

Nutrition Science Days, 9-10 October 2014

# Nutrition: an incredible science?!

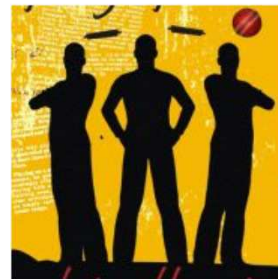
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Wageningen University

# Disclosures

My views on nutrition may be influenced by:

- Grant from Dutch Dairy Association
- Grant from Top Institute Food & Nutrition, public-private partnership
- PhD student at Unilever (phytosterols)
- Addiction to coffee
- Vegetarian family members
- BMI >25

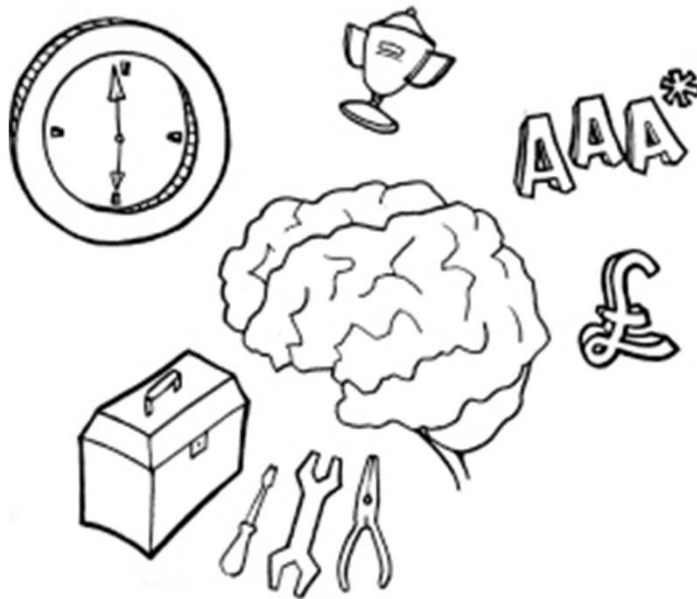


**Everyone has three lives; a public life, a private life, and a secret life.**

# Disclosures ...from secret life

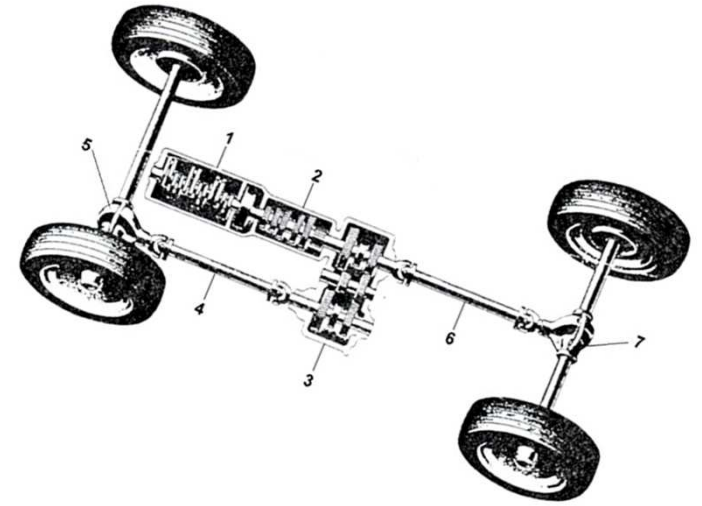
What are my **inner drives**?

**Why** do I work in nutritional science?



# Inner drives

- Self-development / explore own potential
- Make money
- Security
- Have status / authority / influence
- Solve problems
- Compete / be the best
- Be part of something bigger
- Serve people (includes teaching)
- Please people (e.g. parents, family)
- Make things better / effective
- Serve God



- Save the world
- See new places / people
- Be a pioneer / be the first
- Be a knowledge expert / specialist
- Satisfy your curiosity
- Cooperate / work with others

**Any other?**

**List 3 of your inner drives**



# Select one inner drive that motivates you

1. Self-employment
2. Money
3. Status/authority
4. Solve problems
5. Compete
6. Serve people
7. Make things better
8. Be a pioneer
9. Be an expert
10. Curiosity

# Inner drives have an effect on...

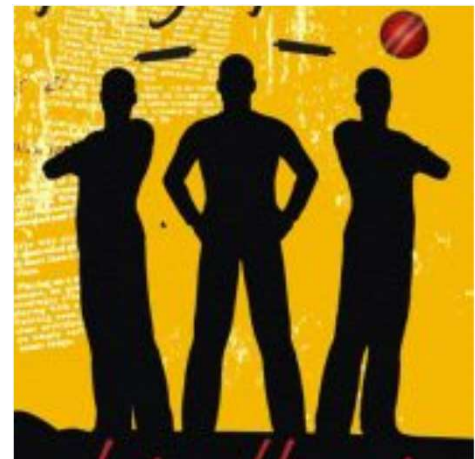
- Whether you come up with *new hypotheses & results*
  - Pioneers more often will than those who seek security
- *How* you present your results
  - Those who want to have influence may give more weight to their findings than knowledge experts
- *When* you present your results
  - Competitors may present their results earlier than consolidators
- Your role in the field
  - Key opinion former vs. back-stage person



# For you to think about...

What would have most effect on your credibility

- Your public life (incl. funding sources)
- Your private life
- Your secret life



# Credibility of (nutritional) science

- Correct use of scientific methods
- Be honest, objective, transparant → seeking the truth has priority above anything else
- Allow others to replicate your research → “auto correction” of science
- Allow others to criticize your research, be part of a critical mass
- Adhere to guidelines for good research practice (VSNU, KNAW, NAV, GCP, GLP, trial registration)



# Science comes with trial and error

- A scientist is a doubter
- Scientific progress is characterized by *paradigm shifts*
- When all is quiet, we should worry...



