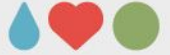




Research ethics

Sebastian Jentschke





Overview

- introduction and background
definition, history, regulations, dilemmas, incidence
- ethical stand. when experimenting / collecting data
informed consent, data protect. / sharing, approval
- ethical standards when processing data
error, misconduct, falsification, fabrication
- publication ethics
publication process, authorship, plagiarism





Introduction and background



Definition

«Psychologists are committed to *increasing scientific and professional knowledge of behavior and people's understanding of themselves and others* and to the use of such knowledge to *improve the condition* of individuals, organizations, and society. Psychologists *respect and protect civil and human rights* [...]. They *perform* many *roles*, such as researcher, educator, diagnostician, therapist, supervisor, consultant, administrator, social interventionist, and expert witness.» (APA Ethical Principles, 2017, p. 2)





Background: Conducting research

- **medical experimentation:**
Nazi-Germany, Japan, U.S. (Syphilis experiments with Afroamericans and in Guatemala), *Soviet union* (chemical weapon experiments)
- **harmful medical treatment – lobotomy:**
Nobel Prize for Physiology or Medicine (1949) to Egas Moniz for «for his discovery of the therapeutic value of leucotomy in certain psychoses»
<https://www.nobelprize.org/prizes/medicine/1949/summary>
most countries used it extensively in the 1940 – 1950, Norway: up to 1974, 2500 cases in total, 50% of the early cases died soon after the operations
- **psychological experiments:**
Stanford prison exp. (Zimbardo, 1971); obedience (Milgram, 1963)





Ethics: Regulations and guidelines

- Nuremberg code (1947)
- *Declaration of Helsinki* (1964). <https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects>
- *Helseforskningsloven*. <https://lovdata.no/dokument/NL/lov/2008-06-20-44>
- *Personopplysningsloven*. <https://lovdata.no/dokument/NL/lov/2018-06-15-38>
- American Psychological Association (2017). *Ethical principles of psychologists and code of conduct*. <https://www.apa.org/ethics/code/index>
- International Committee of Medical Journal Editors (2019). *Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals*. <http://www.icmje.org/recommendations>





Background: Analyzing, publishing

- **publications as «currency»:**
funding, employment or monetary incentives (some institutions reward for publications) depend on the number of publications / number of citations
- **competition among journals:**
open-access → “funding” through article authors → predatory journals
- **digitization and changes in work flow:**
easier to copy-and-paste (also: eases time pressure / work load)
- **resource use and computer capabilities:**
collecting data takes time + easy to fabricate / computer-generate data





Ethics: Regulations and guidelines

- Nuremberg code (1947)
- *Declaration of Helsinki* (1964). <https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects>
- *Helseforskningsloven*. <https://lovdata.no/dokument/NL/lov/2008-06-20-44>
- *Personopplysningsloven*. <https://lovdata.no/dokument/NL/lov/2018-06-15-38>
- American Psychological Association (2017). *Ethical principles of psychologists and code of conduct*. <https://www.apa.org/ethics/code/index>
- International Committee of Medical Journal Editors (2019). *Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals*. <http://www.icmje.org/recommendations>

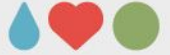




APA General Ethical Principles

- **A: Beneficence and Nonmaleficence**
minim./avoid harm, time, resources; cost-benefit; anticipate possib. conseq.
- **B: Fidelity and Responsibility**
relationship of trust (but: naive, decept.), conflict of interest, assuming roles
- **C: Integrity**
promote accuracy, honesty, and truthfulness (e.g., when analyz., publish.)
- **D: Justice**
treat others fair / just; be aware of your biases or limits to your competence
- **E: Respect for People's Rights and Dignity**
right to privacy, confidentiality (data prot.), and self-determination (consent)





Ethical and legal requirements

- approval and consent:
ethical review board
informed consent from participants
research permission for foreign countries
- authorship and author contributions
- avoid scientific misconduct
- conflicts of interest: financial agreements, affiliations with products and services mentioned in the paper...

Ethics statement (under Methods → Participants)

Written informed consent was obtained, the study was approved by the ethics committee of the University of Leipzig, and conducted according to the guidelines of the Declaration of Helsinki.

Author contributions

Conceived and designed the experiments: SK. Performed the experiments: SK. Analyzed the data: SK SJ JE. Contributed reagents / materials / analysis tools: SJ. Wrote the paper: SK SJ.

From: Koelsch, S., Enge, J., & Jentschke, S. (2012). Cardiac signatures of personality. *PloS One*, 7(2), Article e31441.

<https://doi.org/10.1371/journal.pone.0031444>



Ethical dilemmas: Research Agenda

- weapons, esp. chemical and nuclear weapons:
BUT: balance of power, research on antidotes
- (invasive) animal experiments:
BUT: groundbreaking knowledge – mirror neurons, hippocampus, visual system, cochlea impl.
- big-data-analyses:
huge potential to improve, e.g., medical treatment
BUT: threat to democracy (Brexit, U.S. elections)





How common is ethical misconduct?

Table 2 Answers to questions about scientific dishonesty and other unethical behaviour in connection with research (Those who have answered YES in percent)

Questions	Bergen	Oslo 1	Oslo 2	Tromsø	Trondheim	All Norway	All Sweden
Have you, nationally or internationally, heard about anyone who during the last 12 months that has							
Fabricated data	21,1	28,3	33,3	36,7	29,3	29,2	29
Falsified data	18,4	23,9	23,3	30	24,4	23,8	31,8
Plagiarised data	13,2	19,6	20	23,3	29,3	21,1	24,2
Plagiarised publications	5,3	17,4	16,1	31,3	29,3	19,7	-
Have you yourself during the last 12 months been the object of pressure to							
Fabricate data	0	2,1	0	0	0	0,5	0
Falsify data	0	2,1	0	0	0	0,5	5,4
Plagiarise data	0	0	3,2	0	0	0,5	0
Plagiarise publications	0	0	0	0	0	0	-
Have you during the last 12 months been exposed to unethical pressure concerning							
Ordering of authors	13,2	8,7	12,9	12,5	7,3	10,6	8,5
Design/method	0	2,2	6,5	3,1	2,4	2,7	3,1
Results	0	0	12,9	0	2,4	2,7	0,8
Harassment	0	0	0	3,1	0	0,5	0,8
Have you during the last 12 months been affected by any consequences of scientific dishonesty							
Ethical	0	6,5	3,2	12,5	7,3	5,9	0
Legal	0	0	3,2	3,1	0	1,1	0
Methodological	0	4,3	0	3,1	7,3	3,2	-
Any other aspect	2,6	4,3	3,2	0	4,9	3,2	0

Data from Sweden reproduced from Nilstun 2010.

Hofmann, B., Myhr, A. I., & Holm, S. (2013). Scientific dishonesty—A nationwide survey of doctoral students in Norway. *BMC Medical Ethics*, 14(1), 3. <https://doi.org/10.1186/1472-6939-14-3>





How common is ethical misconduct?

