



Online Ethics Center  
FOR ENGINEERING AND SCIENCE

# Data Reduction Techniques

## Author(s)

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## Year

2000

## Description

A scenario meant to stimulate discussion about ways of responding to different results obtained by duplicating an experiment.

## Body

You are working on a team of undergraduates headed by a graduate student that is attempting to replicate an experiment obtained by another group the previous spring. Your supervising professor needs your experiment completed in time for an upcoming conference at which the results are to be presented. You rigorously perform the tests and collect the data, which is then subjected to a series of reduction and transformation programs on the computer. The students find that each data reduction process distorts the results to the extent that they no longer match the subtle phenomena that were observed. These were the same phenomena that the group who obtained the earlier results chose to consider negligible.

What do you do and how do you go about it?

## Notes

Caroline Whitbeck introduced methods and modules for discussing numerous issues in responsible conduct of research at a Sigma Xi Forum in 2000. Partial funding for the development of this material came from an NIH grant.

You can find the entire sequence on the OEC at [Scenarios for Ethics Modules in the Responsible Conduct of Research](#). Some information in these historical modules may be out-of-date; for instance, there may be a new edition of the professional society's code that is referred to in an item. If you have suggestions for updates, please contact the OEC.

**Contributor(s)**

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Mentors and Trainees

**Discipline(s)**

Research Ethics

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Online Ethics Center