Research Ethics

Domains in which ethics matters

1. Treatment of research participants

2. Treatment of data

3. Presentation of research
Famous cases of unethical treatment of participants

- The Stuttering Study (1930s)
- The Milgram Obedience Study (1963)
- The Zimbardo Prison Study (1971)
- The Tuskegee Syphilis Study (1932 – 1972)

The Stuttering Study (1930s)

- What is the cause and treatment for stuttering?
- Is stuttering a learned behavior and can it be induced in children?

Wendell Johnson (1906 – 1965)
The Stuttering Study (1930s)

Experiment left lifelong psychological and emotional scars, had originally sought $13.5 million

Iowa Settles Stuttering Study Lawsuit

By DAVID PITT
The Associated Press
Friday, August 17, 2007; 6:21 PM

DES MOINES, Iowa -- The state has agreed to pay $925,000 to unwitting subjects of an infamous 1930s stuttering experiment -- orphans who were badgered and belittled as children by University of Iowa researchers trying to induce speech impediments.

Johnson County District Court Judge Denver Dillard issued an order approving the settlement Friday morning, it still must be ratified by the State Appeal Board, which next meets Sept. 4.

The six plaintiffs, who said the experiment left lifelong psychological and emotional scars, had originally sought $13.5 million.

"We believe this is a fair and appropriate settlement," Attorney General Tom Miller said in a statement. "For the plaintiffs, we hope and believe it will help provide closure relating to experiences from long ago and to memories going back almost 70 years."
The Milgram Obedience Study (1963)

It may be that we are puppets—puppets controlled by the strings of society. But at least we are puppets with perception, with awareness. And perhaps our awareness is the first step to our liberation.

—Stanley Milgram

Stanley Milgram (1933 – 1984)

Experimenter:
• Please continue/Please go on
• The experiment requires that you continue.
• It is absolutely essential that you continue.
• You have no other choice, you must go on.

Teacher (subject):
A few subjects began to laugh nervously or exhibit other signs of extreme stress once they heard the screams of pain coming from the learner.
The Zimbardo Stanford Prison Study (1971)

Philip Zimbardo (1933 ~ )

The Zimbardo Stanford Prison Study (1971)

http://prisonexp.org
The Zimbardo Stanford Prison Study (1971)

Researchers ended the experiment after 6 days

“In only a few days, our guards became sadistic and our prisoners became depressed and showed signs of extreme stress.”

Philip G. Zimbardo

The Tuskegee Syphilis Study (1932 – 1972)

• 399 African-American men with syphilis and 201 men without syphilis who served as the controls

• Recruited without informed consent

• Prevented from obtaining treatments for the disease as they became available
The Tuskegee Syphilis Study (1932 – 1972)

• Continued until the first accounts of it appeared in the national press in 1972
• An ad hoc advisory panel was formed by the government

The Tuskegee Syphilis Study (1932 – 1972)

• National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (The first public national body to shape bioethics policy in the U.S, Created by Congress in 1974).

• Belmont Report
  Three ethical principles
  1) Respect for persons
  2) Beneficence
  3) Justice
The Waterboarding controversy

American Psychological Association Bolstered C.I.A. Torture Program, Report Says

WASHINGTON — The American Psychological Association secretly collaborated with the administration of President George W. Bush to bolster a legal and ethical justification for the torture of prisoners swept up in the post-Sept. 11 war on terror, according to a new report by a group of dissident health professionals and human rights activists.

The report is the first to examine the association’s role in the interrogation program. It contends, using newly disclosed emails, that the group’s actions to keep psychologists involved in the interrogation program coincided closely with efforts by senior Bush administration officials to salvage the program after the public disclosure in 2004 of graphic photos of prisoners abused by American military personnel at Abu Ghraib prison in Iraq.

APA Ethical Principles

• 10 principles published by the American Psychological Association
• Intended to guide the conduct of researchers with regard to research using human participants
Q: Is it acceptable to offer improved grades in exchange for research participation?

