


Collaborative Authorship, Peer Review and YOUR Science

Jennifer Shambrook, Ph.D.

Director, Grant & Contract Management Office

St. Jude Children's Research Hospital

A wooden bookshelf filled with books, with a decorative wooden panel in the foreground. The books are arranged in rows, and the wood has a warm, natural finish. The background is dark, making the text stand out.

Topics for discussion

- Authorship
- Elements of responsible publication
- Practices that should be avoided
- Peer review
- Meeting deadlines
- Assessing quality
- Judging importance
- Preserving confidentiality
- Review exercise



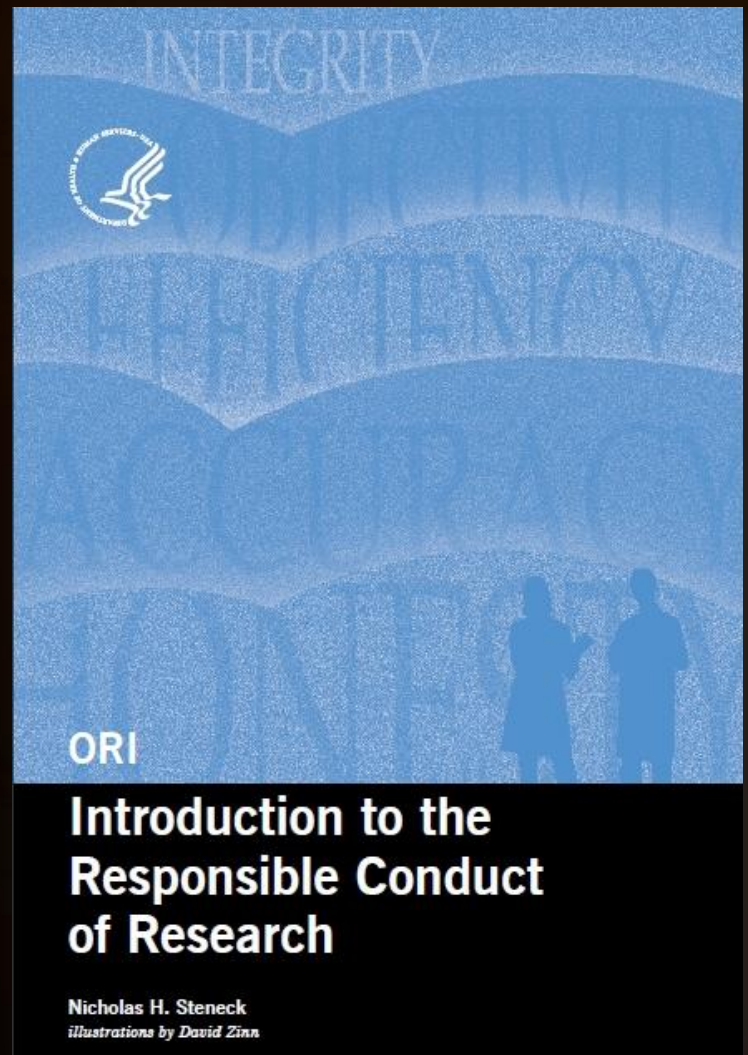
Session Text:

Introduction to the Responsible Conduct of Research

By Nicholas H. Steneck

Published by DHHS, Office of Research Integrity, 2007

<http://ori.hhs.gov/documents/rcrintro.pdf>





Introduction to the Responsible Conduct of Research

AUTHORSHIP & PUBLICATION



Authorship and Publication

- Contribution to the body of knowledge
- Product of research funding
- Currency of academe



A publication should contain:

- Full and fair description of work undertaken
- Accurate report of the results
- Honest and open assessment of the findings
- Methods
- Results (discoveries)
- Discussion (what they think the discovery means in the context of the body of knowledge)

Authorship

- Contribution
 - Intimately involved in the conception and design of the research (or)
 - Assumed responsibility for data collection and interpretation (and also)
 - Participated in drafting the publication, and
 - Approved the final version of the publication

Lesser roles can be listed under acknowledgements.