"I don't believe I've ever seen a scientific paper defended quite as vigorously as this one!"

No controversy  
= No good science



# Weighing & considering

It's about the *totality of evidence*

- Trials, observational studies, animal studies, molecular research
- Judge internal and external validity of studies
- Biological plausibility, causality (temporality), consistency
- Role of sponsors, personal interest of scientists
- Consensus reached in panels, committees, etc.



# *Consensus* in newspapers



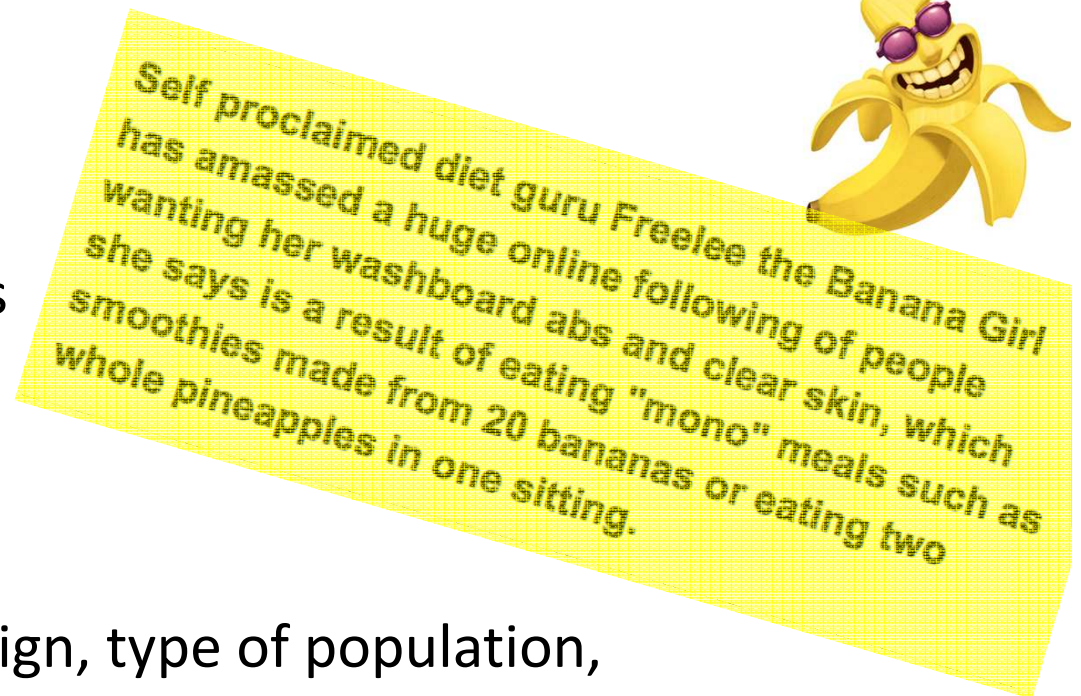
It's about news**VALUE**



# Science in the media

- Journalists and public more interested in *news* (from single studies) than in *news value* (consensus reports)

- Scientists have to compete with charismatic diet gurus and food journalists



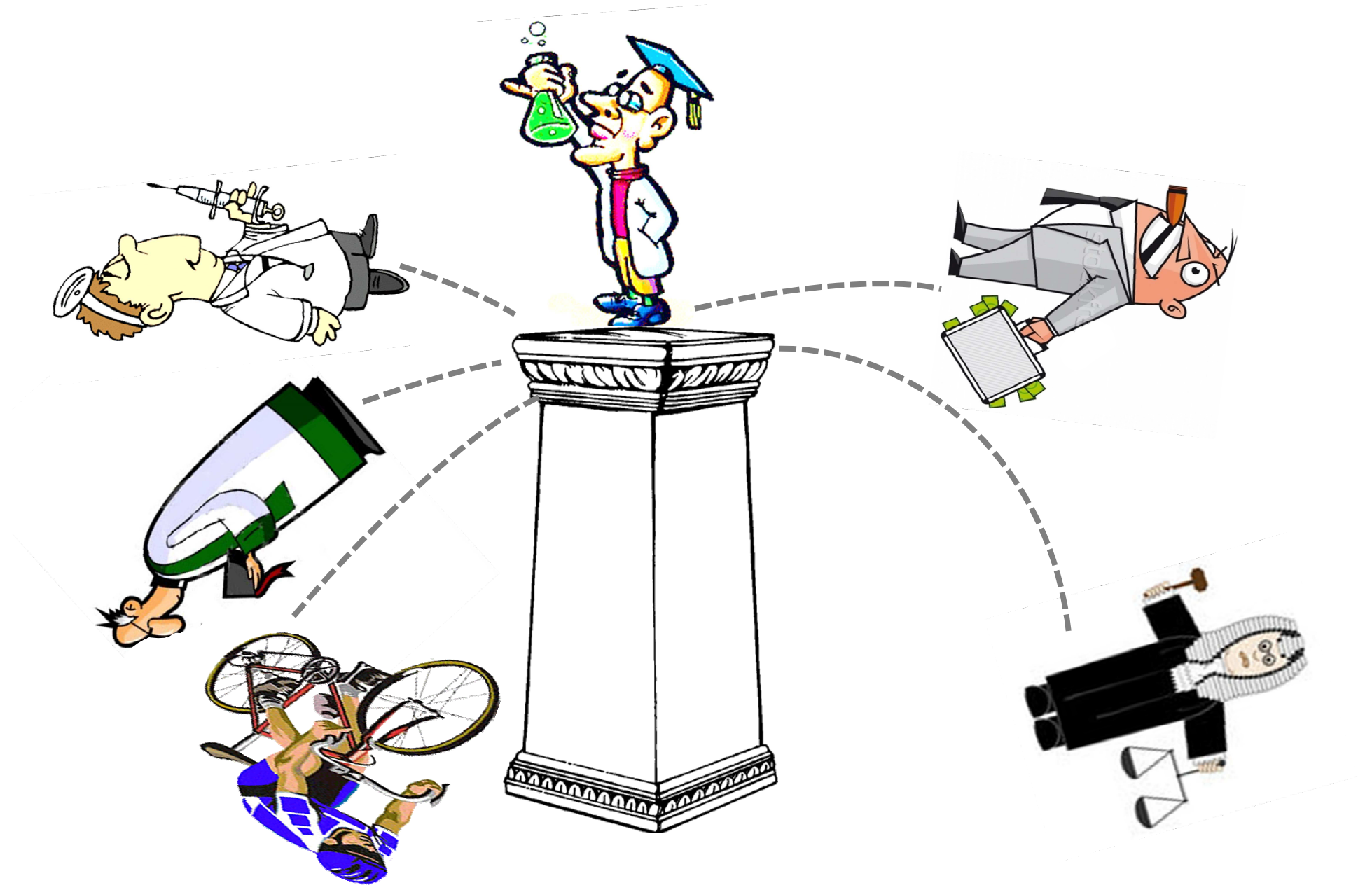
- Relevant details (study design, type of population, dosage, time window of exposure etc) are lost in the media

