SEVENTH EDITION

7

PUBLICATION Manual

of the American Psychological Association

THE OFFICIAL GUIDE TO APA STYLE

COMMON REFERENCES AT A GLANCE

Journal article (Example 1)

McCauley, S. M., & Christiansen, M. H. (2019). Language learning as language use: A cross-linguistic model of child language development. *Psychological Review, 126*(1), 1–51. https://doi.org/10.1037/rev0000126

Newspaper article (Example 16)

Guarino, B. (2017, December 4). How will humanity react to alien life? Psychologists have some predictions. *The Washington Post*. https://www.washingtonpost.com/news/speaking-of-science/wp/2017/12/04/how-will-humanity-react-to-alien-life-psychologists-have-some-predictions

Authored book (Example 20)

Brown, L. S. (2018). *Feminist therapy* (2nd ed.). American Psychological Association. https://doi.org/10.1037/0000092-000

Chapter in an edited book (Example 38)

Balsam, K. F., Martell, C. R., Jones, K. P., & Safren, S. A. (2019). Affirmative cognitive behavior therapy with sexual and gender minority people. In G. Y. Iwamasa & P. A. Hays (Eds.), *Culturally responsive cognitive behavior therapy: Practice and supervision* (2nd ed., pp. 287–314). American Psychological Association. https://doi.org/10.1037/0000119-012

Dictionary entry (Example 47)

Merriam-Webster. (n.d.). Self-report. In *Merriam-Webster.com dictionary*. Retrieved July 12, 2019, from https://www.merriam-webster.com/dictionary/self-report

Government report (Example 50)

National Cancer Institute. (2018). *Facing forward: Life after cancer treatment* (NIH Publication No. 18-2424). U.S. Department of Health and Human Services, National Institutes of Health. https://www.cancer.gov/publications/patient-education/life-after-treatment.pdf

YouTube video (Example 90)

University of Oxford. (2018, December 6). *How do geckos walk on water?* [Video]. YouTube. https://www.youtube.com/watch?v=qm1xGfOZJc8

Government webpage or website (Example 111)

Centers for Disease Control and Prevention. (2018, January 23). *People at high risk of developing flu-related complications*. https://www.cdc.gov/flu/about/disease/high_risk.htm

See Chapter 10 for more reference examples.

SEVENTH EDITION

7

PUBLICATION Manual

of the American Psychological Association

THE OFFICIAL GUIDE TO APA STYLE

AMERICAN PSYCHOLOGICAL ASSOCIATION
Washington, DC

CONTENTS

LIST OF TABLES AND FIGURES

Tables

Figures

EDITORIAL STAFF AND CONTRIBUTORS

Project Director
Emily L. Ayubi

APA Style Team
Chelsea L. Bromstad Lee
Hayley S. Kamin
Timothy L. McAdoo
Anne T. Woodworth
Ayanna A. Adams

***Publication Manual* Revision Task Force**
James Campbell Quick, *Chair*
Mark Appelbaum
Jacklynn Mary Fitzgerald
Scott Hines
Heidi M. Levitt
Arthur M. Nezu
Pamela Reid

APA Publications and Communications Board Task Force on Journal Article Reporting Standards

APA Working Group on Quantitative Research Reporting Standards
Mark Appelbaum, *Chair*
Harris Cooper
Rex B. Kline
Evan Mayo-Wilson
Arthur M. Nezu
Stephen M. Rao
James Campbell Quick, *Publications and Communications Board Liaison*

APA Working Group on Reporting Standards for Qualitative Research
Heidi M. Levitt, *Chair*
Michael Bamberg
John W. Creswell
David M. Frost
Ruthellen Josselson
Carola Suárez-Orozco
James Campbell Quick, *Publications and Communications Board Liaison*

APA Public Interest Bias-Free Language Committees

Committee on Aging
Walter R. Boot
Brian Carpenter
Erin E. Emery-Tiburcio
Margaret Norris
Patricia A. Parmelee
Maggie L. Syme
Deborah A. DiGilio, *Staff Liaison*

Committee on Disability Issues in Psychology
Erin E. Andrews
Susan D'Mello
Jennifer J. Duchnick

Dana S. Dunn
John W. Hagen
Poorna Kushalnagar
Eun-Jeong Lee
Erin M. Liebich
Treven Curtis Pickett
Jennifer Reesman
Karrie A. Shogren
Maggie K. Butler, *Staff Liaison*

Committee on Ethnic Minority Affairs
A. Kathleen Burlew
Milton A. Fuentes
Daniel Gaztambide
Scott Graves
Kelli Johnson
Michelle Madore
Sandra Mattar
Helen A. Neville
Don Operario
Wendy Peters
Don Pope-Davis
Tiffany Townsend, *Staff Liaison*
Alberto Figueroa-García, *Staff Liaison*

Committee on Sexual Orientation and Gender Diversity
Mark Brennan-Ing
Sarah Burgamy
Arlene Noriega
Seth T. Pardo
Julia Z. Benjamin, *American Psychological Association of Graduate Students CSOGD Chair*
Clinton Anderson, *Staff Liaison*
Ron Schlittler, *Staff Liaison*

Committee on Socioeconomic Status
Rosario Ceballo
Ramani Durvasula
John Ruiz
Wendy R. Williams
Keyona King-Tsikata, *Staff Liaison*
Maha Khalid, *Staff Liaison*

Committee on Women in Psychology
Alette Coble-Temple
Paola Michelle Contreras
Sarah L. Cook
Diya Kallivayalil
Shannon Lynch
Charlotte McCloskey
Alayne J. Ormerod
Lauren Stutts
Shari E. Miles-Cohen, *Staff Liaison*
Tanya Burrwell Dozier, *Staff Liaison*

Reviewers
Tricia B. Bent-Goodley
Melinda Knight
Rachel Mack
Cynthia Saver
Frank C. Worrell
Jeff Zuckerman

ACKNOWLEDGMENTS

The precursor to the *Publication Manual of the American Psychological Association* was published in 1929 as a seven-page article in *Psychological Bulletin* describing a "standard of procedure, to which exceptions would doubtless be necessary, but to which reference might be made in cases of doubt" (Bentley et al., 1929, p. 57). Since then, the scope and length of the *Publication Manual* have grown in response to the needs of researchers, students, and educators across the social and behavioral sciences, health care, natural sciences, humanities, and more; however, the spirit of the original authors' intentions remains.

To address changes in scholarly writing and publishing since the release of the sixth edition, we consulted many professional groups and experts (each recognized individually in the Editorial Staff and Contributors list). We thank members of the *Publication Manual* Revision Task Force for their vision for the manual and for ensuring that our guidance reflects current best practices. We also thank the APA Working Group on Quantitative Research Reporting Standards for updating the original journal article reporting standards (JARS) for quantitative research and the APA Working Group on Reporting Standards for Qualitative Research for their groundbreaking work in establishing the first set of qualitative and mixed methods JARS in APA Style. We are indebted to members of the APA Public Interest Directorate committees and other advocacy groups who revised the bias-free language guidelines on age, disability, race and ethnicity, sexual orientation and gender diversity, and socioeconomic status. We are also grateful to the reviewers who provided valuable perspectives while representing psychology, nursing, education, business, social work, ethics, and writing instruction.

The important work of the *Publication Manual* Revision Task Force, JARS working groups, APA bias-free language committees, and other experts builds on efforts from previous groups. Thus, we also acknowledge the significant contributions of prior task forces, working groups, and APA staff members who revised previous editions of the *Publication Manual.*

For their guidance on writing about older adults with respect and dignity, we thank Nancy Lundebjerg and Dan Trucil from the American Geriatrics Soci-

ety. For her contribution to the sections on race and ethnicity, we thank Karen Suyemoto from the University of Massachusetts Boston. For their insights on sexual orientation, gender, and disability, we thank reviewers from the Human Rights Campaign: Jay Brown, Katalina Hadfield, Ellen Kahn, and Sula Malina. We also thank lore m. dickey, Mira Krishnan, and Anneliese A. Singh, members of APA Division 44: Society for the Psychology of Sexual Orientation and Gender Diversity, for their expertise in revising the sections on sexual orientation and gender diversity. For his suggestions regarding substance use language, we thank William W. Stoops from the University of Kentucky College of Medicine. They all shared their wisdom and passion for their communities to help people write with respect and inclusivity.

This edition of the *Publication Manual* is more accessible thanks in large part to the enthusiastic, detailed, and thoughtful contributions from David Berman Communications—in particular, David Berman, Michael E. Cooper, Hannah Langford Berman, and Krisandra Ivings. They helped refine our recommendations for fonts, headings, reference style, color contrast, and more to benefit all people who will use the manual.

For their guidance on presenting findings in tables and figures, we thank Adelheid A. M. Nicol and Penny M. Pexman. We also thank Gilad Chen, Anne M. Galletta, Roger Giner-Sorolla, Kevin Grimm, Lisa L. Harlow, Wendy Rogers, and Nadine Michele Weidman for their insights into publishing. We thank Steve W. J. Kozlowski, Open Science and Methodology Chair, for his expertise on replication and publication ethics. For their valuable expertise on legal references, we thank David DeMatteo and Kirk Heilbrun from Drexel University.

