

A Graduate Student's Guide to Determining Authorship Credit and Authorship Order

APA Science Student Council

Introduction

As a graduate student, conducting research and publishing your work is essential to your professional development and the advancement of your career. Your involvement in this process provides the opportunity to learn new skills, network with other researchers in your area of interest, and personally contribute new knowledge to the field. As you advance in your studies, you will likely carry increased responsibility throughout the research process, including the development of investigations, collecting and analyzing data, and presenting and publishing your findings. Although it is often viewed as the final stage and endpoint of a given study, publication actually reflects the culmination of efforts and contributions made by everyone involved that has made the dissemination of findings possible. Authorship is often the primary way by which to acknowledge the contributions of individuals involved in a project, and as a graduate student, it can be a rewarding experience and achievement to see your name on a published manuscript for the first time. Because of the importance placed on publication in psychology and related fields, and the increasing number of multi-authored articles (Gladding, 1984; Iammarino, O'Rourke, Pigg, & Weinberg, 1989), negotiating and determining authorship is an important part of the research process.

An open discussion on authorship among all individuals involved in a project is necessary throughout the research process. Specific issues involving authorship may become more salient at different points in a project, and can reflect either new developments or revisited issues from an earlier discussion. As such, we view the negotiation and determination of authorship as a dynamic process, rather than a predetermined or fixed decision. This process to proceed in the spirit of collaboration and in an egalitarian manner among all individuals involved in the study. The purpose of this website is to introduce and provide information regarding the process of negotiating and determining authorship, particularly from a graduate student perspective. You will also find materials and resources that outline a variety of issues and topics related to authorship. The included worksheets and agreements can be used to facilitate a dialogue with your advisor and/or colleagues around authorship, and can be referred to throughout the research process. In addition, references to pertinent articles and links to examples of university guidelines are provided.

What is Authorship and How is it Determined?

Authorship entails a public acknowledgment of scientific or professional contribution to a disseminated piece of information (see APA, 2002) and includes involvement in various tasks associated with the project (National Health and Medical Research Council, 1997). As such, a number of interrelated factors are considered in determining authorship. The APA *Ethical Principles of Psychologists and Code of Conduct* (2002, Section 8.12) also addresses certain criteria for authorship by stating:

- (a) Psychologists take responsibility and credit, including authorship credit, only for work they have actually performed or to which they have contributed.
- (b) Principal authorship and other publication credits accurately reflect the relative scientific or professional contributions of the individuals involved, regardless of their relative status. Mere possession of an institutional position, such as Department

- Chair, does not justify authorship credit. Minor contributions to the research or to the writing for publication are appropriately acknowledged, such as in footnotes or in an introductory statement.
- (c) A student is usually listed as principal author on any multiple-authored article that is based primarily on the student's dissertation or thesis. Faculty advisors discuss publication credit with students as early as feasible and throughout the research and publication process as appropriate.

Negotiating Authorship

The guidelines and definitions of authorship provided by various professional organizations offer general conceptualizations and provisions for researchers. As such, they may not offer comprehensive or unambiguous definitions (Fine & Kurdek, 1993), and collaborators must further discuss and reach consensus on certain issues, such as identifying what constitutes a scientific contribution, how authorship order is decided upon, and how to engage in the process of authorship determination. Discussion of authorship and authorship order will optimally begin at the inception of a research project, and involve a purposeful and thoughtful examination of expected contributions of the individuals who are involved in the project (Winston, 1985). Depending on the scope of a particular project, it is possible that several manuscripts will be planned, each of which could involve different authors or different authorship orders. In this event, it is especially important to discuss authorship at the beginning of the project. When discussed, it is helpful for everyone to recognize that initial authorship and authorship order can change throughout the development of the project if necessary in order to better reflect the actual contributions of all investigators. Although it is not always the case that significant changes are made in regard to authorship after the initial determination, several common reasons for change are discussed below. All individuals involved in the project to take part in these discussions in an open and professional manner. Changes should be decided upon mutually after consideration of each individual's perspective and review of each individual's contributions.

