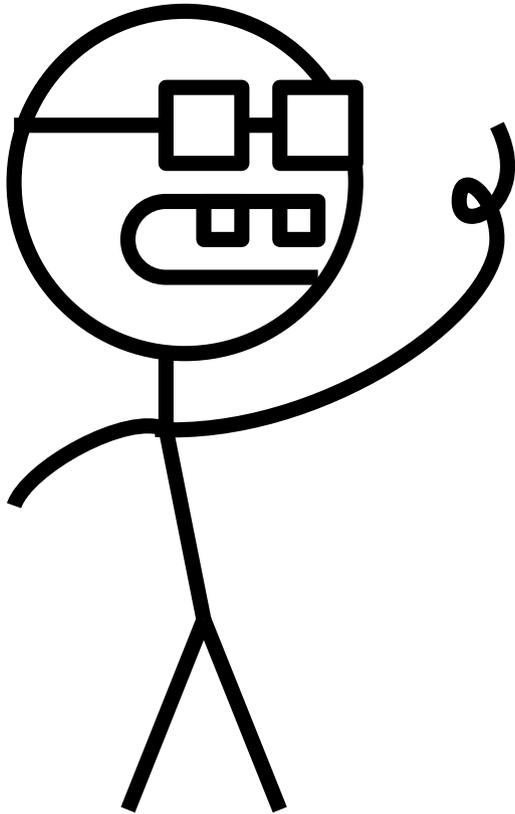


Charlie's Grand Challenge

A breif history of snobbery

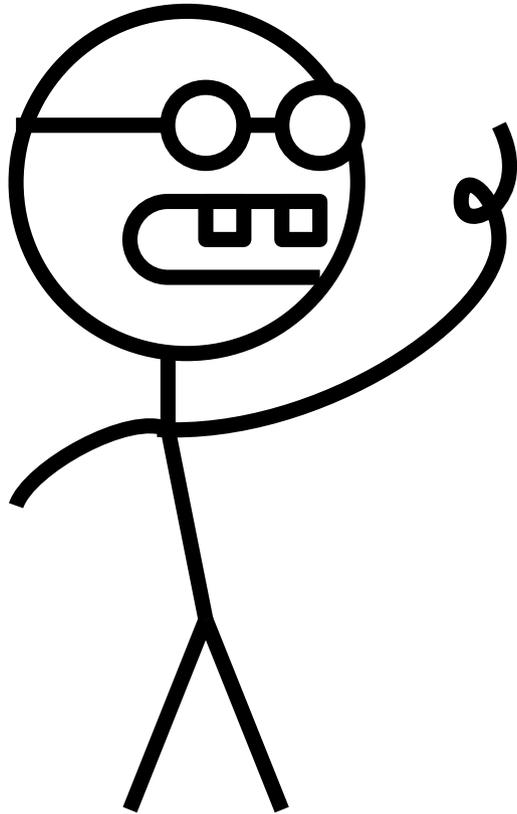
A breif history of snobbery

Actually...

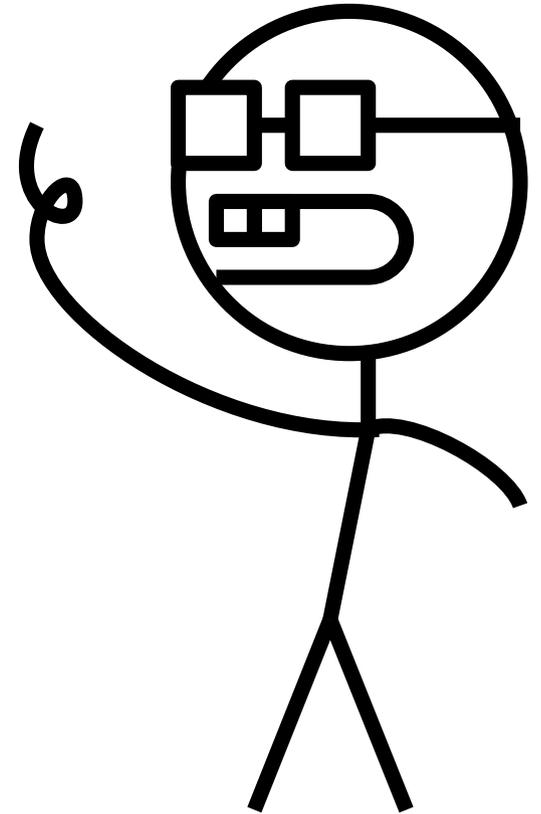


What is a snobbery?

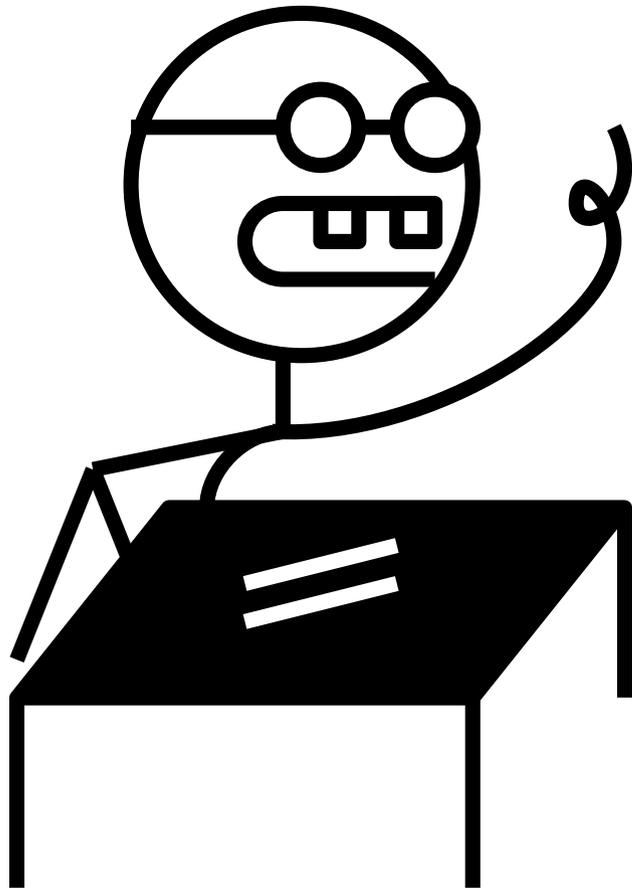
**Apple makes the
best computers.**



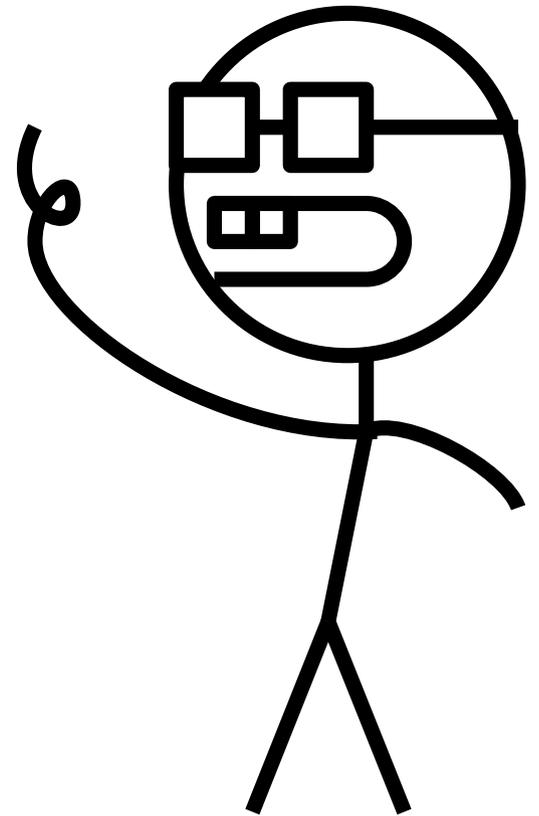
**Actually you're
wrong but I wouldn't
expect a Mac user
to understand**



