICIENT ORIGINALITY

It may come as a shock to many forest scientists that probably 90% of all forestry research is not original enough for journal publication. This can be illustrated with a rather a simplistic example from wood anatomy. Timbers differ from each other by their wood anatomy. There are thousands of timber species, so one can write

thousands of papers one species at a time, or hundreds of papers one genus at a time, following the same template. Each paper would contribute a 'salami-thin slice' of new information. Journal would decline such papers almost certainly. The best way to publish such information is in a book in which a range of timbers are compared in a holistic and comprehensive manner—the whole sausage instead of one thin slice at a time.

Wood anatomists learnt this lesson long ago, and we rarely receive manuscripts in wood anatomy. But we see papers on tissue culture, seed germination, seed storage, mechanical properties of bamboo, pulping properties of wood, vegetative propagation, and so on, one species at a time, and most papers of this type are declined.

Some studies result in abundant data but their intellectual content is still 'salami' thin. Examples are inventories of forests, mycorrhizae and other things that may result in voluminous data. Every forest is different, but after 50 years of forest inventory what can another description of another forest contribute to our understanding of forests? The authors now have to offer more. One possibility is to re-inventorize the same forest at different times, to track the changes that take place. The study becomes a study of change. But as more and more studies are carried out, studies that merely document change also lose impact. The next questions are about the forces that drive change. The authors have to move on, perhaps to devise and test possible mechanisms of change.

Authors need to be aware that something that is done the first time is original. After that the originality drops. Many forest scientists work in bureaucratic organizations and are slotted into jobs that were defined 100, 50 or 20 years ago. If they follow exactly what their predecessors did, their work would certainly fail in originality. Repetitive work is valid and useful, but is not journal-publishable unless the author discovers

something extraordinary in the course of an otherwise routine investigation.

The constant demand for originality is what drives science forward. Bureaucratic organizations, even scientific organizations, do not drive originality; it is the journals that perform this function. The reputations of scientific organizations rise or fall according to the papers their staff publish in peer-reviewed journals. There is no other measure of performance of institutions and individuals that is more universally respected.

INSUFFICIENT GLOBAL RELEVANCE

Journal publication allows local research to be brought to the attention of the global community of scientists, but the authors have to find ways to link the local research to the global picture.

A description of the flora or fauna specific of a particular place, no matter how well written, is applicable only to that place and is best in a locally published guide book.

The study of growth of a plantation is extremely local. An equation relating volume or biomass to diameter is only applicable to that particular plantation.

A study on a local phenomenon, like the best time to collect seeds of a particular species in the Himalayas, can only be used for that species in the Himalayas, unless the author can find a way to make it relevant to other parts of the world.

We once had a paper dealing with the water quality of an oil palm plantation used as a catchment area for domestic water supply. There was a problem with the fertilizer load in the water supply. The author, thinking this work was totally original, did not refer to any other work. It was certainly original with respect to oil palm, but there are lots of agricultural areas used as water catchments around the world. By not attempting to interpret this work in the global context of agricultural catchments, the author reduced the value of the paper.

In writing for a journal, the authors should ask themselves what they are offering that readers in another country might find useful. We find that an author with a global mindset is almost always more versatile in the interpretation of data than a person with a parochial mindset, so journals perform a necessary service in forcing scientists

to think global even when the work they do must necessarily be local.

INSUFFICIENT COMPLETENESS

A paper is incomplete or inconclusive if the data it contains does not result in any satisfactory 'closure'.

If a study is made comparing two planting designs in agroforestry, the expectation is that one arrangement will be found to be better than the other. If the author cannot say which is better, the paper is inconclusive.

In a study on cyclical behaviour of trees, forests, insects, etc. one cycle is obviously not enough to establish the features of a cycle. Three cycles may be acceptable for publication if they are all in agreement. But if they do not fully agree, the study is incomplete and more cycles have to be monitored.

We sometimes have papers based entirely on statistical correlations. An author may think a case is proven with the demonstration of statistical significance, but it rarely is. We may use statistics to support an argument but the argument still has to be made persuasively by linkage with other evidence.

All research carries the risk that the data obtained may not contain the answers we seek. Should all such work be written off? Some people think inconclusive research should be published because they may contain useful lessons that could contribute to the final solution of a problem. Most editors would make their decisions on a case-by-case basis depending on how well the case is presented. However, there is little evidence in science that inconclusive findings can lead to the final correct solution. For example, it is well documented that Charles Darwin carried out many experiments to find out how heritable traits are inherited. Darwin was on the wrong track and had no influence whatever on Gregor Mendel, whose own independent investigations produced the way forward. Indeed, we only know where Darwin went wrong by reinterpreting Darwin's experiments from Mendel's point of view. In other words, we cannot even interpret inconclusive work properly until we have conclusive results and the latter do not proceed from the former.

THE RESEARCH PORTFOLIO

Scientists, especially those in government service, need to recognize that part of their research portfolio would be routine, to full up institutional databases. Another part will be of purely local interest, to service a local clientele. Only part of it will be exploratory and some (actually most) explorations will be inconclusive. The research portfolio of a scientist should therefore be varied enough so that some part of it has a chance of being original, globally relevant, conclusive and

journal-publishable. This is the reality of life as a scientist. There is a need for a survivor's guide for scientists, which somebody should write. A successful scientist usually manages to publish 100 to 300 papers in a lifetime and has a lot of fun doing it. That's the target we should set for ourselves.

Dr Francis Ng is Consulting Editor to JTFS. He has been, at various times, Deputy Director General of FRIM, a Service Chief in the Forestry Department of FAO and a Director in CIFOR.