Tabell 6: **Oppfatninger** av diskutabile eller uakseptable praksiser. Fabrikkere, Forfalske, Plagierte.

	Å fabrikkere (dikte opp) data/materiale	Å forfalske data/materiale	Å fremstille andres arbeid (ideer, materiale, tekst) som sitt eget ved å utelate henvisning til opphavskilden (plagiering)
Dette er helt uproblematisk	0,9 %	0,9 %	0,7 %
Dette er litt problematisk	0,6 %	0,4 %	0,8 %
Dette er ganske problematisk	1,2 %	0,7 %	8,4 %
Dette er svært problematisk	97,3 %	97,9 %	90,1 %
Totalt	100 % (N=7241)	100 % (N=7239)	100% (N=7246)

<https://www.forskningsetikk.no/globalassets/dokumenter/4-publikasjoner-som-pdf/rino-delrapport-1-2018.pdf>





How common is ethical misconduct?

Tabell 8: Har selv deltatt i diskutable eller uakseptable praksiser. Fabrikkere, Forfalske, Plagiere.

	Har du selv deltatt i denne typen praksis de siste tre årene?		
	Å fabrikkere (dikte opp) data/materiale*	Å forfalske data/materiale**	Å fremstille andres arbeid (ideer, materiale, tekst) som sitt eget ved å utelate henvisning til opphavskilden (plagiering)***
Nei	99,8 %	99,7 %	99,5 %
Ja, en gang	0,07 %	0,2 %	0,3 %
Ja, noen tilfeller/noen ganger	0,04 %	0,1 %	0,2 %
Ja, mange ganger	0,06 %	0 %	0,01 %
Totalt	100 % (N=7129)	100 % (N=7127)	100 % (N=7181)

<https://www.forskningsetikk.no/globalassets/dokumenter/4-publikasjoner-som-pdf/rino-delrapport-1-2018.pdf>





Ethical standards when conducting experiments



Informed consent

consent must be **voluntary**, **specific**, **informed** and **expressed** (and begins with advertising your study):

- **voluntary**: avoid influence that would lead people to accept risks (e.g., payment); dependent / vulner. people, researcher-participant-relation
- **specific**: data acquisition / processing must have specified purposes
- **informed**: information must be relevant + objective (describe purpose, methods, pot. benefits / risks / discomfort); presented in an accessible form, using clear, plain language
- **expressed**: active consent - participants give a declaration where they express their consent

Templates: <https://rekportalen.no> → Mal for informasjon og samtykke



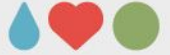


Informed consent

Competence to give consent:

- legally competent persons and minors from 16: competence to consent to participate in medical research
- minors up to 16 (up to 18 for clinical trials) or adults who lack competence to give consent: parents / next-of-kin / legal guardian have authority to give consent
however: even if the participant lack competence to give consent, he/she will have the **right to refuse to participate**





Retaining and sharing data

Respect privacy, confidentiality, and restrict re-use

- **confidentiality** in creating, storing, accessing, transferring, and disposing of data
- all materials (e.g., instructions, data, analyses) are expected to be **retained** for at least **5 years after publication**
- the **data** on which the results are based **should** not be withheld / **be shared**

Personal data

- must be anonymised;
- **participants** are **entitled** to **check** whether confidential information is accessible
- **data collected** for one purpose **cannot be used for other purposes** (new consent is needed)
- personal data should **not** be **stored longer than necessary**





Retaining and sharing data

especially protected information:

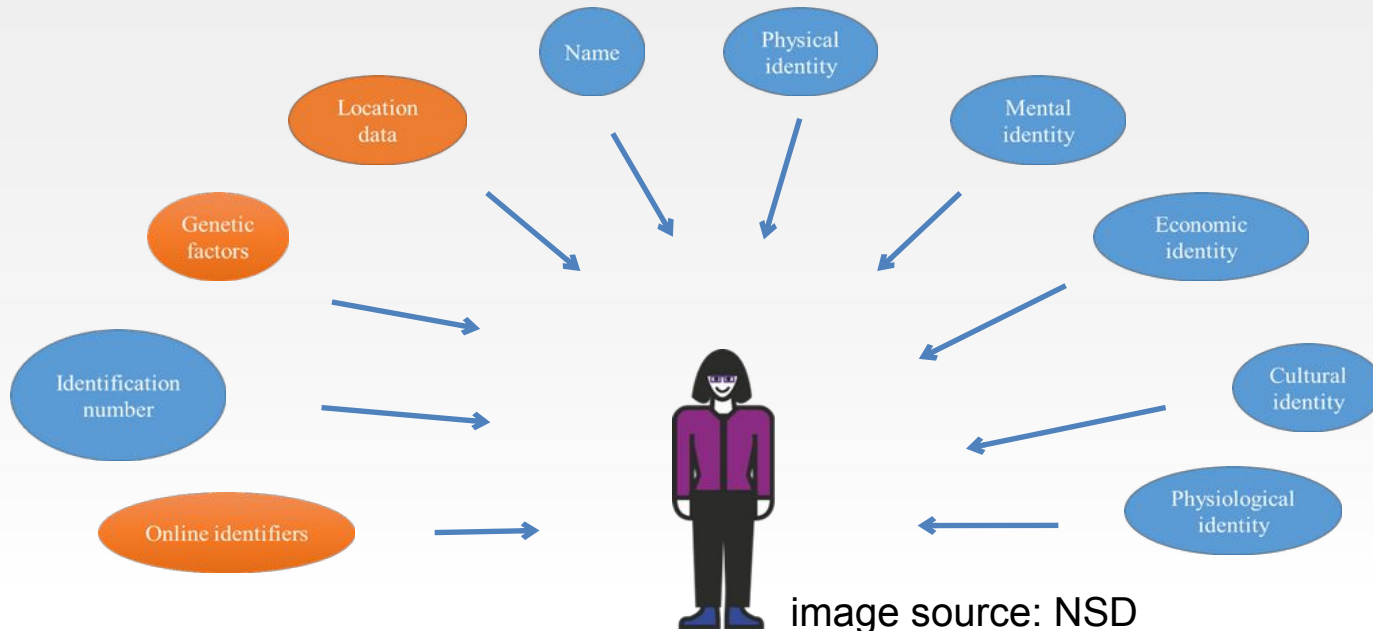
- racial or ethnic origin
- political opinions
- trade-union membership
- religious or philosophical beliefs
- information on sexual orientation and sex life
- health information
- genetic data or biometric data





Retaining and sharing data

any information to identify a person (directly / indirectly)





Retaining and sharing data

- data must be relevant + necessary to the objective of the project (**need to know** **NOT nice to know**; data minimization)
- identification not greater/longer than required
- accurate (incl. right for correction)
- appropriate security: encrypt data – separate key / data – delete key after project conclus.
- institution (UiB, data protection officer) must ensure the legal basis for processing data

Navn (også ved signatur/samtykke) ?