**Actually this is
Fairtrade cocaine!**

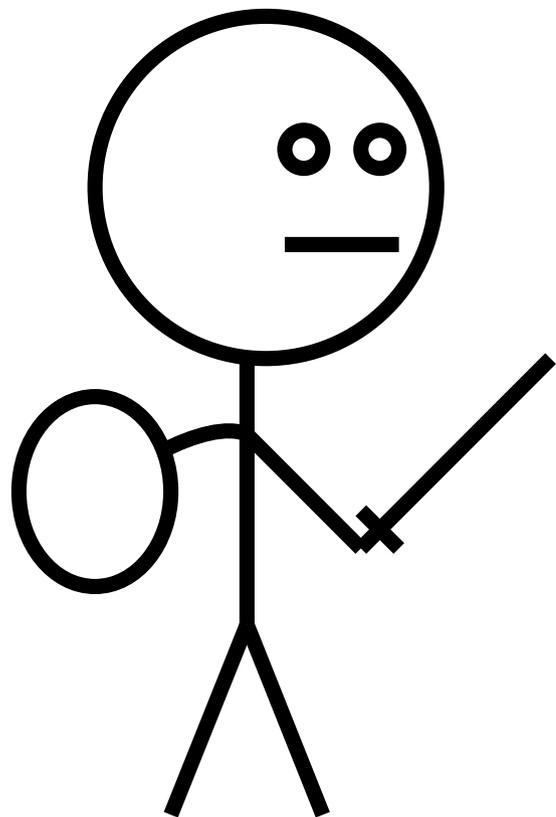


**HA!
But is it organic?**

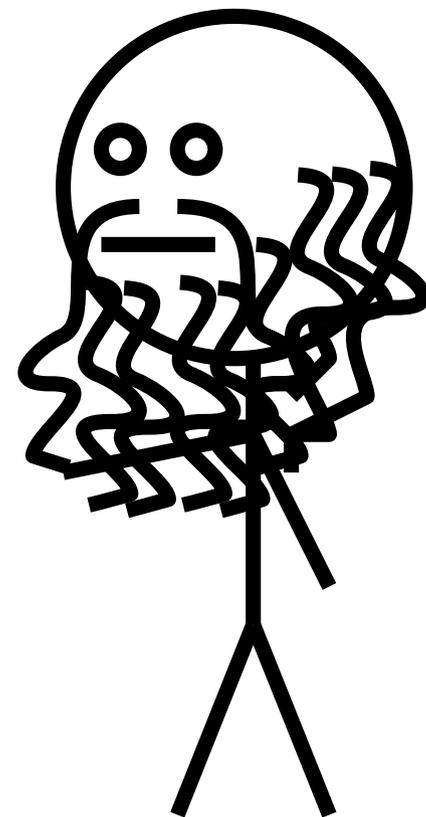


Time before snobbery

Being a soldier is a noble profession



But why?



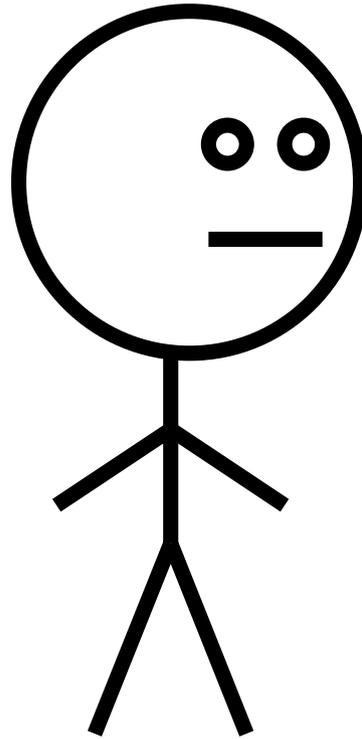
For

**Murdering people
is wrong**

**Wars have to be for
a reason and not
just to demonstrate
courage**

**Pursuit of glory is
not a selfless act**

?



Against

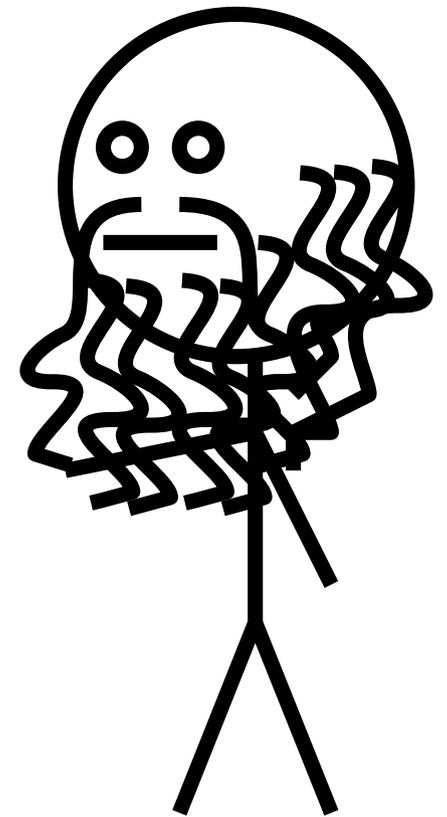
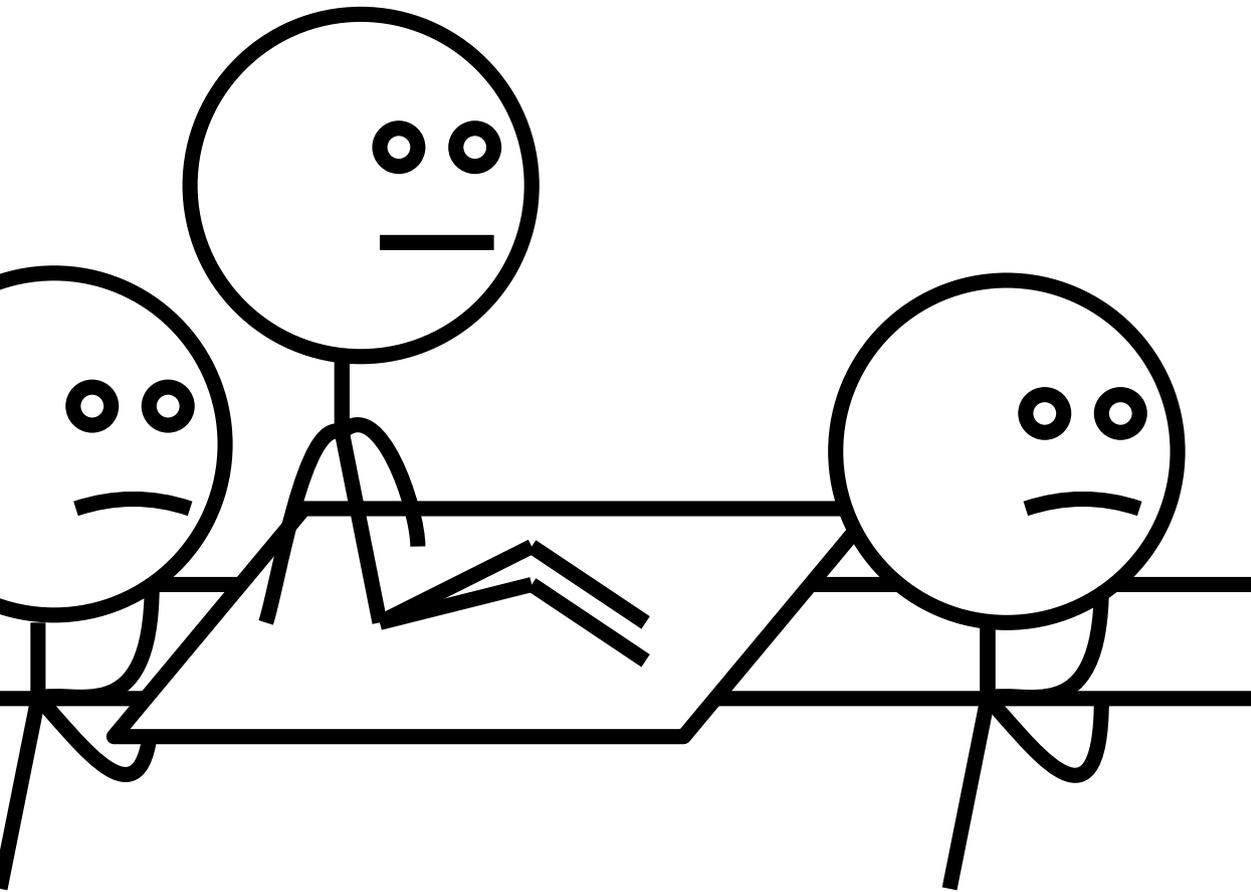
**This person does
not seem to have
common sense**

