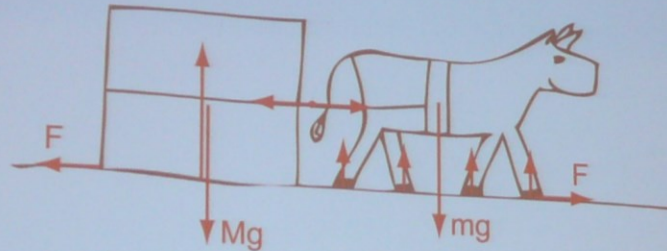


Hahaha - Feminist Perspectives on Humour in Science Teaching and Learning

Mar  erge



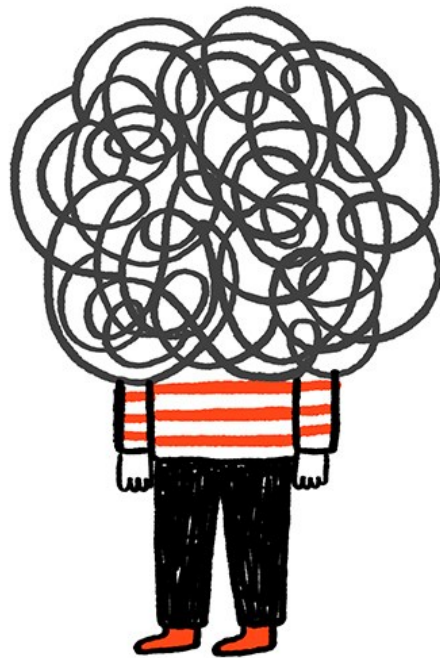
Force diagram



MARIA BERGE 2011



UMEÅ UNIVERSITY



ANXIETY

gemma
CORRELL



FESTIVE
ANXIETY

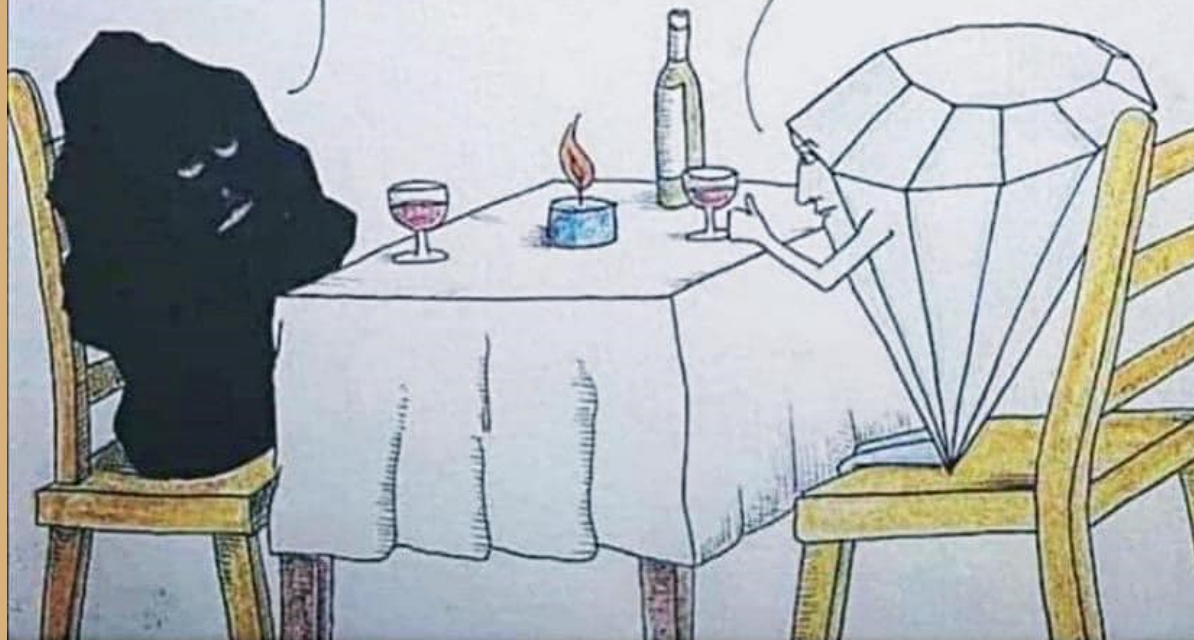


UMEÅ UNIVERSITY

Carbon dating

You look older than
your profile picture

I've been under
a lot of pressure

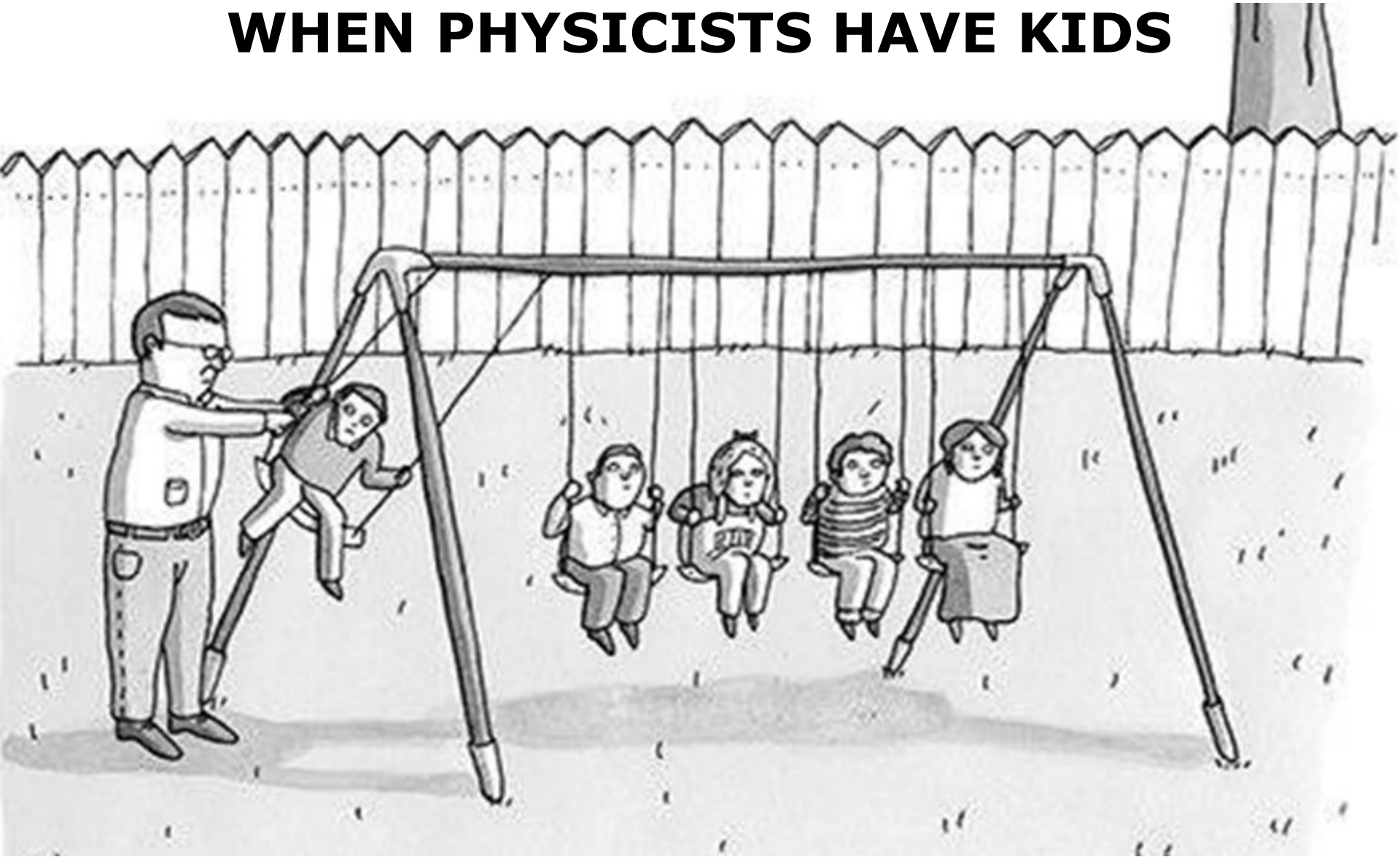


Another "Schrödinger's
cat" cartoon? That joke's
been done to death.

Or has it?



WHEN PHYSICISTS HAVE KIDS



Professor- "Think back to your first kiss. If you're a CS major, think ahead to your first kiss."

   904

64 Comments

 Like

 Comment



UMEÅ UNIVERSITY

A BRIEF OVERVIEW OF HUMOUR THEORY

- Incongruity theory
- Relief/Release Theory
- Superiority theory



Friedman, H. H., & Friedman, L. W. (2019). LAUGHING MATTERS: When Humor is Meaningful. *Available at SSRN 3418980*.