Informed consent

- Inform participants of all aspects of experiment that might influence their willingness to participate
- Special procedures required for children and participants with impairments
- Unethical to use investigator’s position to coerce participation
Informed consent

2. The experiment may involve viewing and responding to images of emotional and non-emotional scenes. The images that you will see may cover a broad range of content, including flowers, children, families, insects, animals, sports, and graphic slides similar to those that might be seen in a documentary of war footage (including mutilated individuals and dead bodies). Some people experience some degree of distress when viewing the most graphic pictures. You will have an opportunity to view some sample images to make certain that you understand the types of material you will see during our study. In some conditions you may be asked to wear a lightweight glove so that we can monitor your hand responses, or a pair of spectacle frames so that we can monitor your eye movements. You may also be asked to press foot pedals during some conditions. The foot pedals are similar to automobile brake and accelerator pedals. In conditions involving only foot pedals, a lightweight fabric strip will be used to hold your hands together as a reminder that you are not to respond with your hands.

3. In some conditions, emotional pictures may cause you to feel some degree of anxiety or fear. Please understand that if any of the pictures make you feel uncomfortable, you may discontinue the study at any time without any penalty. Likewise, if you feel that you are likely to be upset, offended, or otherwise have a strong negative reaction to the picture content, you are free to decline to take part in the study right now.

Informed consent

• An ongoing process; freedom to discontinue participation at any time of the study

Q: if a subject leaves in the middle of an experiment, should they still receive credit or payment?

Q: what if the subject is bored and responds randomly until the experiment ends?
Multimodal Attention I
Information Sheet

We invite you to participate in a research study being conducted by investigators from Washington University in St. Louis. The purpose of the study is to learn about visual and auditory perception.

If you agree to participate, we would like you to view or listen to stimuli and respond to them by making hand and eye movements. It will take approximately one hour and you will receive $10 per hour or one course credit for your time. Please note that alternatives for earning course credits are available from your course instructor.

You will be compensated for your time, even if you do not complete the study. Your pay or credit earned will be prorated for the amount of time that you have spent. For example, if you serve for 30 minutes you will receive one-half of the hourly compensation. The minimum compensation you will receive will be for one-quarter of an hour.

We will do everything we can to protect your privacy. As part of this effort, your identity will not be directly linked to any responses that you provide, and your identity will not be revealed in any publication or other description of this study.

Taking part in this research study is completely voluntary. If you do not wish to participate in this study, please let us know.

If you have any questions about the research study please contact Prof. Richard Abrams at rhabrams@wustl.edu or (314) 935-6538. If you have questions about the rights of research participants, please contact the Human Research Protection Office, 660 S. Euclid Ave., Campus Box 9009, Washington University, St. Louis, Saint Louis, MO 63110, (314) 935-7400 or 1-(800) 438-0444 or e-mail hprotection@wustl.edu.

Thank you very much for your consideration of this research study.

Q: Must the subject be told if you are video-recording them, monitoring their eye movements, recording their blood pressure, observing from a hidden vantage point?
Deception

• Determine whether deception is justified by the prospective scientific, educational, or applied value of study
• Determine whether alternative procedures are available
• Ensure sufficient explanation for participants as soon as possible

Harm

• Protect participants from physical or mental discomfort, harm, and danger that may result from research procedure
• Detect and remove any undesirable consequences that occur to participants
  – E.g., Elmes et al. (1984) induced slight depression by having participants read “depressing” statement, used a similar mood manipulation after the experiment
Harm

Some of the following items may be hazardous to your safety or may interfere with the MRI examination. Do you have any of the following?

- Yes  No  Cardiac pacemaker or defibrillator
- Yes  No  Insulin or infusion pump
- Yes  No  Cochlear, optic, or ear implant
- Yes  No  Any implanted metal, clips, bands, or scleral lenses
- Yes  No  Any metal fragments (e.g., shrapnel)
- Yes  No  Tissue expanders (plastic surgery)
- Yes  No  Any implant held in place by a magnet (e.g., dental)

Other, please explain:

Before you may enter the scanner room, you must remove all metallic objects.

- Yes  No  Shoelaces or athletic shoes
- Yes  No  Wrist watch, any bracelets
- Yes  No  Hair pins, clips, wigs, bandannas
- Yes  No  Pins or buttons on shirt
- Yes  No  Belt with metal (e.g., buckle)

Note: You are required to wear earplugs or earphones during the MRI examination.

Harm

Guidelines for Ethical Conduct in the Care and Use of Nonhuman Animals in Research

As a field of study, psychology uses a wide range of research and applied areas. Important parts of both work are teaching and research on the behavior of nonhuman animals, which contribute to the understanding of basic principles underlying behavior and advancing the welfare of both human and nonhuman animals. While psychologists must conduct their research in a manner consistent with relevant laws and regulations, ethical concerns further mandate that psychologists consider the costs and benefits of procedures involving animals prior to proceeding with these activities.