We also thank the many APA staff and consultants who contributed their feedback and expertise. These staff work across APA Publishing, the Education Directorate, the Executive Office, Information Technology Services, the Office of General Counsel, the Public Interest Directorate, and the Science Directorate: Joe Albrecht, Emma All, Ida Audeh, David Becker, Cara Bevington, Martha Boenau, Marla Bonner, Liz Brace, Dan Brachtesende, Dan Brown, Ann Butler, Kerry Cahill, Brenda Carter, Lindsay Childress-Beatty, Alison Cody, Lyndsey Curtis, Chris Detzi, Katie Einhorn, Andy Elkington, Kristine Enderle, Elise Frasier, Rob Fredley, Dana Gittings, Hannah Greenbaum, Rachel Hamilton, Sue Harris, Beth Hatch, Annie Hill, Sue Houston, Shelby Jenkins, Robert Johnson, Lois Jones, Shontay Kincaid, Kristen Knight, Kristin Walker Kniss, Marla Koenigsknecht, David Kofalt, George Kowal, J.J. Larrea, Stefanie Lazer, Katy Lenz, Glynne Leonard, Kathryn Hyde Loomis, Tim Meagher, Jennifer Meidinger, Claire Merenda, Necco McKinley, Debra Naylor, David Nygren, Sangeeta Panicker, Amy Pearson, Steph Pollock, Lee Rennie, Natalie Robinson, Kathleen Sheedy, Jasper Simons, Rose Sokol-Chang, Ann Springer, Elizabeth Stern, Amber Story, Daniya Tamendarova, Nina Tandon, Ron Teeter, Karen Thomas, Jenna Vaccaro, Purvi Vashee, Chi Wang, Jason Wells, Sarah Wiederkehr, Angel Williams, Kimberly Williams, Aaron Wood, and Sherry Wynn.

Last, we thank our many users who contributed their feedback via emails, surveys, interviews, focus groups, and social media. Your insights into what worked for you and what more you needed from APA Style have been invaluable in revising and creating content for this edition of the manual.

INTRODUCTION

Excellence in writing is critical for success in many academic and professional pursuits. APA Style is a set of guidelines for clear and precise scholarly communication that helps authors, both new and experienced, achieve excellence in writing. It is used by millions of people around the world in psychology and also in fields ranging from nursing to social work, communications to education, business to engineering, and other disciplines for the preparation of manuscripts for publication as well as for writing student papers, dissertations, and theses. The *Publication Manual of the American Psychological Association* is the authoritative resource for APA Style, and we are proud to deliver its seventh edition.

Why Use APA Style?

APA Style provides a foundation for effective scholarly communication because it helps authors present their ideas in a clear, concise, and organized manner. Uniformity and consistency enable readers to (a) focus on the ideas being presented rather than formatting and (b) scan works quickly for key points, findings, and sources. Style guidelines encourage authors to fully disclose essential information and allow readers to dispense with minor distractions, such as inconsistencies or omissions in punctuation, capitalization, reference citations, and presentation of statistics.

When style works best, ideas flow logically, sources are credited appropriately, and papers are organized predictably and consistently. People are described using language that affirms their worth and dignity. Authors plan for ethical compliance and report critical details of their research protocol to allow readers to evaluate findings and other researchers to potentially replicate the studies. Tables and figures present data in an engaging, consistent manner.

Whether you use APA Style for a single class or throughout your career, we encourage you to recognize the benefits of a conscientious approach to writing. Although the guidelines span many areas and take time and practice to learn, we hope that they provide a balance of directiveness and flexibility and will eventually become second nature.

APA Style for Students

The *Publication Manual* has long been an authoritative source for scholarly writing, and this edition provides more targeted guidance and support for students. All students, no matter what career they pursue, can benefit from mastering scholarly writing as a way to develop their critical thinking skills and hone the precision and clarity of their communication.

Most guidelines in the *Publication Manual* can be applied to both student papers and professional manuscripts. The manual also has elements specifically designed for students, including a student title page; guidance on citing classroom or intranet sources; and descriptions of common types of student papers such as annotated bibliographies, response papers, and dissertations and theses. Journal article reporting standards (JARS) are intended primarily for authors seeking publication but may be helpful for students completing advanced research projects.

Utility and Accessibility

We have created the seventh edition of the *Publication Manual* with the practical needs of users in mind. Within chapters, content is organized using numbered sections to help users quickly locate answers to their questions. This ease of navigability and depth of content mean that the manual can be used as both a reference work and a textbook on scholarly writing.

This edition promotes accessibility for everyone, including users with disabilities. In consultation with accessibility experts, we ensured that the guidelines support users who read and write works in APA Style through a variety of modalities, including screen readers and other assistive technologies. For example, we present a streamlined format for in-text citations intended to reduce the burden of both writing and reading them. We provide guidance on how to use adequate contrast in figures to meet Web Content Accessibility Guidelines (Web Accessibility Initiative, 2018). We also support the use of a variety of fonts and default settings in common word-processing programs, meaning that users need to make fewer adjustments to their systems to be ready to write in APA Style. Above all, our aim is to support the many ways in which people communicate. We encourage authors to be conscientious and respectful toward both the people about whom they are writing and the readers who will benefit from their work.

What's New in the Seventh Edition?

Brief descriptions of new and updated content are provided next on a chapter-by-chapter basis. For a more comprehensive overview of content changes, see the APA Style website (https://apastyle.apa.org).

Chapter 1: Scholarly Writing and Publishing Principles

Chapter 1 addresses types of papers and ethical compliance.

- New guidance addresses quantitative, qualitative, and mixed methods articles as well as student papers, dissertations, and theses.

- Information on planning for and ensuring ethical compliance reflects best practices.
- Guidance on data sharing, including in qualitative research, reflects open practice standards.

Chapter 2: Paper Elements and Format

Chapter 2 is designed to help novice users of APA Style select, format, and organize paper elements.

- The title page is updated for professionals, and a new student title page is provided.
- For all papers, the byline and affiliation format on the title page aligns with publishing standards.
- The author note includes more information, such as ORCID iDs, disclosure of conflicts of interest or lack thereof, and study registration information.
- The running head format has been simplified for professional authors and is not required for students.
- Font specifications are more flexible to address the need for accessibility.
- An updated heading format for Levels 3, 4, and 5 improves readability and assists authors who use the heading-styles feature of their word-processing program.
- Two new sample papers are provided: a professional paper and a student paper, with labels to show how specific elements appear when implemented.

Chapter 3: Journal Article Reporting Standards

Chapter 3 orients users to journal article reporting standards (JARS) and includes tables outlining standards for reporting quantitative, qualitative, and mixed methods research.

- JARS for quantitative research has been significantly expanded and updated (see Appelbaum et al., 2018; Cooper, 2018).
- The updated JARS now cover qualitative and mixed methods research (see Levitt, 2019; Levitt et al., 2018).

Chapter 4: Writing Style and Grammar

Chapter 4 provides guidance on writing style and grammar.

- The singular "they" is endorsed, consistent with inclusive usage.
- More detailed guidance helps writers avoid anthropomorphism.

Chapter 5: Bias-Free Language Guidelines

Chapter 5 presents bias-free language guidelines to encourage authors to write about people with inclusivity and respect.

- Existing guidance on age, disability, gender, racial and ethnic identity, and sexual orientation has been updated to reflect best practices.

- New guidance is provided on participation in research, socioeconomic status, and intersectionality.

Chapter 6: Mechanics of Style

Chapter 6 covers the mechanics of style, including punctuation, capitalization, abbreviations, numbers, and statistics in text.

- Updated guidance answers a common question: Use one space after a period at the end of a sentence, unless an instructor or publisher requests otherwise.
- Formatting of linguistic examples has changed; quotation marks are now used around examples, rather than italics, to promote accessibility.
- Expanded guidance is provided on the capitalization of proper nouns, job titles, diseases and disorders, and more.
- Guidelines for the presentation of abbreviations address common questions, such as how to include a citation with an abbreviation.
- Guidelines for the presentation of numbers have been updated to be consistent throughout a work (e.g., there is no longer an exception for presenting numbers in an abstract).
- New guidance is given on how to write gene and protein names.
- Updated guidelines allow greater flexibility for lettered, numbered, and bulleted lists.

Chapter 7: Tables and Figures

Chapter 7 presents guidance on creating tables and figures.

- More than 40 new sample tables and figures are presented, in dedicated sections, covering a variety of research types and topics.
- The presentation of tables and figures in text is more flexible (either after the reference list on separate pages or embedded in the text).
- Formatting of tables and figures is parallel, including consistent styles for numbers, titles, and notes.
- The accessible use of color in figures is addressed.

Chapter 8: Works Credited in the Text

Chapter 8 addresses appropriate levels of citation as well as plagiarism, self-plagiarism, and other unethical writing practices.

- In-text citations have been simplified; all in-text citations for works with three or more authors are shortened to the name of the first author plus "et al." (except where this would create ambiguity).
- New guidance is provided on how to cite recorded or unrecorded Traditional Knowledge and Oral Traditions of Indigenous Peoples.
- Examples of paraphrasing demonstrate how to achieve clear attribution without overcitation.
- New guidance is provided on how to format quotations from research participants.

Chapter 9: Reference List

Chapter 9 examines the four elements of a reference list entry (author, date, title, and source).

- The number of authors included in a reference entry has changed; up to 20 authors are now included before names are omitted with an ellipsis.
- The presentation of digital object identifiers (DOIs) and URLs has been standardized. Both are presented as hyperlinks; the label "DOI:" is no longer used, and the words "Retrieved from" are used only when a retrieval date is also needed.
- Updated guidance explains when to include DOIs and URLs for works retrieved from most academic research databases as well as from proprietary databases such as ERIC or UpToDate.
- New formatting guidance is provided for annotated bibliographies.

Chapter 10: Reference Examples

Chapter 10 provides more than 100 examples of APA Style references, each with accompanying parenthetical and narrative in-text citations.

- Templates are provided for every reference category.
- References are streamlined; for example, journal article references always include the issue number, and book references now omit the publisher location.
- Audiovisual materials receive expanded coverage, with new examples for YouTube videos, PowerPoint slides and lecture notes, TED Talks, and more.
- Social media, webpages, and websites are addressed in new categories. For consistency and ease of formatting, blogs and other online platforms that publish articles are part of the periodicals category.

Chapter 11: Legal References

Chapter 11 presents expanded and updated legal reference examples.

- Guidelines from *The Bluebook: A Uniform System of Citation* continue to be the foundation for APA Style legal references, with some modifications.
- New, relevant legal reference examples are provided (e.g., the Every Student Succeeds Act).

Chapter 12: Publication Process

Chapter 12 provides guidance on the publication process.

