

CREDIT WHERE CREDIT'S DUE: GUIDELINES ON AUTHORSHIP

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Abstract. The thorny issue of inappropriate authorship is a well recognized problem in research (Epstein, 1993). Recent editorials and articles in the *British Medical Journal (BMJ)*, *Lancet* and *Journal of American Medical Association (JAMA)* have raised its profile amongst our medical colleagues. The current authors feel that clinical psychologists, nurses and other mental health professionals need to be more aware of the complexities of the area. Hence this paper intends to clarify the major concerns regarding proper accreditation and gives some recommendations and guidelines.

Keywords: Authorship, publications, referencing, responsibility, accreditation, citation.

Introduction

When applying for a promotion, regarding, or seeking a new post, a person's publication list is increasingly important. Our medical and university colleagues know only too well that their publications are a criterion by which they and their department are judged. However, those attempting to publish face numerous difficulties. There are difficulties of time management ("I'll get round to writing it up *sometime* in the *near future*"); threats to competence ("It's not good enough. I am too embarrassed to send it for review"); and potential threats to self-esteem ("Oh God, they've rejected me again!"). Adding to these issues is the problem of *improper authorship*. Indeed, there is little worse than investing a great deal of time and energy in a piece of research and then gaining little or no credit. As one might imagine this issue causes great acrimony amongst professionals.

Editor's note: The views expressed in this paper are those of the authors and do not necessarily reflect journal policy.

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Table 1. Percentage table of authorship in journals of *Consulting and Clinical Psychology* and *Behavioural and Cognitive Psychotherapy*

	<i>JCCP</i>		<i>BCP</i>	
	1 & 2 authors	Range	1 & 2 authors	Range
1963–69	82%	1–8	–	–
1970–79	72%	1–9	93%	1–4
1980–89	51%	1–9	79%	1–9
1990–96	44%	1–13	68%	1–9

Defining the problem

There has been a steady rise in authorship over the years. A recent survey of *The New England Journal of Medicine (NEJM)* revealed that fewer than 5% of its current articles were written by a single author; a century ago the percentage was 98 (Fye, 1990). Another review conducted for the *NEJM* in the late 80s revealed that the mean number of authors per article in their journal was now more than six (Sobal & Ferentz, 1990).

A review of psychology journals by the current authors shows similar trends, although to a less marked extent. For example, the percentage of articles in the *Journal of Consulting and Clinical Psychology (JCCP)* citing more than two authors rose from 18% in the 1960s to 56% in the 1990s and the percentage of 2+ authors of *Behavioural and Cognitive Psychotherapy (BCP)*, first published in 1972) rose from 7% in the 1970s to 32% in the 1990s (see Table 1). One can hypothesize that this rise in authorship directly influences the validity of the accreditation process.

Ensuring proper authorship

When one reviews this important area, it becomes apparent that the dual issues of proper accreditation and responsibility are key features within this field (APA, 1994).

- (i) *Crediting*: Papers should credit the people who have done the work – those involved in: formulating the problem or hypothesis, structuring the design, analysing the data, interpreting the results, or writing a major part of the paper.
- (ii) *Responsibility*: Authors should be held responsible for the content of the published article. If the work is plagiarized, fraudulent, mendacious or ethically or morally wrong, then the author(s) must be held accountable.

Indeed, lack of clarity about inclusion, responsibility and order of authorship can result in the downfall of a well-designed study, or the start of a bitter feud. According to Smith (1997a), it appears that all too often authorship is influenced by power and departmental policies, where the powerful will be authors and the powerless simply acknowledged. In recognition of these problems, a set of guidelines was proposed by The International Committee of Medical Editors (the Vancouver Group, 1985). The guidelines state that:

- an author must participate in each of the following three stages: (a) conception/design or analysis and interpretation of data, or both; (b) drafting the article or

revising it; and (c) final approval of the finished version. Participation in data collection alone does *not* warrant authorship.

- all elements of an article (a, b and c), critical to its main conclusions, must be attributable to at least one author.
- a paper with corporate (collective) authorship must specify the key persons responsible for the article; others contributing to the work should be recognized separately via acknowledgements.
- editors may require authors to justify the assignment of authorship.

The American Psychological Association (APA, 1994) produced similar guidelines, suggesting that “substantial scientific contributions” (p. 294) should be the guiding principle for the assignment of credit. This “may include formulating the problem or hypothesis, structuring the experimental design, organizing and conducting the statistical analysis, interpreting the results, or writing a major portion of the paper” (APA, 1994, p. 294). However, they also consider that *combinations* of lesser contributions such as designing or building apparatus, suggesting or advising about statistical analysis, collecting the data and arranging for research subjects may justify authorship (see Digiusto, 1994) or at least an acknowledgement (APA, 1994).

Although such frameworks have been in place for a number of years, they have not had the intended impact. For example, Goodman (1994) conducted a small survey of research papers published in five consecutive issues of a general medical journal. He identified 84 authors in total and found that approximately one-third of these did not meet the Vancouver criteria. Among many examples of bad practice, he found a number of heads of department failing to fulfil *any* of the necessary criteria. Goodman's findings are comparable to results from a study carried out in the U.S. (Shapiro, Wenger, & Shapiro, 1994), which revealed that one quarter of the authors did not contribute substantially.

These results suggest that this form of misconduct is widespread. But why? Perhaps it is the increasing pressure to publish that encourages misconduct and poor-practice. Or maybe it is because few researchers know about the Vancouver guidelines, and furthermore many of those who are cognisant either disagree with them or find them difficult to follow (Bhopal, et al., 1997).