The following guidelines were developed by the American Psychological Association (APA) for use by psychologists working with human and nonhuman animal subjects. They are informed by Sections 5.2 of the APA Ethics Principles of Psychologists and Code of Conduct (APA, 2002). The publication, care, housing, use, and disposal of nonhuman animals in research must be in compliance with all applicable laws and regulations of the United States, as well as the states and countries in which the procedures take place.

Questions about these guidelines should be referred to the APA Committee on Animal Research and Ethics (CARE) via email, by phone at 202-336-5900, or in writing to APA, Science Directorate, Office of Research Ethics, 750 First St., NE, Washington, DC 20002-4242.

Instructions of the APA Code of Conduct by phone at 202-336-5900, or in writing to APA Ethics Office, 750 First St., NE, Washington, DC 20002-4242.

These guidelines are scheduled to expire ten years from February 24, 2012 (the date of adoption by the APA Council of Representatives). After that date, users are encouraged to contact the APA Science Directorate to determine if this document remains effective.
Debriefing

- Provide participant with information about nature and results of study
- Remove potential misconceptions

Debriefing form for Visual Attention 2

What are we trying to learn in this research?
We are interested in learning about the mental mechanisms that are involved in visual attention, particularly a phenomenon known as “attentional capture”. Attentional capture occurs when you are compelled to examine some salient stimulus, even though you may not necessarily believe that stimulus to carry important information. When your attention is captured in this way, many of your responses to the stimuli will be faster. In the present experiment, we monitored the timing of your responses to see if that was the case. Our goal is to find out more about the types of stimuli that do or do not capture attention, and about their effects on various responses.

Why is this important to scientists or the general public?
This research is important because it may help us better understand the brain mechanisms involved in attentional capture and visual perception more generally. This might permit a better understanding of disorders related to visual perception and about the changes that might take place in the visual system as people age. The results of the research may also help people to design better visual displays in machines and cars.

What are our hypotheses and predictions?
In our previous research, we have found that some types of stimuli tend to capture attention regardless of the instructions given to participants. We are curious to see if this result carries over into different experimental paradigms, and with different types of changes.

Where can I learn more?

(References and sources should be included here.)
Confidentiality

• Protect confidential information obtained from research – remove personally identifiable information
• Discuss with participant possibility that others will have access to the confidential information

Enforcement
Institutional Review Board (IRB)

• Much more formal than years ago.
• Voluntary adherence to a higher standard.
• Some monitoring of record-keeping compliance.
10/22/2015

16

VI.1. How many adult participants do you expect to enroll in this project?

VI.2. How many minor participants do you expect to enroll in this project?

VI.3. What is the age of the youngest adult participant?

VI.4. What is the age of the oldest adult participant?

VI.5. Describe the total number of participants available to meet your recruitment goals.

VI.6. Describe how you will ensure access to each of your study populations to sufficient numbers to meet your recruitment goals.

VI.7. Describe the ethics in human research for MCH and other races.

VI.8. Describe the data that will be collected from the study population.

VI.9. Describe the procedures that will be followed to protect the confidentiality of the data.

VI.10. Describe the animal research that will be conducted.

VI.11. Describe the interaction with each participant's data.

VI.12. Describe the ethical considerations in research.

VI.13. How will participants be informed about their rights to withdraw from the study?

VI.14. How will participants be informed about the possibility of being exposed to risks during the study?

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HRPO: “This is not considered a benefit to participants. It sounds like there are no direct benefits.”

Response: “Sorry, but I consider that a benefit. Maybe I am just thinking about the meaning of "benefit" in the wrong way. Can you provide a definition of "benefit" that I should use for this question?”

**What are the direct benefits to the participant (do not include compensation)?**

None. Please note that I have been informed that it is not considered a direct benefit if the participants, typically university students, learn something about psychology research during the course of their participation in the experiment.

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**Domains in which ethics matters**

1. Treatment of research participants

2. Treatment of data

3. Presentation of research
Treatment of data

• Means, medians, trimming, outlier removal, subject removal, subject replacement…
  – Report what you did
• Do not fabricate or manipulate data!