- New content helps early career researchers adapt a dissertation or thesis into a journal article or articles, select a journal for publication, avoid predatory or deceptive publishers, and navigate journal submission.
- Improved guidance on the journal publication process reflects current processes and policies authors need to be aware of when preparing a manuscript for submission.
- New guidance addresses how authors can share and promote their work following publication.

APA Style Online

The APA Style website (https://apastyle.apa.org) is the premier and authoritative online destination for APA Style. In addition to numerous free resources and instructional aids, it contains supplemental content that is referred to throughout the manual, including additional reference examples, sample papers, and guidance on using color effectively and accessibly in figures.

The JARS website (https://apastyle.apa.org/jars) contains the full repository of information about journal article reporting standards for a wide range of research designs; it is freely available to complement the orienting information in Chapter 3.

The APA Style blog (https://apastyle.apa.org/blog) and related social media accounts will continue to answer questions about and share insights into APA Style with the publication of the seventh edition, providing authoritative content from members of the APA Style team.

Academic Writer (https://digitallearning.apa.org/academic-writer) is APA's cloud-based tool for teaching and learning effective writing. Developed by the creators of APA Style, this product helps both student and professional authors compose research papers and master the application of seventh-edition APA Style.

Notes to Users

The *Publication Manual* refers to numerous products and services that are not affiliated with the American Psychological Association but that our readers may encounter or use during the process of research, writing, and publication. The trademarks referenced in the *Publication Manual* are the property of their respective owners. The inclusion of non-APA products is for reference only and should not be construed as an endorsement of or affiliation between APA and the owners of these products and their respective brands.

Finally, some eagle-eyed users have asked why every aspect of APA Style is not applied throughout this manual. The manual is a published work, whereas the guidelines for APA Style are meant to be applied to manuscripts being submitted for publication or to student papers. Considerations for published works such as this book (e.g., typesetting, line spacing, length, fonts, use of color, margins) differ from those of draft manuscripts or student papers and thus necessitate deviations from APA Style formatting. Also, in this manual—in which we are writing about writing—it is often necessary to distinguish between explanatory text and examples through the use of font, color, and other design elements. Wherever possible, however, we have endeavored to demonstrate APA Style while writing about it and to present the information in a way that is accessible for our many users around the world.

1

SCHOLARLY WRITING AND PUBLISHING PRINCIPLES

Contents

1

SCHOLARLY WRITING AND PUBLISHING PRINCIPLES

Research is complete only when scholars share their results or findings with the scientific community. Although researchers may post articles on scholarly collaboration sites or preprint servers or share them informally by email or in person, the most widely accepted medium for formal scholarly communication continues to be the published article in a peer-reviewed, scientific journal. Scientific journals contain our primary research literature and thus serve as repositories of the accumulated knowledge of a field.

Students are also important members of the scholarly community. Although most student work is not formally published, by writing papers students engage in critical thinking, thoughtful self-reflection, and scientific inquiry and thereby prepare to make unique contributions to the repository of knowledge. Therefore, student writing deserves the same level of care and attention to detail as that given to professional writing.

In this chapter, we provide important principles that professional and student authors should consider before writing their paper or, in many cases, before embarking on a research study. We begin with overviews of the different types of articles and papers professional and student authors write. This is followed by a discussion of ethical, legal, and professional standards in publishing that all authors of scholarly work, regardless of the type of paper they are writing or their level of experience, must be mindful of and abide by. For example, research conducted with human participants or nonhuman animal subjects must be approved by an institutional review board (IRB), institutional animal care and use committee (IACUC), or another ethical committee. Similarly, an author writing about human participants must protect their confidentiality while following best practices for data sharing. Moreover, any written work, from a course paper to a published manuscript, should represent an original contribution and include appropriate citations to the work of others. Thus, scholarly writing and publishing, in all forms, are inherently embedded in and guided by an ethical context.

Types of Articles and Papers

Many types of articles are published in scientific journals, including quantitative, qualitative, and mixed methods empirical articles and replications. These journal articles report *primary*, or original, research—that is, research that has not been previously formally published. Theoretical articles and methodological articles do not present research but describe advancements in theories or methods. Journal articles that review or synthesize findings from primary research include literature reviews and quantitative and qualitative meta-analyses. By understanding the characteristics of different types of articles and the types of information they most efficiently convey, you will be able to select an article type that fits your research and to follow the appropriate journal article reporting standards (discussed in Chapter 3). Students may write the same kinds of articles that are published in journals, as well as student papers (including course assignments, dissertations, and theses) not intended for publication in a journal (see Section 1.10). Sample papers are included at the end of Chapter 2 and on the APA Style website (https://apastyle.apa.org).

1.1 Quantitative Articles

In *quantitative articles*, authors report original, empirical, quantitative research. *Quantitative research* refers to a set of approaches commonly used in the behavioral and social sciences and related fields in which the observed outcomes are numerically represented. The results of these studies are typically analyzed using methods (statistics, data analyses, and modeling techniques) that rely on the numerical properties of the measurement system. Quantitative research studies use a variety of experimental designs and a range of analytic techniques. Some quantitative articles present novel hypotheses and data analyses not considered or addressed in previous reports of related data. Within the article, authors should describe elements of their study in the first person (see Section 4.16). Researchers who used a quantitative approach should follow the quantitative journal article reporting standards to report their findings (see Sections 3.5–3.12).

Quantitative articles typically include distinct sections that reflect the stages of the research process and appear in the following sequence:

- **Introduction:** a statement of the purpose of the investigation, a review of the background literature, and an explicit statement of the hypotheses being explored (see Section 3.4)
- **Method:** a full description of each step of the investigation, including details about the materials used and the procedures followed (which should be sufficient to enable replication), a full statement of the research design, statements on the protection of human participants or nonhuman animal subjects and informed consent, and a description (in words and/or a figure) of the flow of participants through the study (see Section 3.6)
- **Results:** data analysis and a report of the findings (see Section 3.7)
- **Discussion:** a summary of the study, including any interpretation, limitations, and implications of the results (see Section 3.8)

Reports of Multiple Studies. Authors of quantitative articles often report the findings of several conceptually linked studies in one manuscript. These authors

should make the rationale, logic, order, and method of each study clear to readers. Headings should be used to label each study—for instance, "Experiment 1," "Experiment 2," and so forth. This format organizes the sections and makes them easier to discuss in the manuscript or in later research articles. Method and Results subsections can appear under each study heading. If appropriate, the authors can include a short subsection titled "Discussion" in which they explore the implications of the results of each study, or they can combine the discussion with the description of results under a heading such as "Results and Discussion." Authors should always include a comprehensive general discussion of all the studies at the end of the article, which often has the heading "General Discussion."

1.2 Qualitative Articles

In *qualitative articles*, authors report original, empirical, qualitative research. *Qualitative research* refers to scientific practices that are used to generate knowledge about human experience and/or action, including social processes. Qualitative approaches tend to share four sets of characteristics:

- Researchers analyze data consisting of natural language (i.e., words), researcher observations (e.g., social interactions), and/or participants' expressions (e.g., artistic presentations) rather than collecting numerical data and conducting mathematical analyses. Reports tend to show the development of qualitative findings using natural language (although numbers may be used adjunctively in describing or exploring these findings).
- Researchers often use an iterative process of analysis in which they reexamine developing findings in light of continued data analysis and refine the initial findings. In this way, the process of analysis is self-correcting and can produce original knowledge.
- Researchers recursively combine inquiry with methods that require researchers' reflexivity about how their own perspectives might support or impair the research process and thus how their methods should best be enacted.
- Researchers tend to study experiences and actions whose meaning may shift and evolve; therefore, they tend to view their findings as being situated within place and time rather than seeking to develop laws that are expected to remain stable regardless of context.

Researchers who used a qualitative approach should follow the qualitative journal article reporting standards to report their findings (see Sections 3.13–3.17).

Case Studies and Other Types of Qualitative Articles. A variety of methods are reported in qualitative articles, and the structure of qualitative articles varies depending on the nature of the study. For example, in *case studies* researchers report analyses or observations obtained while working closely with an individual, group, community, or organization. Case studies illustrate a problem in depth; indicate a means for solving a problem; and/or shed light on needed research, clinical applications, or theoretical matters. Qualitative articles also describe studies with multiple participants, groups, communities, or organizations that identify commonalities and/or differences across these entities. Such research can have a systemic focus, examining the ways in which social processes, actions, or discourses are structured.

Regardless of the qualitative research approaches they use, when writing reports, authors should carefully consider the balance between providing important illustrative material and using confidential participant data responsibly (see Sections 1.18–1.19 for more on confidentiality; see also Section 1.15). Qualitative reports may be organized thematically or chronologically and are typically presented in a reflexive, first-person style, detailing the ways in which the researchers arrived at questions, methods, findings, and considerations for the field.

1.3 Mixed Methods Articles

In *mixed methods articles*, authors report research combining qualitative and quantitative empirical approaches. Mixed methods research should not be confused with *mixed models research*, which is a quantitative procedure, or with *multimethods research*, which entails using multiple methods from the same approach. Mixed methods research involves the following:

- describing the philosophical assumptions or theoretical models used to inform the study design (Creswell, 2015);
- describing the distinct methodologies, research designs, and procedures in relation to the study goals;
- collecting and analyzing both qualitative and quantitative data in response to research aims, questions, or hypotheses; and
- integrating the findings from the two methodologies intentionally to generate new insights.

The basic assumption of a mixed methods approach is that the combined qualitative findings and quantitative results lead to additional insights not gleaned from the qualitative or quantitative findings alone (Creswell, 2015; Greene, 2007; Tashakkori & Teddlie, 2010). Because there are many ways to design a mixed methods study, the structure of mixed methods articles varies depending on the specific nature of the study and the balance between the two methodologies. Researchers who used a mixed methods approach should follow the mixed methods journal article reporting standards to report their findings (see Section 3.18).

