

PSYC 272: Selected Topics in Cognitive Psychology: Artifacts in Psychological Research
Weds, 1-4, Norman Anderson Conference Room (5326 McGill Hall)
Winter 2015

Professor Craig McKenzie
cmckenzie@ucsd.edu
<http://pages.ucsd.edu/~cmckenzie/>

Overview: Experimental psychologists sometimes publish results and conclusions that are misleading or wrong. This is to be expected to some extent – reasoning from data is inherently probabilistic, for example – but psychologists get it wrong surprisingly often. Why? How? The course will cover classic topics (e.g., demand characteristics, the file drawer problem, low power), but most of the readings are recent and cover new territory. Among other things, the readings examine the role of incentives in the publication process, motivated reasoning on the part of researchers, and outright fraud. The goals of the course are to raise students' awareness of problems in experimental psychology in general, help them recognize issues in their own and others' research, and help them make lasting contributions to the field.

Week 1 (Jan 7): NO MEETING

Week 2 (Jan 14): Introduction

Pashler, H., & Wagenmakers, E.-J. (2012). Editors' introduction to the Special Section on replicability in psychological science: A crisis of confidence? *Perspectives on Psychological Science*, 7, 528-530.

<http://pages.ucsd.edu/~cmckenzie/Pashler&Wagenmakers2012Perspectives.pdf>

Neuroskeptic (2012). The nine circles of scientific hell. *Perspectives on Psychological Science*, 7, 643-644.

<http://pages.ucsd.edu/~cmckenzie/Neuroskeptic2012Perspectives.pdf>

Ioannidis, J. P. A. (2005). Why most published research findings are false. *PLoS Medicine*, 2, 696-701.

<http://pages.ucsd.edu/~cmckenzie/ioannidis2005PLOS.pdf>

Week 3 (Jan 21): Demand Characteristics and Experimenter Effects

Orne, M. T. (1962). On the social psychology of the psychological experiment: With particular reference to demand characteristics and their implications. *American Psychologist*, 17, 776-783.

<http://pages.ucsd.edu/~cmckenzie/Orne1962AmPsychologist.pdf>

Rosenthal, R. (1963). On the social psychology of the psychological experiment: The experimenter's hypothesis as unintended determinant of experimental results. *American Scientist*, 51, 268-283.

<http://pages.ucsd.edu/~cmckenzie/Rosenthal1963AmScientist.pdf>

Klein, O., et al. (2012). Low hopes, high expectations: Expectancy effects and the replicability of behavioral experiments. *Perspectives on Psychological Science*, 7, 572-584.

<http://pages.ucsd.edu/~cmckenzie/Kleinetal2012Perspectives.pdf>

Week 4 (Jan 28): Conversational Pragmatics

Schwarz, N. (1999). Self-reports: How the questions shape the answers. *American Psychologist*, 54, 93-105.

<http://pages.ucsd.edu/~cmckenzie/Schwarz1999AmPsychologist.pdf>

Hilton, D. J. (1995). The social context of reasoning: Conversational inference and rational judgment. *Psychological Bulletin*, 118, 248-271.

<http://pages.ucsd.edu/~cmckenzie/Hilton1995PsychBulletin.pdf>

Week 5 (Feb 4): The File Drawer Problem

Rosenthal, R. (1979). The "file drawer problem" and tolerance for null results. *Psychological Bulletin*, 86, 638-641.

<http://pages.ucsd.edu/~cmckenzie/Rosenthal1979PsychBulletin.pdf>

Bakker, M., van Dijk, A., & Wicherts, J. M. (2012). The rules of the game called psychological science. *Perspectives on Psychological Science*, 7, 543-554.

<http://pages.ucsd.edu/~cmckenzie/Bakker2012Perspectives.pdf>

Simonsohn, U., Nelson, L. D., & Simmons, J. P. (2014). *P*-Curve: A key to the file-drawer. *Journal of Experimental Psychology: General*, 143, 534-547.

