

## Multiple Authorship: Gold Mines or Booby Traps?

In this publication, as the editor-in-chief, I discuss a critical issue of authorship.

In their analysis of nearly 20 million articles across various disciplines, Wuchty, Jones and Uzzi (2007) reported in *Nature*, an increasing number of multiple authorship in all fields of scientific inquiry. What started as a practice in hard science, is now evident in social sciences as well (Macfarlene, 2015). This trend became apparent in early 1990s, as proportion of sole-authored articles dropped from 42% to 12% (Costa & Gaetz, 1992). Not only do authors tend to collaborate more, the numbers of writers per article is increasing as well. In an examination of four major journals in Psychology, for example, the proportion of manuscripts with four or more authors increased from 5% to 29% (Costa & Gaetz, 1992). This trend is substantiated by Ductor (2015), who analyzed data from a panel of economists publishing between 1970 and 2010, that demonstrated that multiple authorship leads to a higher academic productivity (research output) and quality of research. No wonder, Kozlowski, Chen and Salas (2017, p. 243) cautiously predict that “it appears that the frequency of publications for teams with four or more authors is accelerating.”

In line with the aforementioned trend, we also see this pattern of multiple authorship in *Makara Human Behavior Studies in Asia* in the past five years. Since 2014 (when the journal focused on human behavior, and shifted to only publishing articles in English), sole authorship has sharply decreased from 69% in 2014 to 20% by July 2019. Moreover, the proportion of manuscripts with three or more authors have risen from zero in 2014 to 30% in July 2019 (See Table 1).

The tendency of multiple authorship in Indonesia is influenced by government regulations that require students, even Master’s degree students, to publish their research, in an effort to push the number of scientific publications in the country. In this kind of publication, the students usually become the lead author whereas the

faculty members become the co-authors (and/or the corresponding author). On the one hand, such regulation may increase the number of publications of the academics, yet on the other hand this kind of collaboration present potential ethical concerns. For example, this relationship is prone to the White Bull effect, where senior academics assert a first authorship credit (Macfarlene, 2015), or where senior academics enjoy gift authorship (Schoenherr, 2015), that is gaining authorship position without substantial contribution.

One reason for the occurrence of inappropriate authorship practices, such as gift authorship, is the social exchange norms where junior researchers, including students, feel obliged to reciprocate or venerate to senior faculty, while the latter is prone to fall into confirmation bias (confirming and justifying their contributions) (Schoenherr, 2015). As discussed by Fine and Kurdek (1993, p. 1144), “Although, collaboration between two professionals can occur on an egalitarian basis, collaboration between faculty and their students is inherently unequal.” Arguably, the interplay of power and positionality between juniors and senior academics is even more complicated in high power distance countries (Hofstede, Hofstede & Minkov, 2010), such as Indonesia, where individuals tend to accept that power is spread unequally. In this kind of situation, it is harder for people in less powerful situations (i.e., students or junior academics) to openly disagree with their supervisors. It can be intimidating for them to discuss their position of authorship. It is even harder for them to question the contributive role of their supervisor or the senior academics. Altogether, these studies suggest the danger of inappropriate authorship practices in the collaboration of junior and senior faculty members or graduate students and faculty members.

It is worth noting, however, that the collaboration between students and supervisors, and between junior and senior academics is essential in the growth of students and junior scholars. It is an important mentor and mentee relationship that can help students and junior academics to develop their identity and competence as scholars and researchers (Gaffey, 2015). In general, all kinds of research collaborations can contribute to one’s learning process, and can provide opportunity for sharing workloads, utilizing specific expertise, and creating greater productivity and impact.