1.4 Replication Articles

In *replication articles*, authors report the results of work intended to verify or reproduce findings from previous investigations. The aim of a *replication study* is to examine whether the conclusions from an earlier study remain the same or similar over variations in the conduct of the original study. There are internal and external forms of replication; only external replications are addressed in APA journal article reporting standards (see Section 3.10). An *external replication* occurs when researchers obtain a new sample and duplicate, insofar as is possible or desirable, the features of the original study being replicated. New design, measures, and/or data-analysis methods can also be used to test whether a finding has generality beyond the particular situation studied in the original work, but any such variations must be clearly specified in the report.

Researchers conducting an external replication should report sufficient information to allow readers to determine whether the study was a direct (exact, literal) replication, approximate replication, or conceptual (construct) replication. In a *direct replication*, researchers repeat a study collecting data from a new sample in a way that duplicates as far as possible the conditions of the earlier study.

A direct replication is called an *exact replication* or a *literal replication* when researchers use procedures that are identical to the original experiment or duplicated as closely as possible (e.g., with variations only in the location of the study and the investigators conducting the study). These forms of replication are useful for establishing that the findings of the original study are reliable. In an *approximate replication* (or a *modified replication*), researchers incorporate alternative procedures and additional conditions into the features of the original study; such replications usually contain the original study design along with some additional study features. The purpose of an approximate or modified replication may be not only to replicate a study but also to determine whether some factors not included in the original formulation have an influence on the outcome. In a *conceptual replication*, researchers introduce different techniques and manipulations to gain theoretical information; it is possible that no features of the initial study are retained. Researchers may use other labels for or descriptions of replications (for further exploration of this issue, see National Academies of Sciences, Engineering, and Medicine, 2019); the descriptions provided in this section were adapted from the *APA Dictionary of Psychology* (https://dictionary.apa.org).

1.5 Quantitative and Qualitative Meta-Analyses

Meta-analysis refers to a collection of techniques in which researchers use the findings from a group of related studies to draw a general conclusion (synthesis) based on the extant research on a topic. Individual participant or subject data are not used in meta-analyses because the data analyzed are at the study level.

Just as the reporting standards for quantitative and qualitative studies vary by study design, those for meta-analyses vary by the particular questions asked in the study and the approaches used to answer those questions. Because the study is the input unit for a meta-analysis, the studies included are provided in the reference list and marked with an indicator that shows they were part of the meta-analysis. This indicator distinguishes studies included in a meta-analysis from other references. For example, in APA Style articles, references used in a meta-analysis are preceded by an asterisk (see Section 9.52).

Quantitative Meta-Analysis. Within quantitative approaches, meta-analyses generally stipulate a technique in which effect-size estimates from individual studies are the inputs to the analyses. Meta-analysis is also used to determine factors that may be related to the magnitude of the outcome in quantitative studies—for example, design factors (e.g., randomized vs. nonrandomized), demographic factors (e.g., percentage of the study sample below the poverty line), and so forth. Meta-analytic reports usually follow the same basic structure as quantitative studies (see Section 1.1) and contain an introduction and Method, Results, and Discussion sections. Researchers who use a quantitative meta-analytic approach should follow the reporting standards for quantitative meta-analysis (see Section 3.12).

Qualitative Meta-Analysis. Within qualitative research, there are a variety of approaches to meta-analysis, including qualitative metasynthesis, metaethnography, metamethod, and critical interpretive synthesis. These approaches often use strategies from primary qualitative analyses to synthesize findings across studies. Qualitative meta-analyses can be used to highlight methodolog-

ical trends, identify common findings and gaps, develop new understandings, and propose future directions for an area of research. Qualitative meta-analytic reports have a structure similar to that of qualitative primary reports, with the addition of a description of the perspectives and situatedness of the authors of the primary works included in the analysis. Qualitative meta-analyses do not entail a singular procedure but rather an aggregating function common to meta-analytic approaches. Qualitative meta-analyses are not to be confused with *quantitative reviews*, in which authors generate a narrative description of a quantitative literature base. We recommend referring to those studies as *literature reviews* or *narrative literature reviews* to avoid confusion with qualitative meta-analyses (see Section 1.6). Researchers who used a qualitative meta-analytic approach should follow the reporting standards for qualitative meta-analysis (see Section 3.17).

1.6 Literature Review Articles

Literature review articles (or *narrative literature review articles*) provide narrative summaries and evaluations of the findings or theories within a literature base. The literature base may include qualitative, quantitative, and/or mixed methods research. Literature reviews capture trends in the literature; they do not engage in a systematic quantitative or qualitative meta-analysis of the findings from the initial studies.

In literature review articles, authors should

- define and clarify the problem;
- summarize previous investigations to inform readers of the state of the research;
- identify relations, contradictions, gaps, and inconsistencies in the literature; and
- suggest next steps in solving the problem.

The components of literature review articles can be arranged in various ways—for example, by grouping research on the basis of similarity in the concepts or theories of interest, methodological similarities among the studies reviewed, or the historical development of the field.

1.7 Theoretical Articles

Theoretical articles draw from existing research literature to advance theory. Theoretical articles present empirical information only when it advances the theoretical issue being explicated. Authors of theoretical articles trace the development of a theory to expand and refine its constructs, present a new theory, or analyze an existing theory. Typically, they point out flaws or demonstrate the advantage(s) of one theory over another. Authors also may examine a theory's internal consistency and external validity. The order of sections in a theoretical article can vary.

1.8 Methodological Articles

Methodological articles present new approaches to research or practice, modifications of existing methods, or discussions of quantitative and/or qualitative data analysis. These articles use empirical data (quantitative, qualitative, or both)

only as a means to illustrate an approach to research. Some use simulated data to demonstrate how methods work under varying conditions (e.g., different sample sizes, number of variables, level of nonnormality, size of coefficients).

Methodological articles provide sufficient detail for researchers to assess the applicability of the methodology and its feasibility for the type of research problem it is designed to study. Further, these articles allow readers to compare proposed methods with those in current use. In methodological articles, highly technical materials (e.g., derivations, proofs, data generation, computer code, extensive details of simulations) should be presented in appendices or as supplemental materials to improve overall article readability. When having detailed information (e.g., parameters used in a simulation) is necessary for readers to understand the major points being made, those details should be presented in the text of the article.

1.9 Other Types of Articles

Additional types of published articles include brief reports, comments on and replies to previously published articles, book reviews, obituaries, and letters to the editor. Authors should consult the editors or author guidelines of individual journals for specific information regarding these kinds of articles.

1.10 Student Papers, Dissertations, and Theses

Although the *Publication Manual* originated as a guide for authors seeking publication in scholarly journals, it has been widely adopted by academic instructors, departments, and institutions that require students to use APA Style when writing scholarly papers. Students may write the same types of papers that are professionally published (e.g., literature review articles) or assignments that fall outside that scope (e.g., dissertations, theses, essays, response or reaction papers, annotated bibliographies). Likewise, this manual has historically addressed researchers working in the field of psychology; however, students and researchers use APA Style in other fields and disciplines, including social work, nursing, communications, education, and business. Some journals in these fields require APA Style, and others do not. Other field-specific requirements may also apply (e.g., nurses may have to adhere to a nurse's code of ethics rather than a psychologist's code of ethics).

Student assignments commonly written at the undergraduate level include annotated bibliographies, many types of essays, and response or reaction papers. The descriptions that follow are generally representative of these types of papers; check with your assigning instructor or institution for specific guidelines.

- **Annotated bibliographies** consist of reference list entries followed by short descriptions of the work called *annotations*. Instructors generally set most requirements for these papers, but many APA Style guidelines still apply (see Section 9.51).
- **Cause-and-effect essays** report how specific events lead to particular results or advocate for a specific position. A clear and strong thesis provides a solid foundation for this type of essay. The paragraphs are generally structured by describing each cause and its collateral effect, with logical transitions between them.

- **Comparative essays** compare and contrast two (or more) items with the goal of linking disparate items under a central thesis. The paper structure can be organized to focus on Topic 1 and then Topic 2, or the topics may be interwoven.
- **Expository essays** follow a multiparagraph structure (e.g., five paragraphs) and explain or provide information on a specific topic. The paper structure includes an introduction, body, and a conclusion. Evidence should be provided to reinforce the written claims detailed in the paper.
- **Narrative essays** convey a story from a clear point of view and include a beginning, middle, and end. Narrative essays should have a clearly defined purpose and focus and include concise, evocative language.
- **Persuasive essays** are intended to convince readers to adopt a certain viewpoint or take a particular action. They present clear arguments, include logical transitions, and have a similar paper structure to the expository essay.
- **Précis** are concise summaries in students' own words of essential points, statements, or facts from a single work; the length of a précis is typically about a quarter of the length of the original work. The précis structure includes a brief thesis and sections that mirror the sections of the original work, such as Method, Results, and Discussion.
- **Response or reaction papers** summarize one or more works and describe students' personal reactions or responses to them, including how the work or works impacted them, are relevant to their life, and so forth. This type of paper is typically short (e.g., three pages or so). The first person is used in describing personal reactions (see Section 4.16).

Dissertations or theses are typically required of graduate students, but undergraduate students completing advanced research projects may write similar types of papers. Academic institutions or departments have detailed guidelines for how to format and write dissertations and theses, and the requirements and acceptable format vary by discipline. Some dissertations and theses are hundreds of pages long and contain thorough literature reviews and exhaustive reference lists, whereas others follow a multiple-article format consisting of several shorter, related papers that are intended for individual publication. See Section 12.1 for guidance on adapting a dissertation or thesis into a journal article.

As mentioned in the introduction to this manual, most of the guidelines in the *Publication Manual* can be applied to student papers. However, because the scope of what constitutes a student paper is broad and flexible, and because students submit papers to their academic institutions rather than to an APA journal, we do not designate formal requirements for the nature or contents of an APA Style student paper. Thus, questions about paper length, required sections, and so forth are best answered by the instructor or institution setting the assignment. Students should follow the guidelines and requirements developed by their instructors, departments, and/or academic institutions when writing papers, including dissertations and theses; these guidelines and requirements may entail adaptations of or additions to the APA Style guidelines described in this manual. We encourage writers, instructors, departments, and academic institutions using APA Style outside of the journal publication context to adapt APA Style to fit their needs.