The Basics

Authorship-related planning should include the collaborative discussion of the expected roles and responsibilities of each contributor. As a graduate student who is significantly involved in a research project, it will be helpful for you to consider several issues as part of this process. For example, consider your short-term and long-term goals, and how your involvement on this specific project will provide the opportunity to work toward these goals. Keep in mind that each project brings unique opportunities and responsibilities, and that you will most likely be involved in multiple projects simultaneously as you advance in your graduate studies. Authorship can provide the opportunity to begin, enhance, and advance your involvement on future and related projects, strengthen your affiliations with other graduate students and professors, and advance your overall career. Given your status as a graduate student, it may at first feel intimidating to discuss the role(s) you would like or expect, and your place as a contributing author. However, this can be viewed as an excellent learning opportunity that will contribute to your professional identity as a researcher and scholar, and that will eventually contribute to your identity as a colleague among other researchers. Most advisors and senior researchers will be happy to talk with you about authorship, and consider this a part of the student-advisor relationship.

Given the number of responsibilities associated with the completion of a research project, there are usually a number of contributors. A checklist like [this](#) can offer a helpful outline of the various necessary tasks and who will be responsible for completing each task. As such, this checklist not only helps facilitate the organization and delegation of various responsibilities, it also provides an initial opportunity to begin a collaborative negotiation of authorship and initial authorship order among the individuals involved in the project. This checklist can also serve as a basic example for the development of your own checklist that is specific to the given research project.

Authorship Negotiation Worksheet (Winston, 1985)

An authorship-determination worksheet such as [this](#) provides a quantitative example for determining authorship and authorship order. Detailed information on this worksheet is provided by Winston (1985) and general information is provided below.

The use of this worksheet is most effective when completed collaboratively among all individuals involved in the project. The overall purpose of the instrument is to provide an easy and clear way to negotiate and determine authorship and to clarify the expected roles of each contributor. This involves discussing who will do or has done certain tasks, and then assigning appropriate points to each task. For example, the conceptualization and clarification of the research idea and design is assigned 50 points by default. These points can also be delegated to several contributors to reflect relative contributions to each task (e.g., contributor A may receive 40 points, and contributor B may receive 10 points). The default weight given to each task might also be negotiated depending on the given project. For example, less weight will likely be attached to the conceptualization section of a basic replication and extension project. It should be noted that not all projects fall within the scope of this instrument, thus creating a situation in which aspects such as total points available per task or authorship cut-off scores should be adjusted. In other cases, tasks might need to be added or deleted (e.g., statistical analyses are not always relevant in qualitative research).

After all tasks have been discussed and points have been assigned, each contributor's points should then be totaled. A minimum total should be collaboratively agreed upon by the involved researchers to warrant authorship. Throughout this process, individuals should have an open discussion regarding responsibilities, expectations, and intentions for the project. For example, if this process is conducted at the inception of the project, an individual might ask to re-negotiate responsibilities if they would like to increase their total points in order to qualify as an author on the project.

A Caveat for Interdisciplinary Research

Research in psychology has become increasingly interdisciplinary (Sung et al., 2003), and it is important to know that other fields may have different authorship cultures. For example, in the biomedical field it is customary for the advisor (as head of the lab) to be the last author. It is therefore all the more important to start authorship discussions early so that all the contributors' expectations are aligned.

Written Authorship Agreements

Authorship agreements are forms that outline each contributor's responsibilities, roles, efforts, and publication intent (for example, [click here](#)). The purpose of these agreements is to provide more explicit information regarding such things as the order of authors, the ownership of data gathered as part of the project, and expectations for publication. Similar to the use of authorship worksheets, authorship agreements can be used to facilitate discussion with your advisor and/or other collaborators on a project regarding your desire to contribute to the publication of research for a given project, and how you envision your role and place in authorship. For example, you might negotiate with your advisor the expected time frame to publish your dissertation, and the responsibilities each of you would like to take as part of this process. Authorship agreement forms can be used in combination with authorship determination worksheets. This adds the benefit of further ensuring that all contributors can participate in authorship-related discussions and decisions. In addition, the research responsibility checklist can also be used by collaborators to take responsibility for specific tasks.