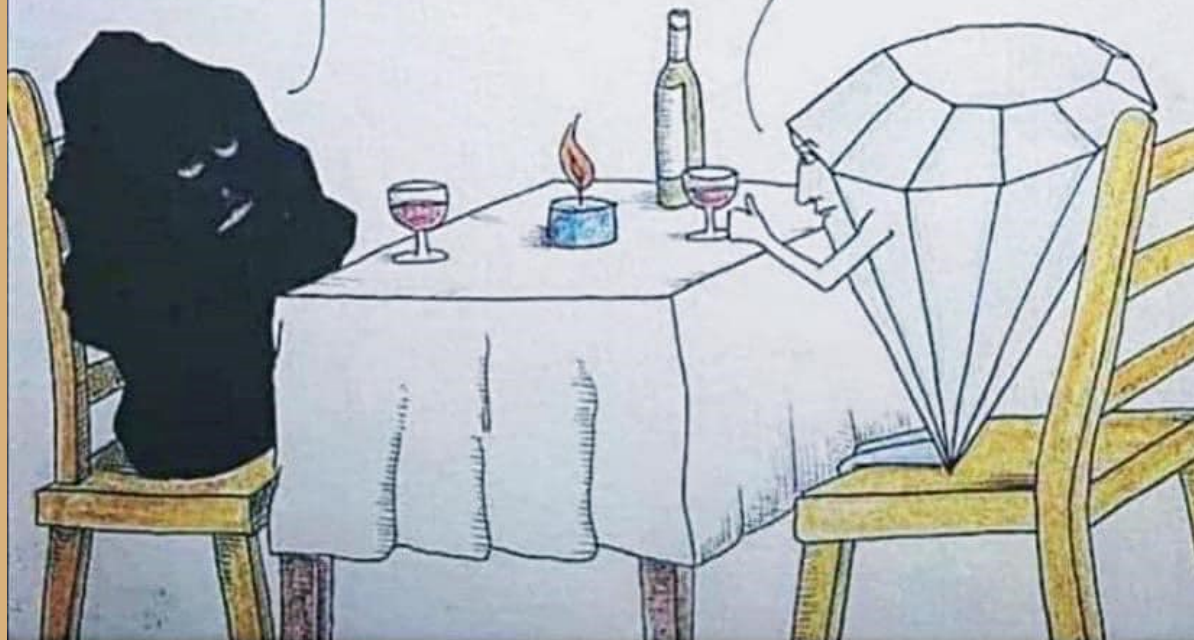


UMEÅ UNIVERSITY

Carbon dating

You look older than
your profile picture

I've been under
a lot of pressure



A BRIEF OVERVIEW OF HUMOUR THEORY

1. Humour is both universal and particular
2. Humour is social and anti-social
3. Humour is simultaneously mysterious and understandable

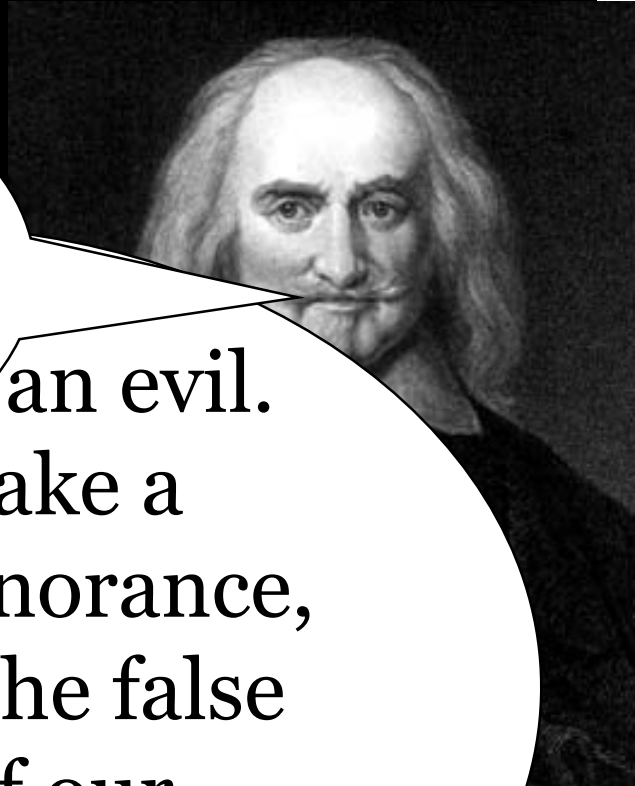
Billig, M. (2005). Laughter and ridicule: Towards a social critique of humour. Sage



UMEÅ UNIVERSITY

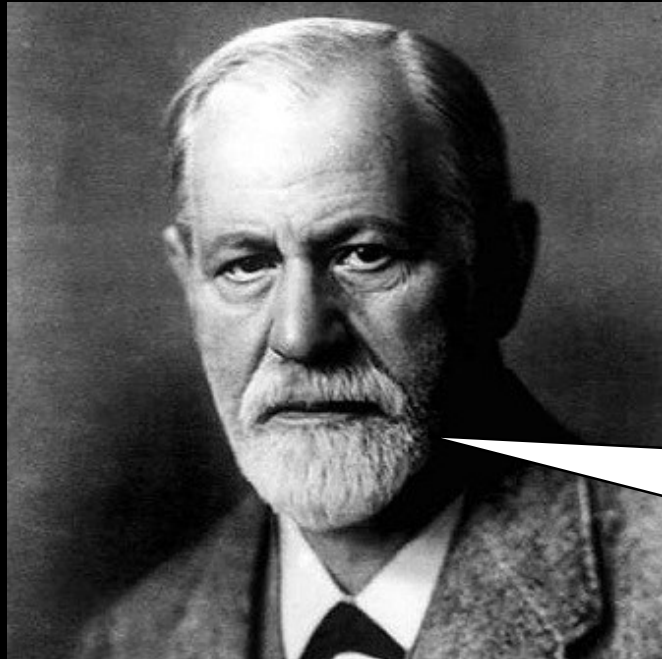


Laughter is not
innocent !



is an evil.
If we take a
pleasure in ignorance,
laughing at 'the false
conceits of our
friends', then we are
taking pleasure in evil!