Ja Nei

Fødselsnummer eller andre nasjonale identifikasjonsnumre ?

Ja Nei

Fødselsdato

Ja Nei

Adresse eller telefonnummer

Ja Nei

E-postadresse, IP-adresse eller annen nettidentifikator ?

Ja Nei

Bilder eller videoopptak av personer ?

Ja Nei

Lyddopptak av personer ?

Ja Nei

Gps eller andre lokaliseringsdata (elektroniske spor) ?

Ja Nei

Bakgrunnsopplysninger som vil kunne identifisere en person ?

Ja Nei

Genetiske opplysninger ?

Ja Nei

Biometriske opplysninger ?

Ja Nei

Andre opplysninger som vil kunne identifisere en fysisk person ?

Ja Nei



Which studies have to be approved?

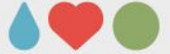
REK:

- health research on: (1) human beings; (2) human biological material or (3) personal health data
- don't apply: anonymous information, other (non-health) research using only non-health data, quality control
- if in doubt: application form «Remit assessment»

NSD:

- if any personal information are stored





What documents to include?

REK and NSD:

- all questionnaires or other materials that are used to collect data (e.g., text of instructions and items of online experiments)
- information sheet / consent form

REK:

- materials for recruitment (poster, e-mail-draft)
- study protocol





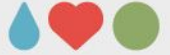
Further aspects of ethics

- **honesty:**
 - to your participants: *naivety, use of deception, debriefing*
 - to funding agencies: *pilot studies, your CV*
 - conflicts of interest
 - explore your hypothesis: *adequate design, competence / expertise to conduct the experiment*
- **awareness about roles, research with subordinates**
- **offering inducement (monetary reward)**





Ethics of processing data



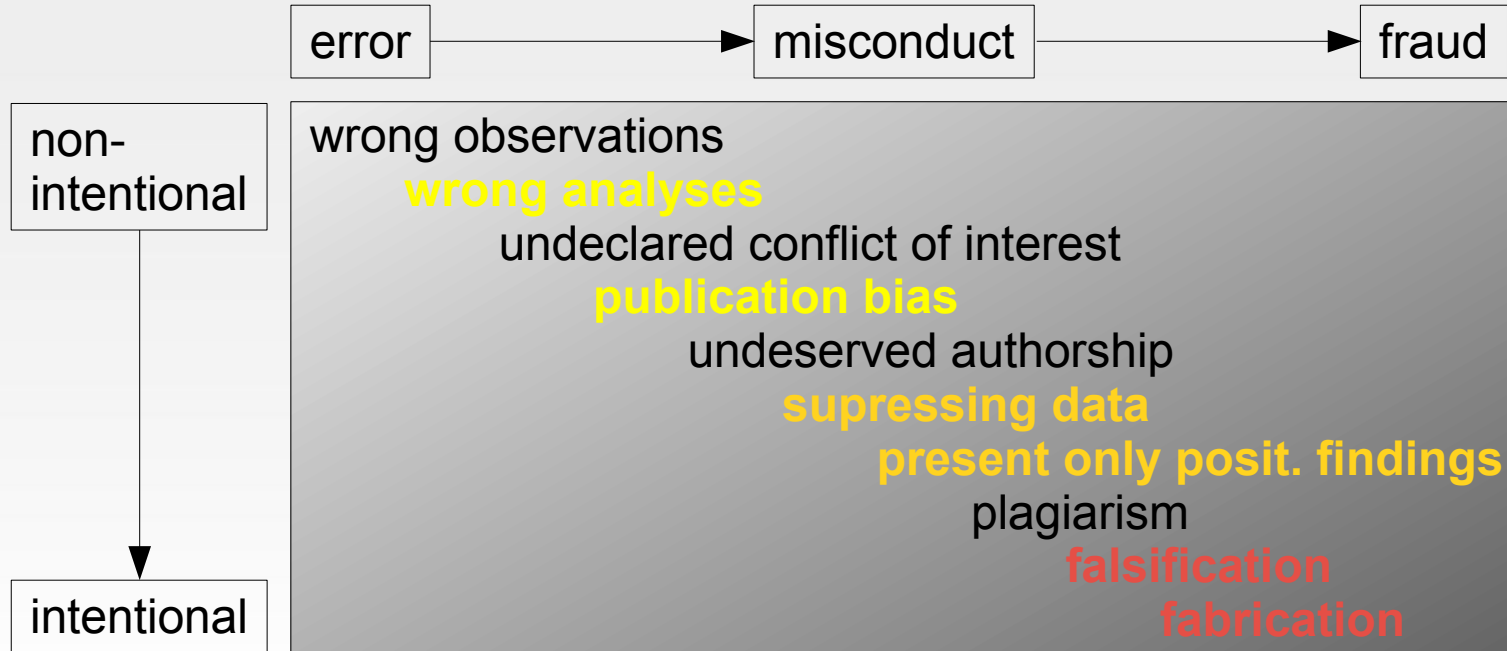
Unethical use of data

- **no duplicate publication**: do not publish – as original data – data that have been previously published (this includes results that are part of, or significantly overlap with, other publications but does not preclude republishing data when they are accompanied by proper acknowledgement)
- **no slicing of publications**: do not split up a coherent block of results in order to get more papers out (e.g., from large-scale, longitudinal, or multi-disciplinary projects)
- **no publicity in advance**: do not make results public before they have been scrutinized by the scientific community (accepted for publication, presented at a conference).





From errors to fraud



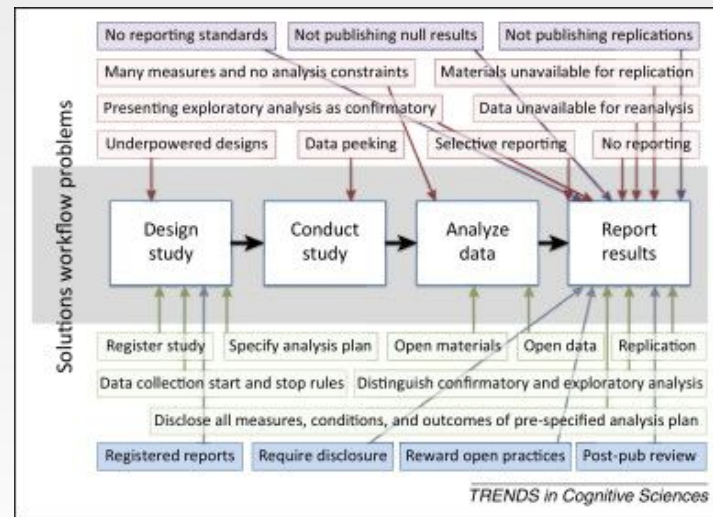


From errors to fraud

Publication and selective reporting biases:

- study publication bias (“file drawer” problem) including time-lag bias
- selective outcome reporting bias
- selective analysis reporting bias

