Research and writing ethics

The following kinds of situations may be helpful for training purposes and classroom purposes, to make students aware of these issues.

Misrepresenting or fabricating experimental data or results
Ethical problems sometimes arise as researchers cheat or stretch the truth.1
- Outright fabrication of data; even reporting experiments which were never conducted (sometimes referred to as “drylabbing”).
- “Fudging”, “massaging”, or outright manufacture of experimental data.
- Inappropriate and statistically invalid “culling” of experimental data, such as the intentional exclusion of data which contradict the researcher’s hypothesis.
- Intentional portrayal of interdependent events as independent.
- Ordering subordinates or research assistants to participate in any of the above.
- Plagiarism

Famous examples

- Cyril Burt, a well-known mid-20th century researcher in education and psychology, who was exposed for fabricating some of his research data. He reported entirely fabricated studies on IQ tests which he had never conducted, and included fictitious collaborators in his papers.
- Hwang Woo-suk, the dog cloner from Seoul National University.
- Shin Jeong-ah, the supposed art historian.

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1 Adapted from: http://en.wikipedia.org/wiki/Fabrication_%28science%29
• Jan Hendrik Schön, a Swiss physicist who was exposed several years ago for fabricating research and data. He earned a doctorate from the University of Konstanz and worked at Bell Labs. He published prolifically, and at one point in 2001 he authored a published scientific paper on average of every 8 days; he also received various awards for his research. He claimed discoveries that were later found to be dubious; other researchers tried to replicate his findings and could not. It became apparent that he had fabricated data, and also committed “self-plagiarism” - copying the same research and publishing it in more than one journal. He was fired and stripped of Ph.D. At least 21 papers had to be retracted by scientific journals.

• In 2011, the German Defense Minister and popular politician, Karl-Theodor Guttenberg, became embroiled in a scandal over his Ph.D. dissertation (completed 2007) in law at the University of Bayreuth. In February 2011, evidence was revealed that he had plagiarized numerous sections of his dissertation from newspaper articles, academic articles, speeches, and even his advisor. On 23 Feb. the University of Bayreuth revoked his Ph.D., and on 1 March he resigned as Defense Minister and resigned from parliament (the Bundestag).

• See also: http://en.wikipedia.org/wiki/Scientific_misconduct

Consequences for such behavior include: dismissal; revocation of degrees; loss of tenure track jobs; published articles being retracted by journals; and being academically “blacklisted” - no hope of getting an academic job again. For students committing serious offenses, the violations would be mentioned in one’s academic transcripts, which would ruin one’s chances of being accepted at other schools or finding academic or research jobs.

Discussing these kinds of consequences will hopefully scare students and prevent them from doing any of these things.