UM



A joke
always hides
secrets!



UMEÅ UNIVERSITY

1 MINUTE

**THINK OF JOKE THAT
EFFECTED YOU SOMEHOW**

What was the joke about?

How did the joke make you feel?



UMEÅ UNIVERSITY

10 MINUTES

DISCUSS WITH YOUR NEIGHBOURS

Introduce yourself

- Name
- Pronouns
- Institution/Role
- Describe the feeling you felt when you heard this joke



UMEÅ UNIVERSITY

CANNED JOKES



I went to the Seminar Series on Equal Opportunities.
It was great! It was as good as the last two
combined.



UMEÅ UNIVERSITY

WHAT IS THE FUNCTION OF HUMOR?

Positive Humor	Negative Humor	General Humor
Disagree Compliment Self Self-disparaging/ Compliment partner Bonding humor	Down-putting partner Down putting task or other	Light humor ^a Tension release Nonverbal humor Laughing along Other humor
^a Light humor = Puns, canned jokes, anecdotes, or playful comments		

Dunbar, N. E., Banas, J. A., Rodriguez, D., Liu, S. J., & Abra, G. (2012). Humor use in power-differentiated interactions. *Humor: International Journal of Humor Research*, 25(4), 469–489. doi:10.1515/humor-2012-0025.



NEGATIVE HUMOUR

Sexism/Racism

Downwards in the hierarchy

Excludes



THE POWER OF LAUGHTER



- Humour is something we do together
- Laughter indicate that the joke is understood
- Laughter is also a way to construct power/humour



GENDER AND HUMOUR

- Humour is a negotiation of power
- Some people are always the targets
- People with power use humour to higher extent than those with less power
- Men make more jokes than women
- Women make more jokes when men are not there
- Laughter is form of power distribution
- Women make more answer laughter than men



A vertical pink watercolor brushstroke on the left side of the slide.

FEMINIST PERSPECTIVES

- Another instance: when I was younger, someone said to me that in not shaving my legs I was “making a feminist statement.” Not to go along with an expectation, you are making a statement. (Ahmed, 2016, p. 56)
- Collective expectations for and understandings of appropriate and desired behaviour (Anderson et al., 2010, p. 366).
- A norm is also a way of living, a way of connecting with others over or around something (Ahmed, 2016, p. 43)

Ahmed, S. (2016). *Living a feminist life*. duke university Press.

Anderson, M. et al. (2010) Extending the Mertonian Norms: Scientists' Subscription to Norms of Research, *The Journal of Higher Education*, 81:3, 366-393

SCIENCE HUMOUR



UMEÅ UNIVERSITY

A physicist should have both a Wife and a Mistress and furthermore each should be aware of the other. That way, the Wife will think he is with his Mistress and the Mistress will think he is with his Wife and he can go to the lab and get some work done.

I got this joke from my "mentors", Portuguese Phd students at CERN my first summer at CERN as an undergraduate.



5 MINUTES

DISCUSS WITH YOUR NEIGHBOURS

How is scientists portrayed in this joke?

What are the norms and expectations here?