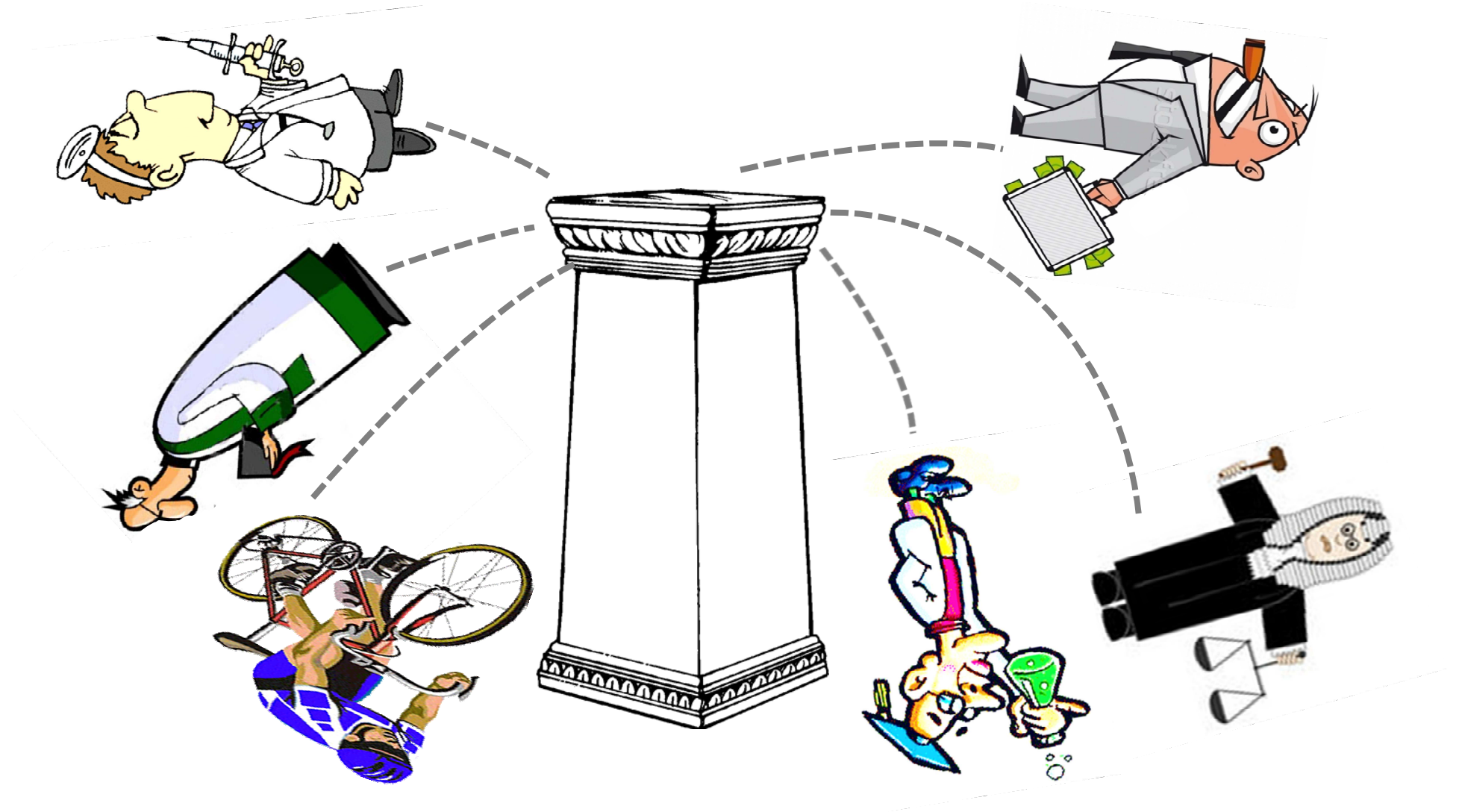
# Why science in the media?

