



Online Ethics Center
FOR ENGINEERING AND SCIENCE

Falsification, Fabrication, Plagiarism & Cheating Bibliography

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Description

This bibliography contains references that address general falsification, fabrication, plagiarism, and cheating along with resources for instructors and studies of the prevalence of these behaviors.

Body

Bouville, Mathieu (2008). Plagiarism: Words and Ideas. *Science and Engineering Ethics*. 14(3) 311-322.

The article distinguishes between plagiarism, the stealing of the ideas of others, and the lesser act of copying a few sentences out of a publication or work that contains only ideas of marginal importance. The label of "plagiarism" should not be used for this later act.

Gert, Bernard (2005). Cheating. *Teaching Ethics: The Journal of the Society for Ethics Across the Curriculum*. 5(1) 15-27.

The concept of cheating has been almost completely neglected by philosophers. Cheating, in the paradigm case, involves the violation of the rules of a voluntary activity in order to gain its built-in goal. Golf is a model for academic cheating even

though the primary goal of academic activity is to learn new information, or improve one's skills, not to compete. But being in a college or university adds the element of competition. Faculty and administration should function as referees or umpires, or tournament officials, allowing each student to have a fair chance to compete with others.

Handelsman, Jo (2008). The Gray Zone: Scientific Misconduct Comes in Many Shades. *DNA & Cell Biology*. 27(2): 63-64.

This editorial discusses the prevalence of questionable behaviors that are part of the daily scientific research, and explores the “gray zones” of research behavior, where deliberate fraud is usually not intended, but ethical standards are nonetheless breeched. This includes things such as duplicate publications, duplicate data, and conflicts of interest for reviewers of scientific publications.

Indiana University, School of Education. How to Recognize Plagiarism. 2002. <https://www.indiana.edu/~istd/>

This short tutorial seeks to help students understand and recognize plagiarism. It gives an overview of what plagiarism is and its definition, gives some examples of word-for-word and paraphrasing plagiarism, and gives the user a chance to practice identifying plagiarism.

LaFollette, Marcel. C. (1996). Stealing Into Print: Fraud, Plagiarism and Misconduct in Scientific Publishing. Berkeley: University of California Press.

The author looks at some of the ethical issues inherent in scientific publishing practices, how changes such as the proliferation of paper with multiple authors and electronic journals are putting new strains on the peer review system, and looks at ways in which the system might be changed to help reduce the level of plagiarism and misconduct in scientific publication.

Parrish, Debra and Briget Noonan (2009). Image Manipulation as Research Misconduct. *Science and Engineering Ethics*. 15(2) 161-167.

The article looks at cases handled by the Office of Research Integrity involving image manipulations and discusses detection methods, and the final outcomes of the cases. It discusses the sanctions imposed on researchers found guilty, and contributing factors to instances where individuals were found not guilty, though the images in question were clearly flawed.

Reilly, Richard, Samuel Pry and Mark L. Thomas (2007). Plagiarism: Philosophical Perspectives. *Teaching Philosophy* 30(3): 269-282.

Plagiarism is often equated with theft, but closer inspection reveals that plagiarism is fundamentally a form of deception. In the case of plagiarism in the classroom, a plagiarist sabotages the instructor's ability to make a fair and accurate evaluation of the student's abilities and thereby violates duty inherent in the student-teacher relationship.

Roig, Miguel (2002). Avoiding plagiarism, self plagiarism, and other questionable writing practices: a guide to ethical writing. Office of Research Integrity.

<http://ori.dhhs.gov/education/products/plagiarism/plagiarism.pdf>

This online tutorial discusses questionable writing practices which are common in professional scientific writing. The guide seeks to help students and professionals to identify and prevent these questionable practices and to develop an awareness of ethical writing. The guide looks at the area of plagiarism, duplicate publication, self-plagiarism, and other, lesser forms of inappropriate writing practices. In each instance, examples of questionable practice are given, and recommendations are made for how to avoid this practice. This tutorial was developed with funding from the United States Office of Sponsored Research.

United States Department of Health and Human Services, Office of Research Integrity. ORI Policy on Plagiarism. 1994.

<http://ori.dhhs.gov/policies/plagiarism.shtml>

This short document gives the U.S. Office of Research Integrity's definition of plagiarism, and explains how this definition applies to the ORI's investigation of misconduct cases.

Resources for Instructors

Bernardi, Richard, Ania V. Baca, Kristen S. Landers, and Michael B. Witek (2008). Methods of Cheating and Deterrents to Classroom Cheating: An International Study. *Ethics & Behavior* 18(4): 373-391.

This study examines the methods students use to cheat on class examinations and suggests ways of deterring using an international sample from Australia, China, Ireland, and the United States. We also examine the level of cheating and reasons

for cheating that prior research has highlighted as a method of demonstrating that our sample is equivalent to those in prior studies. Our results confirm the results of prior research that primarily employs students from the United States. The data indicate that actions such as having multiple versions of the examination and scrambling the questions on these versions would deter cheating. In addition, given the increased level of cheating and students' increased perception of the social acceptability of cheating in college, the data provided by our international sample also suggest that some relatively simple precautions by instructors could dramatically reduce the level of cheating on in-class examination.