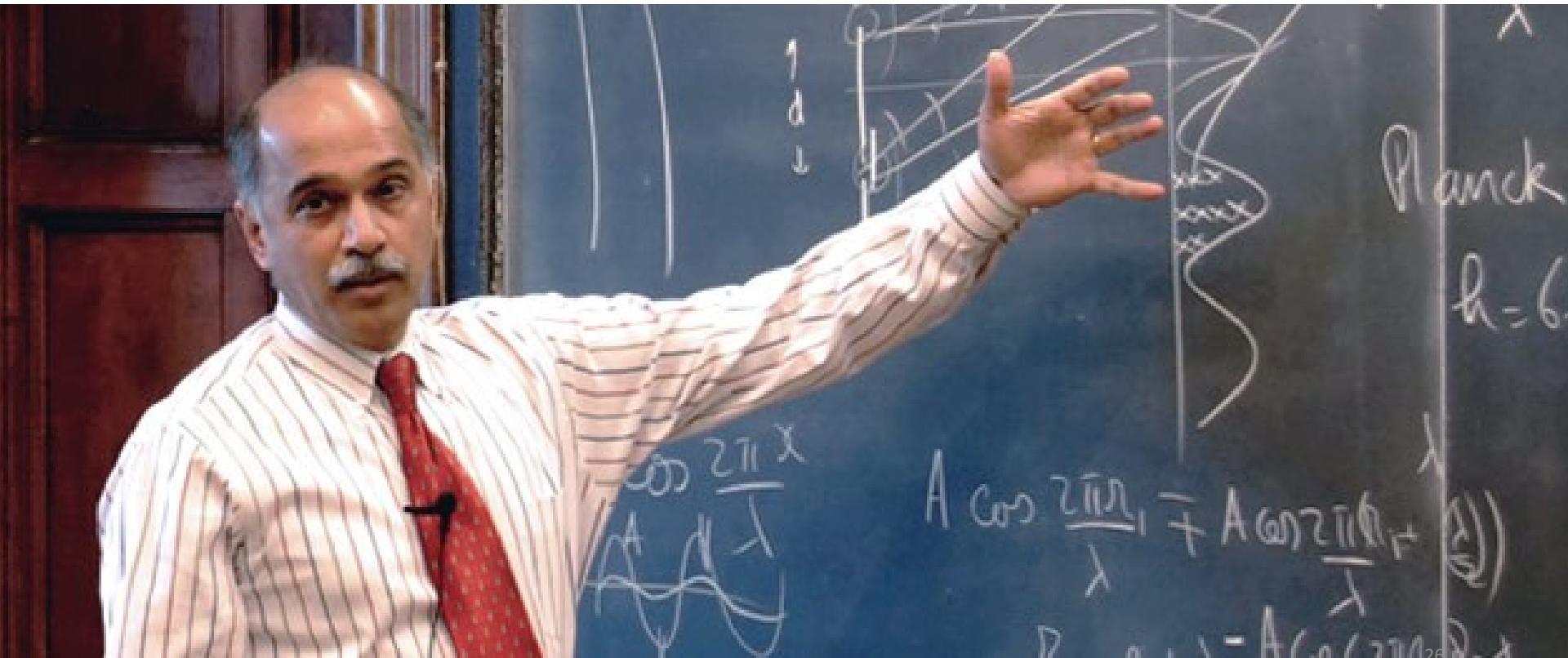
UMEÅ UNIVERSITY

SCIENCE HUMOUR



UMEÅ UNIVERSITY

Lecture jokes



Analysis

Discourses are ways of referring to or constructing knowledge about a particular topic of practice: a cluster (or formation) of ideas, images and practices, which provide ways of talking about, forms of knowledge and conduct associated with, a particular topic, social activity or institutional site in society. (Hall, 1997)

Johansson, A., & Berge, M. (2020). Lecture Jokes: Mocking and Reproducing Celebrated Subject Positions in Physics. In *Physics Education and Gender* (pp. 97-113). Springer, Cham

27



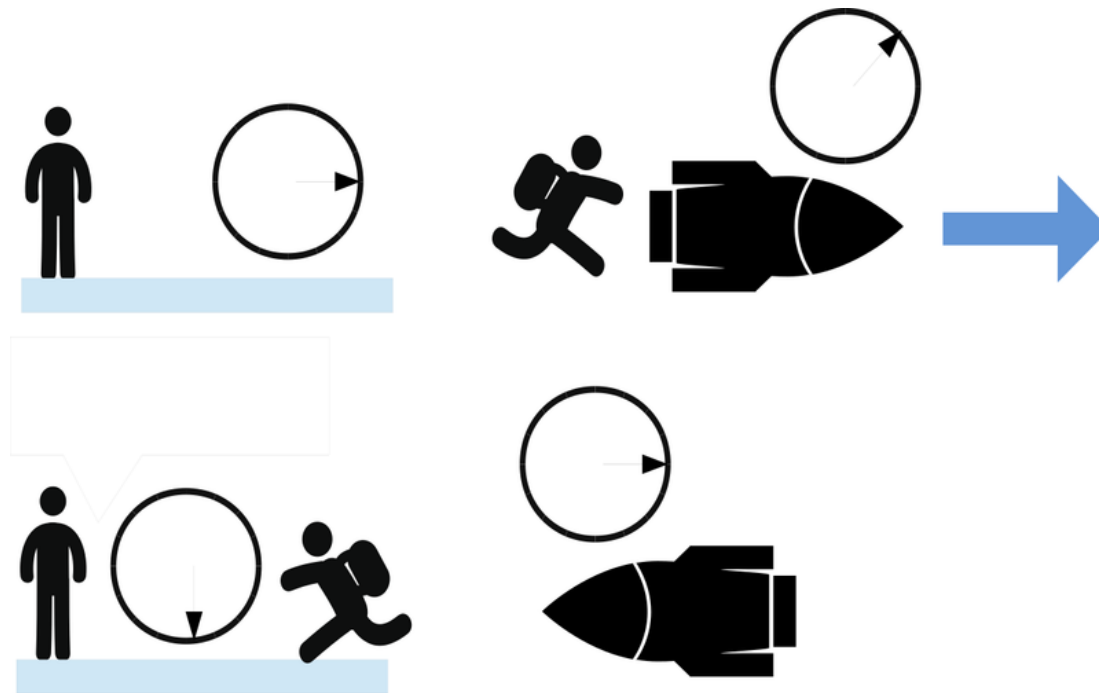
UMEÅ UNIVERSITY

Overview of data collection

Material	Jokes	Courses	Classes	Teachers
List of quotes from R. Shankar	111	1?	unknown	1
Observations of quantum physics classes at two Swedish universities	53	3	29	5
Observations of various classes at two Master's programmes in physics at two Scandinavian universities	13	5	7	5