Common Reasons for Changes in Authorship

There are several common reasons for making changes in authorship, and only a limited sample of examples are included in this section. In addition, although these reasons may be common, the fairness and appropriateness for any changes is situation-dependent, and the context in which the changes are occurring must necessarily be examined and considered. Changes can refer to including additional authors, reducing the number of authors, or rearranging authorship order. Several reasons for why authors might be added to a manuscript include: (a) the project has expanded beyond the original purpose, conceptualization, or scope; (b) the added author may possess valuable expertise necessary for the completion of the project or to address major concerns expressed by a reviewer of the submitted manuscript; or (c) a contributor to the project who originally was intended to be thanked in the acknowledgement section of the manuscript became significantly more involved to the extent that their contributions warranted authorship. Several reasons for why an author may be later omitted from authorship include: (a) the author did not contribute to the project as originally expected or agreed upon; or (b) the author graduated or relocated before a project could be significantly undertaken, and the author's relocation prevented her or him from reasonably or substantially contributing to the proposed project. Several reasons for why authorship order may be revised include: (a) the actual contributions of authors differed significantly from the originally expected contributions at the beginning of the project; or (b) an author would like to accept increased responsibility, or would like to delegate a portion of her or his responsibility to other authors.

As a graduate student, you will also want to consider several specific situations when becoming involved in certain projects. For example, you may wish to give special consideration to projects that are primarily longitudinal. In this case, it would be beneficial to discuss with the primary investigator whether she or he intends to produce manuscripts only at the end of the investigation, or if several manuscripts are planned throughout the process. You will also want to discuss if or how your authorship or authorship order would be affected if you graduate before the completion of the entire project or the completion of the manuscript. Involvement in

longitudinal research can be particularly rewarding if clear expectations and understandings exist at the beginning of your involvement. For example, if you are able to negotiate authorship on several manuscripts throughout the process of the project and for manuscripts after the completion of the project, this could greatly assist you in developing a publication history not only as you apply for faculty positions, but also as you go up for tenure. Therefore, although your involvement in longitudinal projects can present some potential difficulties given the nature of your graduate student status, they can also be rewarding. [Additional considerations here]

Concerns Regarding Authorship

Negotiating authorship is in most cases a professional and respectful endeavor. However, situations and concerns can develop throughout this process that can lead to misunderstandings, authorship disagreements, and unethical behavior. In a survey conducted among experienced researchers, many of the ethical concerns related to faculty-student collaboration involved authorship issues (Goodyear, Crego, & Johnston, 1992). Because the negotiation of authorship is a process, efforts can be made throughout to minimize the potential for the development of these disputes, or to identify and collaboratively resolve any disputes before they escalate. Open communication, understanding, and revisiting of expectations are essential, and provide a basic way to identify any early development of disputes. Discussing authorship at regular intervals or at major developments in the project can help minimize the potential for the development of a disagreement later on in the project. However, if an authorship disagreement has developed, as a graduate student, you have several options for recourse. We expand upon several options in the space below, and in addition, we recommend that you further consult your university's handbook for information that applies specifically to your own institution.

Generally, the first level at which disagreements should be attempted to be resolved is between the contributors on the project. This can occur through additional discussion or by joint completion of a post hoc authorship determination worksheet. Come prepared with a critical understanding of your own contributions relative to those of others, and also an open-mind to consider the perspective of other collaborators. It can be helpful to approach the situation with the perspective that you, your advisor, and/or other collaborators have common ground and interests. At this stage, it may be necessary to first correct any existing miscommunications or misunderstandings. If the process of authorship determination was not explicit at the beginning of the project, it could be that collaborators have been unaware of the actual level of involvement of others on the project, especially when the project is being conducted at multiple institutions or sites, or has been a particularly long project.

As a graduate student, you might also find it helpful to consult with other individuals outside of the project in order to gain an objective perspective, or to receive feedback and suggestions on how you might best approach the situation. This could include other faculty members or advanced graduate students. There might also be other relevant consultants given your specific situation.

If the initial concern cannot be appropriately resolved, you may wish to directly consult your university's handbook at this time to identify the steps outlined by your institution. This may

include discussing the situation with your program or department chair, who may act as arbitrators, or who can provide more specific information on how to further proceed.