- Show citizens, government, funding organizations what happens to their money
- Responsibility: share knowledge on nutrition, explain how it works
- Valorisation (important for sponsors)
- Get yourself *in the picture* for future funding
- PR important for university / food company / knowledge institute

# Time has changed







# Our country has 17 million experts

When it comes to

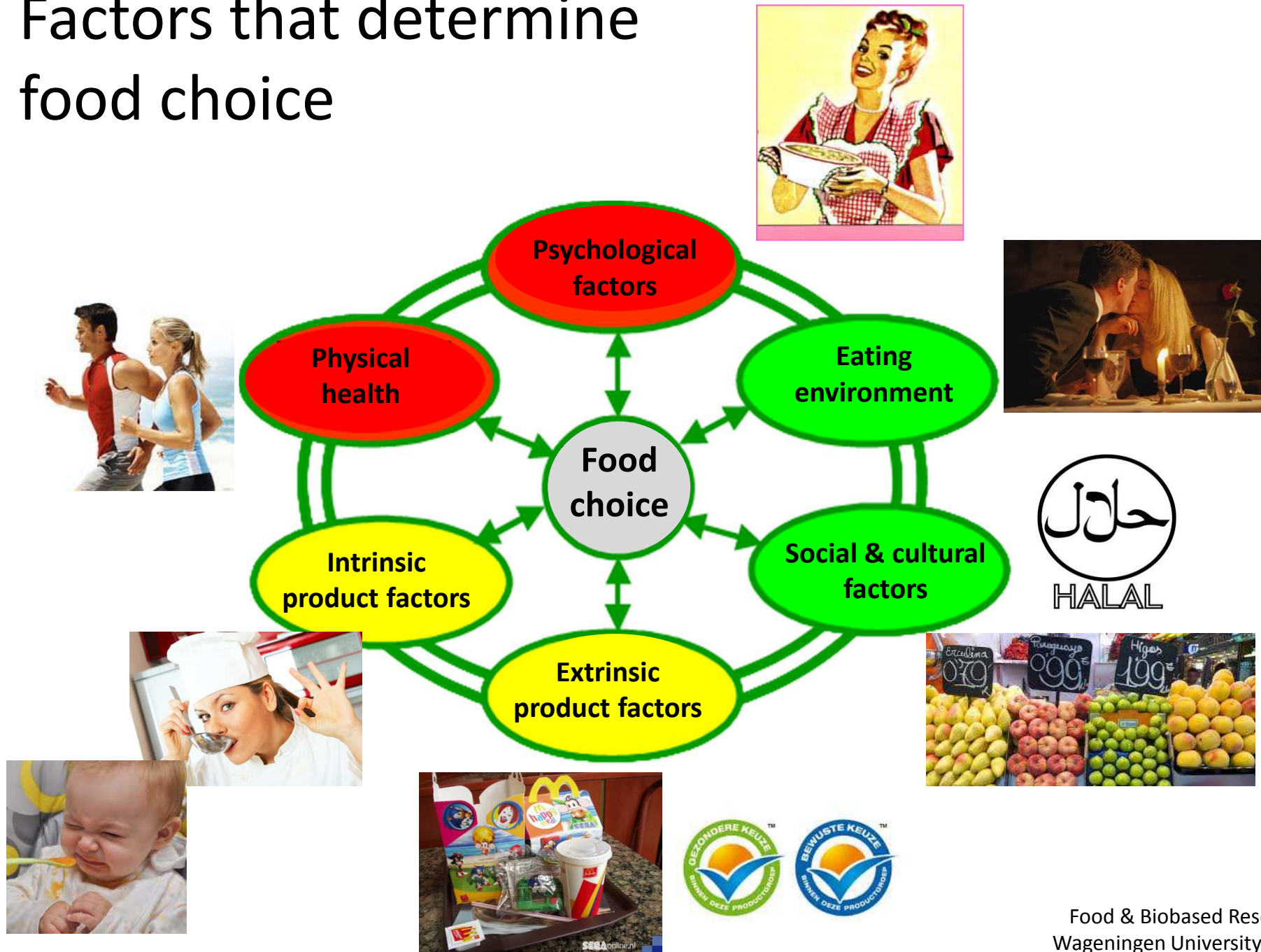
- Climate change
- Economic crisis
- Football
- ...



And: **NUTRITION**



# Factors that determine food choice



# The authority of nutritional science

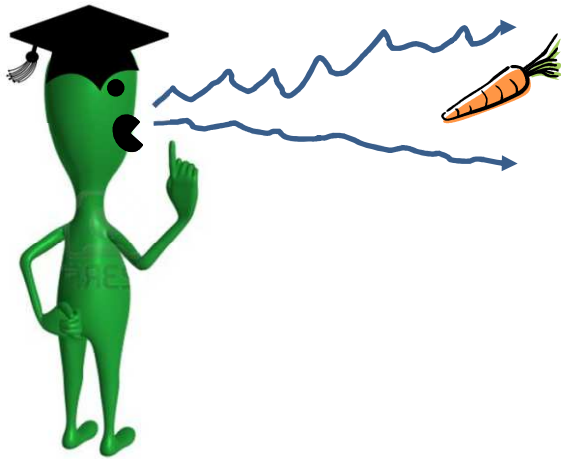
- Everybody has a say about it, they understand what it's about (in contrast to nanotechnology, astronomy)
- It touches emotions, culture, tradition, mum's cooking
- What scientists say can be verified against own experience
- Mixed messages in the media
- Influence of commercials, 'believers', advice by medical doctors who have no proper background in nutrition