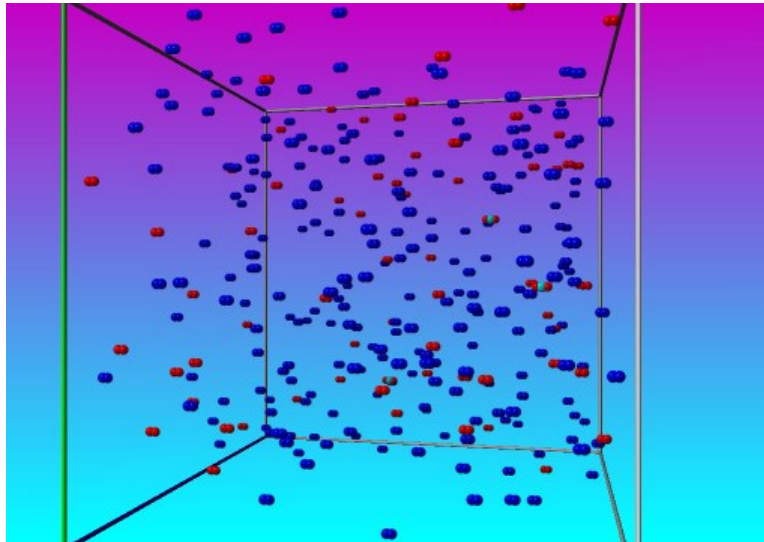


Results

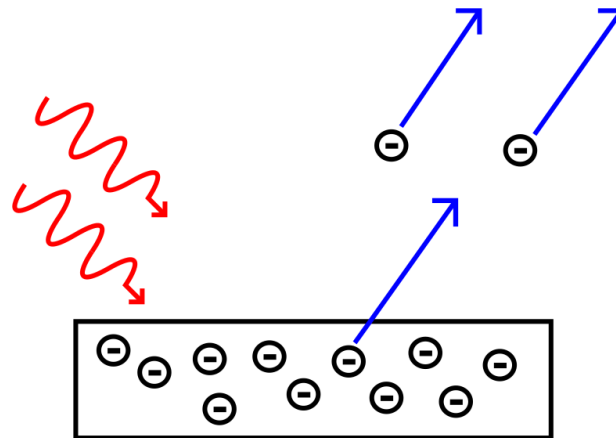


Physics content

‘If I could tag the air molecules – this is Joe, Joe, what are you doing?
Generally, Joe is just going back and forth’



The situation of learning physics



‘So, this was pretty easy. For this simple derivation he received the Nobel Prize in 1921 ... No, there were some other things as well’



Physics identity

‘This is a very important day. You can forget your birthday, forget anniversaries, but you need to remember this day, because this is the day that you will learn Newton's Laws.’



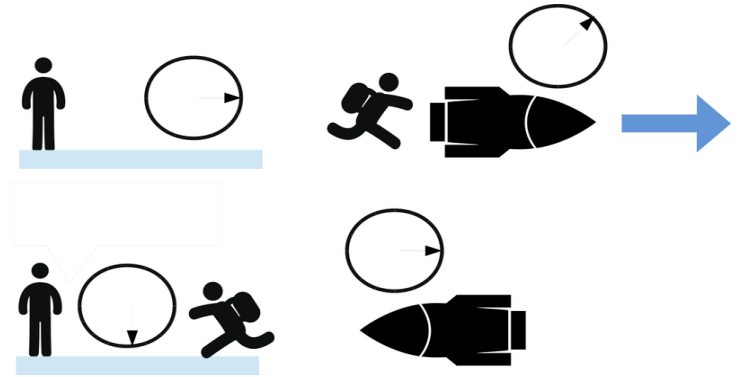
$$\sum \mathbf{F} = 0 \Leftrightarrow \frac{d\mathbf{v}}{dt} = 0$$

$$\mathbf{F} = m\mathbf{a}$$

$$\mathbf{F}_A = -\mathbf{F}_B$$



Conclusions



- Similarities in physics jokes across contexts
- No demeaning jokes

BUT:

- Lecture jokes mirror norms in physics
- This reproduces a picture of physicists and physics that may work to exclude some students



HUMOUR IN LIFE SCIENCE



Kobayashi, S., & Berge, M. (2022). Learning norms of science through laughter: a study of humour in life science supervision. *International Journal of Science Education*, 1-20.



UMEÅ UNIVERSITY

HUMOUR IN LIFE SCIENCE

MS: Next week is better, I mean, from now on, except for the fact that in week seven I am on holiday, then things are much better now. Life is easier, I hope

PhD2: **hehe**

MS: Hahahaha, maybe optimistic

CS: You always say that **hehe**

MS: ja, I know, I'm optimistic by nature

CS: **hehe**

PhD2: **hehe**

Kobayashi, S., & Berge, M. (2022). Learning norms of science through laughter: a study of humour in life science supervision. *International Journal of Science Education*, 1-20.



HUMOUR IN LIFE SCIENCE

PHD: I think we have a strategy, for me, for the next

MS: excellent

PHD: months **hehehehe** but eh, ja,

PHD: ehm, I don't even want to ask, but what about this eh, Baltic meeting

MS: you wanna go?