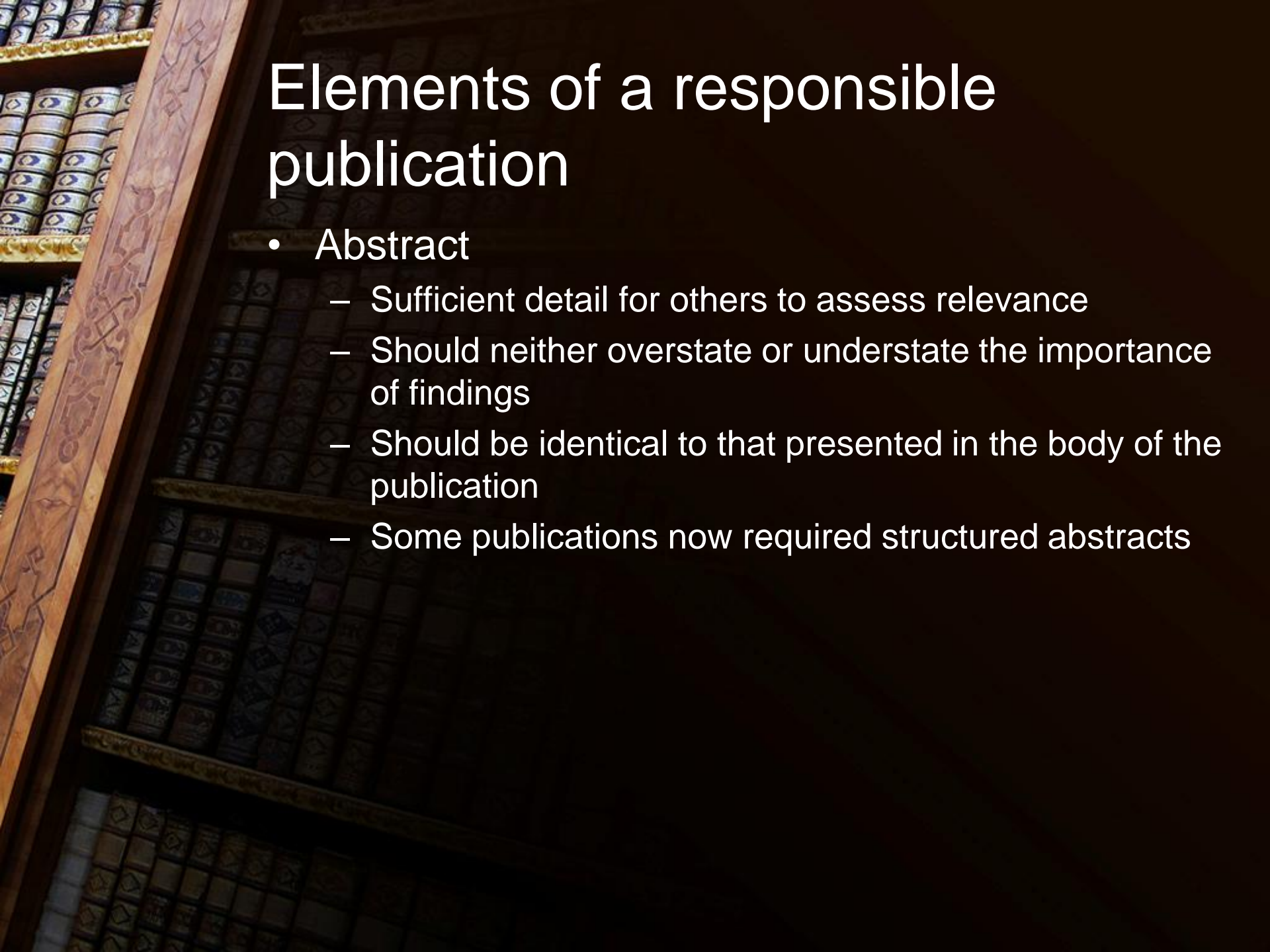


Authorship

- Authorship name order
 - Order of importance
 - First and last author (varies by discipline)
 - Joint decision among the authors
 - Decide early and in writing

