# Science business

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*Wildlife Digestive Physiology Course Vienna 2013*

University of Zurich
Vetsuisse Faculty

Clinic
of Zoo Animals, Exotic Pets and Wildlife

# How do you know what you read is true?

# Check the sources!

# Frustration I: it is all about humans

# Frustration I: it is all about humans

- What else would it be about?

# Frustration I: it is all about humans

- What else would it be about?

- 'if you are still looking for a miracle you better be one'

# Frustration II: they all just cook with water

# Frustration II: they all just cook with water

- What else would you expect people to cook with in the first place?

# Frustration III: How can I, a student/ a beginner, know when to trust a scientific text ?

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  - falling in love and wondering whether that feeling is reciprocated

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  - have a wedding gown made by a tailor
  - falling in love and wondering whether that feeling is reciprocated

- Why should SCIENCE be the one thing that you can do without a lot of effort and uncertainty?

# Learning process

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facts, concepts,
policies, practice

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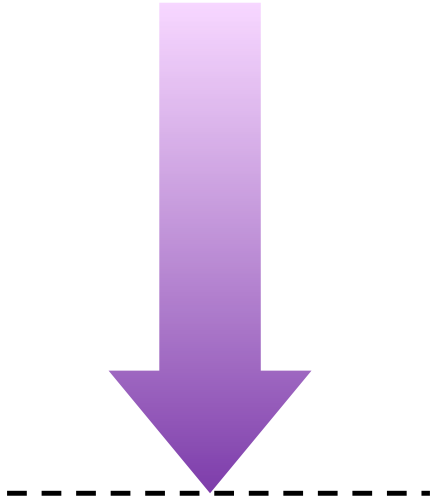

(graduation)

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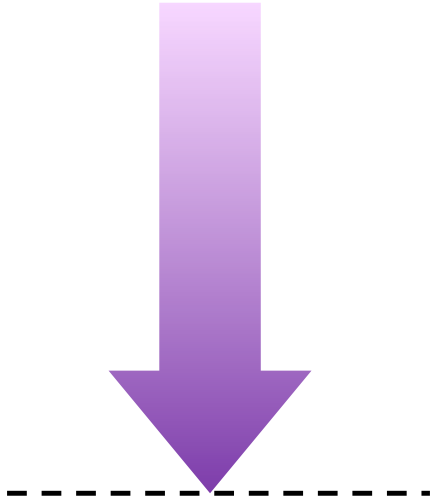

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(scientific work:)
how to produce
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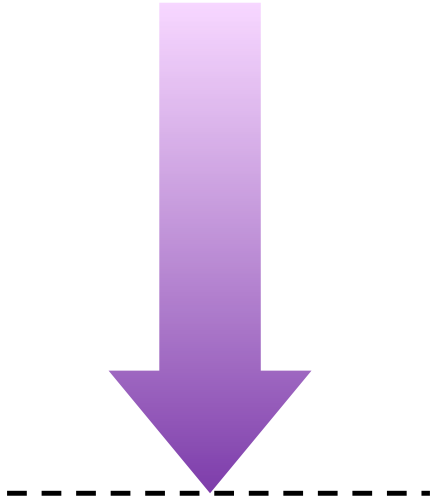

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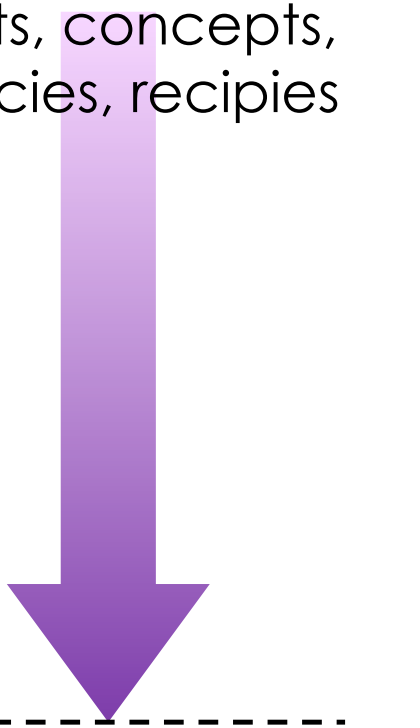

(postgrad education)