PHD: you are there, aren't you? You are the key speaker or something

MS: perhaps

PHD: or no? **haha**/

MS: you wanna go? and give my key presentation?

PHD: **haha** no (name of MS)



HUMOUR IN LIFE SCIENCE

MS: Do you wanna go [to the conference]? And give my key presentation? (to PhD1)

...

MS: two girls instead of you

L: **hehehe**

PhD1: two girls, blond, 180

MS+CS: **hehehe**

PhD1: **hahahahahahaha**



**WHO IS
WORKING
HERE?**

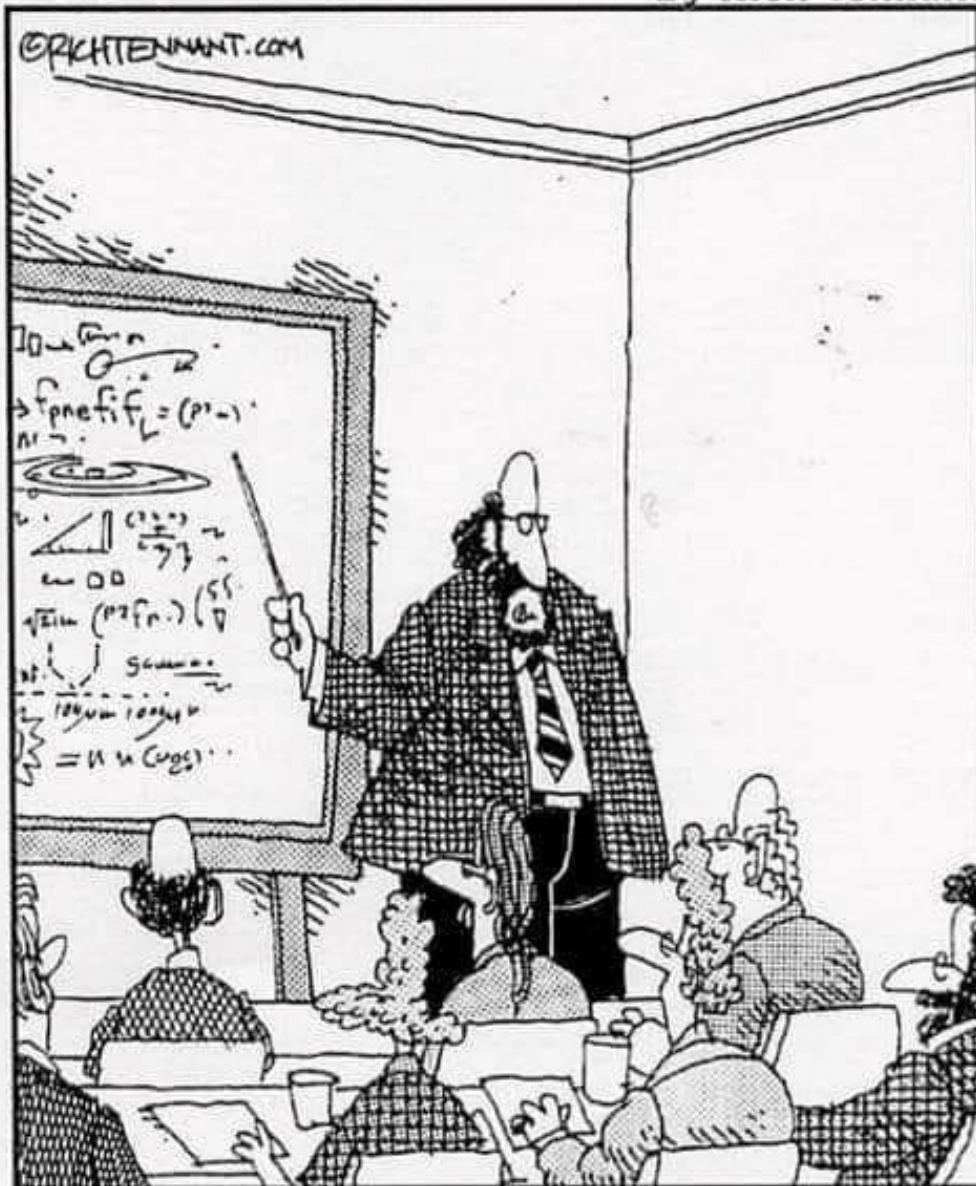


UMEÅ UNIVERSITY

The 5th Wave

By Rich Tennant

©RKTENNANT.COM



"After the discovery of 'antimatter' and 'dark matter', we have just confirmed the existence of 'doesn't matter', which does not have any influence on the Universe whatsoever."

10 MINUTES

DISCUSS WITH YOUR NEIGHBOURS

What kind of humour do you have at Uppsala University?

What kind of norms and expectations does your humour represent?

Are these norms good?



UMEÅ UNIVERSITY

TAKE HOME MESSAGES

Humour is everywhere

Humour is related to power

**Humour is to create a relaxed
atmosphere that allows participants to
talk freely and openly**

Jokes can be difficult to interpret

Let's be careful out there!