Ioannidis, J. P. A., Munafò, M. R., Fusar-Poli, P., Nosek, B. A., & David, S. P. (2014). Publication and other reporting biases in cognitive sciences: detection, prevalence, and prevention. *Trends in Cognitive Sciences*, 18(5), 235-241. <https://doi.org/10.1016/j.tics.2014.02.010>





Errors: Correction

- if significant errors in published data are discovered, take reasonable steps to correct these → correction note, retraction

Full reference to the article being corrected; ideally incl. precise location of the error

Correction to Klauer et al. (2010)

In the article “Conditional Reasoning in Context: A Dual-Source Model of Probabilistic Inference,” by Karl Christoph Klauer, Sieghard Beller, and Mandy Hütter (*Journal of Experimental Psychology: Learning Memory, and Cognition*, 2010, Vol. 36, No. 2, pp. 298–323), the dual-source model is overparameterized. Only the products $\lambda\tau$ of the λ and τ parameters are uniquely identified by the data. This has no consequences for the ξ parameters, for ratios of τ parameters estimated with the same λ , for ratios of λ parameters associated with the same τ parameters, nor for the fit values. The model fit is, however, achieved more parsimoniously than stated in Klauer et al. because one parameter (Experiments 1, 2, and 4) or two parameters (Experiment 3) are redundant.

To fix the scale for τ and λ parameters, one of them has to be set to one. We recommend to set the largest of τ (MP), τ (MT), τ (AC), and τ (DA) equal to one. This yields unique parameter estimates for τ and λ but has consequences for their interpretation: Differences in overall level of the profile of τ parameters over the four inferences (due to, e.g., differences in cognitive load), if any, would be removed from the τ estimates and would show up in the λ parameters. The above constraint is the one implicitly imposed almost perfectly by the estimation method used in Klauer et al. (2010). In consequence, when the constraint is explicitly enforced, the numerical values of the parameter estimates reported in Klauer et al. change only minimally, and the outcome of all of the significance tests reported remains the same.

DOI: 10.1037/a0019445

quotation of the error (or accurate paraphrase)

correction in concise, unambiguous wording





Errors: Retraction



Retraction notice

British Journal of Pain
2018, Vol 12(2) 1
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DOI: 10.1177/2049464317728039
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At the request of the authors, the following article has been retracted:

The moderating factors of neuroticism and extraversion in pain anticipation, Jenna L Gillett, Emily Mattacola, British Journal of Pain, first published online August 23rd 2017 DOI: 10.1177/2049463717728039

It has come to the attention of the authors that the statistical tests detailed in this paper were performed incorrectly and therefore the results collected are unreliable. The authors apologise for this error.



Original Article

RETRACTION: The moderating factors of neuroticism and extraversion in pain anticipation

Jenna L Gillett and Emily Mattacola

British Journal of Pain
1-8
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Abstract

This study investigates the moderator relationship between three psychological variables on pain threshold and tolerance: pain anticipation, neuroticism and extraversion. It hypothesised that (a) a significant effect of anticipation on both pain threshold and tolerance will exist, wherein high intensity pain anticipation will predispose lower pain threshold and tolerance, and (b) high neuroticism and low extraversion will moderate this relationship. The study was conducted using 76 participants who completed the cold pressor test under one of three conditions: control condition, intense-pain expectant condition or low-pain expectant. The results of the study showed no significant effect of anticipation and no significant moderator relationship for neuroticism or extraversion on pain threshold and tolerance, thus both hypotheses are not supported. Implications for future research are discussed, including the need for unique findings, as no prior research into the moderator relationship between anticipation and personality traits and pain currently exists.

Keywords

Pain, nociceptive pain, pain threshold, pain tolerance, cold pressor test, pain anticipation, personality

Introduction

Nociception can be defined as the sensory nervous systems' response to internal or external physiological damage.^{1,2} Moreover, pain sensation is impacted upon by both physiological and psychological states. Physiological factors that have been evidenced as significant influences on nociceptive experiences include gender,³⁻⁸ ethnicity,⁹⁻¹⁰ age¹¹⁻¹⁴ and genetic predisposition such as ethnic-

impacting pain experiences.²⁷ High neuroticism correlates with high pain thresholds²⁴ and tolerance levels.^{24,28} Additionally, those high in introversion have also been associated with higher pain thresholds/tolerances.^{25,26} Thus, high neuroticism and low extraversion independently predict higher pain thresholds/tolerances. Individuals who possess both these traits termed 'sensitive introverts' are therefore considered to have





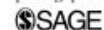
Falsification: Retraction

Retraction

aps
ASSOCIATION FOR
PSYCHOLOGICAL SCIENCE

Retraction of “A Common Discrete Resource for Visual Working Memory and Visual Search”

Psychological Science
2015, Vol. 26(9) 1527
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DOI: 10.1177/0956797615602706
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The following article has been retracted by the Editor and publishers of *Psychological Science*:

Anderson, D. E., Vogel, E. K., & Awh, E. (2013). A common discrete resource for visual working memory and visual search. *Psychological Science*, 24, 929–938. doi:10.1177/0956797612464380

The retraction follows the results of an investigation into the work of author David E. Anderson. The Office

of Research Integrity (U.S. Department of Health and Human Services), together with the University of Oregon, has determined that Anderson falsified data affecting Figures 3e and 3f, removing outlier values and replacing outliers with mean values, to produce results that conformed to predictions. Anderson's coauthors were in no way implicated in the research misconduct, and all authors have seen and agreed to this retraction.

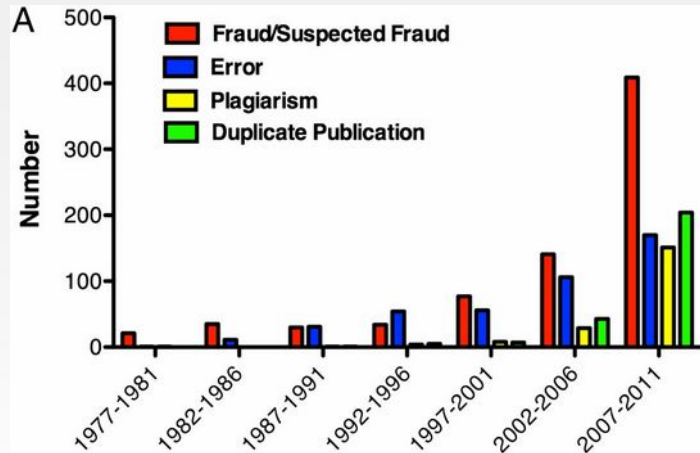




Retraction

most common reasons:

(real + suspected) fraud, duplicate publication, error, plagiarism



Fang, F. C., Steen, R. G., & Casadevall, A. (2012). Misconduct accounts for the majority of retracted scientific publications. *PNAS*, *110*(3), 17028-17033. <https://doi.org/10.1073/pnas.1212247109>



*The rate appears to decline after 2015, but numbers are almost certainly incomplete because of delays in publishing retractions.