To mitigate the potential ethical concerns related to authorship in any collaboration, Fine and Kurdek (1993) suggest ways to determine authorship credit: process and outcome recommendations. In the process recommendation, they advise researchers to engage in a meaningful

**Table 1. Proportion of Manuscripts with Single or Multiple Authors**

Number of Authors	2014	2015	2016	2017	2018	2019
Single author	69.3	41.6	30.7	25	29.4	20
Two	7.6	16.6	15.3	41.7	17.6	30
Three	23.1	33.3	38.4	25	41.2	20
More than three	0	8.3	15.6	8.3	11.8	30

discussion early in the research process. In line with this, Gaffey (2015) reminds junior researchers that negotiating authorship is a dynamic process. She provides researchers with useful tools for this negotiation, which are: authorship agreement, authorship determination scorecard, authorship tie-breaker and publication contracts. These all are part of what Fine and Kurdek (1993) refer to as the process recommendation. In the outcome recommendation, they remind collaborators to acknowledge the level of competence each individual brings to the partnership, as this competence is an essential determinant for quality research.

Since there are low levels of understanding as to what comprises legitimate claim to authorship (Macfarlene, 2015), more research and discussion on multiple authorship is essential in constructing an ethical perspective on legitimate authorship, especially in countries that are in the early stages of academic productivity.

Multiple authorship should not become a booby trap for junior academics or graduate students, whose intellectual contribution can be overridden by power and positionalality. Instead, it should be a gold mine publication, where team-based research encourages methodological sophistication and multidisciplinary research (Macfarlene, 2015), to achieve quality publications (Piocuda, Smyers, Knyshev, Harris, & Rai, 2015) even 'big' research that produces corner stones of science (IWCSA Report, 2012).

In order to examine the impact of multiple authorship on our journal, we analyzed the number of citations (in Scopus and Google-scholar data base) of manuscripts published since 2014 (see Table 2). Although the number of observations (number of cited articles) is not very high, this simple analysis provides important insights. On average, single author whose manuscript is cited in Scopus, gets 0.5 citation, while three or more authors get 1 citation or more. The same trend occurs in citations in Google Scholar: articles with multiple authors tend to have a higher number of citations. As research shows that articles potentially achieve higher impact when authors collaborate with prominent scholars (Li, Liao, & Yen, 2015), articles published in this journal may get better citations when collaborating with prominent scholars.

**Table 2. Average citation\*)**

Number of author(s)	In Scopus	In G-scholar
Single author	0.5	2.75
Two authors	0.5	2.5
Three authors	1.16	3.16
More than three authors	1	4

\*) Note: for manuscripts, published since 2014, that have been cited in Scopus and G-scholar.

Since, the majority of quality research is produced by academics from the developed world (Piocuda et al., 2015), and that positive collaborations potentially occur when academics have networks with prolific authors (Li, et al., 2015), *Makara Human Behavior Studies in Asia* aims to promote quality research and publications by building bridge between well-known scholars and enthusiastic Indonesians' researchers. One way to do this is by inviting prominent authors to share their research, stimulate more research and motivate collaborative studies. In January 2019, we invited May O. Lwin (Nanyang Technological University), Stella Chia (City University of Hong Kong), Wonsun Shin (University of Melbourne), and Maurice Verger (Radboud University) to discuss their research with Indonesian researchers in a mini symposium titled: Young People and Media. This coming October, we will have another mini symposium, titled Diversity and Healthy Relationship. Several prominent authors have confirmed their attendance: Elizabeth George (University of Auckland), Allan Bernardo (University of Macau), Prithviraj Chattopadhyay (University of Auckland), and Buxin Han (Chinese Academy of Sciences). These efforts are directed at building the social capital of researchers that participate in the symposium and encourage collaborations to achieve quality publications.

In conclusion, it seems that multiple authorship is inevitable. In order for the partnership to be fruitful and fair, there are at least two aspects that need be developed: First the awareness of potential ethical issues pertaining to it, especially in the relationship between junior and senior academics, including between students and their supervisors; and second, the opportunity for academics to build social capital with prominent scholars so that their collaboration will be more powerful. *Makara Human Behavior Studies in Asia* is proud to take serious part in that avenue.

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