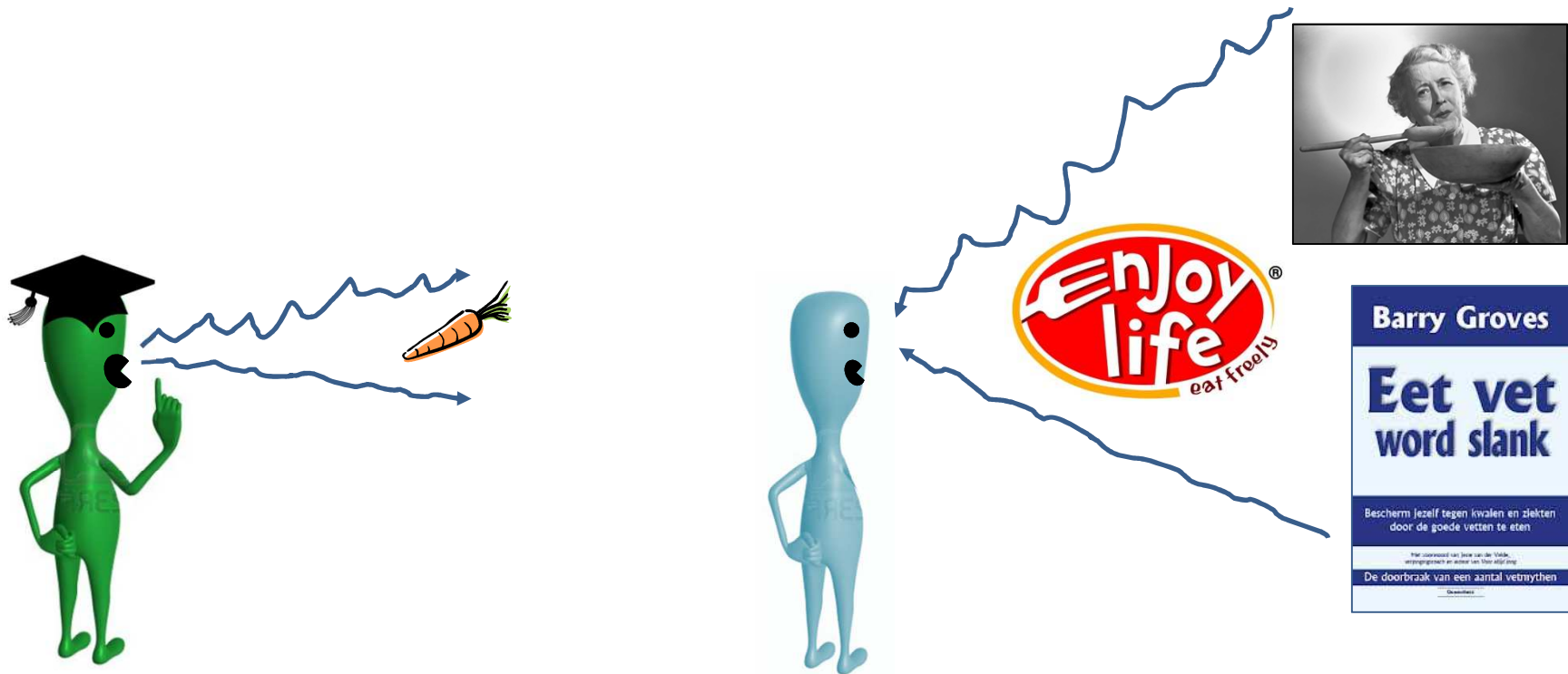
# Eating = Emotion

What does the consumer *want* to believe?



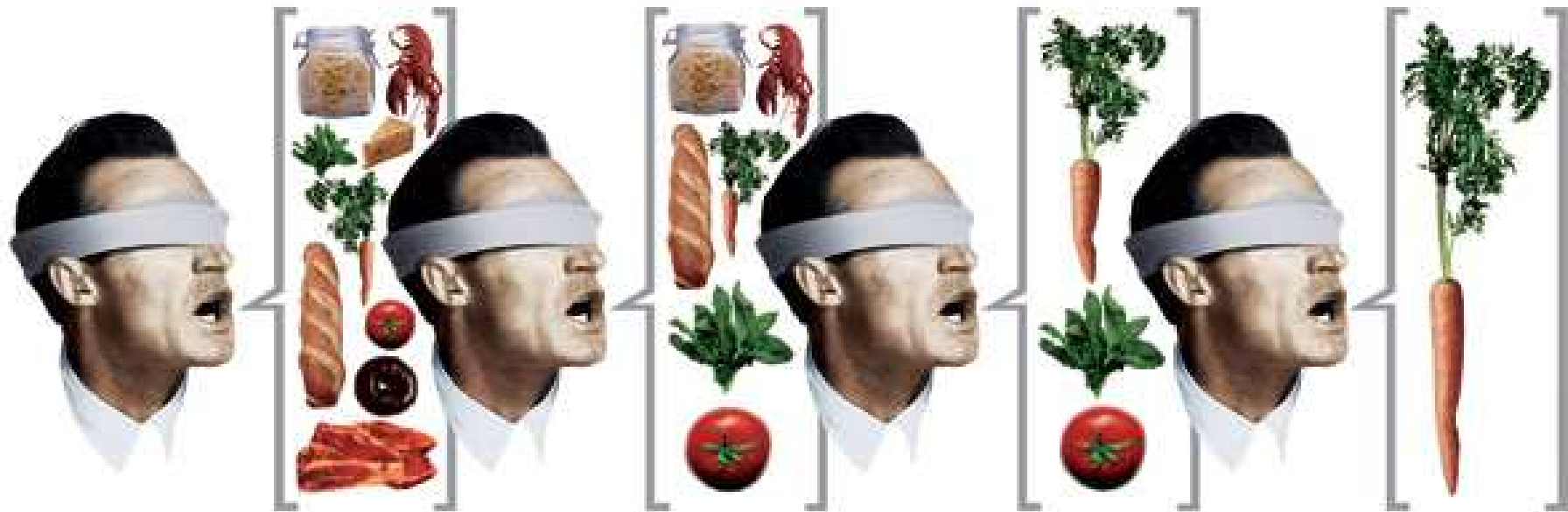
# Eating = Emotion

What does the consumer *want* to believe?