It is also important to acknowledge that the practice of gift-authorship, where the rightful authors invite other researchers to add their prominent names to papers hoping this will improve their credibility and “marketability”, has been shown to be widespread (Rennie, Yank, & Emanuel, 1997; Eastwood, Derish, Leash, & Ordway, 1996; Shapiro et al., 1994; Goodman, 1994). Considering the issue of liability, and the uncovering of some spectacular scandals (e.g., the Darsee case,¹ Relman, 1983), one would expect researchers to be wary of attaching their names to papers with uncertain pedigrees.

A variant of this practice is sometimes employed by outside agencies, such as pharmaceutical companies, who can also help to perpetuate bad practice. As pointed out by Rennie et al. (1997), some companies may produce in-house reviews and then hire credible academics to attach their names to the work.

¹Darsee co-authored papers that were later found to be fraudulent and a number of the authors refused to take responsibility for the contents, claiming minimal involvement.

Having outlined the problems, let us examine possible solutions to the dilemmas discussed above.

Guidelines

(a) *Distinguishing between contributors and guarantors*

Rennie et al.'s (1997) recent article argued that the term authorship should be replaced by the labels "contributors" and "guarantors". A contributor would simply be someone who has been involved with the study (i.e., making a substantial or lesser contribution). It is suggested that every person involved should take full responsibility for their part of the work, and therefore everyone would be listed alongside their contributions. A specific description of this contribution should appear e.g., as a footnote on the first page of the article—such a procedure is sometimes termed the "Film Script" system. The most important contributor should be named first, followed by the next in the conventional descending manner.

In contrast, guarantors are seen as guardians of the work, taking responsibility for the study overall. It is their responsibility, for instance, to act quickly and publicly should there be a problem with truthfulness or fraud.

This procedure has much to commend it, but the notion of a guarantor presents some problems. For example, his/her role can only be a theoretical one. As Horton (1997) points out, it is not realistic for one person to oversee *all* aspects of a study, from trials to data entry and analysis. Smith (1997b) suggests that a kind of ministerial responsibility-role for the guarantor might be sufficient.

(b) *Signing statements*

Another approach adopted by journal editors is to require all potential authors to sign statements attesting to the fact that they have made a substantial contribution to the article (Rennie & Flanagan, 1994). This is chiefly designed to discourage multiple authorship. However, statements have been employed in *JAMA* since 1989, with only limited effect and the *BMJ* found that having authors sign against criteria resulted in hardly any changes in authorship (Smith, 1997a).

Horton (1997) goes one step further by suggesting that authors sign a formal contract. The contract is hoped to promote a stronger ethical obligation. Once again a distinction is made in terms of level of responsibility (contributors vs. signatories), with only signatories taking "proper" responsibility.

(c) *Completing questionnaires*

Thirdly, Goodman (1994) suggests that journal editors should use a formal questionnaire procedure with all articles that are submitted. In this procedure authors are required to put their signatures against lists of possible contributions. He believes that the questionnaire employed in his own study could serve as a useful template (Goodman, 1994).

(d) *The "Superscript" system*

The current authors favour the "Film Script" system, and like this framework we suggest that all contributors be listed according to the importance of their involvement,

with the first author taking overall responsibility (i.e., acting as the guarantor). However, we think that it is a rather cumbersome procedure, and with multiple-authors it can become unwieldy. Hence we propose using a more “elegant” system, but one that captures many of the good features of the script framework. We have termed the revised procedure the “Superscript” system. In this methodology the nature of the contribution is denoted by an abbreviated superscript code, which is typed alongside each name.

It is proposed that the codes be recognized internationally and appear in every edition of the journal. Some initial flexibility would be required regarding these codes in order to establish workable categories that capture each contribution accurately. We offer the following codes as examples:

Jones,^{O,D,W,R}, Smith^{D,S,W,R}, Bloggs^{L,C}, & Brown^{S,I}

O	Original idea &/or hypotheses	W	Writing a substantial part of the article
D	Design	L	Literature review
C	Data collection	S	Statistical analysis
R	Revision of script	I	Intellectual contribution

A potential problem of the revision is that the system will become cumbersome when many names are cited as having made a contribution. This would cause problems for referencing and indexing etc. Therefore it is proposed that only the first three contributors are mentioned in text citations (Jones^{O,D,W,R}, Smith^{D,S,W,R}, & Bloggs^{L,C} et al.) and the first six within references. Of course, all contributors would be named in the original script.

We think that the above proposed system is both practicable and informative. However, we suggest that many of the associated difficulties faced in this area could be prevented by following a set of simple procedural guidelines.

- At the initial research meeting someone should take minutes to record answers to such important questions as: How many papers are likely to be written? Who are the potential authors? Who will do what?
- An accreditation system for the team should be agreed (e.g., as suggested above). A research contract might be appropriate in some situations (Kirkland, 1989).
- The topic of authorship should be a standing item on the agenda, as both project and personnel are likely to change over time, and this may require alterations in eligibility for accreditation.
- Before submission, there should be a final joint reading of the paper by all contributors to ensure that they approve of the final version (McQuay & Moore, 1997).

Addressing these procedural areas will help to clarify the interpretation of the accepted guidelines.

Conclusion

Improper authorship is a widely recognized problem within the medical profession. Up until now it has been an issue largely ignored within the principal allied mental health

professions. As the research and development initiative in the NHS gathers momentum (Culyer, 1994), we are more and more likely to be required to monitor, analyse and disseminate information regarding our research practice. Therefore it is probable that at some time in our career we will be faced with decisions about accreditation. The current paper has attempted to clarify some of the key issues and draws the readers' attention to helpful procedures and guidelines.

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