Ethical, Legal, and Professional Standards in Publishing

In addition to abiding by standards specific to writing and publishing, authors of scholarly research should also follow ethical standards (e.g., Section 8, Research and Publication, of the APA *Ethical Principles of Psychologists and Code of Conduct*, hereinafter referred to as the APA Ethics Code; APA, 2017a; see also https://www.apa.org/ethics/code) and broader professional standards when conducting a research study. Moreover, individuals engaged in conducting, analyzing, or reporting any type of research should have acquired the requisite skills and experience to do so competently (e.g., Section 2, Competence, of the APA Ethics Code; see also the *Multicultural Guidelines: An Ecological Approach to Context, Identity, and Intersectionality*; APA, 2017b).

Ethical and legal principles underlie all scholarly research and writing. These long-standing principles are designed to achieve the following goals:

- ensuring the accuracy of scientific findings,
- protecting the rights and welfare of research participants and subjects, and
- protecting intellectual property rights.

Writers in the social and behavioral sciences work to uphold these goals and to follow the principles that have been established by their professional disciplines. The guidance in this section is drawn from the APA Ethics Code (APA, 2017a), which applies to all APA members regardless of where they publish and contains standards that address the reporting and publishing of scientific data. The APA Ethics Code is not a static document—it is revised over time to reflect shifts or changes in the understanding and conception of the principles of beneficence and nonmaleficence, fidelity and responsibility, integrity, justice, and respect by the scientific community relative to advances in science and technology and evolving cultural norms. Revised or new versions of the APA Ethics Code appear on the APA website after adoption by the APA Council of Representatives.

Ensuring the Accuracy of Scientific Findings

1.11 Planning for Ethical Compliance

Regardless of the type of article, attention to ethical concerns should begin long before any manuscript is submitted for publication. Among the issues to carefully consider while research is in the planning stages are those related to institutional approval, informed consent, deception in research, participant protections, and data sharing. Most journals, including APA journals, require authors submitting a manuscript for publication to also submit forms affirming their compliance with ethical standards for research and publication and disclosing their conflicts of interest, if any (see Section 12.13 for more information and a link to the APA ethical compliance form). We encourage all authors, whether or not they will submit their manuscript to an APA journal, to consult these ethics resources before beginning their research project and at regular intervals throughout the research process. To ensure that they meet ethical standards, before starting a research project, authors should contact the appropriate IRB or ethical review group for their institution or country for information

on the kinds of research that require ethics approval, procedures for obtaining ethics approval, ethical and research requirements, and so forth. Authors not affiliated with a university, hospital, or other institution with an IRB are still expected to follow ethical standards in conducting their research and should consult an external IRB if necessary. For more information on IRBs, see the APA website (https://on.apa.org/2FuiPJ1).

Authors are encouraged to report in the text of the manuscript the institutional approvals the study received, as described in the APA journal article reporting standards in Chapter 3 (see Sections 3.6 and 3.14 and Tables 3.1–3.3). Authors should also be prepared to answer potential questions related to these issues from editors or reviewers during the review process (see Section 12.13). As a final step prior to manuscript submission, authors should also consult the ethical compliance checklist in Section 1.25.

1.12 Ethical and Accurate Reporting of Research Results

The essence of ethics in all scientific reporting is that authors report the methods and results of their studies fully and accurately. Therefore, the ethical and professional issues discussed in this section apply equally to quantitative, qualitative, and mixed methods research (see Chapter 3 for additional reporting standards).

Authors must not fabricate or falsify data (APA Ethics Code Standard 8.10a, Reporting Research Results). Modifying results, including visual images, to support a theory or hypothesis and omitting troublesome observations from a report to present a more convincing story are also prohibited (APA Ethics Code Standard 5.01b, Avoidance of False or Deceptive Statements). Similarly, representing data-generated hypotheses (post hoc) as if they were preplanned is a violation of basic ethical principles.

The practice of "omitting troublesome observations" includes

- selectively failing to report studies (e.g., in the introduction or Discussion section) that, although methodologically sound and relevant to the hypothesis, theory, or research question at hand, had results that do not support the preferred narrative (i.e., that contrast with results obtained in the current study);
- selectively omitting reports of relevant manipulations, procedures, measures, or findings within a study, for similar reasons; and
- selectively excluding participants or other individual data observations, without a valid methodological reason, in order to achieve desired results.

To clarify expectations for reporting and help safeguard scientific integrity, APA (like other scientific organizations) has issued a series of reporting standards (Appelbaum et al., 2018; Cooper, 2018; Levitt, 2019; Levitt et al., 2018). These standards, which are discussed in Chapter 3, address many aspects of the ethical reporting of experiments. They include expectations for describing all measured variables, for tracking participant flow through a study (with an accompanying prototype figure; see Figure 7.5 in Section 7.36) so that no participant is selectively excluded without mention, and for reporting special classes of studies such as clinical trials.

Reporting standards, like the APA Ethics Code, are not static; changes are continually made to improve how researchers report results. One of the more recent and important changes for quantitative research reporting is that hypotheses should now be stated in three groupings: preplanned–primary,

preplanned–secondary, and exploratory (post hoc). Exploratory hypotheses are allowable, and there should be no pressure to disguise them as if they were preplanned. Similarly, qualitative researchers should transparently describe their expectations at the outset of the research as part of their research reporting.

1.13 Errors, Corrections, and Retractions After Publication

Careful preparation of manuscripts for publication is essential, but errors can still appear in the final published article. When errors are substantive enough to affect readers' understanding of the research or their interpretation of the results, authors are responsible for making such errors public.

Corrections. When a correction is needed, the first step is to inform the editor and the publisher of the journal so that a formal correction notice (erratum) can be published. The goal of such a notice is to openly and transparently correct the knowledge base for current and future users of the information in the published article. A correction notice is usually appended to the original article's record in research databases so that readers will retrieve it when they access either the article or a database's record for the article; at times, the article itself may also be corrected. See also APA Ethics Code Standard 8.10b, Reporting Research Results, as well as Section 12.22 of this manual for further information on when and how to write a correction notice.

Retractions. Occasionally, the problems with an article are so great (e.g., plagiarism, fabrication or falsification of data, belatedly discovered calculation or measurement errors that change the interpretation of the findings) that the entire article is retracted by the author or authors, their institution, or the publisher. Whatever the reason for the retraction, the intent is to remove the information from the scientific literature and thus avoid wasting the time and resources of other scientists who might rely on or attempt to replicate the compromised results. The retracted article may still be available in databases; however, a retraction notice will accompany it to notify readers of its status. Authors should avoid citing retracted articles unless the citation is essential; if authors do cite a retracted article, its reference list entry should reflect that the article has been retracted (see the APA Style website at https://apastyle.apa.org for an example).

1.14 Data Retention and Sharing

Data Retention. Authors are expected to retain the data associated with a published article in accordance with institutional requirements; funder requirements; participant agreements; and, when publishing in an APA journal, the APA Ethics Code (Standard 8.14, Sharing Research Data for Verification). When planning a research study and before beginning data collection, authors are encouraged to consider how the data will be retained (and shared) and to outline clear data-handling procedures in the study protocol submitted to an IRB or other ethics committee. During the informed consent process, authors should describe to study participants the data they intend to collect, save, and/or share with other researchers and obtain their approval. In qualitative studies, data sharing may not be appropriate because of confidentiality, consent, and other limitations (see Section 1.15).

Data Sharing. The APA Ethics Code prohibits authors from withholding data from qualified requesters for verification through reanalysis in most circumstances (see Standard 8.14, Sharing Research Data for Verification), as long as the confidentiality of the participants is protected. The APA Ethics Code permits psychologists to require that a requester be responsible for any costs associated with the provision of the data. Increasingly, funders are also requiring that data be shared in an open- or secured-access repository or that a data-management plan otherwise be spelled out. Authors publishing in an APA journal are invited to share their data on APA's portal on the Open Science Framework (https://osf.io/view/apa/).

Notably, incentives are offered to researchers who wish to share their data, such as Open Science Badges offered through the Center for Open Science. Open Science Badges are awarded for the open sharing of *materials* used by researchers in the process of data collection and analysis (e.g., instructions, stimuli, blank questionnaires, treatment manuals, software, interview protocols, details of procedures, code for mathematical models); *source data*, meaning the original written, electronic, or audiovisual records of the study participants' responses (e.g., paper questionnaires, transcripts, output files, observational notes, video recordings); and *analysis data*, meaning the processed version of the source data used to produce the analyses reported in the paper.

Sharing During Review. Subject to the conditions and exceptions discussed next, authors are expected to share data, analyses, and/or materials during the review and publication process if questions arise with respect to the accuracy of the report. On request, the authors should share the raw data with the journal's editor and (if approved by the editor) with reviewers to verify the reported analyses and data and to assess their rigor. If questions arise about the integrity or processing of the source data, authors should also share access to them with the editor on request. Costs of sharing data requested during the review process should be borne by the authors. Similarly, students should expect to provide raw data to faculty reviewing their dissertation, thesis, or research project. A journal editor has the right to deny publication if the authors refuse to share requested materials or data during the review process. In the case of student work, refusal to share requested materials or data may result in a failing grade or defense. See Section 1.15 for additional considerations when sharing access to data from qualitative studies.

Sharing After Publication. Authors must make their data available after publication, subject to conditions and exceptions, within the period of retention specified by their institution, journal, funder, or other supporting organization. This permits other competent professionals to confirm the reported analyses using the data on which the authors' conclusions are based or to test alternative analyses that address the article's hypotheses (see APA Ethics Code Standard 8.14a, Sharing Research Data for Verification, and Standard 6.01, Documentation of Professional and Scientific Work and Maintenance of Records). *Competent professionals* are those who are currently accountable to a research institution or an educational employer and who demonstrate sufficient training and credentials to understand the research study's background, methods, and analyses. The journal editor may be asked to determine who qualifies as a competent professional given the topic of the research. See Section 1.15 for additional considerations when sharing qualitative research data.