**But I like it the
way things are**

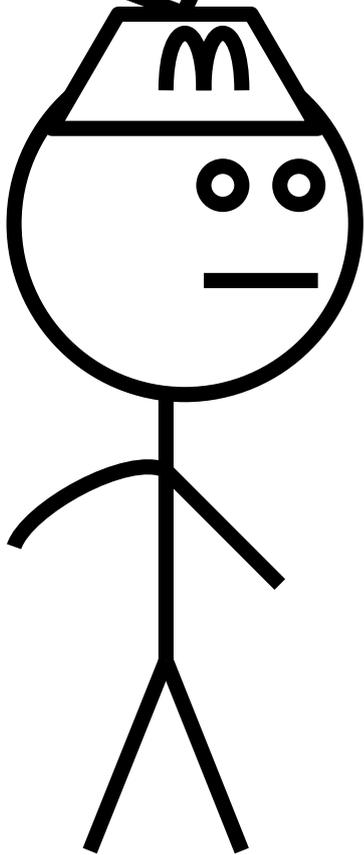
**Looks like he
hasn't had a
wash for weeks**

**Owning slaves is
acceptable**

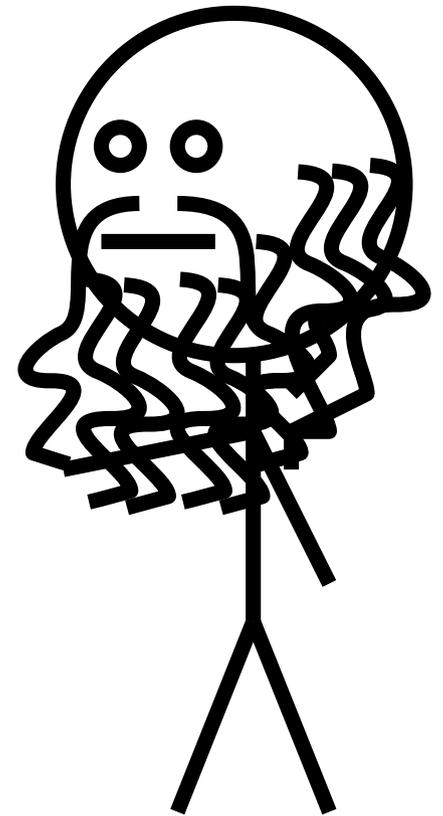
But why?



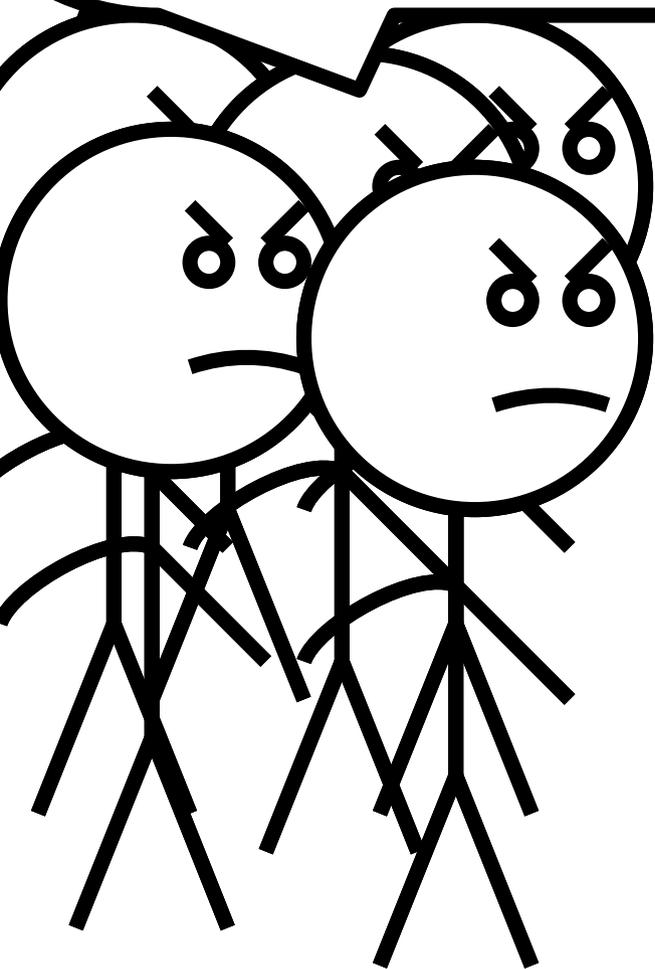
**Would you like fries
with that?**



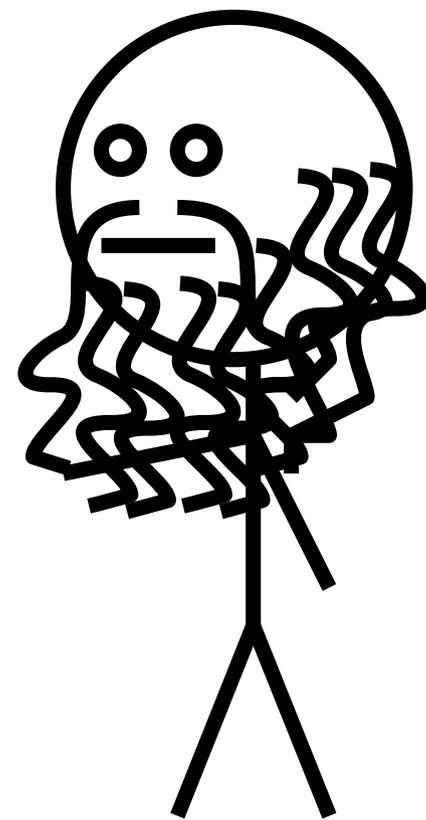
But why?



Lets shut him up



But why?



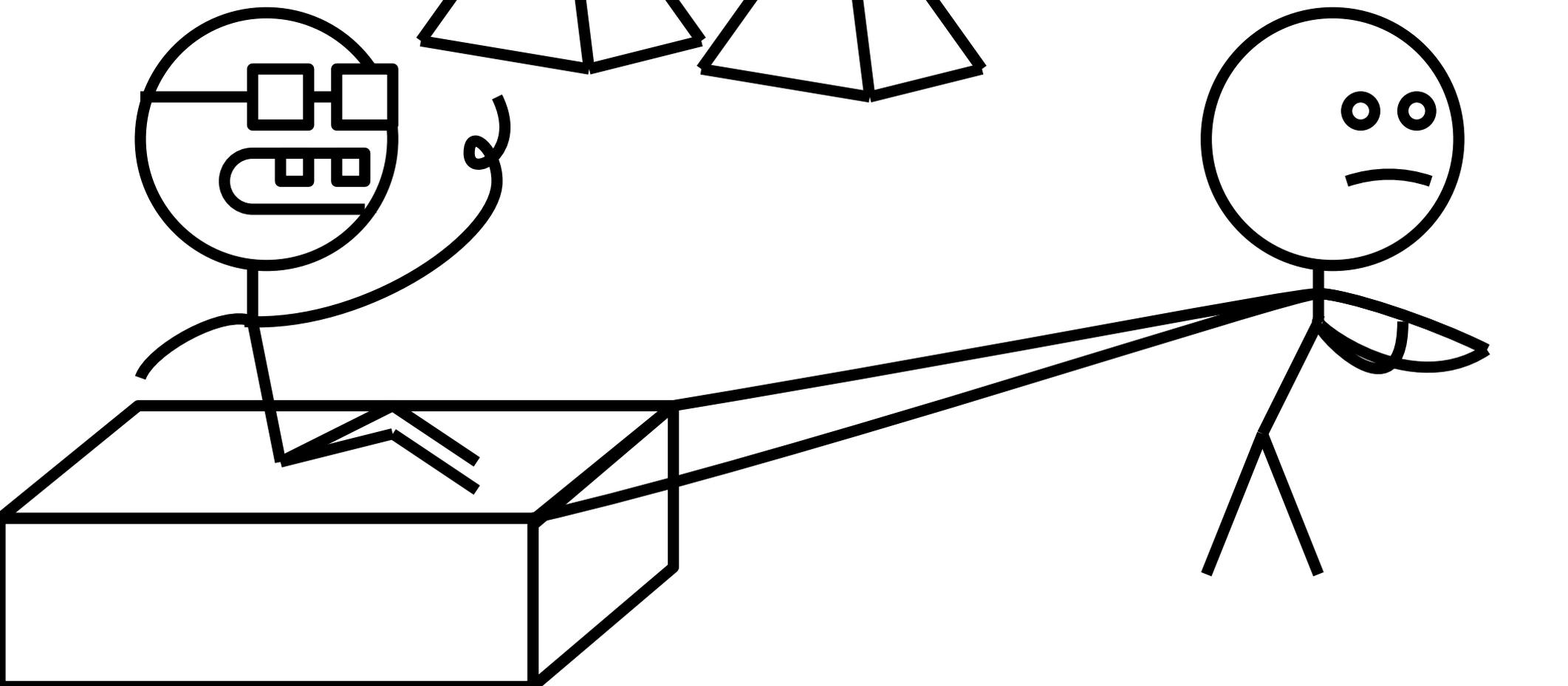
Stop whining!