Brainard, J., & You, J. (2018, October 25). *What a massive database of retracted papers reveals about science publishing's 'death penalty'*. *Science*. <https://www.sciencemag.org/news/2018/10/what-massive-database-retracted-papers-reveals-about-science-publishing-s-death-penalty>



Fabrication: Jon Sudbø

Jon Sudbø: the cancer researcher (*University of Oslo*) is in January 2006 uncovered to have systematically fabricated data

- Sudbø loses his job, academic credentials, and professional authorization
- articles are retracted (overview at next slide)



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Cancer study patients 'made up'

A cancer expert invented patients for a study which concluded taking common painkillers could protect against oral cancer, it is alleged.

Dr Jon Sudbo reportedly made up patients and case histories for the study published in highly-respected Lancet medical journal last October.

Dr Sudbo has not commented publicly on the claims.

But a spokeswoman for Oslo's Norwegian Radium Hospital, where he works, said he had admitted falsifying data.

The revelation comes just days after work published in the journal Science by South Korean cloning expert Hwang Woo-suk was revealed as fabricated.

“ This is the worst thing that could happen in a research institution like ours ”

Trine Lind

Hospital spokeswoman, Trine Lind said: "We are shocked. This is the worst thing that could happen in a research institution like ours."

Stein Vaaler, director of external relations at the hospital, added: "He published an article in The Lancet in October last year whose data is totally false, actually totally fabricated."



Aspirin was among the drugs studied



Fabrication: Jon Sudbø

- Sudbø J, Lee JJ, Lippman SM, Mork J, Sagen S, Flatner N, Ristimäki A, Sudbø A, Mao L, Zhou X, Kildal W, Evensen JF, Reith A, Dannenberg AJ. (2005). Non-steroidal anti-inflammatory drugs and the risk of oral cancer: a nested case-control study. *Lancet*, 366(9494), 1359-66.
- Sudbø J. (2004). Novel management of oral cancer: a paradigm of predictive oncology. *Clinical Medicine & Research*, 2(4):233-42.
- Sudbø J, Samuelsson R, Risberg B, Heistein S, Nyhus C, Samuelsson M, Puntervold R, Sigstad E, Davidson B, Reith A, Berner A. (2005). Risk markers of oral cancer in clinically normal mucosa as an aid in smoking cessation counseling. *J Clin Oncol*, 23(9), 1927-33.
- Sudbø J, Lippman SM, Lee JJ, Mao L, Kildal W, Sudbø A, Sagen S, Bryne M, El-Naggar A, Risberg B, Evensen JF, Reith A. (2004). The influence of resection and aneuploidy on mortality in oral leukoplakia. *New England Journal of Medicine*, 350(14), 1405-13.
- Sudbø J, Bryne M, Mao L, Lotan R, Reith A, Kildal W, Davidson B, Søland TM, Lippman SM. (2003). Molecular based treatment of oral cancer. *Oral Oncology*, 39(8):749-58.
- Sudbø J. (2003). [Chemoprevention of oral cancer]. *Tidsskrift for Den Norske Legeforening*, 123(11), 1518-21.
- Sudbø J, Ristimäki A, Sondresen JE, Kildal W, Boysen M, Koppang HS, Reith A, Risberg B, Nesland JM, Bryne M. (2003) Cyclooxygenase-2 (COX-2) expression in high-risk premalignant oral lesions. *Oral Oncology*, 39(5), 497-505.
- Sudbø J, Reith A. (2002). When is an oral leukoplakia premalignant? *Oral Oncology*, 38(8), 813-4.
- Sudbø J, Warloe T, Aamdal S, Reith A, Bryne M. (2001). [Diagnosis and treatment of oral precancerous of oral precancerous precancerous lesions]. *Tidsskrift for Den Norske Legeforening*, 121(26), 3066-71.
- Sudbø J, Ried T, Bryne M, Kildal W, Danielsen H, Reith A. (2001). Abnormal DNA content predicts the occurrence of carcinomas in non-dysplastic oral white patches. *Oral Oncology*, 37(7), 558-65.
- Sudbø J, Bryne M, Johannessen AC, Kildal W, Danielsen HE, Reith A. (2001). Comparison of histological grading and large-scale genomic status (DNA ploidy) as prognostic tools in oral dysplasia. *Journal of Pathology*, 194(3), 303-10.
- Sudbø J, Kildal W, Risberg B, Koppang HS, Danielsen HE, Reith A. (2001). DNA content as a prognostic marker in patients with oral leukoplakia. *New England Journal of Medicine*, 344(17), 1270-8.



Fabrication: Diederik Stapel

Diederik Stapel: Professor for Social *Psychology* at Tilburg University, founder of TiBER (Tilburg Institute for Behavioral Economics Research)

- inquiry: fictitious data → 58 retractions
- suspension from his duties (September 2011)
- returned his Ph.D. certificate to the University of Amsterdam (November 2011), noting that his “behavior of the past years is inconsistent with the duties associated with the doctorate”
- **victims:** his 20 *PhD students* (12 theses relied entirely or partly on fictitious data, 1 defense postponed because of suspicions, 7 theses cleared)



Top 10 retracted authors

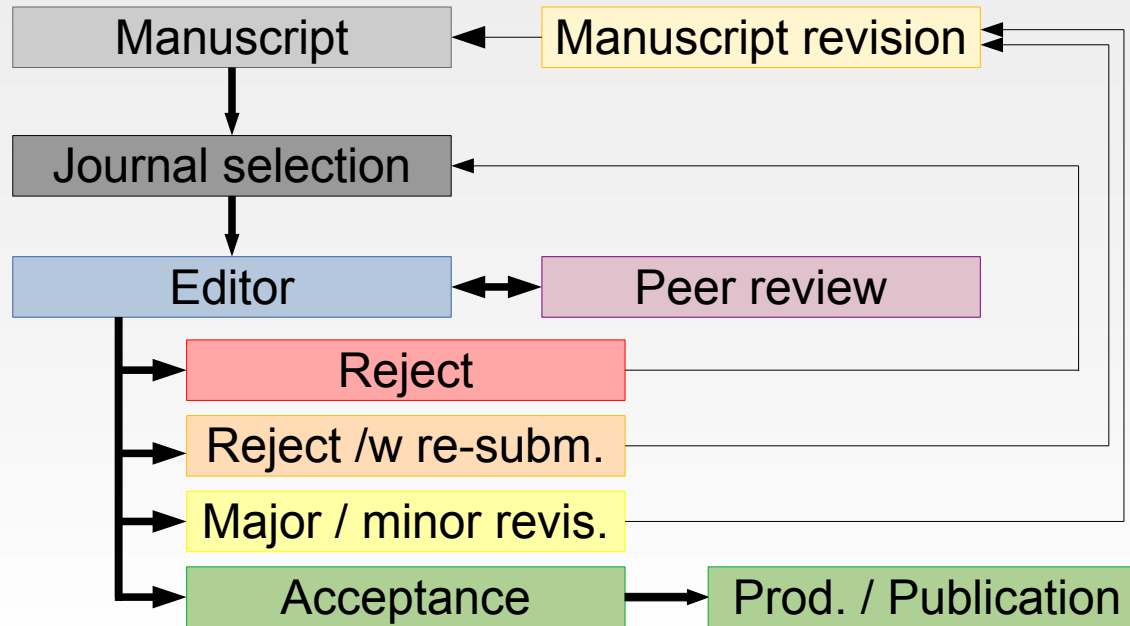
Yoshitaka Fujii, Japan	169
Joachim Boldt, Germany	96
Diederik Stapel, Netherlands	58
Chen-yuan Peter Chen, Taiwan	43
Yoshihiro Sato, Japan	43
Hua Zhong, China	41
Shigeaki Kato, Japan	39
James Hunton, United States	36
Hyung-in Moon, South Korea	35
Jan Hendrik Schön, United States	32