Cases of data fabrication
Academic Scandal Shakes Japan

By DAVID MCBRIDE, THE CHRONICLE OF HIGHER EDUCATION  MAY 8, 2014

TOKYO — In a professional world dominated by middle-aged men, Haruko Obokata stood out. Ms. Obokata, 31, led a research unit for cellular programming at the Riken Center for Developmental Biology. In January she stunned Japan’s academic establishment when the British journal Nature published two papers, of which she was the lead author, that suggested a leap forward in regenerative medicine.

Japan’s news media hailed Ms. Obokata, a former researcher at Harvard Medical School, as an academic star, but the adulation was short-lived. In February, Riken, a network of research institutions receiving roughly $1 billion a year from the government, set up an investigative panel after being notified of problems in the Nature papers. Three months later the panel publicly shamed Ms. Obokata, accusing her of...

August 20, 2010

Harvard Finds Psychology Researcher 'Soely Responsible' for Scientific Misconduct

By Tom Bartlett

The Harvard University psychologist Marc Hauser was "solely responsible" for eight instances of scientific misconduct in his lab, a university committee has found, according to an e-mail message sent to faculty members on Friday by the university’s dean of the Faculty of Arts and Sciences.

The message is the fullest account provided by the university so far of the investigation into Mr. Hauser’s work. Ever since news of the investigation was broken by The Boston Globe, the university has been criticized for remaining mostly silent on the nature of the allegations.
Washington University student accused of faking research

March 07, 2013 10:30 am • By Sylhe Bernhard bbernhard@post-dispatch.com 314-340-8129

Updated to show that student’s mentor, Todd Brucher, responded to emailed questions. See separate story.

A Washington University doctoral student lied in his psychology research to create better results, federal officials said Monday.

Adam Savine, a former candidate for a doctorate, was put on voluntary probation for three years for falsifying data in three studies published between 2010 and 2012 and six presentations at conferences from 2009 to 2012. The three research papers with Savine listed as lead author will be

Q: Who are the victims of fabricated data?
Any other possible impact on the field?


Coping with Chaos: How Disordered Contexts Promote Stereotyping and Discrimination

Diederik A. Stapel and Siegwart Lindenberg

Author Affiliations

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ABSTRACT

Being the victim of discrimination can have serious negative health- and quality-of-life-related consequences. Yet, could being discriminated against depend on such seemingly trivial matters as garbage on the streets? In this study, we show, in two field experiments, that disordered contexts (such as litter or a broken-up sidewalk and an abandoned bicycle) indeed promote stereotyping and discrimination in real-world situations and, in three lab experiments, that it is a heightened need for structure that mediates these effects (number of subjects between 40 and 70 per experiment). These findings considerably advance our knowledge of the impact of the physical environment on stereotyping and discrimination and have clear policy implications: Diagnose environmental disorder early and intervene immediately.

Diederik Stapel Under Investigation by Dutch Prosecutors

Degraded Dutch psychologist Diederik Stapel is under investigation by the Dutch Public Prosecution Service and the Fiscal Information and Investigation Service, according to media reports in the Netherlands.

NRG Handelsblad today reports that investigators are trying to establish whether Stapel defrauded the government by collecting grant money for research he did not carry out and made false statements in his accounts of how the money was spent. Last month, detectives confiscated Stapel’s laptop, cell phone, and financial records; according to the paper, they will also seek testimony from witnesses in the case.

Stapel resigned in 2011 after an investigation revealed that he made up the results in many of his eye-catching social psychology studies. So far, 26 of his papers have been retracted; a commission is still investigating others. NRG Handelsblad reports that Stapel received €2.2 million in grants from the Netherlands Organisation for Scientific Research, but that university funds may be part of the inquiry as well.

The Public Prosecution Service confirmed the investigation to Dutch news service ANP. A decision whether to prosecute Stapel will be made once the investigation is completed, which may take several months.

Can we believe psychologists?

Number of Journal Articles in Psychology and Percentage of Articles Retracted (1989 – 2015)

http://www.geekpsychologist.com/can-we-trust-psychological-research/

The Top 10 Journals with the Most Retractions from 1989 to 2015.

http://www.geekpsychologist.com/can-we-trust-psychological-research/
Data Mining Issue

False-Positive Psychology: Undisclosed Flexibility in Data Collection and Analysis Allows Presenting Anything as Significant

Joseph P. Simmons¹, Leif D. Nelson², and Uri Simonsohn¹
The Wharton School, University of Pennsylvania, and Haas School of Business, University of California, Berkeley

Abstract
In this article, we accomplish two things. First, we show that despite empirical psychologists’ nominal endorsement of a low rate of false-positive findings (≤.05), flexibility in data collection, analysis, and reporting dramatically increases actual false-positive rates. In many cases, a researcher is more likely to falsely find evidence that an effect exists than to correctly find evidence that it does not. We present computer simulations and a pair of actual experiments that demonstrate how unacceptably easy it is to accumulate (and report) statistically significant evidence for a false hypothesis. Second, we suggest a simple, low-cost, and straightforwardly effective disclosure-based solution to this problem. The solution involves six separate requirements for authors and four guidelines for reviewers, all of which impose a minimal burden.