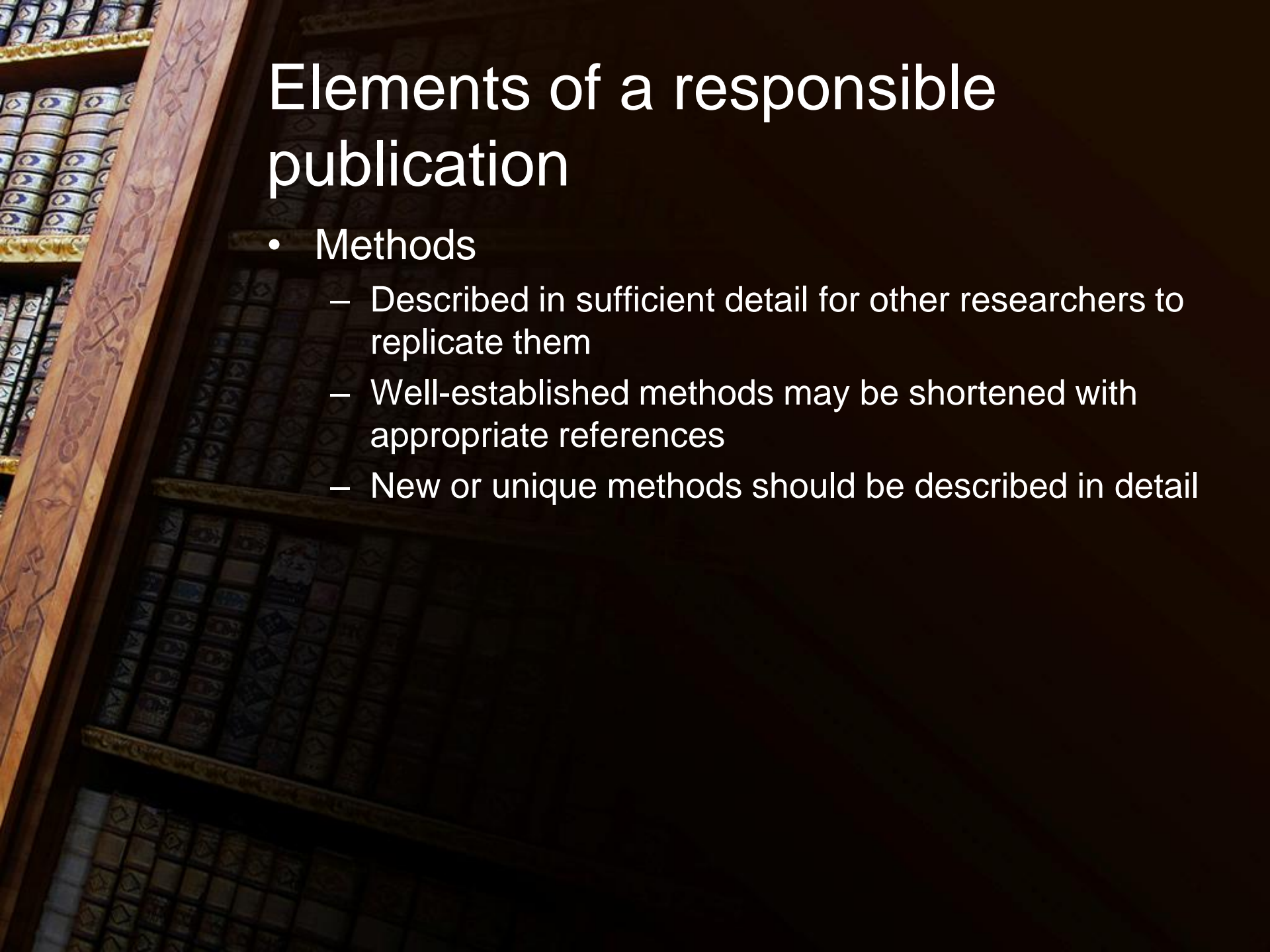
Authorship

- Corresponding or primary author
 - Accuracy of data
 - Names listed as authors
 - None neglected
 - None honorary
 - Approval of the final draft by all authors
 - Handles all correspondence
 - Responds to inquiries