Publication ethics



Publication process



Criteria for journal selection:

Research:

topic
quality
novelty

Journal:

status / impact
audience
length / style rules
«publication lag»





Publication process: Peer review

Goal: quality ensurance – the work should be original and valid

- discussion among colleagues (confidential)
- “action editor” responsible for both content and quality of the journal

Reviewers

- assist the editor (who makes the decision)
- are chosen according to expertise, familiarity with a field/topic, balance of perspectives ...
- are expected to respond in appropriate time
- identity often concealed from the authors

Types

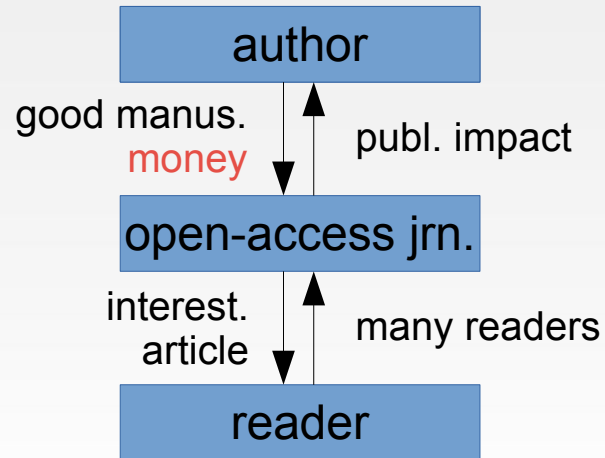
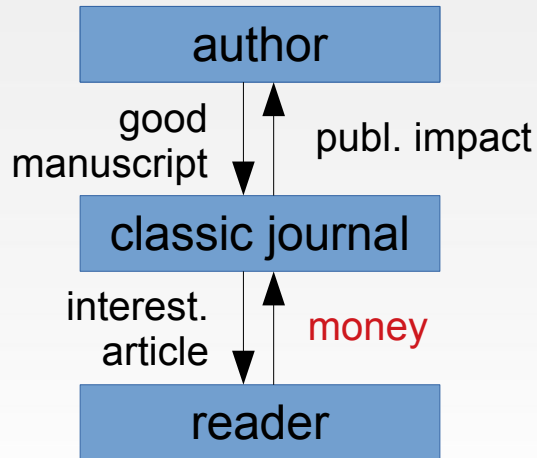
- unmasked: Authors’ identity revealed to reviewers
- masked: Authors’ identity concealed from reviewers





Publicat.: Classic vs. open access

trend towards open access publishing → research is available not only to those who can afford journal subscriptions



reader is less important as long as the authors pay → predatory open access journals





Publication: Predatory journals

- **accepting articles quickly** with little or no review or quality control, including hoax and nonsensical papers
- **aggressively campaigning** for academics to submit articles or serve on editorial boards
- **listing academics as members of editorial boards without their permission** or appointing fake academics to editorial boards
- **mimicking** the name or web site style of **established journals**
- notifying academics of **article fees** only **after papers are accepted**
- **fake impact factors**

<https://beallist.net/>





Publication: Predatory journals

Subject: Follow up Reminder Mail for Manuscript Submission: World Journal of Surgery and Surgical Research (ISSN: 2637-4625) (Impact Factor: 1.989)

Dear Dr. Jentschke Sebastian,

We are very lucky to contact an eminent researcher like you!!

Sorry for bothering several times but we honorably needs your support this time kindly respond this email.

I am Emily S. Blunt Editorial Manager of World Journal of Surgery and Surgical Research (ISSN: 2637-4625) (Impact Factor: 1.989). We are planning to release our journal upcoming Trending Issue is on or before April 26th, 2022.

As we know that, in this pandemic situation is not the right time to over burden you by asking you to contribute a full length manuscript. We need your support for this upcoming issue, therefore, we humbly request you to submit 2 pages Editorials, 150 Words Clinical Images, Letter to Editor or Short communications to this kind issue of our journal.

Research, Review and Case Reports are also welcome to this issue. - There is no specific topic for this issue it completely depends on your current research work.

Kind Note: We have to be needed your support immediately - We are anticipating to receiving your submission to this E-mail as an attachment as soon as possible. If not possible kindly invite your friends and colleagues for this issue.

Kindly submit your manuscript as an attachment to this Email as soon as possible.

We are looking forward for your valuable manuscript submissions.