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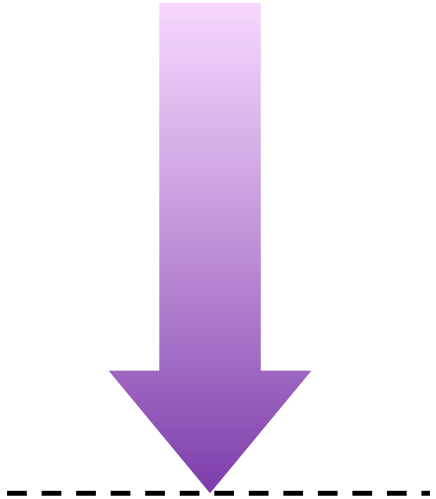
facts, concepts, policies, practice



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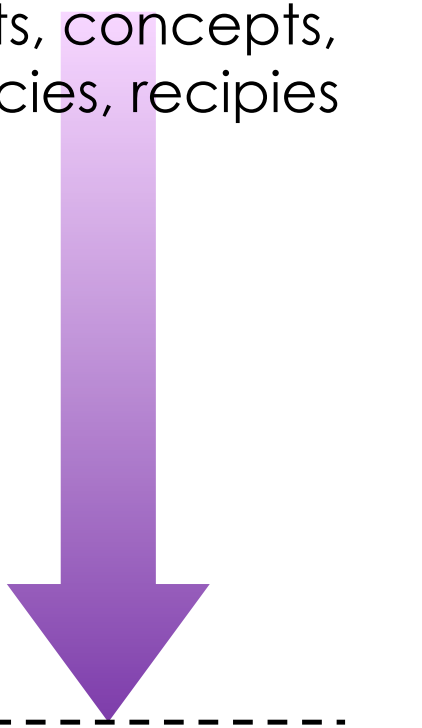
(scientific work:) how to produce facts, concepts, policies, recipies



(postgrad education)

how to be happy

(?)

# Why publish ?

- Selfish reasons I
- Public reasons
- Selfish reasons II

# Why publish ?

- Selfish reasons I
  - Publications are a prerogative for many career steps (PhD, Diplomate, Certified specialist) and very generally for a career in academia (but not necessarily for cool wildlife jobs).
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  - Publications are a cornerstone of evaluations and of the reputation of a scientist or an institution; publications are therefore important for your own reputation, and you can make others your friends by publishing with/for them.
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‘publish or perish !’

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  - Most researchers are paid for by public funds. Not publishing your findings is like taking the cash without delivering in return.
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  - be known (and remembered) ...

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- Selfish reasons II
  - be known (and remembered) ... be famous ... be human

# ‘Cathedrals of knowledge’

# The Citation

**Clauss M (1998) Feeding Giraffe (*Giraffa camelopardalis*). MSc Thesis, Zoological Society of London/Royal Veterinary College (copy available on request)**

**Clauss M, Suedmeyer WK, Flach EJ (1999) Susceptibility to cold in captive giraffe (*Giraffa camelopardalis*). Proceedings of the American Association of Zoo Veterinarians, 183-186**

**Clauss M, Lechner-Doll M, Flach EJ, Tack C, Hatt JM (2001) The comparative use of four marker systems for the estimation of digestibility, and low food intake, in a group of captive giraffe (*Giraffa camelopardalis*). Zoo Biology 20: 315-329**

# The Citation

**Giraffes in zoos often die from malnutrition (Clauss et al. 2001).**

**According to Clauss et al. (2001), giraffes in zoos often die from malnutrition.**

**Clauss et al. (2001) showed that some zoo giraffes consume amounts of food lower than expected based on extrapolations from other herbivores and from free-ranging giraffes, and speculated that this might be a cause for low body reserves and death associated with depleted adipose tissue stores often observed in this species in captivity.**

# The Citation

**The basal metabolic rate of sauropod dinosaurs changed during ontogeny (Sander & Clauss 2008).**

**It has been speculated that the basal metabolic rate of sauropod dinosaurs might have changed during ontogeny (Sander & Clauss 2008).**

# The Citation

**Browsing ruminants have only protozoa of the subfamily Entodiniinae in their rumen (Clauss & Lechner-Doll 2001).**

**Entodiniinae are mostly the only protozoa subfamily that is found in the rumen of browsing ruminants (reviewed by Clauss & Lechner-Doll 2001).**

# The Citation

**Digesta retention times do not differ between browsing and grazing ruminant species (Gordon & Illius 1994).**

**It has been suggested that digesta retention times do not differ between browsing and grazing ruminant species (Gordon & Illius 1994, but see Hummel et al. 2006).**

# How new knowledge is generated

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Experience and knowledge in a topic

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(new) idea

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Formulation of a question/hypothesis

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Do the study: finances, material

personell

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    lab stage: analysis of samples

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experimental stage: generation of samples

lab stage: analysis of samples

incl. all that can happen (and also go wrong) at these stages

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- Write an “Abstract”
- Submit

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others perceive the presentation/ read the abstract

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Revision of manuscript
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Others read the manuscript -> **Discussion**
**Media appearance**
**Repetition**

**Inclusion into Textbooks**

# ‘Impact Factor’

IF = mathematical parameter (calculated!)