Origins of snobbery

**This is the the natural
order of things**

But why?



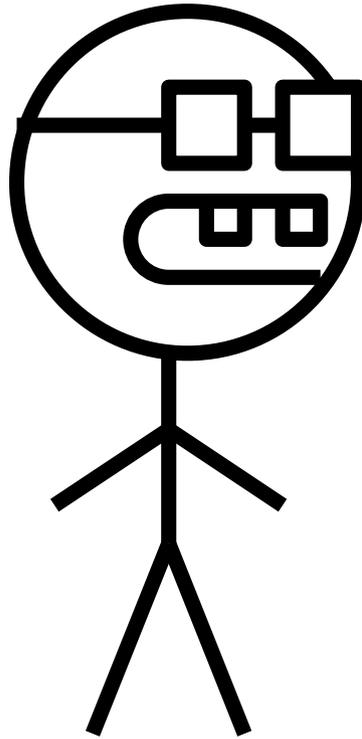
For

~~Murdering people
is wrong~~

~~Wars have to be for
a reason and not
just to demonstrate
courage~~

~~Pursuit of glory is
not a selfless act~~

?



Against

This person does
not seem to have
common sense

Common sense is the collection
of prejudices acquired by age
eighteen

Albert Einstein

Cats have 4 legs

Sky is blue

Fire is hot

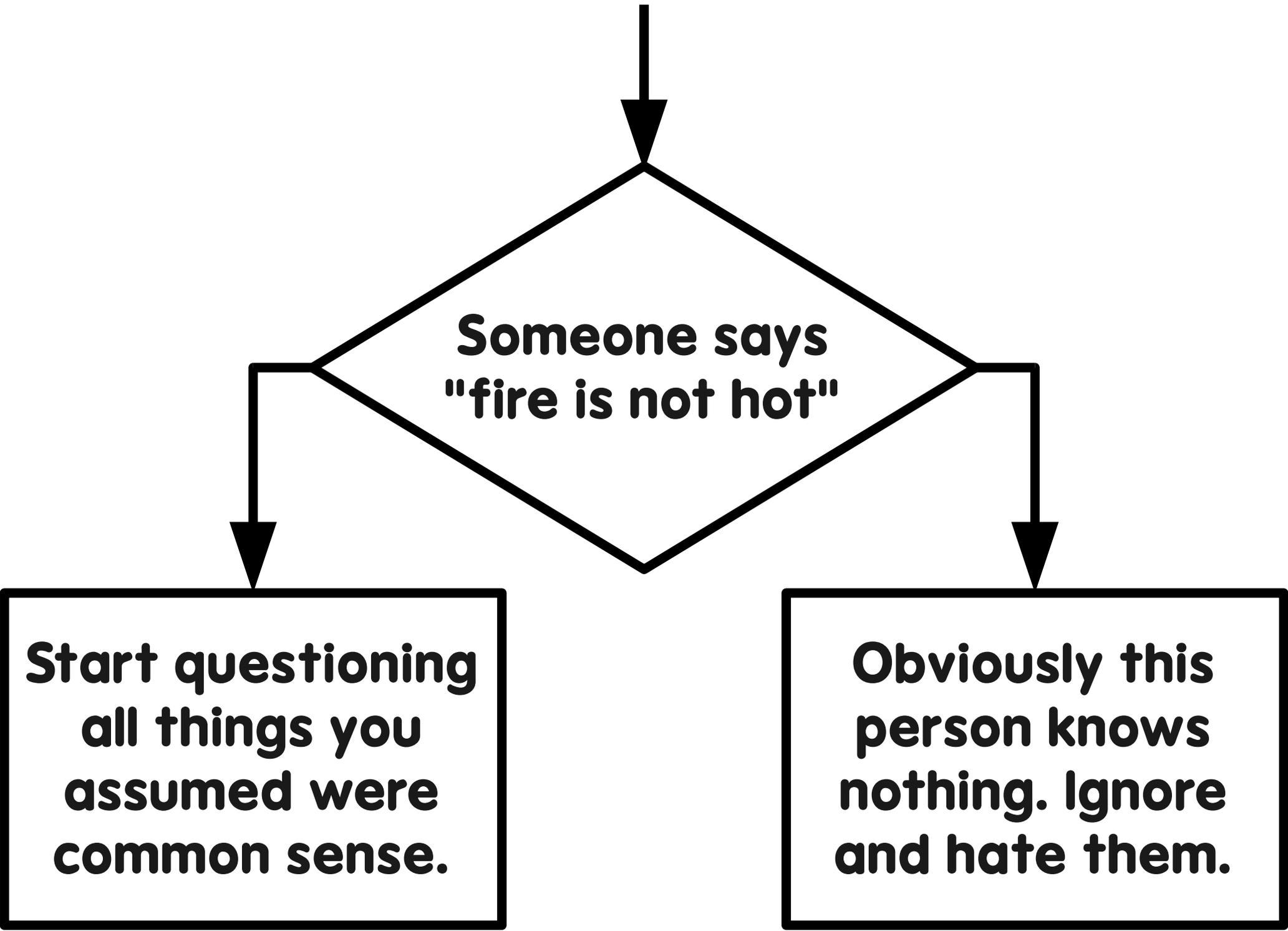
Common Sense

I am fantastic

Slaves are stupid

Indent with tabs

My iPhone loves me



```
graph TD; A[ ] --> B{Someone says "fire is not hot"}; B --> C[Start questioning all things you assumed were common sense.]; B --> D[Obviously this person knows nothing. Ignore and hate them.];
```

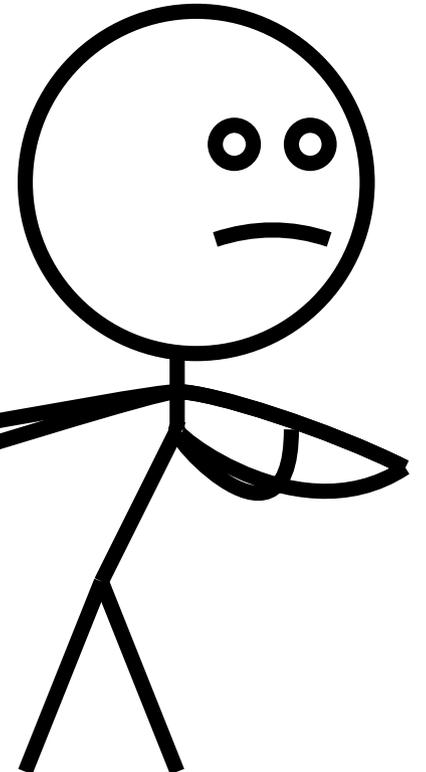
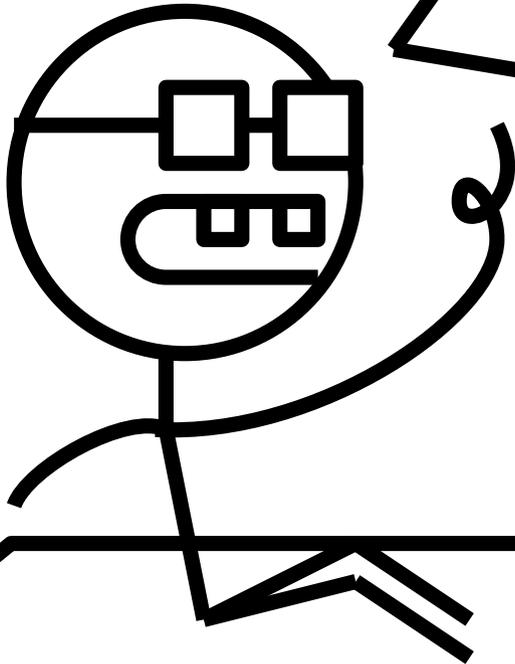
**Someone says
"fire is not hot"**

**Start questioning
all things you
assumed were
common sense.**

**Obviously this
person knows
nothing. Ignore
and hate them.**

Your inability to understand the natural order is why

Grumble grumble...