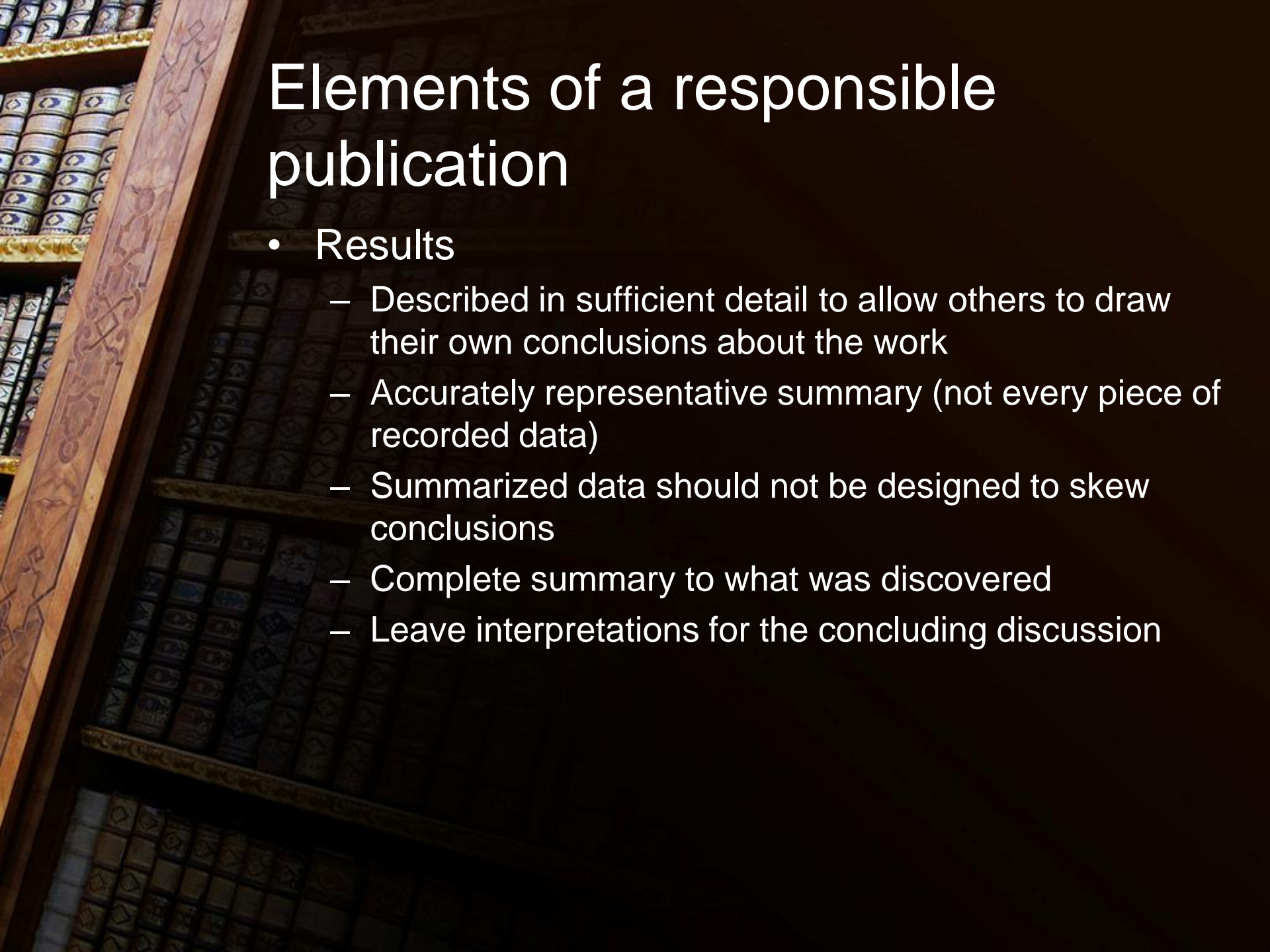
Elements of a responsible publication

- Abstract
 - Sufficient detail for others to assess relevance
 - Should neither overstate or understate the importance of findings
 - Should be identical to that presented in the body of the publication
 - Some publications now required structured abstracts