Typically, any additional costs of complying with a request for data beyond the general standards of internal data maintenance (e.g., anonymization, transfer of data, translation) should be borne by the requester, and these costs should be assessed at a reasonable local rate for the necessary services and materials. If it emerges that authors are unwilling or unable to share data for verification within the retention period, the journal's current editor may retract the article or issue an Expression of Concern about its findings according to the policy of the publisher.

Data and materials may sometimes be requested after publication for purposes beyond the ones outlined previously. Regardless of why the data and materials are requested, to avoid misunderstanding, it is important that the researcher requesting data and the researcher providing it come to a written agreement about the conditions under which the data are to be shared (see APA Ethics Code Standard 8.14b, Sharing Research Data for Verification). Generally, such an agreement specifies the limits on how the shared data may be used (e.g., for verification of already published results, for inclusion in meta-analytic studies, for secondary analysis), who may have access to the data (e.g., only the requester, the requester and direct supervisees, anyone interested with no limits on further sharing), and how the requester will store and dispose of the data. Furthermore, the agreement should specify any limits on the dissemination of the results of analyses performed on the data (e.g., whether they can be published in conference presentations, internal reports, journal articles, or book chapters) and any expectations for authorship of publications based on shared data. Data-sharing arrangements must be entered into with proper consideration of the rights of the copyright owner (see Section 12.20), participants' consent, requirements of funding agencies, requirements of IRBs and other ethics committees that provided permission to conduct the study, and rules promulgated by the employer of the holder of the data.

Authors may choose or be required to share data and/or materials openly by posting them online. Journal editors may set a policy to encourage open sharing, to require it, and/or to require authors to give a reason why data and materials cannot be shared (e.g., risk to participant privacy). A permanent link to any data or materials to be shared openly should be included in the article, such as in an Open Practices section in the author note (see Section 2.7); the reference for the data set should also be included in the reference list of the article (see Section 10.9 for how to cite). Federally funded or grant-funded research is often subject to requirements for data sharing; see, for example, the data-sharing policies of the National Institutes of Health (n.d.).

Conditions and Exceptions to Data Sharing. Before sharing or posting data and materials for any purpose, researchers must remove any personally identifiable information or code that would make it possible to reestablish a link to an individual participant's identity. Sometimes, a unique combination of demographic or other public information can be used to establish a participant's identity, and this possibility must be kept in mind and avoided as well. Researchers should consult the relevant policies of their institution or country (e.g., the European Union General Data Protection Regulation [GDPR], the Health Insurance Portability and Accountability Act [HIPAA]) for regulations and guidance on conditions for sharing data and deidentifying protected health information.

In addition to protecting the confidentiality of research participants, some proprietary arrangements may prohibit the sharing of data and materials (e.g., data provided in confidence by a business entity, a coding scheme developed commercially by the authors). Editors are responsible for setting policy for their journal about the acceptability for publication of research resting on proprietary arrangements, given that its accuracy and veracity cannot be checked in the usual way. This policy may depend on the availability of alternative ways to satisfy concerns about scientific integrity. For example, research using a proprietary personality scale may be acceptable if enough qualified researchers subscribe to it that someone can be found to help with independent verification.

1.15 Additional Data-Sharing Considerations for Qualitative Research

The sharing of qualitative data with editors, peers, and other researchers has distinct considerations in addition to those described in Section 1.14. The APA Committee on Human Research and numerous qualitative researchers have expressed concerns about sharing qualitative research data (Data Sharing Working Group, 2015; DuBois et al., 2018; Guishard, 2018). Although consensus on how to navigate this issue has not yet been established, this section highlights several points that contraindicate or suggest alternates to data sharing.

Presentation of Raw Data in Research Reports. Data are typically reproduced in qualitative research reports. Segments of data (e.g., quotations from interviews) are presented to exemplify the process of analysis and to demonstrate the grounding of the findings in the data. Because these raw data are available for examination in the text of the article, they provide a basis by which readers, as well as editors and reviewers during the manuscript review process, can evaluate (and perhaps question) the appropriateness of the conclusions reached.

Confidentiality Limitations. The obligation to protect participants' confidentiality can present special ethical issues for qualitative data sharing. For instance, raw data from a qualitative study involving multiple detailed stories about participants' lives may contain details that are necessary to make the data meaningful but that can be revealing in compromising ways when triangulated. Qualitative research may also involve intensive case studies of people who were selected because of their unique attributes. Although the researchers may try to mask participants' identities within a manuscript, it may not be possible to retain all that is meaningful to evaluate an analysis and at the same time protect participants' confidentiality if the complete data set is shared. The high burden on the researchers to remove all information that can lead to the identification of a participant is unjustifiable if it produces a set of data that is stripped of meaning. As a result, the researchers may instead need to withhold data to ensure participant confidentiality (see McCurdy & Ross, 2018, on the sometimes prohibitive complications of this process).

Consent Limitations. There is also the consideration that participants may give consent to participate in a study to a specific group of researchers and may not extend that consent to other researchers. This may be of particular concern with vulnerable populations. For instance, lesbian participants may consent to have their data analyzed by researchers who are in their community and who seek to support their rights, but that consent may not apply to other researchers with different motivations. Likewise, some researchers spend years developing the

trust to collect and analyze data from a community, and community members may not extend that trust to other groups of researchers. Indeed, communities may be owners or co-owners of the data themselves and may refuse to share the data (DuBois et al., 2018; Tuck & Yang, 2014). As a result, the relationship between the researchers and the participants is an important ethical consideration and one that may contraindicate data sharing.

Researchers' Perspective Limitations. Many qualitative researchers view their own history and epistemological perspectives as legitimate influences on the process of inquiry. Thus, when sharing data from qualitative research, the researchers' perspectives and experiences must be taken into account. Research can be compromised if researchers are unreflective or not purposeful or explicit about this influence. However, when researchers are aware, they can deliberately elaborate on the investigative attitudes (e.g., phenomenological bracketing), personal experiences (e.g., ethnographic study), research teams (e.g., including researchers from the communities under analysis), or analytic lenses (e.g., critical theories) that enrich their research and thereby deepen the acuity they bring to the analytic task (Guishard et al., 2018). These qualitative researchers would not necessarily expect editors or external researchers to interpret their research in the same way when evaluating their analysis because they may not share their perspectives.

In qualitative inquiry, the researchers are the analytic tool, so those who have developed an intimate understanding of a data set or who have developed a perspective to enhance their sensitivity to the data typically are better attuned to nuances, implicit meanings, and systemic connections. This means that an editor or external researcher should not expect replication of the findings and should articulate an appropriate purpose and rationale for review of the shared data prior to the data being shared. Also, the approach to investigation selected may signify epistemological commitments of researchers and their participants, and these values need to be considered and honored in data-sharing efforts. In any case, a review of the data would need to be conducted with a keen awareness of the distinct epistemological positions and analytic processes within qualitative research.

1.16 Duplicate and Piecemeal Publication of Data

Reports in the literature must accurately reflect the independence of separate research efforts. Both duplicate and piecemeal publication of data misrepresent the amount of original research in the repository of scientific knowledge. *Duplicate publication* is the publication of the same data or ideas in two separate works. *Piecemeal publication* is the unnecessary splitting of the findings from one research effort into multiple works.

Duplicate Publication. Misrepresentation of data as original when they have been published previously is specifically prohibited by the APA Ethics Code (Standard 8.13, Duplicate Publication of Data). Duplicate publication distorts the knowledge base by making it appear that more information is available than actually exists. It also wastes scarce resources (journal pages and the time and efforts of editors and reviewers). The prohibition against duplicate publication is especially critical for the cumulative knowledge of the field. Duplicate publication can give the erroneous impression that findings are more replicable than is the case

or that particular conclusions are more strongly supported than is warranted by the cumulative evidence. Duplicate publication can also lead to copyright violations; authors cannot assign the copyright for the same material to more than one publisher. When submitting a manuscript for publication, authors are obligated to disclose whether they have posted the manuscript online, either in full or in substantial part; some editors may consider such posting to be prior publication.

Examples of and Exceptions to Duplicate Publication. Authors should not submit manuscripts that have been published in whole or in substantial part elsewhere, including manuscripts with substantially similar form or content to their previously published works. This policy also applies to translations; authors are not permitted to publish research in one language and then translate the article into another language and publish it again. Authors in doubt about what constitutes prior publication should consult the editor of the journal to which they are submitting their manuscript.

The policy regarding duplicate publication also means that the same or overlapping material that has appeared in a publication offered for public sale, such as conference proceedings or a book chapter, should not be republished elsewhere because these sources are considered widely available. For example, a brief report is published in an APA journal with the understanding that an extended report will not be published elsewhere because APA brief reports include sufficient descriptions of methodology to allow for replication; the brief report is the archival record for the work.

The policy regarding duplicate publication has some exclusions. Manuscripts previously published in abstracted form (e.g., in conference proceedings) or in a periodical with limited circulation or availability (e.g., report by a university department or government agency, dissertation) can be published again in a venue of wide circulation (e.g., in a journal). Consult a journal editor to determine whether a study reported in a dissertation or thesis or posted in a preprint repository could benefit from peer review and publication as a journal article.

Similarly, it is not considered duplicate publication to reanalyze already published data in light of new theories or methodologies, if the reanalysis is clearly labeled as such and provides new insights into the phenomena being studied. The policy also does not apply to follow-up studies; for example, researchers may first report the initial findings from a clinical trial and subsequently report results of a follow-up assessment 2 years after the trial's completion.

Acknowledging and Citing Previous Work. Authors sometimes want to publish what is essentially the same material in more than one venue to reach different audiences. Such duplicate publication can rarely be justified, given the ready accessibility of published works online. If authors think it is justified, the article must include a reference to the original report—both to inform editors, reviewers, and readers and to fulfill the authors' obligations to the copyright holder of the previous work.

