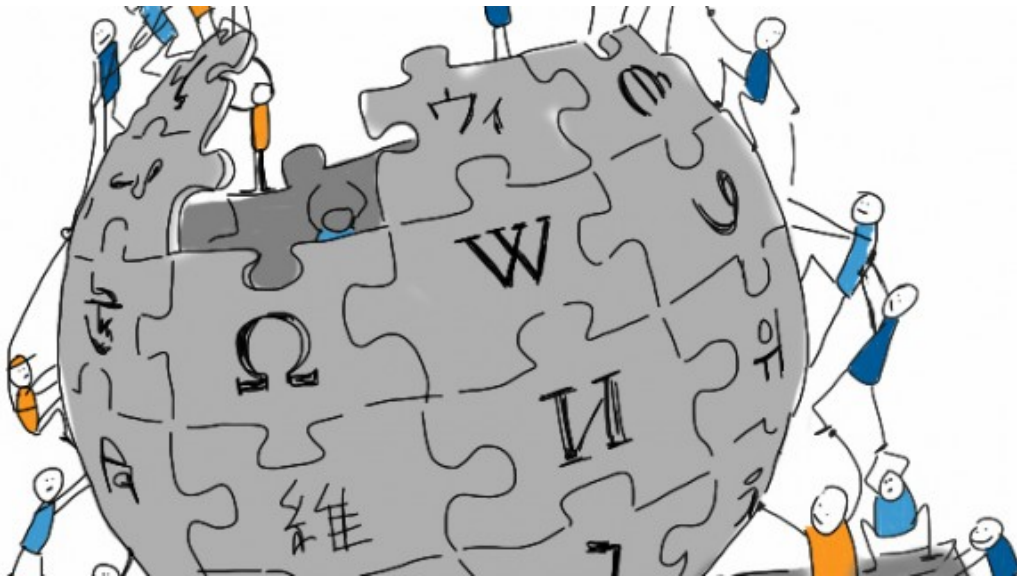


# What does it mean to be an author in the age of distributed experiments?

November 12 2015, by Dr. Eric Lind

---



Credit: Giulia Forsythe for the Wikipedia Educator Project (creative commons license)

Recently at a "campus conversation" about how our strong but not necessarily elite Midwestern US university could improve our international profile, the administrator in charge presented a map of countries colored by their status in terms of ongoing collaborations with local researchers. Countries in red: the stable, ongoing partnerships you might expect (US/Canada, Brazil, EU countries, China, Australia). Yellow countries: rising in opportunity (South America, South Africa,

SE Asia). And then, a somewhat strange category: "CERN countries" in blue.

It turns out that in developing their international collaboration metric, the University had tallied co-authorships in peer-reviewed publications and recorded home countries of the authors. This proved to be a good indicator, except in the case of CERN – the famous international physics experiments being conducted in Switzerland ([home.cern/](http://home.cern/)).

The presenter explained that the papers in question had hundreds of authors, making it a bit obscure what the nature of the international collaboration might be.

Were the scientists from Ukraine, Taiwan, Costa Rica and our University really an international team? Or just a collection of scattered researchers squinting at the same dataset derived from the European atom-smasher?

What constitutes scientific authorship is an old and ever-evolving question. Usually the issues in the scientific community center around who gets to be first, or last, depending on the place of prominence in the field. But as the length of the author list grows, so does apparent suspicion of worthy contribution. As a facile example, a widely read weekly online column of American football ephemera repeatedly framed the issue:

TMQ dislikes the modern convention of listing multiple people as "authors" of a work written by a single person; this is part of the overall cheapening of the written word. Several previous items have concerned the absurd number of people listed as "authors" of scientific papers. For example, the lead paper in the current issue of *Science* magazine, "Draft Genome Sequence of the Sexually Transmitted Pathogen *Trichomonas Vaginalis*," lists 67 authors.



Open contributorship project

Setting aside the obvious differences between news articles written on a 24 hour news cycle and research papers written as the culmination of a multi-decadal experiment, it is unfortunately instructive of what the general public might think. Of course, crediting only five dozen people as being involved in resolving the annotated genome of an important organism might even be considered restrictive. But suspicion of long author lists is not limited to the sportswriter set. Because authorship on manuscripts is the currency of the scientific professional realm,

it is important to avoid authorship "inflation", the increase in authorship credit for any and all participation in a project, which may lead to a decline in value for all scientific authorship.

This is especially true as ecology moves into a "CERN era" of international collaboration on projects where data arise from modest efforts in many places to generate a global dataset. One of the strongest trends in [international collaboration](#) in ecology over the last decade has

been the rise of coordinated, distributed data networks and experiments. In coordinating a distributed experiment called the Nutrient Network ([nutnet.org](http://nutnet.org)), I have had experience confronting these authorship issues, as we try to fit our still-new model of ecological research into the existing authorship attribution of ecological science. Here is what we have found useful:

Establish the authorship rules upfront, and welcome new authors:

In the Nutrient Network we establish authorship based on six major areas: (1) idea generation, (2) data contribution, (3) data analysis, (4) writing, (5) help with analysis and writing, and (6) coordination of the network project. Nearly all writings on the multiple authorship issue emphasize the importance of setting clear rules at the outset of a project. This may not be realistic for all collaborations, but in a distributed framework such as the Nutrient Network it is essential. We publish rules for joining the network as a data contributor or experimental node, and use a standardized abstract proposal system to coordinate analyses. A volunteer authorship committee checks new manuscript proposals for overlap or conflict with new papers but otherwise does not filter proposals.

Be clear in the contribution of each author:

The Nutrient Network has publicly posted guidelines for authorship on its papers. It is our practice to publish as an appendix to each paper a supplementary table stating exactly which of the six major areas of authorship each author contributed to. It is our hope that this approach can overcome the objection of "too many authors" by being specific about exactly what it is that each author contributed. A similar spirit motivates the flashier idea of digital 'badges'.

Defend the collaborative data gathering practice:

Scientists in fields which may emphasize traditional place-based research, must emphasize to administrators how data from a local site, in combination with similar data from many heterogeneous sites, can give rise to a general global understanding. It is through these connections among researchers that this peer-to-peer science can be made most fruitful. There are still fundamental ecological questions which can best be answered by collecting data, in observational or experimental contexts, in uniform ways across sites, across continents, and across countries.

In many ways the new collaborative network efforts are forging a new path in terms of how ecology gets done, and in how we understand the generalities and contingencies of ecosystems worldwide.

This might lead to author lists that are longer than we are used to, for ecology or other environmental sciences. But hopefully [authorship](#) continues to mean what it has always meant: the manuscript couldn't have been generated without the participation of each scientist; each scientist contributed to the shaping of the manuscript in some meaningful way. If so, we each deserve credit on the author line.

*This story is republished courtesy of PLOS Blogs: [blogs.plos.org](https://blogs.plos.org).*

Provided by Public Library of Science

Citation: What does it mean to be an author in the age of distributed experiments? (2015, November 12) retrieved 12 July 2024 from <https://phys.org/news/2015-11-author-age.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--