Who Are Coauthors and What Should Be Their Responsibilities?

T. Prabhakar Clement*

Environmental Program, Department of Civil Engineering, Auburn University, Auburn, Alabama 36849, United States

Environmental scientists and engineers, who endeavor to solve complex problems, are yet to address a simple question: who should be coauthors in their journal articles? While some disciplines (e.g., medical sciences) have had extensive debates, most applied sciences and engineering disciplines have not. The authorship issue has always been shrouded in mystique partly because the word “author” is poorly defined in the context of publishing journal articles. This word was coined several centuries before academic journals started publishing research articles. Moreover, the number of coauthors has gone up dramatically in recent years, adding further vagueness to its meaning. A random data set comparing the number of coauthors in a 1980 ES&T issue (Vol. 14, Issue 11) with a recent 2014 issue (Vol. 48, Issue 21) shows that the average number of coauthors (total number of authors divided by total articles) has roughly doubled in ES&T (from about 3 to 6) in 35 years. Over the years, the title “author” has also become a prestigious designation with an inherent assumption that journal articles make unique contributions and hence authors are entitled to some credit. Basic questions, such as who should be a coauthor and what should be their order, are then viewed as a process of dividing this credit. However, the authorship coin has two sides—one side is credit and the other is responsibility. The objective of this note is to focus on the responsibility side of authorship and discuss why authors should be more explicit about openly disclosing what each did in the formation of an article.

Focusing on credits is a relatively easy task since this approach views an article as a bag with infinite amount of credits. This can be illustrated by reviewing our current practice of allocating citation credits. When a multiauthor paper is cited, every coauthor claims this citation credit; hence the more the authors, the more credit, a perfect win–win model! However, the limitations of this credit paradigm are glaringly exposed when an article is found to be flawed. The John Darsee story is an excellent example for this. In the late 1970s, Dr. John Darsee, a researcher associated with both Emory and Harvard Universities, published two key articles. A few years later, ethical investigations completed at Harvard and Emory found Darsee had fabricated data, and he was forced to retract these publications. Darsee admitted his misdeeds and stated the following in his retraction:

I am deeply sorry for allowing these inaccuracies and falsehoods to be published in the Journal and apologize to the editorial board and readers of the New England Journal, to Emory University, and to my coauthors. Dr. Nutter and Dr. Heymsfield are impeccably honest researchers, whose names appeared on these papers in good faith. Neither of them was aware of any of the inaccuracies nor were they responsible for any of them.

With these words Darsee took full responsibility for the flawed articles, while his co-authors appear to have safely abandoned the work and took little or no responsibility. For the sake of argument, what if these two papers were selected for an award and Dr. Darsee made these hypothetical statements: My co-authors names appeared on these papers in good faith, and neither of them was aware of the accuracy of these efforts nor were they responsible for any of them. I am sure his coauthors would have furiously rebutted these statements and fully owned the responsibility for the effort to claim their share of the credit.

The Darsee story reveals that a true author is someone who is willing to shoulder the responsibility for the work, even when there is a problem. Therefore, when deciding authorship one should adopt a responsibility paradigm and perhaps conceptually view a journal article as a “flawed product” that deserves some shame or penalty (see Figure 1). Using this inverted responsibility paradigm, the authorship problem can be reduced.

Figure 1. Comparison of credit and responsibility paradigms.

Received: January 23, 2015

DOI: 10.1021/acs.est.5b00415

Environ. Sci. Technol. XXXX, XXX, XXX−XXX
to answering these questions—what are the responsibilities each coauthor is willing to own and how much shame/penalty is he or she willing to share? To document these responsibilities one could use any of the quantitative or qualitative approaches suggested in the literature. Among available approaches, the recently proposed matrix method is a relatively simple methodology that conceptually divides a journal article into four basic components: (1) ideas, (2) work, (3) writing, and (4) stewardship. Quantitative fractions can then be assigned to these components to estimate how much responsibility each coauthor is willing to own for the flaws in each component. Clement has integrated these steps within a spreadsheet environment and has demonstrated its application using a detailed case study.

The overall focus of this note is to inspire authors to own their responsibilities when they place their name in the byline of a journal article. Every author should make an effort to explicitly disclose their responsibilities to the readers by using qualitative statements, such as John conducted experiments, completed field work, developed ideas, and wrote the manuscript, or by using some quantitative metrics. Several interdisciplinary journals already require such statements. Rennie reviewed this practice and concluded that it increases author accountability. Perhaps it is time for every journal to make coauthors accountable for their contributions.

I fully admit that authorship has several intangible elements which are difficult to quantify. The title “author” is like the title “sculptor” and such titles simply cannot be conferred on someone. These titles can only be earned by an artist by creating a product. “Author” is someone who goes on an intellectual journey full of twists and turns to create a unique product of his mind; he then shoulders the responsibility to produce a near perfect product. Potential coauthors who claim a share of this creative effort should ask themselves certain questions: Was I part of a significant stretch of this intellectual journey? Is this effort a near-perfect product of my mind? Can I shoulder some unique responsibilities and defend them? If the answers are yes then he or she should be a coauthor.

**AUTHOR INFORMATION**

**Corresponding Author**

*E-mail: clement@auburn.edu.

**Notes**

The authors declare no competing financial interest.

**REFERENCES**