UMEÅ UNIVERSITY

WHO IS A DISCIPLINARY INSIDER?

Undergraduate students' jokes tend to refer to scientific knowledge that would be difficult for a newcomer to grasp. Hasse (2002).

Developing professional vision "All vision is perspectival and lodged within endogenous communities of practice. An archaeologist and a farmer see quite different phenomena in the same patch of dirt." Goodwin (1994)

Disciplinary language can "[...] afford and sustain both expert and naïve representations: the expert representation available to insiders to the academic professions and the naïve representation available to those outside" Geisler (1994:xi-xii)

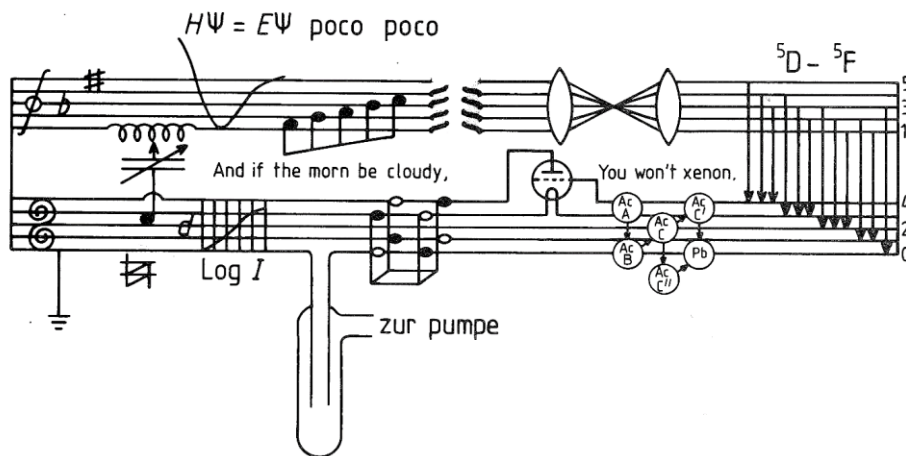
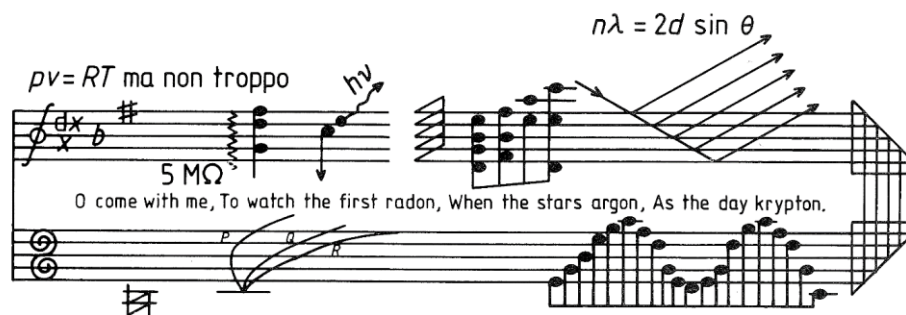


UMEÅ UNIVERSITY

BERLIN – UPPSALA SUMMER SCHOOL
DIVERSITY IN THE CULTURES OF PHYSICS

PHYSIKALISCHES LIED BY MOLLY KULE

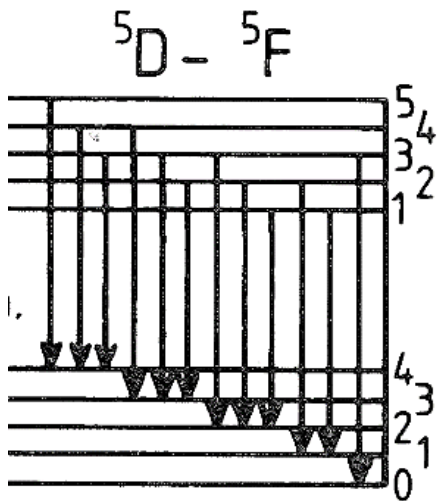
A study on the diatomic scale, arranged for a cyanogen band.



UMEÅ UNIVERSITY

BERLIN - UPPSALA SUMMER SCHOOL
DIVERSITY IN THE CULTURES OF PHYSICS

A WAY TO BECOME A DISCIPLINARY INSIDER?



It looks like to me, when it's going from one energy level to another, in you know, in an atom

This looks like you go backwards so to speak, you go one, two, three, four, five and then you start again, but I'm not really...



UMEÅ UNIVERSITY

BERLIN - UPPSALA SUMMER SCHOOL
DIVERSITY IN THE CULTURES OF PHYSICS

WHO IS A DISCIPLINARY INSIDER?

A: Everything we can recognize--I don't think there's anything there we can't recognize.

B: No, either it's a physics symbol or it's a mathematical symbol

A: As I said I associate this with the music of the fifties---a very clear association I'd say

A: They're just messing about so people can't understand laugh

B: Yes it's irritating to not understand what it is



UMEÅ UNIVERSITY

BERLIN - UPPSALA SUMMER SCHOOL
DIVERSITY IN THE CULTURES OF PHYSICS