If it is deemed scientifically necessary to re-present previously published material—for instance, to report new analyses or to frame new research that follows up on previous work from the authors' laboratory—the following conditions must be met:

1. The amount of duplicated material must be small relative to the total length of the text.

2. The authors must clearly acknowledge in the author note and in all relevant sections of the article (e.g., Method, Results) that the information was reported previously, and the previous work must be cited.
3. The authors must provide a copyright attribution for any reprinted or adapted tables and figures and may need to secure permission from the copyright holder as well (see Sections 12.14–12.18).
4. The original work must be clearly and accurately cited in the reference list (see also the discussion on self-plagiarism in Sections 1.17 and 8.3).

When the original work has multiple authors and the authorship of the new work is not identical, all authors of the original work must provide appropriate copyright permission (see Section 12.20) and receive agreed-upon credit (e.g., in an author note; see Section 2.7) for their contributions in the later publication.

Piecemeal Publication. Authors are obligated to present work as parsimoniously and completely as possible within the space constraints of journal articles. Data that can be meaningfully combined within a single article should be presented together to enhance effective communication.

Piecemeal, or fragmented, publication of research findings can be misleading if multiple reports appear to represent independent instances of data collection or analyses; distortion of the scientific literature, especially in reviews or meta-analyses, may result. Piecemeal publication of the results from a single study is therefore undesirable unless there is a clear reason for doing so. It may be quite difficult to determine whether a valid reason exists; therefore, authors who submit manuscripts based on studies or data presented in other published or submitted works should inform the journal editor of the source and extent of the overlap, and they should detail how their submission builds on the previous reports. Whether the publication of two or more reports based on the same or on closely related research constitutes fragmented publication is a matter of editorial judgment.

Multiple Publications From Large-Scale, Longitudinal Projects and Qualitative and Mixed Methods Research. There are times when it is both necessary and appropriate to publish multiple reports. Multidisciplinary projects often address diverse topics and answer different questions; thus, publishing the results in a single article may be inappropriate. Similarly, researchers sometimes design studies with the purpose of addressing distinct theoretical questions using the same instruments; if written as separate research reports, each report should make a unique contribution and not overlap substantially with the others or with previously published material. Researchers should consider at the outset of data collection how the data will be presented (e.g., in one report vs. multiple reports); although new research questions or analyses may arise in the process of analyzing the data, researchers should not fish through the data for the sole purpose of extracting additional studies. Although all reports stem from the same overall project, the introduction, Results, and Discussion sections of each report would be unique, and at least some aspects of the Method section would be unique as well.

Longitudinal or large-scale studies are another instance when multiple publications are often appropriate because the data at different time points make independent scientific contributions. Further, useful knowledge should be made available to others as soon as possible, which is precluded if publication is delayed until all the studies are complete.

Multiple reports may be needed in some qualitative and mixed methods research when qualitative data collection and analysis produce volumes of findings that are not appropriate for publication in a single article—for instance, when investigators conduct interviews to explore questions that have distinct purposes and are meaningful in relation to separate literatures and concerns. With mixed methods studies, authors might publish multiple articles, such as a qualitative study, a quantitative study, and a mixed methods overview study, each focusing on new insights based on findings across the methods.

When authors create multiple reports from studies of this sort, they are obligated to cite prior reports on the project to help readers understand the work accurately. For example, in the early years of a longitudinal study, the authors might cite all previous publications from it. For a well-known or long-term longitudinal study, the authors might cite the original publication, a more recent summary, and earlier articles that focused on the same or related scientific questions addressed in the current report. It is useful to distinguish between data sets that are complete and data sets that are still in collection. It is not necessary to repeat the description of the design and methods of prior reports in their entirety; authors may refer readers to an earlier publication for this detailed information. It is important, however, to provide sufficient information so that readers can evaluate the current report. It is also important to clarify the degree of sample overlap in multiple reports from large studies. Again, authors should inform and consult with the journal editor before submitting a manuscript of this type.

Whether the publication of two or more reports based on the same or closely related research constitutes piecemeal publication is a matter of editorial judgment, as is the determination of whether the manuscript meets other publication criteria. Authors should note in the manuscript all prior works related to the study by including them in the reference list and citing them in the text (see the previous section on acknowledging and citing previous work). When submitting the manuscript, authors must inform the journal editor in a cover letter of any similar manuscripts that have already been published, accepted for publication, or submitted for concurrent consideration to the same journal or elsewhere. The editor can then make an informed judgment as to whether the submitted manuscript includes sufficient new information to warrant consideration. If the authors' identities are masked for review, references to previous work should be concealed as well until after the review process.

If, during the review or production process, a manuscript is discovered to be in violation of duplicate or piecemeal publication policies and the authors failed to inform the editor of the potential for violation, then the manuscript can be rejected without further consideration. If such a violation is discovered after publication in an APA journal, appropriate action, such as retraction by the publisher or notice of duplicate publication, can be taken.

Republication of an Article as a Book Chapter. Journal articles sometimes are revised for publication as book chapters. Authors have a responsibility to reveal to readers that portions of the new work were previously published and to cite and reference the source. If copyright is owned by a publisher or by another person, authors must obtain permission to reprint or adapt the work and include a copyright attribution in the chapter (see Sections 12.14–12.18).

1.17 Implications of Plagiarism and Self-Plagiarism

Plagiarism is the act of presenting the words, ideas, or images of another as one's own; it denies authors credit where credit is due. Whether deliberate or unintentional, plagiarism violates ethical standards in scholarship (see APA Ethics Code Standard 8.11, Plagiarism) and has profound real-world effects. Authors who try to publish plagiarized work face rejection from publication, as well as possible sanction by professional bodies, censure in their place of employment, and/or exclusion from applying for federal funding. Students who turn in a plagiarized assignment face a failing grade, as well as possible censure from a student or university honor board, suspension, or expulsion. *Self-plagiarism* is the act of presenting one's own previously published work as original; it misleads readers and falsely inflates the number of publications on a topic. Like plagiarism, self-plagiarism is unethical. To learn more about what constitutes plagiarism and self-plagiarism and how to avoid both, see Sections 8.2 and 8.3.

Protecting the Rights and Welfare of Research Participants and Subjects

1.18 Rights and Welfare of Research Participants and Subjects

The APA Ethics Code (Sections 3 and 8) specifies the standards psychologists are to follow when conducting research with human participants and nonhuman animal subjects. Both humans and nonhuman animals in research studies have the right to ethical and humane treatment. Research with human participants involves additional rights and welfare protections; for example, researchers are required to

- obtain informed consent, assent, or permission, as appropriate, using language that is reasonably understood by research participants;
- avoid or minimize participants' exposure to
  - physical, emotional, or psychological harm;
  - exploitative relationships;
  - undue influence based on the researchers' status, power, or authority;
  - excessive or inappropriate inducements to participate; and
  - unjustified or unduly delayed deception or debriefing procedures; and
- take adequate measures to prevent unauthorized access to or release of participant data to the public or other researchers not specified in the informed consent (e.g., by obtaining prior written agreement for sharing of research data).

Nonhuman animal subjects are to be cared for humanely and provided with healthful conditions during their stay in research facilities. The protocol for research with nonhuman animals must be reviewed by an appropriate animal care committee (e.g., an IACUC) before it is conducted to ensure that the procedures are appropriate and humane (APA, 2012a).

Researchers who are APA members, regardless of field, are required to certify that they have followed ethical standards as a precondition of publishing their articles in most journals, including APA journals (see Section 12.13). We encourage authors to include in the text of their manuscripts certifications that their research followed ethical and institutional guidelines, as described in the APA journal article reporting standards in Chapter 3. For instance, if research

participants consented to having their identifying information disclosed (e.g., their name), the authors should indicate in the Method section of the article that consent was given. Failure to follow these standards can be grounds for rejecting a manuscript for publication or for retracting a published article.

1.19 Protecting Confidentiality

When authors describe their research, they are prohibited from disclosing "confidential, personally identifiable information concerning their clients/patients, students, research participants, organizational clients, or other recipients of their services" (APA Ethics Code Standard 4.07, Use of Confidential Information for Didactic or Other Purposes) unless participants give documented consent to disclose their identities. The exact requirements for documentation vary depending on the nature of the consent obtained and the type of study.

Confidentiality in case studies can, at times, be difficult to achieve. For example, the researcher might obtain written consent from the subject of the report to publish the study. The researcher must be careful not to exploit the subject—for example, when the researcher has supervisory, evaluative, or other authority over them, as in the case of a client, patient, supervisee, employee, or organizational client (see APA Ethics Code Standard 3.08, Exploitative Relationships, and Standard 3.05, Multiple Relationships).

In some types of qualitative research (e.g., participatory action research, autoethnography), the participants may be investigators and authors, meaning they will be personally identifiable. Participant-authors or participant-investigators should retain control over what information about them is presented in the report (see Section 1.15 for more on sharing data from qualitative research).

Strategies to Disguise Identifying Material. Researchers can protect confidentiality by disguising some aspects of the data so that neither the subject nor third parties (e.g., family members, employers) are identifiable. Four main strategies are used: (a) altering specific characteristics, (b) limiting the description of specific characteristics, (c) obfuscating case detail by adding extraneous material, and (d) using composite descriptions. Disguising identifying information must be done carefully because it is essential not to change variables in a way that would lead readers to draw false conclusions (Sweeney et al., 2015). For example, altering a person's gender in a case illustrating a promising therapy for sexual assault trauma might compromise its educative value if the person's gender played a significant role in the treatment. Subject details should be omitted only if they are not essential to the phenomenon being described. Confidentiality, however, should never be sacrificed for clinical or scientific accuracy. Reports that cannot adequately disguise identifiable subject information should not be submitted for publication. For examples of how to incorporate case material (e.g., quotations from research participants) into the text, see Section 8.36.

Data Deidentification. Extra steps may be needed to protect participants' confidentiality when working with data sets containing multiple forms of data or protected health information. The HIPAA website provides guidance on deidentifying data (see https://www.hhs.gov/hipaa/for-professionals/privacy/special-topics/de-identification/index.html). Researchers have also developed methods for deidentifying various kinds of data; see, for example, the work of the Data Privacy Lab (https://dataprivacylab.org/projects/index.html).