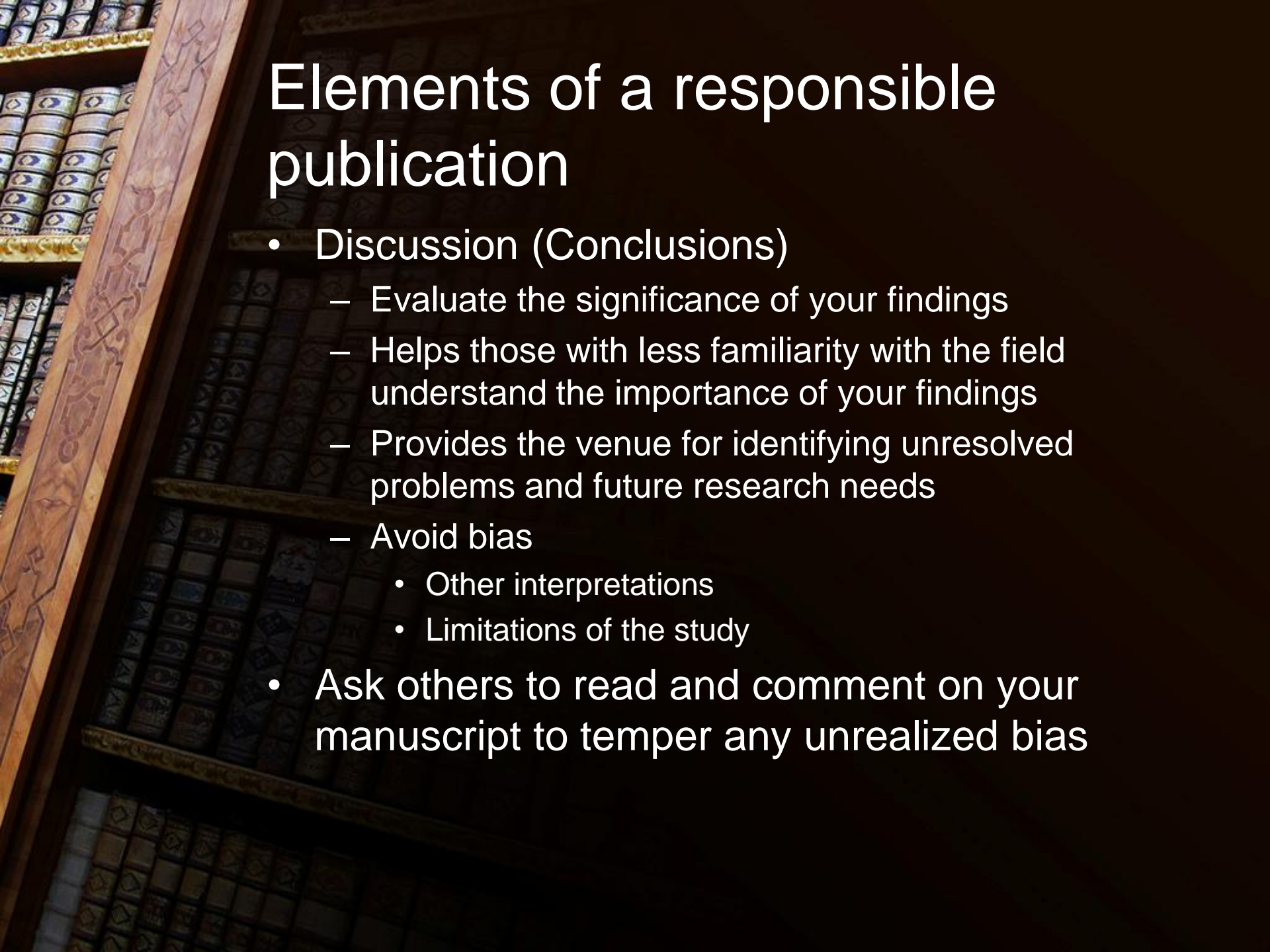
Elements of a responsible publication

- Methods
 - Described in sufficient detail for other researchers to replicate them
 - Well-established methods may be shortened with appropriate references
 - New or unique methods should be described in detail



Elements of a responsible publication

- Results
 - Described in sufficient detail to allow others to draw their own conclusions about the work
 - Accurately representative summary (not every piece of recorded data)
 - Summarized data should not be designed to skew conclusions
 - Complete summary to what was discovered
 - Leave interpretations for the concluding discussion



Elements of a responsible publication

- Discussion (Conclusions)
 - Evaluate the significance of your findings
 - Helps those with less familiarity with the field understand the importance of your findings
 - Provides the venue for identifying unresolved problems and future research needs
 - Avoid bias
 - Other interpretations
 - Limitations of the study
- Ask others to read and comment on your manuscript to temper any unrealized bias



Practices that should be avoided

- Honorary authorship
 - Could be considered misconduct
 - Significant contributions can be recognized in the acknowledgement section for...
 - Being chair of a department or research group
 - Providing funding for the research
 - Being the leading researcher in an area
 - Providing reagents
 - Serving as a mentor to the author



Practices that should be avoided

- Salami publications
 - Dividing one significant piece of research into a number of small experiments to increase the number of publications
 - Wastes valuable time and resources within the research community



Practices that should be avoided

- Duplicate publication
 - Publishing the same information a second time without acknowledging the first publication
 - Distorts meta-analyses
- Premature public statements
 - Issuing public statements about their work before it has been peer reviewed



Introduction to the Responsible Conduct of Research

PEER REVIEW