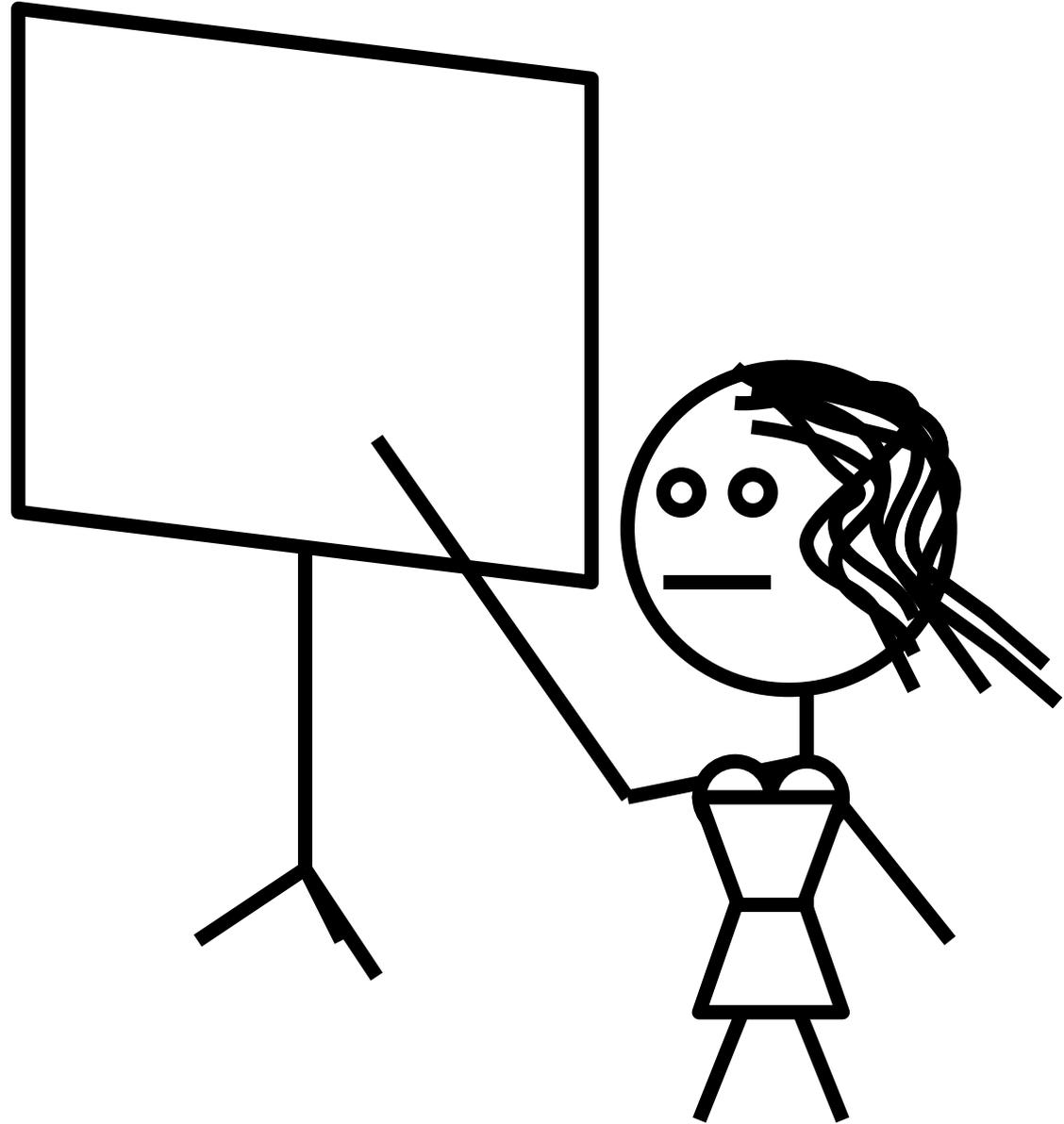
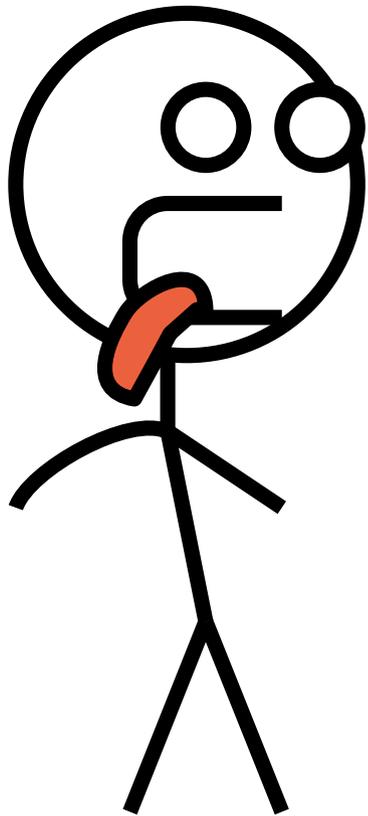
The wisdom of a learned man
cometh by opportunity of leisure:
and he that hath little business
shall become wise.

How can he get wisdom that
holdeth the plough, and that
glorieth in the goad, that driveth
oxen, and is occupied in their
labours, and whose talk is of
bullocks?