From the perspective of ethical decision making, there are several helpful ways in which to frame and approach your current concern. For example, the application of Welfel's (2002) model of ethical decision making could help you as your attempt to resolve authorship disagreements. Welfel's model includes (a) defining the dilemma and alternative actions; (b) referencing ethics codes, laws, ethics literature, and ethical principles; (c) applying fundamental ethical principles to the current situation (i.e., autonomy, nonmaleficence, beneficence, justice, and fidelity); (d) consulting; (d) deliberating and deciding; (e) informing others of the decision and implementing the decision; and (f) reflecting on the experience.

Final Considerations

Authorship disagreements can generally be resolved professionally, and early engagement in the discussion of developing disagreements can significantly contribute to successfully resolving concerns. As a graduate student, it is especially important to engage in open discussion at the start of the process, particularly due to the default power differential between you and your advisor, and when discussion of authorship is not engaged in collaboratively. The negotiation of authorship should be an exciting and positive experience when participating individuals demonstrate respect for other individuals' abilities and contributions. As such, it is beneficial to become involved in conducting research and participating in manuscript preparation whenever possible, whether it is with your immediate academic advisor, other faculty members, or your peers. Your continued involvement in conducting research and disseminating your findings through professional presentations or peer reviewed journals will significantly advance your professional development as a scientific researcher in psychology.

Resources

Forms

[Authorship contract](#)

[Authorship-determination worksheet](#)

[Research responsibilities checklist](#)

[Authorship contract combined with authorship determination worksheet](#)

Links

[APA Ethical Principles of Psychologists and Code of Conduct:](#) Contains all of APA's ethical guidelines.

[British Sociological Association: Authorship Guidelines for Academic Papers:](#) Contains detailed information regarding authorship order and the necessary contributions of authors.

[Committee on Publication Ethics: Guidelines and Code of Conduct:](#) A comprehensive set of guidelines covering a number of publication-related topics from authorship to peer review.

[Harvard Faculty Authorship Guidelines:](#) An example of university guidelines.

[The Aga Khan University Institute for Educational Development:](#) Provides alternative quantitative methods for determining authorship as well as detailed guidelines (click [here](#) and select "Authorship Guidelines for full .pdf file that contains additional determination strategies).

[The Health and Medical Research Council \(NHMRC\) of Australia:](#) Provides information regarding the definition of authorship and what constitutes being an author.

[The QUAD system \(Verhagen, Wallace, Collins, & Scott, 2003\):](#) This is another quantitative system from determining authorship that was published in *Nature*.

[University of California, Berkeley Guidelines:](#) A very good example of authorship guidelines that includes definitions and a section related to conflict resolution.

[Wake Forest Authorship Guidelines:](#) Another example from a university handbook.

[World Association of Medical Editors:](#) A list of web resources pertaining to research and publication ethics (note that a number of them are medical-field specific).

References

American Psychological Association. (2002). Ethical principles of psychologists and code of conduct. *American Psychologist*, 57, 1060-1073.

Fine, M. A., & Kurdek, L. A. (1993). Reflections on determining authorship credit and authorship order on faculty-student collaborations. *American Psychologist*, 48, 1141-1147. ([link](#))

Gladding, S. T. (1984). Multiple authorship in the *Personnel and Guidance Journal*: A 12-year study. *Personnel and Guidance Journal*, 62, 628-630.

Goodyear, R. K., Crego, C. A., & Johnston, M. W. (1992). Ethical issues in the supervision of student research: A study of critical incidents. *Professional Psychology: Research and Practice*, 23, 203-210.

Iammarino, N. K., O'Rourke, T. W., Pigg, R. M., & Weinberg, A. D. (1989). Ethical issues in research and publication. *Journal of School Health*, 59, 101-105.

National Health and Medical Research Council (1997). Joint NHMRC/AVCC statement and guidelines on research practices. Retrieved August 1, 2005, from <http://www.nhmrc.gov.au/funding/policy/6>

Welfel, E. R. (2002). *Ethics in counseling and psychotherapy: Standards, research, and emerging issues* (2nd ed.). Pacific Grove, CA: Brooks/Cole.

Winston, R. B. (1985). A suggested procedure for determining order of authorship in research publications. *Journal of Counseling and Development*, 63, 515-518. (Note that this article is available through EBSCOhost)