Best Regards,
Emily S Blunt
Editorial Manager
USA

RESEARCH ETHICS

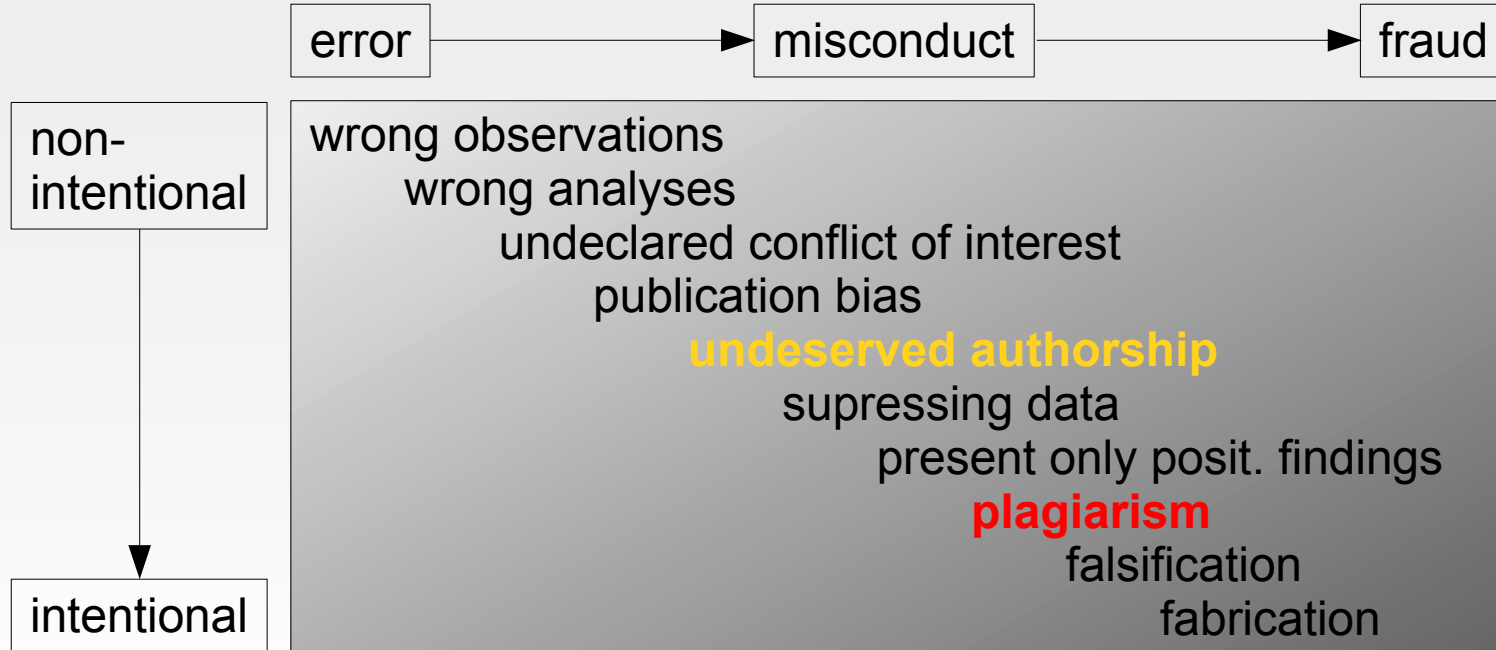
SEBASTIAN.JENTSCHKE@UIB.NO

SLIDE 41





From errors to fraud





Authorship

“Authorship is reserved for persons who make a **substantial contribution** to and who accept responsibility for a published work.” (*APA Publication Manual, 2020, p. 24*)

“Psychologists take responsibility and credit, including authorship credit, only for work they have actually performed or to which they have substantially contributed.”

“**Publication credits** reflect the **relative scientific contributions** of the individuals involved, **regardless** of their relative **status**.”

“Mere possession of an institutional position, such as department chair, does not justify authorship credit.”

“**Minor contributions** to the research or to the writing for publications are **acknowledged** appropriately, such as in **footnotes** or in an introductory statement.”

American Psychological Association (2017). *Ethical principles of psychologists and code of conduct*. <https://www.apa.org/ethics/code/index>





Authorship

Substantial scientific contribution and writing:

- formulating the problem / hypothesis
- structuring the experimental design
- organizing or conducting the statistical analysis
- interpreting the results
- writing a major proportion

Supportive functions:

- designing or building the apparatus
- suggesting or advising on analysis
- recruiting participants, conducting routine observations, collecting or entering the data
- modifying a computer program
- **or for simply being the boss**





Authorship

Problems with publication pressure:

- increasing number of journals and papers
- increasing number of authors per paper and gift / guest / ghost authors
- increasing number of “predatory” journals

Order of authors and authors’ responsibilities

- first author is main contributor; the order of the remaining authors reflects their relative contributions; BUT: senior author(s)
but: relative contribution → conflicts among authors → fairness?
- every single author is responsible for the content of an article
but: responsibility for quality and integrity varies among authors; dilemma if co-author is ‘unaware’





Plagiarism

an example of plagiarism:

Hickman, S., Dalton, C., Miller, D., & Plant, G. (2002). Management of acute optic neuritis. *The Lancet*, 360(9349), 1953–1962. [https://doi.org/10.1016/S0140-6736\(02\)11919-2](https://doi.org/10.1016/S0140-6736(02)11919-2)

Midgard, R., Seland, J. H., Hovdal, H., Celius, E. G., Eriksen, K., Jensen, D., Heger, H., Mellgren, S. I., Wexler, A., Beiske, A. G., & Myhr, K.-M. (2005). Optikusnevritt – diagnose, behandling og oppfølging. *Tidsskrift for Den norske legeforening*, 125(4), 425–428. <https://tidsskriftet.no/2005/02/oversiktsartikkel/optikusnevritt-diagnose-behandling-og-oppfolging>

- Ms submitted (2004), 11 authors – Norwegian experts in that field
- peer review(s) very favorable
- Ms published (2005)
- e-mail from a Danish editor, hints at similarity with article in *Lancet* (2002) → Plagiarism?





Plagiarism

REVIEW

Review

Management of acute optic neuritis

S J Hickman, C M Dalton, D H Miller, G T Plant

Optic neuritis is a common condition that causes reversible loss of vision. It can be clinically isolated or can arise as one of the manifestations of multiple sclerosis. Occasional cases are due to other causes, and in these instances management can differ radically. The treatment of optic neuritis has been investigated in several trials, the results of which have shown that corticosteroids speed up the recovery of vision without affecting the final visual outcome. Other aspects of management, however, are controversial, and there is uncertainty about when to investigate and when to treat the condition. Here we review the diagnostic features of optic neuritis, its differential diagnosis, and give practical guidance about management of patients. The condition's association with multiple sclerosis will be considered in the light of studies that define the risk for development of multiple sclerosis and with respect to results of trials of disease-modifying drugs in these individuals.

Optic neuritis is common, having an incidence of 1–5 per 100 000 per year.^{1,2} The incidence is highest in caucasians,³ in countries at high latitudes,² and in spring.³ Individuals aged 20–49 years are most at risk, with women more often affected than men.² The condition usually presents as subacute unilateral loss of vision, although loss of vision in both eyes can arise, either simultaneously or sequentially. Most instances of optic neuritis are due to idiopathic inflammatory demyelination, which can arise in isolation, or as a manifestation of multiple sclerosis.³

Despite some major studies there are still many controversial areas in the management of optic neuritis, with differences of opinion expressed in surveys done to

might be seen by the patient on eye movement.¹¹ Clearly, subclinical cases are frequent, since some patients present with Uhthoff's phenomenon (visual deterioration on getting warm, or during exercise),¹² and delayed visual evoked potentials are not uncommon in early multiple sclerosis, even without a previous history of optic neuritis.¹³

The maximum visual loss varies from minor blurring to no perception of light in the affected eye. Abnormal colour vision, reduced contrast sensitivity, visual field loss, and a relative afferent pupillary defect (RAPD) are usually present in the affected eye.^{3,10,11} The presence of an RAPD is a useful objective sign of a unilateral optic neuropathy, although it is not specific for optic neuritis. The absence of

Oversiktsartikkel MEDISIN OG VITENSKAP ■

Optikusnevritt – diagnose, behandling og oppfølging

Sammendrag

Bakgrunn. Optikusnevritt er en vanlig tilstand som kan opptre isolert eller som en manifestasjon av multipl sklerose. Tilstanden er godt klinisk karakterisert, men differensialdiagnostisk vil mange tilstander måtte overveies. Behandling av optikusnevritt har vært undersøkt i flere studier. Disse viser at kortikosteroider bidrar til raskere restitusjon av synsstyrken uten at den endelige synsstyrken påvirkes vesentlig. Både diagnose og behandlingsmuligheter har endret seg i de senere år. Aspekter ved utredning, behandling og oppfølging er kontroversielle.