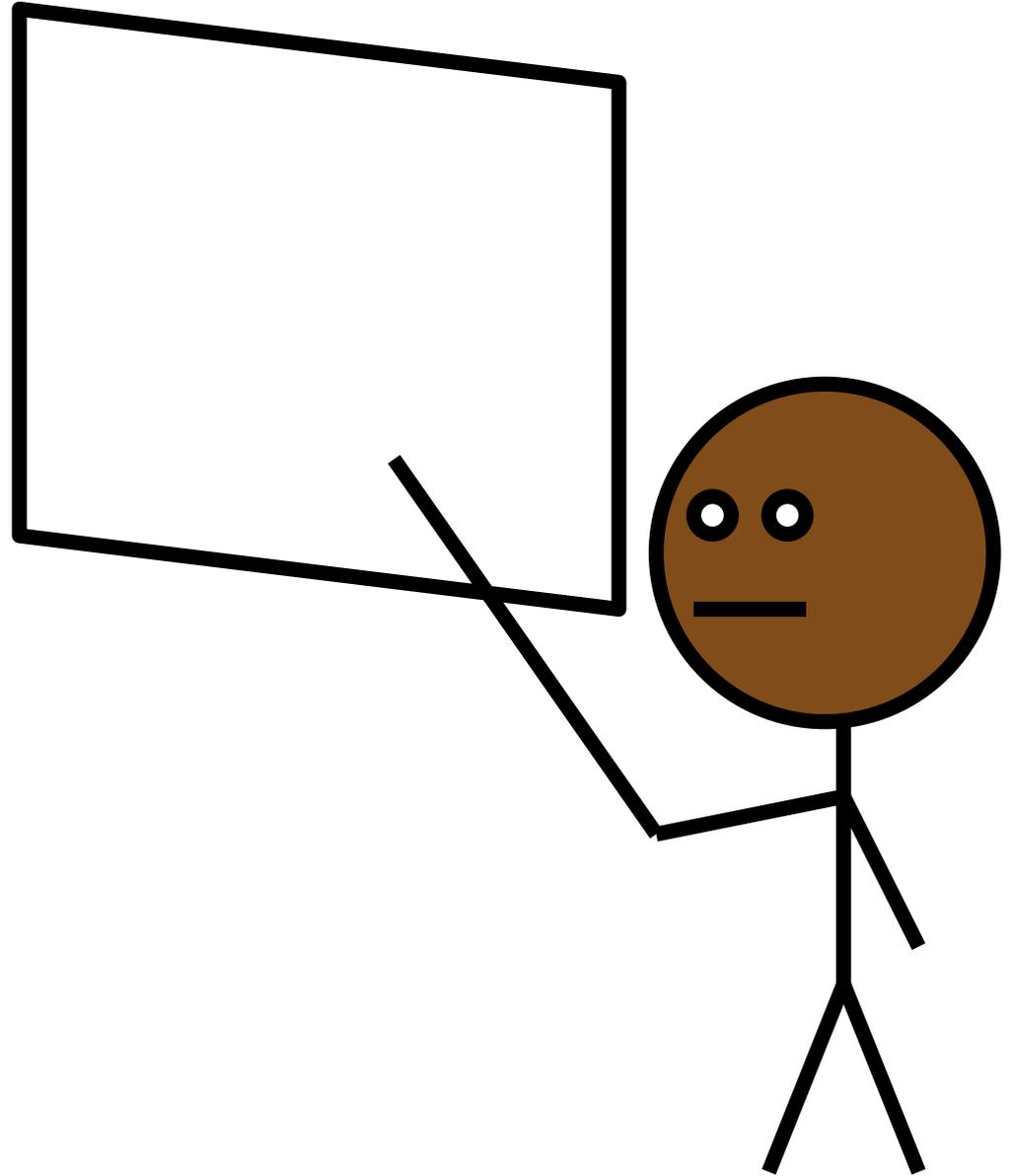
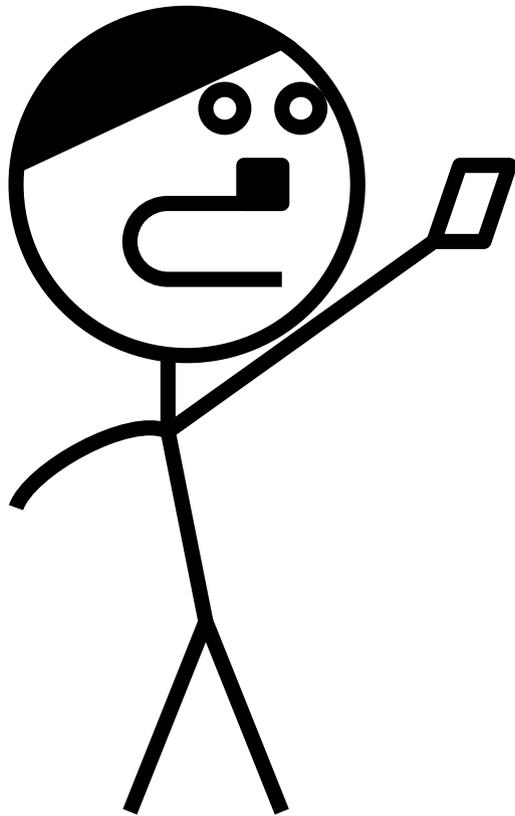
Sirach [38:24]

Is it acceptable?

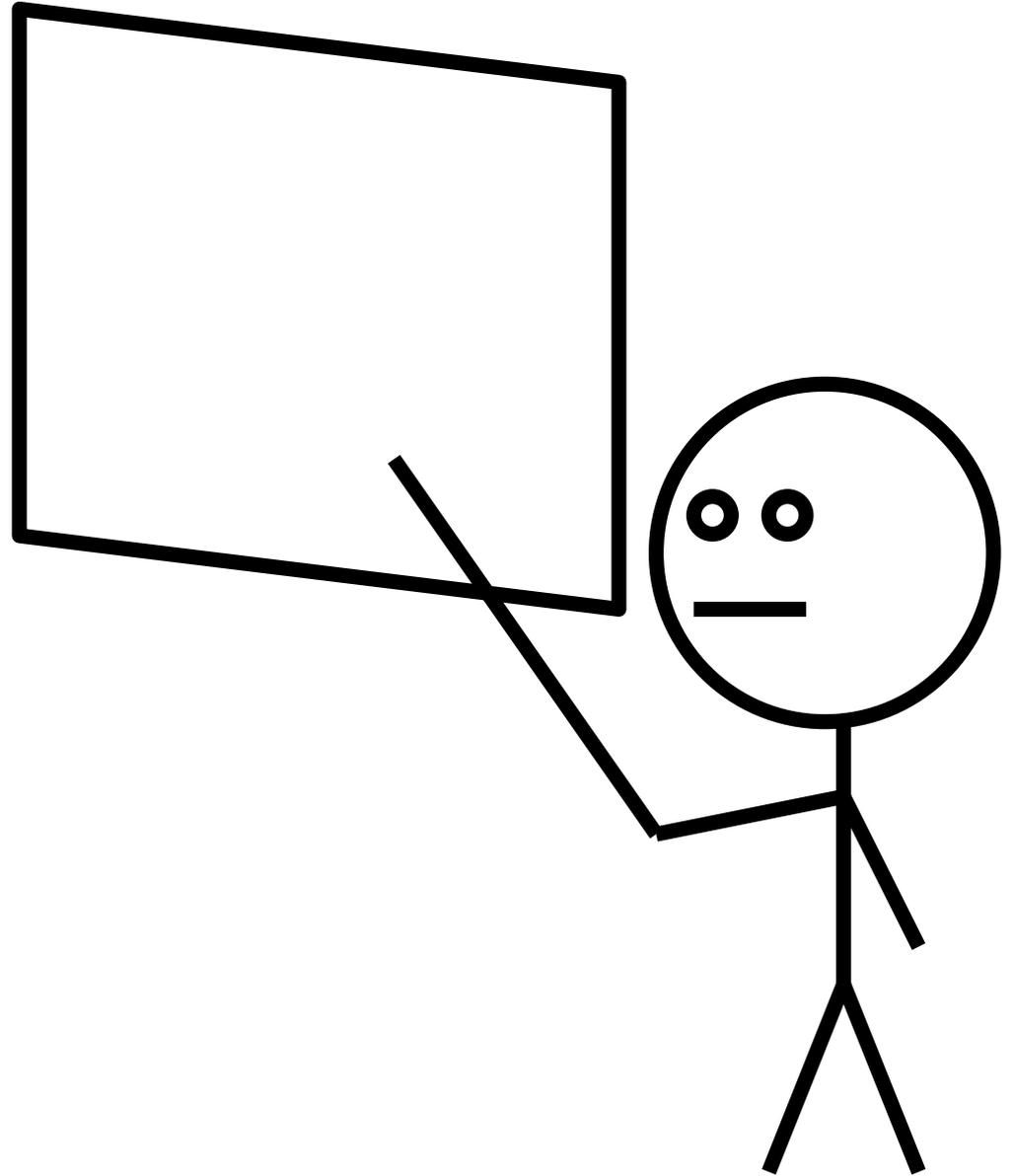
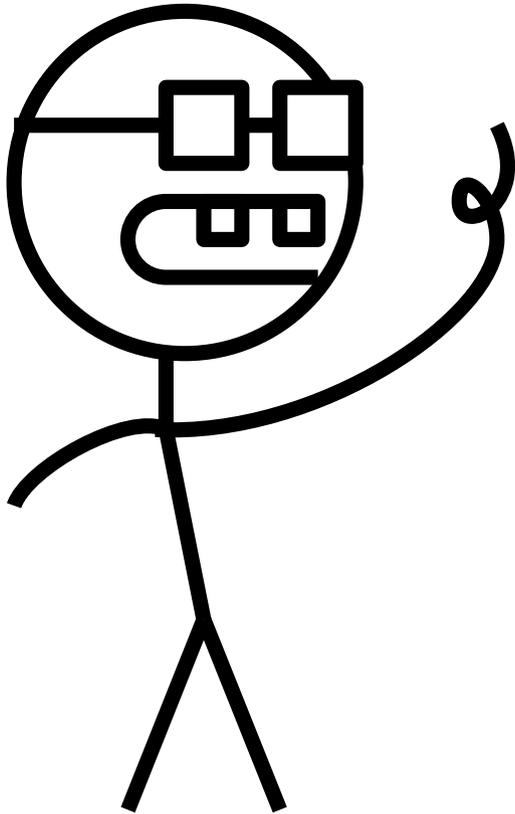
**What is she doing
out of the kitchen?
She does have a
cracking pair though**