A photograph of a wooden bookshelf filled with books, with a decorative wooden panel in the foreground. The books are arranged in rows, and the wood has a warm, natural tone. The lighting is soft, highlighting the texture of the wood and the spines of the books.

Peer review

- Evaluation by colleagues with similar knowledge and experience
- Essential component of research and the self regulation of the professions
- Lay persons cannot assess
- Good professional citizenship

A photograph of a wooden bookshelf filled with books, with a decorative wooden panel in the foreground. The books are arranged in rows, and the wood has a warm, reddish-brown tone. The lighting is soft, highlighting the texture of the wood and the spines of the books.

Peer review includes

- Which projects to fund
- Which research findings to publish
- Which scholars to hire and promote
- Which research is reliable



Peer review

- Meeting deadlines
 - Uncompensated work
 - Conflicting priorities
 - Honor your commitment
 - Timely dissemination of knowledge

A photograph of a wooden bookshelf filled with books, with a decorative wooden panel in the foreground. The books are arranged in rows, and the wood has a warm, reddish-brown tone. The lighting is soft, highlighting the texture of the wood and the spines of the books.

Assessing quality

- Internally consistent
- Conforms to the best practices of the field
 - Are methods appropriate?
 - Check calculations
 - Arguments are logical
 - Conclusions supported by the evidence presented
 - Relevant literature has been consulted and cited



Challenges to assessing quality

- Careless mistakes
 - Reporting data
 - Listing citations
- Deliberate fabrication or falsification
- Plagiarism
- Inaccurate reporting of conflicts of interest
- Failure to mention prior work
 - Others
 - Author or grant applicant
- These issues may be difficult to detect
- Cannot (usually) discuss with authors



Judging importance

- Is the research important enough to
 - Fund?
 - Publish?
- Would this research be important in setting policy or practice?
- Do these results make an important contribution to this field of study?