Billic-Zulle, Lidja, Josip Azman, Vedran Frkovic and Mladen Petrovecki (2008). Is there an effective approach to deterring students from plagiarizing? *Science and Engineering Ethics* 14(1):129-137.

This article reports on the results of a study looking at the effectiveness of plagiarism detection software and penalty for plagiarizing in detecting and deterring plagiarism among medical students. The students in one group were given the task of writing an original essay, while the students of the second group were also told to write an essay, and were additionally warned against plagiarism, and how to avoid it. The third group was also told to write an essay, told about plagiarism and how to avoid it, and also told about the plagiarism software which would be used to examine their papers. The students in the third group had a much lower rate of plagiarism than the two other groups, suggesting that plagiarism software and discussing plagiarism in the class is an effective deterrent.

Broeckelman-Post, Melissa A (2008). Faculty and Student Classroom Influences on Academic Dishonesty. *IEEE Transactions on Education*. 51(2): 206-211.

This study examined the influence that faculty and students have on academic dishonesty. Results showed that instructors who employ more safeguards against academic dishonesty and who discuss plagiarism, collaboration, and source attribution are more likely to observe students engaging in academic dishonesty behaviors. This study also found that students are less likely to report engaging in serious plagiarism if the instructor spends time discussing plagiarism and are more likely to believe that copying sentences is a serious form of academic dishonesty if the instructor discusses source attribution.

Duff, Andrea H., Derek P. Rogers and Michael B. Harris (2006). International Engineering Students: Avoiding Plagiarism Through

Understanding the Western Academic Context of Scholarship. *European Journal of Engineering Education*. 31(6): 673-681.

This article describes a program to help reduce the level of plagiarism by undergraduate and international students through a collaborative effort between the lecturers and the learning support staff to make cross-cultural assumptions about academic scholarship in the Western context explicit, while putting in place additional workshops for students. Instead of focusing on policy, remediation and punishment, staff worked to foster an understanding of critical scholarship in the Western academic context.

Marks, Joel (2003). Cheating 101: Ethics as a Lab Course. *Teaching Philosophy*. 26(2) 131-145.

The author describes the system he has developed to combat cheating by using a system of "contract grading" that relies entirely on student self-reports of how many hours they spent doing the assignments. He believes that students learn more and cheat less when they are trusted and when their work is not evaluated.

Studies of the Prevalence of Falsification, Fabrication, Plagiarism & Cheating in Engineering and Science

Anderson, M. S., Ronning, E. A., De Vries, R., & Martinson, B. C. (2007). [The perverse effects of competition on scientists' work and relationships](#). *Science and Engineering Ethics*, 13(4): 437-461.

Though competition for funding, positions, and prestige is often seen as one of the main components driving scientific advancement, little attention has been given to its possible negative effects on scientists, their work, and their relationships. The authors of this study conducted focus-groups with 51 mid-to-early career scientists which revealed that this kind of competition often lead to strategic game-playing in science, a decline in one's willingness to share information and methods, deformation of relationships, and in some cases, questionable research conduct. When such competition is pervasive, the authors argue, it can undermine the integrity of science.

Anderson, M. S., Martinson, B. C., & De Vries, R. (2007). [Normative dissonance in science: Results from a national survey of U.S. scientists](#). *Journal of Empirical Research in Human Research Ethics*, 2(4): 3-14.

The article summarizes the results from two national surveys of 4,000 faculty and doctoral students in chemistry, civil engineering, microbiology and sociology. The results of the survey indicate that both faculty and students subscribe strongly to traditional norms but are more likely to see alternative counternorms enacted in their departments. They also show significant effects of departmental climate on normative orientations and suggest that many researchers express some degree of ambivalence about traditional norms.

Fanelli, Daniele (2009). How Many Scientists Fabricate and Falsify Research? A Systematic Review and Meta-Analysis of Survey Data. *PLOS ONE* 4(5): Article Number e5738.

This article reports on a study looking at twenty-one surveys of scientists that asked them if they have committed or knew of a colleague who committed research misconduct. The researchers found in an analysis of these surveys that an average of 1.97% admitted to have fabricated, falsified, or modified data or results at least once, and up to 33.7 percent admitted to other questionable research practices. When asked about colleagues, 14.2% admitted to knowing of a colleague committing fabrication, and up to 72% admitted to knowing about colleagues committing other questionable research practices. By doing a meta-analysis of the data, it appears that these numbers are likely to be a conservative estimate of the true prevalence of scientific misconduct.

Hard, Stephen, James M. Conway, and Antonia C. Moran (2006). Faculty and College Student Beliefs about the Frequency of Student Academic Misconduct. *Journal of Higher Education*. 77(6): 1058-1080.