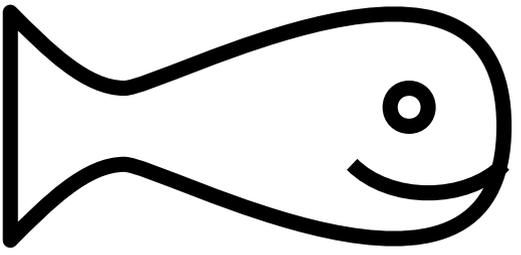
**I dismissed this talk
due to the colour of
the presenter's skin**

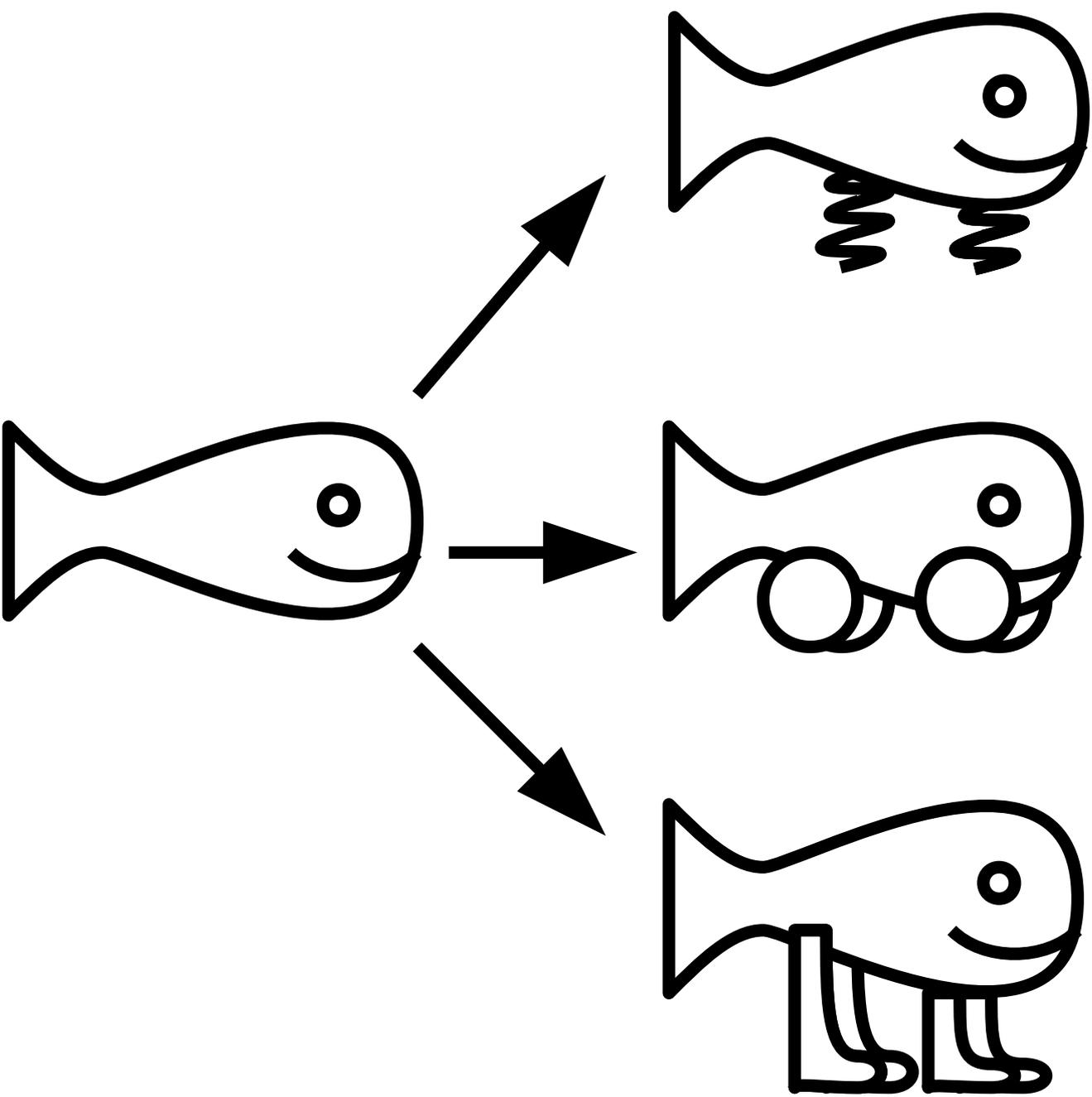


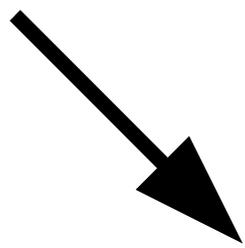
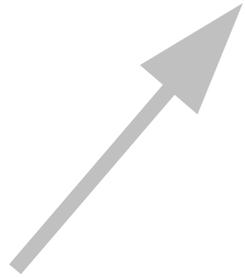
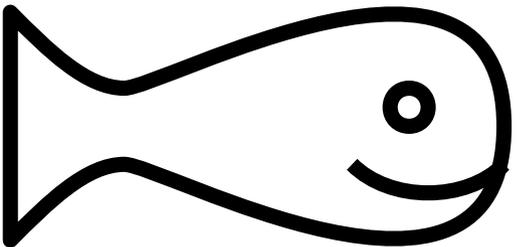
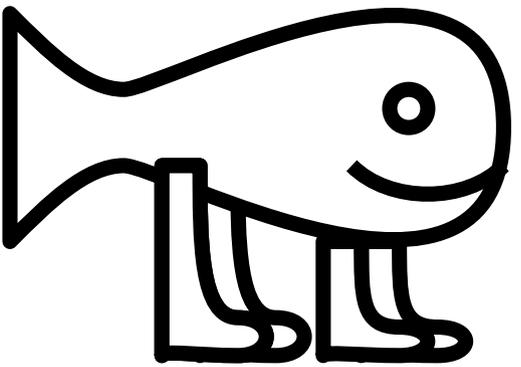
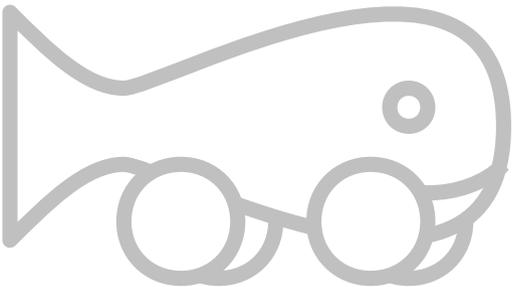
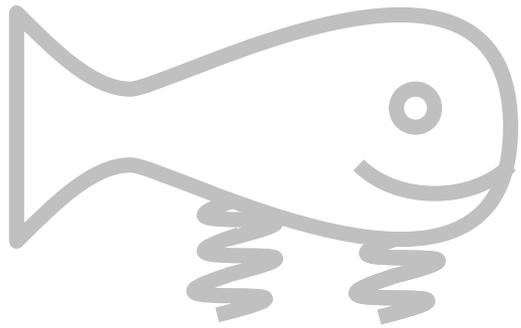
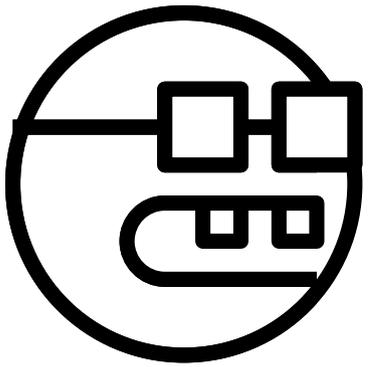
**Actually...
I dismissed this talk
because of a spelling
error on slide 1**