Judging importance

- Keeping an open mind rather than being swayed by:
 - Stature of researcher or institution
 - Country of origin
 - Preference for one method over another
 - Outcome of studies under review
- Document objections with concrete information
 - Literature
 - Stated biases
- End to anonymous review?

A photograph of a wooden bookshelf filled with books, with a decorative wooden panel in the foreground. The books are arranged in rows, and the wood has a warm, reddish-brown tone. The lighting is soft, highlighting the texture of the wood and the spines of the books.

Preserving confidentiality

- Confidentiality is required
 - Grant reviews
 - Manuscript reviews
 - Personnel reviews



Peer review best practices

- Timely
- Thorough
- Constructive
- Free from bias
- Respectful of confidentiality



Peer review worst practices

- Asking students or anyone else to write a review you were asked to do
- Use an idea or information from a review before it is published
- Discuss manuscripts or grant proposals with others outside the review process
- Retain a copy of the reviewed material
- Discuss personnel and hiring decisions with others outside of the hiring or promotion process

A photograph of a wooden bookshelf filled with books, with a decorative wooden panel in the foreground. The books are arranged in rows, and the wooden panel has intricate carvings. The lighting is dramatic, with the foreground panel being brightly lit and the background shelves receding into shadow.

Authorship and Peer Review

CASE STUDIES

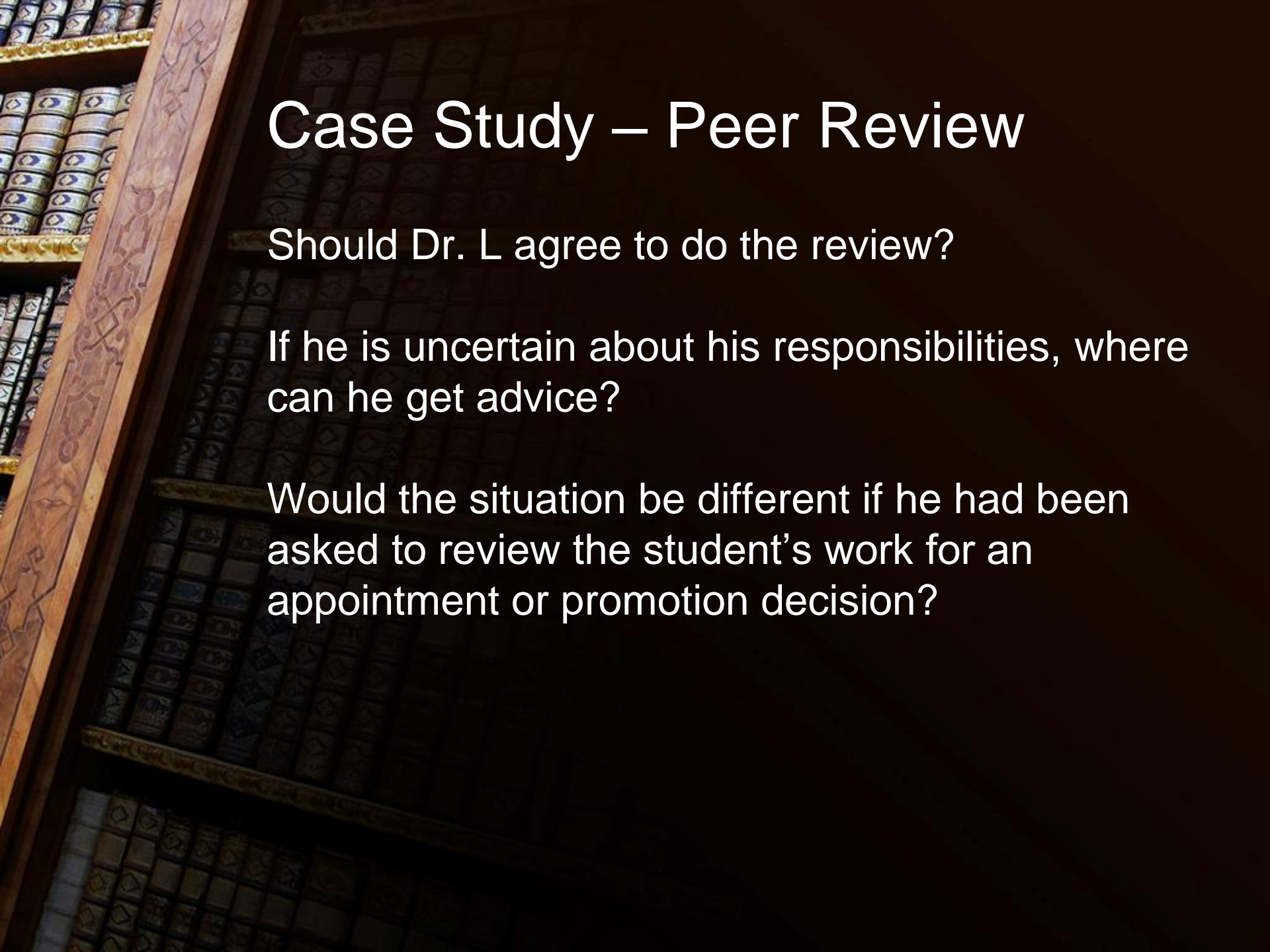


Case Study -- Authorship

What should Sanjay do?

Which of these problems should Sanjay tackle first?

Is there anything he could have done to assure that things went more smoothly when he was ready to publish his results?



Case Study – Peer Review

Should Dr. L agree to do the review?

If he is uncertain about his responsibilities, where can he get advice?

Would the situation be different if he had been asked to review the student's work for an appointment or promotion decision?

Authorship Case Study

As his first major grant is coming to an end, several important elements of Dr. Sanjay K.'s research suddenly fall into place. The last series of experiments his graduate student ran clearly link the gene they are studying to a particular type of cancer. His postdoc's work on the proteins associated with this gene could pave the way for possible cures. With these results in hand, he is finally ready to make a strong case for continued support and, happily, his pending promotion. All he has to do now is publish the results.