This article reports on the prevalence of academic misconduct, such as plagiarism and cheating, which has increased and the faculty often does nothing to prevent cheating. The perception of misconduct is important because that can be a factor when a student cheats. The authors gathered data on student populations and then conducted surveys of students and faculty to measure their perceptions of cheating. The researchers questioned whether students were more likely to cheat if they had the impression that cheating was widespread on campus. They also tried to determine whether the students' perceptions of cheating were accurate, and calculated whether an impression of widespread cheating increased the faculty's

efforts to prevent it.

Kisamore, Jennifer, Thomas Stone and I. Jawahar (2006) [Academic Integrity: The Relationship Between Individual and Situational Factors on Misconduct Contemplations](#). *Journal of Business Ethics*. 75(4): 381-394.

Along with focusing on situational factors (e.g., integrity culture, honor codes), demographic variables or personality constructs that influence the prevalence of misconduct, the authors examined how these classes of variables interact to influence perceptions of and intentions relating to academic misconduct. In a sample of 217 business students, the authors examined how integrity culture interacts with Prudence and Adjustment to explain variance in estimated frequency of cheating, suspicions of cheating, considering cheating and reporting cheating. Age, integrity culture, and personality variables were significantly related to different criteria. Overall, personality variables explained the most unique variance in academic misconduct, and Adjustment interacted with integrity culture, such that integrity culture had more influence on intentions to cheat for less well-adjusted individuals. Implications for practice are discussed and future research directions are offered.

Martinson, B. C., Anderson, M. S., & De Vries, R. (2006). [Scientists' Perceptions of Organizational Justice and Self-reported Misbehaviors](#). *Journal of Empirical Research on Human Research Ethics*, 1(1): 51-66.

Policymakers concerned about maintaining the integrity of science have recently expanded their attention from a focus on misbehaving individuals to characteristics of the environments in which scientists work. Little empirical evidence exists about the role of organizational justice in promoting or hindering scientific integrity. Our findings indicate that when scientists believe they are being treated unfairly they are more likely to behave in ways that compromise the integrity of science. Perceived violations of distributive and procedural justice were positively associated with self-reports of misbehavior among scientists.

Mumford, Michael D. Ethan P. Walples, Alison L. Antes, Stephen T. Murphy, Shane Connelly, Ryan P. Brown and Lindsay D. Devenport (2009). [Exposure to Unethical Career Events: Effects on Decision-making, Climate, and Socialization](#). *Ethics and Behavior*. 19(5): 351-378.

An implicit goal of many responsible conduct of research interventions is to minimize peoples' exposure to unethical events. The intent of the present effort was to examine if exposure to unethical practices in the course of one's work is related to ethical decision making. Accordingly, 248 doctoral students in the biological, health,

and social sciences were asked to complete a field appropriate measure of ethical decision making. In addition, they were asked to complete measures examining the perceived acceptability of unethical events and a measure examining perceptions of ethical climate. When these criterion measures were correlated with a measure examining the frequency with which they had been exposed to unethical events in their day-to-day work, it was found that event exposure was strongly related to ethical decision making but less strongly related to climate perceptions and perceptions of event acceptability. However, these relationships were moderated by level of experience. The implications of these findings for practices intended to improve ethics are discussed.

Stephens, Jason M., Michael F. Young, and Thomas Calabrese. (2007). Does Moral Judgment Go Offline When Students Are Online? A Comparative Analysis of Undergraduates' Beliefs and Behaviors. Related to Conventional and Digital Cheating. *Ethics & Behavior*. 17(3): 233-254.

This study provides a comparative analysis of students' self-reported beliefs and behaviors related to six analogous pairs of conventional and digital forms of academic cheating. Results from an online survey of undergraduates at two universities suggest that students use conventional means more often than digital means to copy homework, collaborate when it is not permitted, and copy from others during an exam. However, engagement in digital plagiarism (cutting and pasting from the Internet) has surpassed conventional plagiarism. Students also reported using digital "cheat sheets" (i.e., notes stored in a digital device) to cheat on tests more often than conventional "cheat sheets." Overall, 32% of students reported no cheating of any kind, 18.2% reported using only conventional methods, 4.2% reported using only digital methods, and 45.6% reported using both conventional and digital methods to cheat.

Yardley, Jennifer, Melanie Domenech Rodriguez, Scott C. Bates and Johnathan Nelson (2009). True Confessions?: Alumni's Retrospective Reports on Undergraduate Cheating Behaviors. *Ethics & Behavior* 19(1): 1-14.

This study examined the prevalence of cheating in a sample of college alumni, who risk less in disclosing academic dishonesty than current students. A total of 273 alumni reported on their prevalence and perceived severity of 19 cheating behaviors. The vast majority of participants (81.7%) report having engaged in some form of cheating during their undergraduate career. The most common forms of cheating were "copying from another student's assignment" and "allowing others to

copy from your assignment." More students reported cheating in classes for their major than other classes. Males and females cheated at the same rates in classes for their major, and males reported higher rates of cheating than females in nonmajor classes. Respondents reported that their top reasons for cheating were "lack of time" and "to help a friend."

Notes

Last updated by Kelly Laas, February 2011.

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