CASE I: Authorship

Dr. Brown writes a grant proposal in which the background section duplicates, nearly verbatim, two pages from a paper published by his colleague, Dr. Schmidt. The section copied by Dr. Brown was the literature review section; and the content was not central to Dr. Schmidt's findings in the original paper. Dr. Brown's proposal cites Schmidt's work, but does not state that the background section is based on it. Dr. Schmidt, upon finding that his work was copied, reports the matter to his institution's research integrity officer.

Discussion Questions

1. Does writing a background section represent real intellectual effort? Does that matter?
2. Would your answer change if Dr. Schmidt had made a mistake in his original work, which was then passed on by Dr. Brown?
3. Is this plagiarism? See definitions of research misconduct provided at the end of this packet.
4. Assume that the grant is funded with the copied background section—what should Dr. Brown and his institution do? What if the grant weren't funded?

Based on:

CASE II: Data Management

As part of her post-doctoral research on cognitive aging, Angela develops a computerized task that measures way-finding (i.e., the ability to navigate in space). She conducts a cross-sectional study of individuals ranging in age from 15 to 85 years, with an equal number of males and females in each of seven age groups. When she looks at the performance for each age group broken down by sex, she is immediately drawn to the striking difference between the youngest and oldest groups. Not unexpectedly, the youngest group outperformed the oldest group, but she notices also that whereas the youngest males performed better than the youngest females, there was no gender difference in the oldest group. Indeed, an analysis of variance (ANOVA) using only the data from the youngest and oldest groups reveals a significant age x sex interaction. Angela worries, however, that ANOVA is an inappropriate test because it omits the data from all but the two extreme age groups. Indeed, when she analyzes the full dataset using multiple regression, she finds that age and sex together account for 40% of the variance in way-finding, but the age x sex interaction does not account for any additional variance. Angela shares her findings with her post-doctoral advisor, who recommends that she first publish the data from the two extreme groups (proposing that age differences in estrogen or testosterone are the mechanism underlying the interaction) and then publish a second article based on all the data. Despite some misgivings, Angela decides to follow her advisor’s recommendation.

Once on the job market, Angela presents the data from her second article along with arguments about differential socialization of males and females as the mechanism underlying the age-invariant sex difference, and she finds that these arguments are well received. After a presentation at a top research university, the chair of the search committee asks Angela about the discrepancy between her current findings and those that she reported earlier. At this point, Angela reveals that the data in the first article are actually a subset of the full dataset on which her second article is based. Later, Angela hears through the grapevine that she was almost everyone’s top-pick for the position based on her talk and interviews with individual faculty, but she did not get the job.

Discussion Questions

1. Were Angela’s methods of data analysis legitimate and/or ethical? Did Angela report her results ethically?
2. What are the possible motives that led Angela to make this decision?
3. Did her advisor give her good advice? What should Angela have done differently?
4. Why didn’t Angela get the job?
5. Could Angela’s actions be considered research misconduct? See definitions of research misconduct provided at the end of this packet.

Developed by:

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CASE III: Conflict of interest

A researcher at a prestigious university has a postdoctoral fellow who has been studying one specific aspect of a new drug that has just been approved by the FDA. The company that has developed the drug pays the researcher $15,000 per year in consulting fees. The company sponsors a conference in San Francisco to bring together the leading researchers working on this drug. This conference is an all-expense paid trip for the speakers and physicians who attend, with the speakers receiving a $5,000 honorarium. The researcher plans to attend and teach at the conference, but is informed by his post-doc that she has new data indicating that the drug may have serious cardiovascular side effects. The researcher thanks the post-doc for her work, but only plans to report on published findings and will omit the new information about the drug’s dangers.

Discussion Questions

1. Does the researcher have a conflict of interest? If so, what is the nature of the conflict? Does the conflict raise any concerns? If not, why not?

2. Should Dr. Ryan's refusal to mention possible additional risks be treated as a case of withholding data?

3. What should Dr. Ryan and her postdoc do in light of the evidence that the drug might have serious cardiovascular side effects?

Based on:

WUSTL Definitions

Fabrication:
making up data or results and recording or reporting them.

Falsification:
manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.

Plagiarism:
the appropriation of another person’s ideas, processes, results, or words without giving appropriate credit.

Other Useful Resources:

WUSTL Authorship Policy  http://www.wustl.edu/policies/authorship.html
WUSTL Conflict of Interest Policy  http://www.wustl.edu/policies/conflict.html
WUSTL Research Integrity Policy  http://www.wustl.edu/policies/research.html