The average number of times a publication of the journal in question is cited in the first two years following the publication year (i.e. today’s IF refers to publications three years old).

The more prestigious a journal = the more it is read = the more its articles are cited = the more prestigious it is

# Impact Factors 2006

| | |
|---|---|
| CA-A Cancer Journal for Clinicians | 50 |
| Science | 31 |
| Nature | 29 |
| The Veterinary Record | 1.06 |
| Journal of Zoo and Wildlife Medicine | 0.36 |
| Schweizer Archiv für Tierheilkunde | 0.32 |

# ‘h-Factor’

HF = mathematical parameter (calculated!)

The number of publications of a researcher which have been cited as least as often as this number.

Example: 7 publications, one is cited 5 times, one is cited 2 times, the other ones are cited once or not at all => HF=2

HF of Noble Price winners 30-70

HF should increase with age and has to be corrected for age if different people are compared.

Note that the HF can never go down even if you don’t work any more.

# How is academic work evaluated ?

By any kind of success in the “peer-review-process”,

- successful grant applications

**- “peer-reviewed” publications**

(- awards)

# How is academic work evaluated ?

**Codron, Daryl** Return to Search Page | Get a Badge | ResearcherID Labs

ResearcherID: **B-8867-2008**
URL: **http://www.researcherid.com/rid/B-8867-2008**

**My Institutions** (more details)
Primary Institution: **University of KwaZulu-Natal**
Sub-org/Dept:

**Publications**

**My Publications (22)**
View Publications
Citation Metrics

**Publication List: View**

22 publication(s) Page 1 of 1 Go

1. Title: Hominins, sedges, and termites: new carbon isotope data from the Sterkfontein valley and Kruger National Park
   Author(s): SPONHEIMER, M; LEE-THORP, J; DE RUITER, D; et al.
   Source: **JOURNAL OF HUMAN EVOLUTION** Volume: **48** Issue: **3** Pages: **301-312** Published: **MAR 2005**
   Times Cited: **34**

2. Title: Taxonomic, anatomical, and spatio-temporal variations in the stable carbon and nitrogen isotopic compositions of plants from an African savanna
   Author(s): CODRON, J; CODRON, D; LEE-THORP, JA; et al.
   Source: **JOURNAL OF ARCHAEOLOGICAL SCIENCE** Volume: **32** Issue: **12** Pages: **1757-1772** Published: **DEC 2005**
   Times Cited: **26**

3. Title: Do "savanna" chimpanzees consume C-4 resources?
   Author(s): SPONHEIMER, M; LOUDON, JE; CODRON, D; et al.
   Source: **JOURNAL OF HUMAN EVOLUTION** Volume: **51** Issue: **2** Pages: **128-133** Published: **AUG 2006**
   Times Cited: **20**

4. Title: Significance of diet type and diet quality for ecological diversity of African ungulates
   Author(s): CODRON, D; LEE-THORP, JA; SPONHEIMER, M; et al.
   Source: **JOURNAL OF ANIMAL ECOLOGY** Volume: **76** Issue: **3** Pages: **526-537** Published: **MAY 2007**
   Times Cited: **16**

5. Title: Utilization of savanna-based resources by Plio-Pleistocene baboons
   Author(s): CODRON, D; LUYT, J; LEE-THORP, JA; et al.
   Source: **SOUTH AFRICAN JOURNAL OF SCIENCE** Volume: **101** Issue: **5-6** Pages: **245-248** Published: **MAY-JUN 2005**
   Times Cited: **16**