Materiale og metode. En nasjonal gruppe av nevrologer og øyeleger har vurdert retningslinjer for diagnose, behandling og oppfølging av optikusnev-

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Elisabeth Gulowsen Celius

Ketil Eriksen
Ulleval universitetssykehus

Ditlev Jensen

Rikshospitalet

Hilde Heger

Ulleval universitetssykehus

Svein Ivar Mellgren

Universitetssykehuset Nord-Norge

Alexandra Wexler

Øyevdelingen
St. Olavs Hospital

Antonie Glæver Beiske

Klinikk og sykdomsforløp

I ramme 1 skisseres de typiske symptomer og tegn ved optikusnevritt (11). Tilstanden viser seg som regel som en subakutt ensidig synsreduksjon med moderate smerter som aksentueres ved øybevegelser og progredierer i løpet av få dager til to uker (12). Smertintensiteten er varierende, nattesøvn forstyrres vanligvis ikke, og en tidel rapporterer ingen smerte. Enkelte pasienter observerer lysglimt (fotopsier) ved øybeve-

gelser. Noen pasienter fremviser Uhthoffs fenomen (synsreduksjon ved økt kroppstemperatur eller i tilknytning til fysisk anstrengelse). Forsinket visuelt fremkalt respons er heller ikke uvanlig å finne ved debut av multipl sklerose, noe som kan tyde på en tilsynelatende asymptomatisk optikusnevritt (13).

Den maksimale synsreduksjon varierer fra lett tåkesyn til manglende lyssans på affisert øye. Redusert fargesyn, redusert kontrastsensitivitet, synsfeltfall og relativ af-

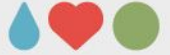


Plagiarism

authors' responses to the accusation of plagiarism:

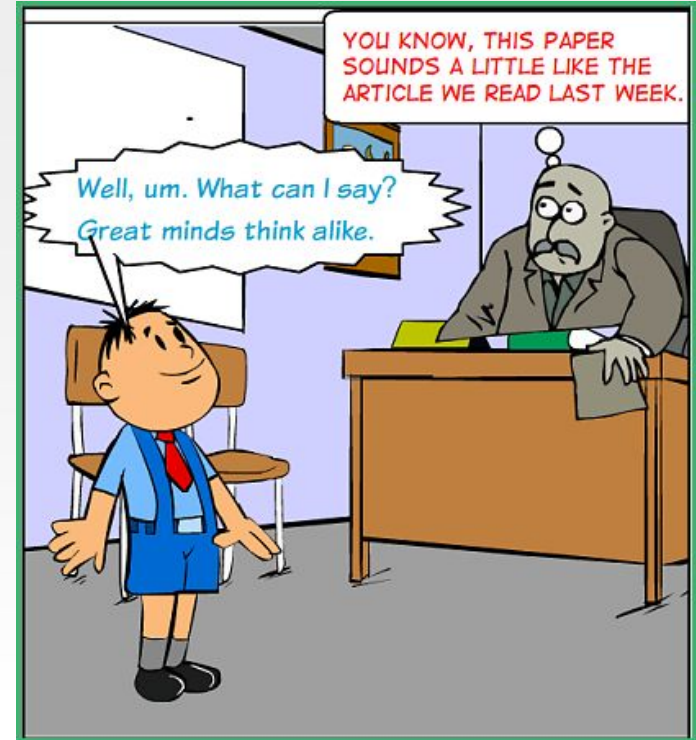
- *first author:* “I haven’t read the Lancet article since 2003, but I see now when I read them side by side that our article unfortunately is very similar. I am very sorry about this, but I did not intentionally try to translate or copy the article by Hickman and colleagues.”
- *co-author:* “Review articles covering the same subject matter will always be very similar and in this case not controversial at all.”
- *co-author:* “The article was written by one of us, the others have read and commented on the text.”
- *co-author:* “All I can do is to offer my strongest apologies. I realize now that my contribution and work on this article was not enough for me to be a co-author, and I should immediately have said that I didn’t want to be listed as a co-author.”





Plagiarism

- **science is cumulative:** If I have seen a little further (than others), it is by standing on the shoulders of giants. (Newton, 1676)
- **plagiarism:** submitting someone else's work or earlier work of yourself
- **UiB policy:** plagiarism check with Urkund (text recognition software) → consequences!
- **how to avoid? avoid copy + paste**
use your own words (paraphrasing) or direct quotes (“...”) + pp.
always provide correct source (in text & reference list)





Plagiarism

Paraphrasing: describe with own words what you have read

legitimate to borrow, but it requires understanding the ideas expressed in the source

→ extract / keep the content

→ change the language, the wording and the structure

Common mistakes

- use of **more than three successive words** from the source
- **lack of significant rewording** or change in structure
- **forgetting** to name the **reference**





Summary and literature



Summary

- introduction and background
definition, history, regulations, dilemmas, incidence
- ethical stand. when experimenting /collecting data
informed consent, data protect./sharing, approval
- ethical standards when processing data
error, misconduct, falsification, fabrication
- publication ethics
publication process, authorship, plagiarism





Literature

Thomas, D. R. & Hodges, I. D. (2010). Research ethics and ethics reviews. In Thomas, D. R., & Hodges, I. D. *Designing and managing your research project: Core skills for social and health research* (pp. 89–110). SAGE Publications. <https://doi.org/10.4135/9781446289044> (introduction / overview; mandatory)

American Psychological Association (2017). *Ethical principles of psychologists and code of conduct*. <https://www.apa.org/ethics/code> (guideline; additional reading)

World Medical Association (2013). *Declaration of Helsinki - Ethical Principles for Medical Research Involving Human Subjects*. <https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects> (guideline; additional reading)

De nasjonale forskningsetiske komiteene (n.d.). *Medisin og helsefag*. Retrieved April 11, 2021 from <https://www.forskningsetikk.no/retningslinjer/med-helse/> (guideline; additional reading)

Gross, C. (2016). Scientific misconduct. *Annual Review of Psychology*, 67(1), 693–711. <https://doi.org/10.1146/annurev-psych-122414-033437> (scientific misconduct; additional reading)

Ross, M. W., Iguchi, M. Y., & Panicker, S. (2018). Ethical aspects of data sharing and research participant protections. *American Psychologist*, 73(2), 138–145. <https://doi.org/10.1037/amp0000240> (data protection; additional reading)





**Think, ...
and do as good as
you can!**



**Thank you very much
for your attention!**