“Scientists don’t even know themselves!” → alibi

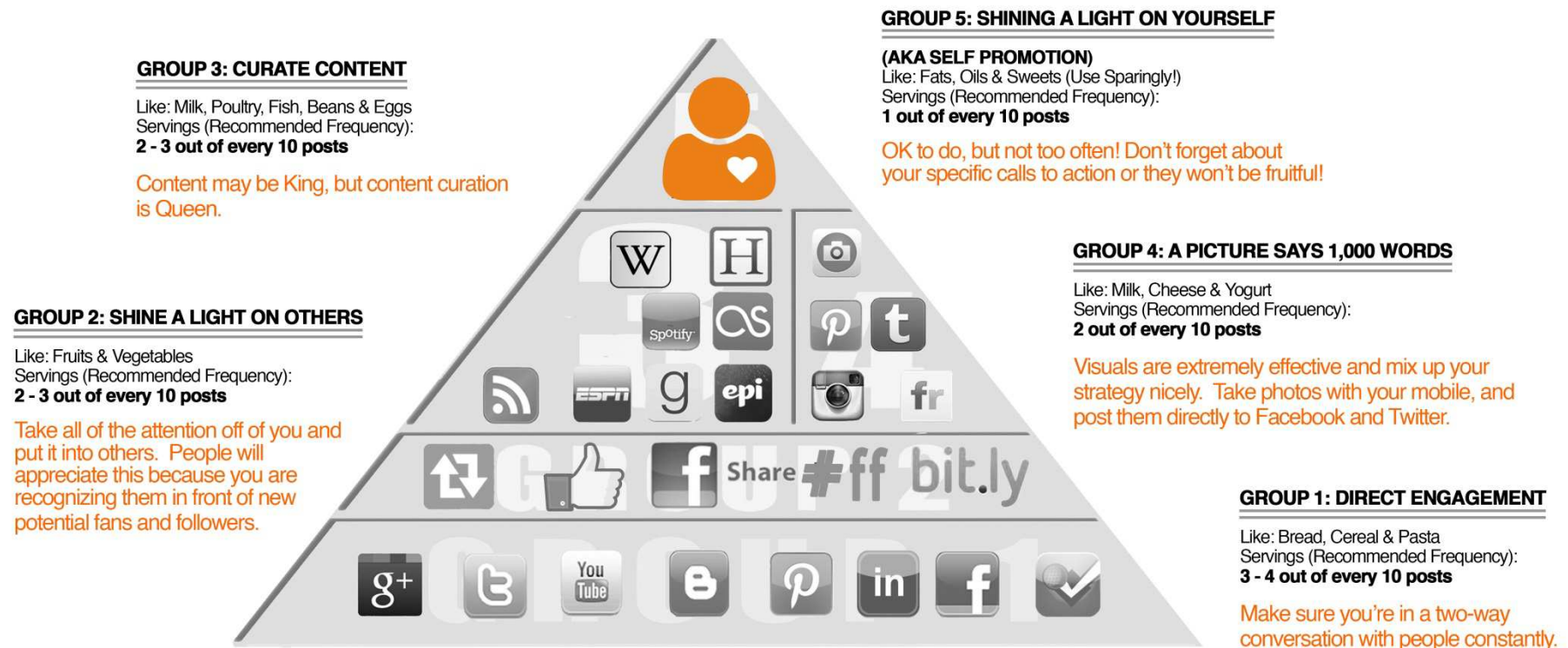
“I can’t eat anything anymore!”



The public is hungry



# There's a lot to eat on the internet



**SUMMARY:** Choose from Groups 1-5 and mix it up. Soon you will be fully engaging people easily and naturally, without thinking! Just like eating.

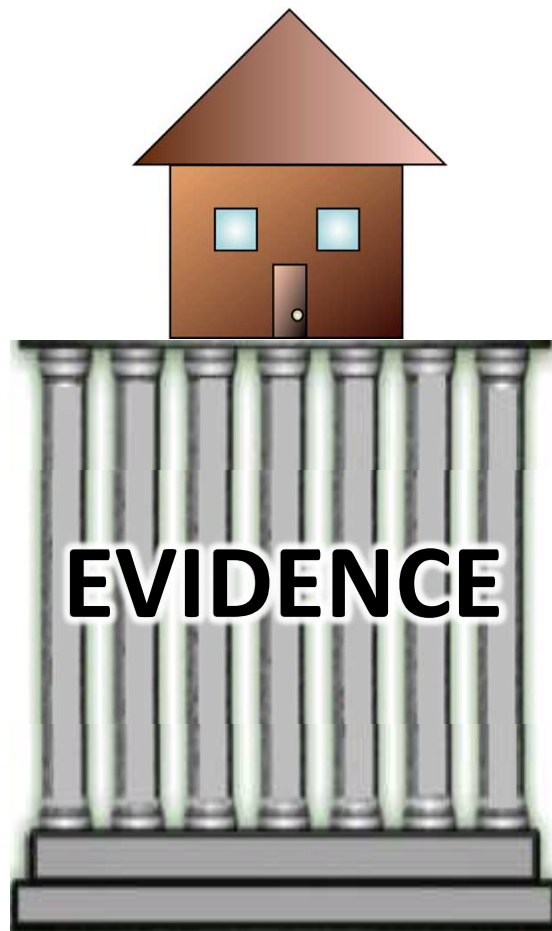
CyberPR.com  
Follow: @CyberPR

**The public  
wants this**





But nutritional  
scientists give  
them this



The public  
wants this



No McDonalds  
No cookies  
No pizza

In fact, nothing  
that induces any  
kind of pleasure!!