# How is academic work evaluated ?

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ResearcherID: **B-8867-2008**
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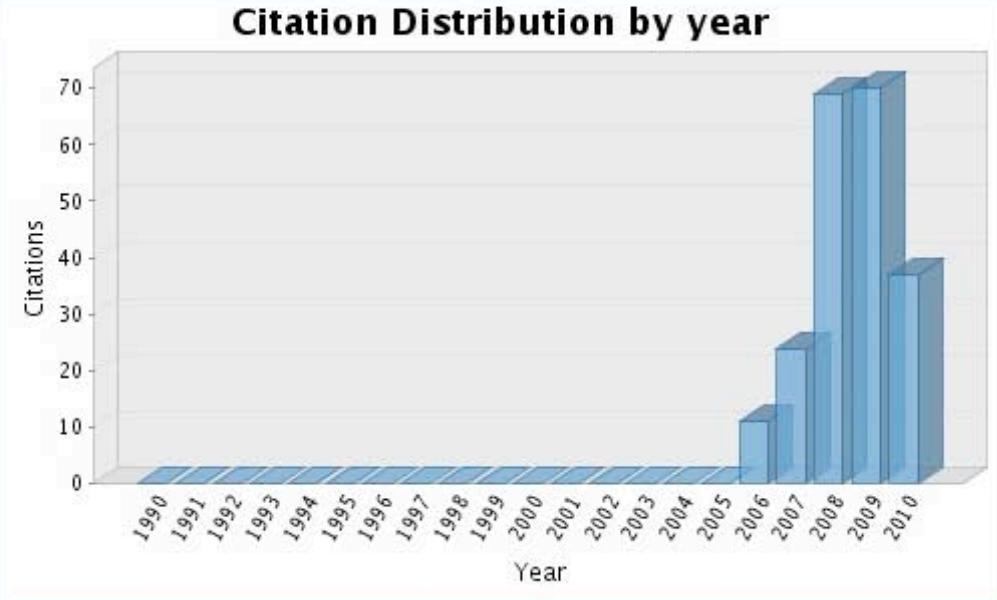
**My Institutions** (more details)
Primary Institution: **University of KwaZulu-Natal**
Sub-org/Dept:

**Publications**

**My Publications (22)**
View Publications
Citation Metrics ▶

**Publication List: Citation Metrics**

This graph shows the number of times the articles on the publication list have been cited in each of the last 20 years.
Note: Only articles from ISI Web of Knowledge with citation data are included in the calculations. More information about these data.




Total Articles in Publication List: **22**
Articles With Citation Data: **22**
Sum of the Times Cited: **211**
Average Citations per Article: **9.59**
h-index: **9**
Last Updated: **08/20/2010 07:48 GMT**

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By any kind of success in the "peer-review-process",

- successful grant applications
- **"peer-reviewed" publications**
- (- awards)

Indirect measures such as successful application for a job position, editorship for a journal, writing a book, producing highly qualified students ...

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Do others read, use, build on, deal with your publications?

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Are you happy?

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Are you happy?

Would the child you were be proud of the adult you are?

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Ambition/effort  <=> “love” for a topic ?

# How do I start ?

Ambition/effort <=> “love” for a topic ?
Read! Read! Read!

(also: literature check for a certain clinical case)

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(also: literature check for a certain clinical case)

Find your own questions

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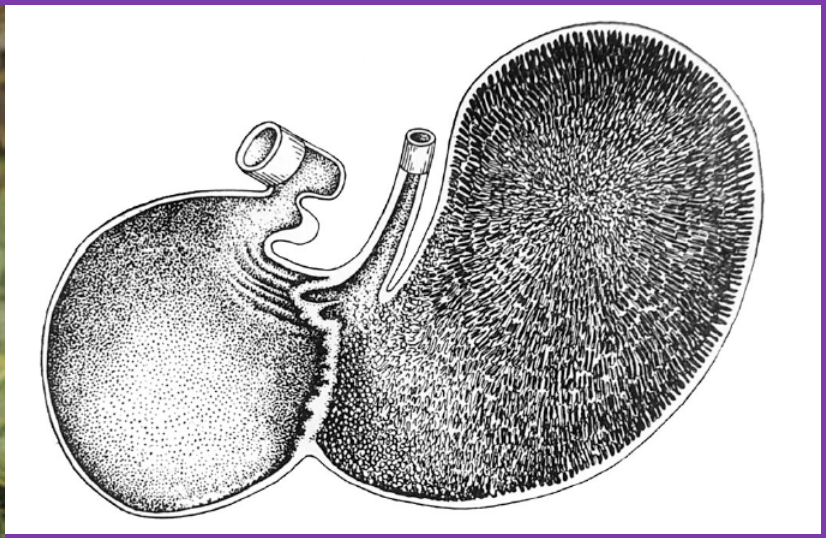
*'I did not chose the music, it chose me'*

*C. Eastwood, Honkytonk Man*

# ‘publish *and* perish !’

Brian McNab (2002)



Demon mole rat
(*Tachyoryctes daemon*)
papillated forestomach