<http://pages.ucsd.edu/~cmckenzie/Simonsohnetal2014JEPGeneral.pdf>

Week 6 (Feb 11): Replicability

Asendorpf, J. B., et al. (2013). Recommendations for increasing replicability in psychology. *European Journal of Personality*, 27, 108-119.

<http://pages.ucsd.edu/~cmckenzie/Asendorpfetal2013EuropeanJPersonality.pdf>

Stroebe, W., & Strack, F. (2014). The alleged crisis and the illusion of exact replication. *Perspectives on Psychological Science*, 9, 59-71.

<http://pages.ucsd.edu/~cmckenzie/Stroebe&Strack2013Perspectives.pdf>

Pashler, H., & Harris, C. R. (2012). Is the replicability crisis overblown? Three arguments examined. *Perspectives on Psychological Science*, 7, 531-536.
<http://pages.ucsd.edu/~cmckenzie/Pashler&Harris2012Perspectives.pdf>

Week 7 (Feb 18): Voodoo Correlations

Vul, E., Harris, C., Winkielman, P., & Pashler, H. (2009). Puzzlingly high correlations in fMRI studies of emotion, personality, and social cognition. *Perspectives on Psychological Science*, 4, 274-290.
<http://pages.ucsd.edu/~cmckenzie/Vuletal2009Perspectives.pdf>

Fiedler, K. (2011). Voodoo correlations are everywhere – not only in neuroscience. *Perspectives on Psychological Science*, 6, 163-171.
<http://pages.ucsd.edu/~cmckenzie/Fiedler2011Perspectives.pdf>

Week 8 (Feb 25): Flexibility

Simmons, J. P., Nelson, L. D., & Simonsohn, U. (2011). False-positive psychology: Undisclosed flexibility in data collection and analysis allows presenting anything as significant. *Psychological Science*, 22, 1359-1366.
<http://pages.ucsd.edu/~cmckenzie/Simonsetal2011PsychScience.pdf>

John, L. K., Loewenstein, G., & Prelec, D. (2012). Measuring the prevalence of questionable research practices with incentives for truth telling. *Psychological Science*, 23, 524-532.
<http://pages.ucsd.edu/~cmckenzie/Johnetal2012PsychScience.pdf>

Kunda, Z. (1990). The case for motivated reasoning. *Psychological Bulletin*, 108, 480-498.
<http://pages.ucsd.edu/~cmckenzie/Kunda1990PsychBulletin.pdf>

Week 9 (Mar 4): Incentives

Giner-Solla, R. (2012). Science or art? How aesthetic standards grease the way through the publication bottleneck but undermine science. *Perspectives on Psychological Science*, 7, 562-571.
<http://pages.ucsd.edu/~cmckenzie/GinerSorolla2012Perspectives.pdf>

Ledgerwood, A., & Sherman, J. W. (2012). Short, sweet, and problematic? The rise of the short report in psychological science. *Perspectives on Psychological Science*, 7, 60-66.
<http://pages.ucsd.edu/~cmckenzie/Ledgerwood&Sherman2012Perspectives.pdf>

Bakker, M., & Wicherts, J. M. (2011). The (mis)reporting of statistical results in psychology journals. *Behavior Research Methods*, 43, 666-678.
<http://pages.ucsd.edu/~cmckenzie/Bakker&Wicherts2011BehavResMeth.pdf>

Week 10 (Mar 11): Fraud

Stroebe, W., Postmes, T., & Spears, R. (2012). Scientific misconduct and the myth of self-correction in science. *Perspectives on Psychological Science*, 7, 670-688.

<http://pages.ucsd.edu/~cmckenzie/Stroebeetal2012Perspectives.pdf>

Wicherts, J. M., Bakker, M., & Molenaar, D. (2011). Willingness to share data is related to the strength of the evidence and the quality of reporting of statistical results. *PLoS One*, 6, e26828.

<http://pages.ucsd.edu/~cmckenzie/Wichertsetal2011PLoSOne.pdf>

Simonsohn, U. (2013). Just post it: The lesson from two cases of fabricated data detected by statistics alone. *Psychological Science*, 24, 1875-1888.

<http://pages.ucsd.edu/~cmckenzie/Simonsohn2013PsychScience.pdf>