# Others offer something more tasty

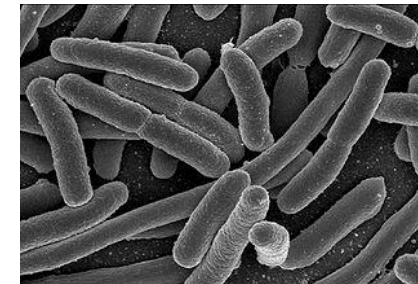
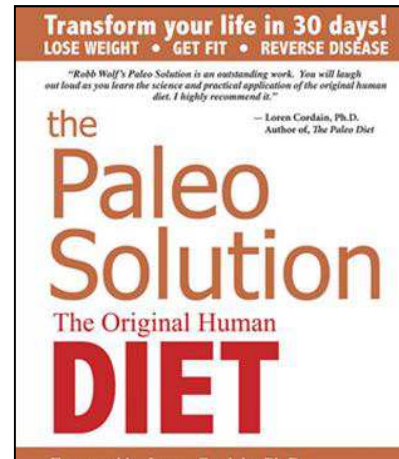
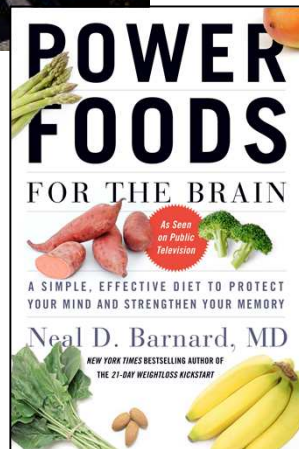
vanmenno



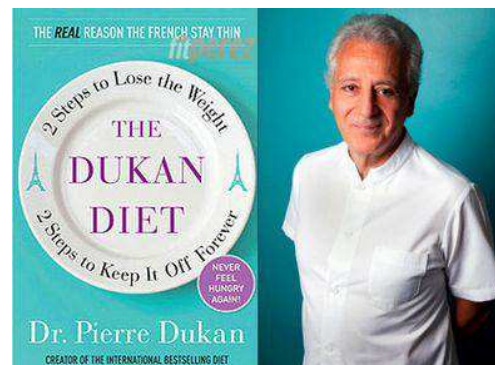
Van volkoren worden  
we alleen maar dikker



“Raw Tom”



Obesity caused by  
bacteria, not by calories





Don't eat anything your great-grandmother  
wouldn't recognize as food.

(Michael Pollan)

[izquotes.com](http://izquotes.com)

Who can be trusted?

# What people consider...

A 'reliable' face

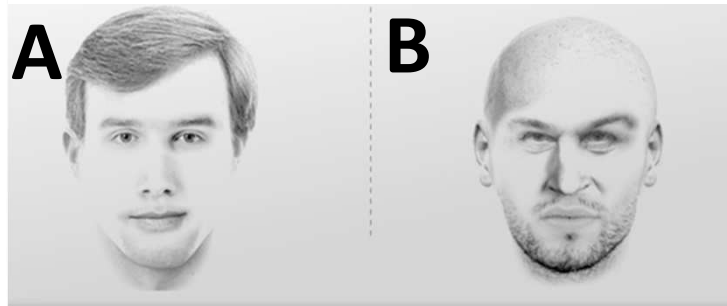


An 'unreliable' face



# Are you a look-a-like of person A?

1. Yes
2. No



A 'reliable' face



An 'unreliable' face



Number of publications: n=11



Number of publications: n=1100

# Reliability of information

- The information is as reliable as the source
- Who is the sender?
  - Well-educated and experienced in nutritional science?
  - Surrounded by critical mass?
  - Good reputation among scientific peers?
  - Commerical interest or other conflicts of interest?

# Reliability of information

- The information is as reliable as the source

- Scientists, journalists, press officers and policy makers are responsible for checking their sources and the messages they send to the public

Good reputation among scientific peers.

- Commercial interest or other conflicts of interest?



# Scientist's view on credibility

- Use of proper study designs and methods
- Don't overstate preliminary conclusions
- No (self-)plagiarism
- Justified co-authorships
- Accessibility of data
- Peer-review
- Track record (# publications)
- No strong views, accept uncertainties



# Public's view on credibility

Does he/she:

- care for me and my problems?
  - “white-coat effect”
- respect me and my decisions
  - understand my overweight, lifestyle, SES...
- make me feel comfortable?
- solve problems, come with solutions?
- have a strong opinion / stand for something?



# Views on credibility



**Rational  
(facts)**



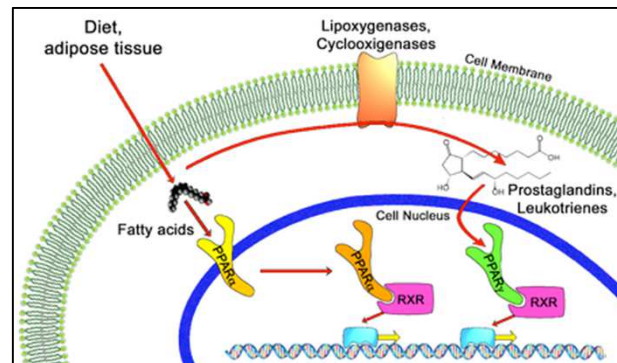
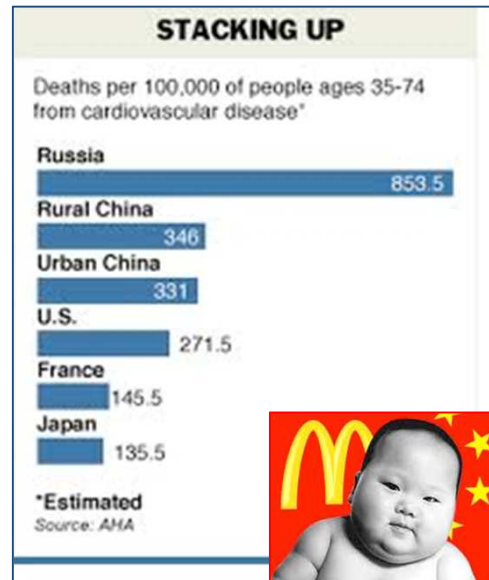
**Sensible  
(humanness)**

Why do we exist?