Data Mining Issue

The Ironic Effect of Significant Results on the Credibility of Multiple-Study Articles

Ulrich Schimmack
University of Toronto Mississauga

Cohen (1962) pointed out the importance of statistical power for psychology as a science, but statistical power of studies has not increased, while the number of studies in a single article has increased. It has been overlooked that multiple studies with modest power have a high probability of producing nonsignificant results because power decreases as a function of the number of statistical tests that are being conducted (Maxwell, 2004). The discrepancy between the expected number of significant results and the actual number of significant results in multiple-study articles undermines the credibility of the reported results, and it is likely that questionable research practices have contributed to the reporting of too many significant results (Sterling, 1959). The problem of low power in multiple-study articles is illustrated using Bem’s (2011) article on extrasensory perception and Guillot et al.’s (2007) article on glucose and self-regulation. I conclude with several recommendations that can increase the credibility of scientific evidence in psychological journals. One major recommendation is to pay more attention to the power of studies to produce positive results without the help of questionable research practices and to request that authors justify sample sizes with a priori predictions of effect sizes. It is also important to publish replication studies with nonsignificant results if these studies have high power to replicate a published finding.

Keywords: power, publication bias, significance, credibility, sample size
Replication Issue

Automaticity of Social Behavior: Direct Effects of Trait Construct and Stereotype Activation on Action

John A. Bargh, Mark Chen, and Lara Burrows
New York University

Pashler, Harris, & Coburn (2008)

Figure 2. Mean time (in seconds) to walk down the hallway after the conclusion of the experiment, by stereotype priming condition, separately for participants in Experiment 2a and 2b.

http://psychfiledrawer.org/replication.php?attempt=MTU3D

Psych File Drawer

“To show that ‘A’ is true, you don’t do ‘B’. You do ‘A’ again.”
Reproducibility Project

https://osf.io/ezcuj/

Reproducibility Project

First results from psychology’s largest reproducibility test

Crowd-sourced effort raises nuanced questions about what counts as replication.

Monya Baker
30 April 2015

An ambitious effort to replicate 100 research findings in psychology ended last week — and the data look worrying. Results posted online on 24 April, which have not yet been peer-reviewed, suggest that key findings from only 39 of the published studies could be reproduced.

But the situation is more nuanced than the top-line numbers suggest (See graphic, ‘Reliability test’). Of the 61 non-replicated studies, scientists classed 24 as producing findings at least “moderately similar” to those of the original experiments, even though they did not meet pre-established criteria, such as statistical significance, that would count as a successful replication.
Domains in which ethics matters

1. Treatment of research participants
2. Treatment of data
3. Presentation of research
Presentation of research

• Do not plagiarize!
suggested that adults may separately encode two distinct types of spatial information: (1) information about the distance covered by an object, and (2) information about the absolute spatial location of the object. Information about distance is more influenced by an induced motion illusion, and people appear to rely differently on the different types of spatial information, depending on features of the motor response (Abrams & Landgraf, 1990; Chiellini & Allport, 1997).

**Differential use of distance and location information for spatial localization**

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Five experiments are reported in which subjects judged the movement or spatial location of a visible object that underwent a combination of real and induced (illusory) motion. When subjects attempted to reproduce the distance that the object moved by moving their unseen hands, they were more affected by the illusion than when they pointed to the object’s perceived final location. Furthermore, pointing to the final location was more affected by the illusion when the hand movement began from the same position as that at which the object initially appeared, as compared with responses that began from other positions. The results suggest that people may separately encode two distinct types of spatial information: (1) information about the distance moved by an object and (2) information about the absolute spatial location of the object. Information about distance is more susceptible to the influence of an induced motion illusion, and people appear to rely differentially on the different types of spatial information, depending on features of the pointing response. The results have important implications for the mechanisms that underlie spatial attention in general.