A week later, Sanjay's optimism starts to fade. As might have been expected, his department chair was delighted with his progress, but then suggested that the first paper announcing the results come out under her name to give it broader circulation. Meanwhile, his postdoc and graduate student have gotten into a heated debate about the order their names should appear on the paper; the university's public affairs office has asked for a summary of the results for a press release; and the technology transfer office has called telling him to hold all publications until they can evaluate the commercial potential of his work.

1. What should Sanjay do?
2. Which of these problems should Sanjay tackle first?
3. Is there anything he could have done to assure that things went more smoothly when he was ready to publish his results?

Peer Review Case Study

Dr. Sung L. is struggling with the decision whether to agree to review the work of an advanced graduate student at another university for publication in the major journal in his field. He is familiar with the student's work and attended a session several months ago at which she presented a brief report on her work. It clearly overlaps with his research in a number of ways, which is one reason he has been asked to serve as a reviewer.

Dr. L. knows he is qualified to do the review and is confident he can provide an objective, constructive judgment of the student's work. However, since his students are working on similar problems, he is concerned about the appearance of a conflict of interest. In addition, he is not sure he wants to learn more about the work in question until he publishes his own work, to avoid later charges that he unfairly used some of the student's ideas. Finally, there is the matter of yet another lost weekend doing the review, when his department chair has already told him to cut down on unpaid professional service.

1. Should Dr. L. agree to do the review?
2. If he is uncertain about his responsibilities, where can he get advice?
3. Would the situation be different if he had been asked to review the student's work for an appointment or promotion decision?