1.20 Conflict of Interest

In the APA Ethics Code (Standard 3.06, Conflict of Interest), *conflict of interest* is defined broadly as involving "personal, scientific, professional, legal, financial, or other interests or relationships" that could negatively affect professional conduct or cause harm to persons with whom a professional interacts (see also Sections 2.7 and 12.13). Thus, the main concerns when a conflict of interest arises in publishing are the impairment of objectivity in both performing and evaluating research and the potential for harm to or exploitation of research participants.

Author Interest. In all scientific disciplines, professional communications are presumed to be based on objective and unbiased interpretations of evidence. Transparency about researchers' positions in relation to their evidence and interpretations is central. For example, authors' economic and commercial interests in products or services used in a study or discussed in a manuscript may color their ability to collect evidence and interpret it with fidelity. Although the presence of such interests does not necessarily constitute an unethical conflict of interest per se, the integrity of the field requires open and honest disclosure of the possibilities of such influences when they may exist. In general, an author's safest and most transparent course of action is to disclose in an author note activities and relationships that, if known to others, might be viewed as a conflict of interest, even if the author does not believe that any conflict or bias exists.

Whether an interest is significant depends on individual circumstances and cannot be defined by a threshold amount. Holdings in a company through a mutual fund are not ordinarily sufficient to warrant disclosure, whereas salaries, research grants, consulting fees, and personal stock holdings should be disclosed. Participation on a board of directors or any other relationship with an entity that is in some way part of the research project should also be carefully considered for possible disclosure.

In addition to disclosing possible influences that might lead authors to support certain findings, authors should also consider disclosing when circumstances could influence them against a product, service, facility, or person. For example, having a copyright or royalty interest in a competing psychological test or assessment protocol might be seen as a possible source of negative bias against another test instrument (American Educational Research Association et al., 2014).

Editor and Reviewer Interest. For editors and reviewers who evaluate a given manuscript for publication, conflicts of interest are defined more broadly than economic interests and are usually dealt with by recusal rather than disclosure. It is the responsibility of editors and reviewers to recognize their conflicts of interest, disclose these conflicts to the person who assigned them the manuscript, and either decline the request or ask the assigning person to make a decision.

For editors and reviewers, conflicts of interest may be economic, as described previously for authors. If the main topic of an article has direct implications for a commercial interest of the editor or reviewer, that individual should decline the request to review the article. Any other economic conflicts that bear on the review are for the person who assigned the manuscript to decide.

Conflicts of interest for editors and reviewers may also take the form of personal connections. Having a family tie, marital relationship, close friendship, or romantic connection with an author is generally seen as a conflict of interest. Professional relationships also may constitute a conflict of interest if, for exam-

ple, one of the authors is a coauthor, past or current collaborator, past doctoral student or supervisor, or current colleague of the editor or reviewer. Editors-in-chief should set policy for their journal about whether collaboration-based conflicts extend for a lifetime or elapse after a certain number of years have passed. If an editor or reviewer guesses the identity of an anonymized author, and there is potential for a personal conflict, the editor or reviewer should make the assigning person aware of this.

Although differences of scientific or political opinion may influence evaluation of a manuscript, it is impractical to define any opinion-based agreement or disagreement as constituting a disqualifying conflict of interest. However, if an editor or reviewer finds that their point of view is fundamentally opposed to the rationale or approach of a manuscript, they should let the assigning person know this. For their part, editors should seek opinions from reviewers with a variety of positions when evaluating a manuscript known to be controversial.

Protecting Intellectual Property Rights

1.21 Publication Credit

Authorship is reserved for persons who make a substantial contribution to and who accept responsibility for a published work. Individuals should take authorship credit only for work they have performed or to which they have substantially contributed (APA Ethics Code Standard 8.12a, Publication Credit). Authorship encompasses, therefore, not only persons who do the writing but also those who have made substantial scientific contributions to a study. Substantial professional contributions may include formulating the problem or hypothesis, structuring the experimental study design, organizing and conducting the analysis, or interpreting the results and findings. Those who so contribute are listed as authors in the byline. Lesser contributions, which do not constitute authorship, may be acknowledged in the author note (see Section 2.7; see also a taxonomy of authorship in the natural sciences called CRediT at https://casrai.org/credit). Lesser contributions may include such supportive functions as designing or building the study apparatus, suggesting or advising about the analysis, collecting or entering the data, modifying or structuring a computer program, recruiting participants, and obtaining animals. Conducting routine observations or diagnoses for use in studies does not constitute authorship. Combinations of these (and other) tasks, however, may justify authorship.

As early as practicable in a research project, the collaborators should decide which tasks are necessary for the project's completion, how the work will be divided, which tasks or combination of tasks merits authorship credit, and on what level credit will be given (first author, second author, etc.). Collaborators may need to reassess authorship credit and order if relative contributions change in the course of the project (and its publication). This is especially true in faculty–student collaborations when students need more intensive supervision than originally anticipated, when additional analyses are required beyond the scope of a student's current level of training, or when the level of the student's contribution exceeds what was originally anticipated.

When a manuscript is accepted for publication, each person listed in the byline must verify in writing that they (a) agree to serve as an author, (b) approve the order of authorship presented in the byline, and (c) accept the responsibilities of authorship.

1.22 Order of Authors

Professional Authors. Authors are responsible for determining authorship and for specifying the order in which two or more authors' names appear in the byline. Principal authorship and the order of authorship credit should accurately reflect the relative contributions of persons involved (APA Ethics Code Standard 8.12b, Publication Credit). Relative status (e.g., department chair, junior faculty member, student) should not determine the order of authorship. The general rule is that the name of the principal contributor appears first, with subsequent names appearing in order of decreasing contribution. In some cases, another principal contributor appears last. These conventions can vary from field to field and from journal to journal. Novice authors are advised to contact the editor of the journal to which they are submitting a manuscript for guidance. If authors played equal roles in the research and publication of their study, they may wish to note this in the author note (see Section 2.7).

Professional–Student Collaborations. Because doctoral work is expected to result in an independent and original contribution to the field by the student, except under rare circumstances, the student should be listed as the principal author of any papers with multiple authors that are substantially based on their dissertation (APA Ethics Code Standard 8.12c, Publication Credit). Unusual exceptions to doctoral student first authorship might occur when the dissertation is published as part of a collection of studies involving other researchers or when work on a final manuscript was performed substantially by a coauthor. Whether students merit principal authorship on papers based on master's-level or other predoctoral research will depend on their specific contributions to the research. When master's-level students make the primary contribution to a study, they should be listed as the first author. Students may also collaborate with a faculty member on a faculty-originated project as a way to acquire the skills to make a primary scientific contribution in their master's thesis. In such cases, authorship should be determined by the relative contributions of the student and faculty member to the project (Fisher, 2017).

Student Assignments. When students contribute equally to a group project that will be submitted to an instructor (not for publication), students may put their names in any order in the byline (e.g., alphabetical order, reverse alphabetical order).

1.23 Authors' Intellectual Property Rights During Manuscript Review

Editorial review of a manuscript requires that the editors and reviewers circulate and discuss the manuscript. During the review process, the manuscript is a confidential and privileged document. Editors and reviewers may not, without the authors' explicit permission, quote from a manuscript under review or circulate copies of it to others, including graduate or postdoctoral students, for any purpose other than editorial review (APA Ethics Code Standard 8.15, Reviewers; see Section 12.7 for a detailed discussion of the peer review process). If a reviewer wishes to consult with a colleague about some aspect of the manuscript, the reviewer must request permission from the editor prior to approaching the colleague. Publishers have different policies on how editorial review works, and reviewers should consult the editor for any questions. In addition,

editors and reviewers may not use material from an unpublished manuscript to advance their own or others' work without the authors' consent.

1.24 Authors' Copyright on Unpublished Manuscripts

Authors are protected by federal statute against unauthorized use of their unpublished manuscripts. Under the Copyright Act of 1976 (Title 17 of the *United States Code*), an unpublished work is copyrighted "automatically from the moment the original work of authorship is fixed" (U.S. Copyright Office, 2017, p. 1), referring to the moment in which a work exists in any tangible form—for example, typed on a page. Until authors formally transfer copyright (see Section 12.20), they own the copyright on an unpublished manuscript; all exclusive rights due the copyright owner of a published work are also due the authors of an unpublished work. To ensure copyright protection, publishers include the copyright notice on all published works (e.g., Copyright [year] by [name of copyright holder]). The notice need not appear on unpublished works; nonetheless, it is recommended that authors include a copyright notice on all works, whether published or not. Registration of copyright (e.g., with the U.S. Copyright Office at https://www.copyright.gov/registration/) provides a public record and is usually a prerequisite for any legal action.

1.25 Ethical Compliance Checklist

The following checklist provides general guidance for ensuring compliance with ethics requirements.

Ethical Compliance Checklist

- ☐ Have you obtained written permission for use of unpublished instruments, procedures, or data that other researchers might consider theirs (proprietary)?
- ☐ Have you properly cited all published works, unpublished works, and ideas and creations of others presented in your manuscript? Have you secured needed permissions and written copyright attributions for items that require them?
- ☐ Have you reported institutional review of your study or studies in the Method section of your manuscript?
- ☐ Are you prepared to answer editorial questions about the informed consent, assent, and/or debriefing procedures you used?
- ☐ If your study involved nonhuman animal subjects, are you prepared to answer editorial questions about the humane care and treatment of such animals?
- ☐ Have all authors reviewed the manuscript and agreed on responsibility for its content?
- ☐ Have you adequately protected the confidentiality of research participants, clients/patients, organizations, third parties, or others who were a source of information presented in the manuscript?
- ☐ Have you released or shared participant data only in accordance with the agreement specified in the informed consent for your study?
- ☐ If your study was a clinical trial and has been registered, have you reported its registration in the author note and in the text?

2

PAPER ELEMENTS AND FORMAT