# We can make a difference!

- Poor nutrition is the **key risk factor** in the development of many diseases
  - in high-, middle; and low-income countries
  - e.g. 80% of cardiovascular diseases may be prevented by healthy diet & lifestyle!
- Poor nutrition impacts quality of life

# Happy with nutritional science





# How full is the glass?

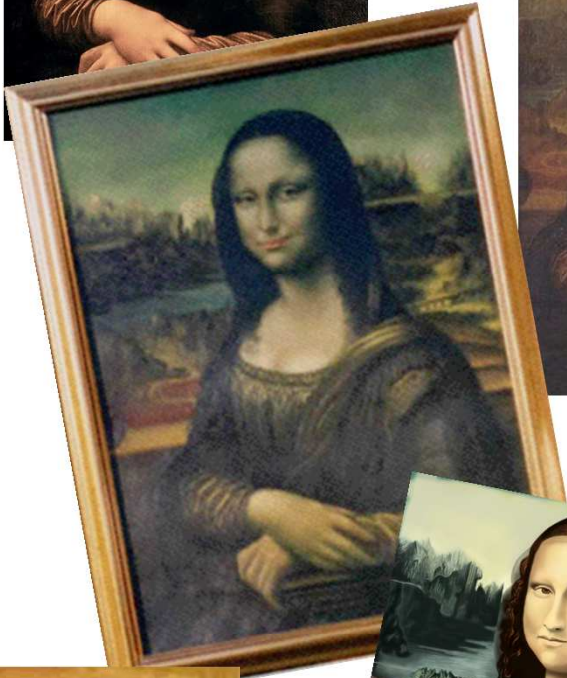


Emphasize achievements  
not missteps





Our asset: we have  
expert knowledge  
to differentiate!





# No underdog position!

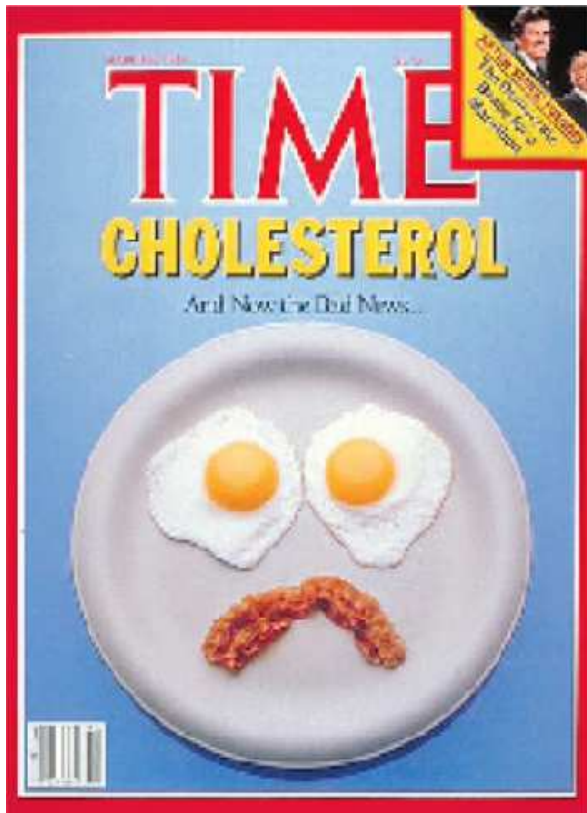


# No underdog position!



# However, be modest...

Harvard, 1980s



Coffee Is  
~~Bad~~ *good*  
for You

**EGG PHOBIA**



# We should not punch above our weight

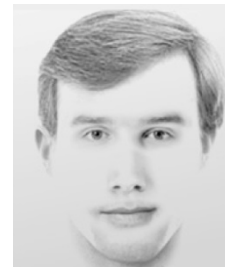
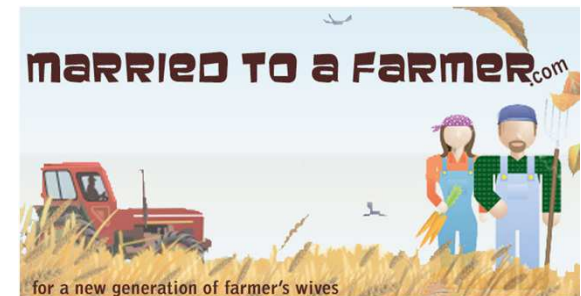
- Scientists
- Press officers
- University boards
- Journalists
- TV makers
- Policy makers
- Medical doctors





# To sum up...

- We live in a world full of noise
  - Pseudoscientists, commercials, emotion
- There is lots of solid nutritional science out there
  - Not mediagenic, but we have an asset: We are able to discriminate!
- Science is *trial & error*, controversies are essential
  - Be modest
- Take care of your conflicts of interest
- Two types of credibility:
  - In the scientific world
  - In the real world → take care of your appearance!



# Nutrition

an incredible science!



# 6 PROPOSITIONS



Inner drives of individual scientists affect  
the credibility of nutritional science

1. Yes
2. No



A nutritional scientist has the responsibility  
to influence public health policy

1. Yes
2. No



Your *personality* is as important as *facts*  
for your credibility as a scientist

1. Yes
2. No

# For a nutritional scientist it's essential to be visible

1. Yes
2. No



# Tell me who you go with, and I'll tell you who you are

“Waar je mee omgaat, daar raak je mee besmet”

1. Yes
2. No



**“You seem intelligent, capable, level-headed and mature.  
That’s a shame because I was really hoping you’d fit in here.”**

I am proud of my field  
(nutritional science)!

1. Yes
2. No