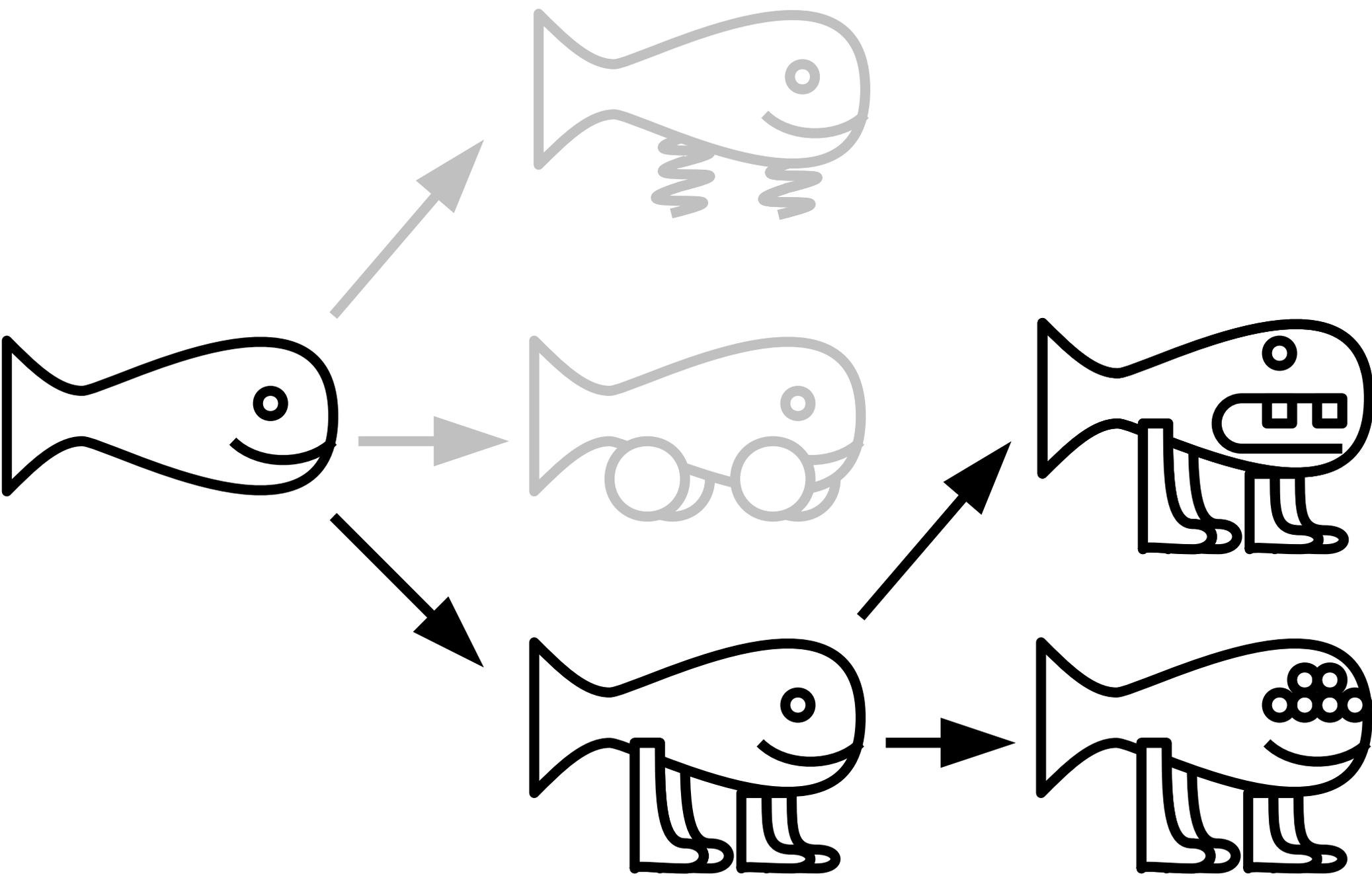


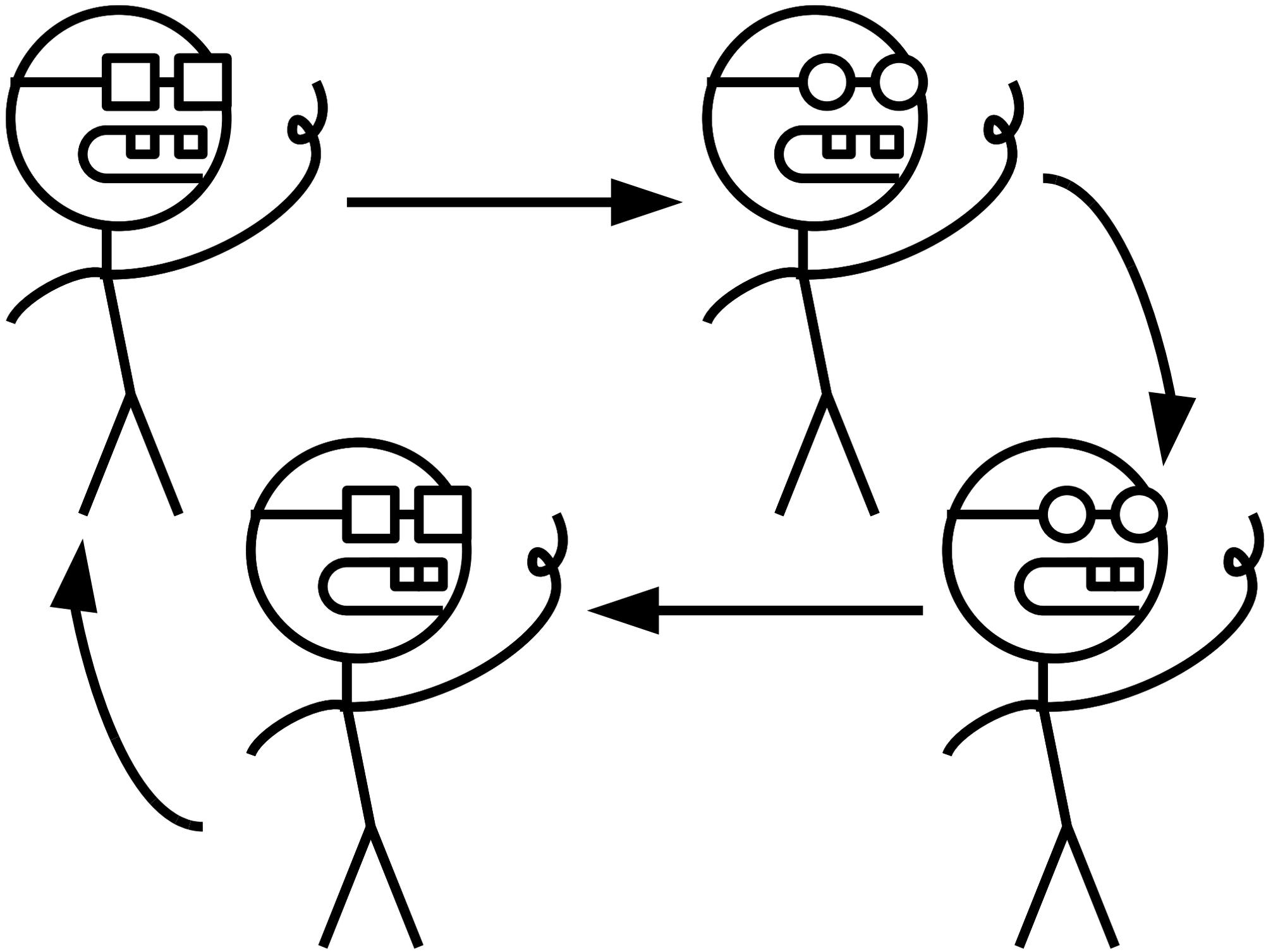
Evolution



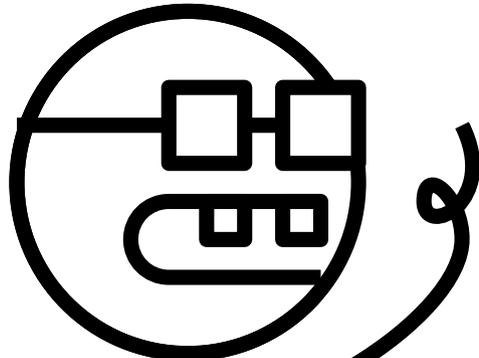




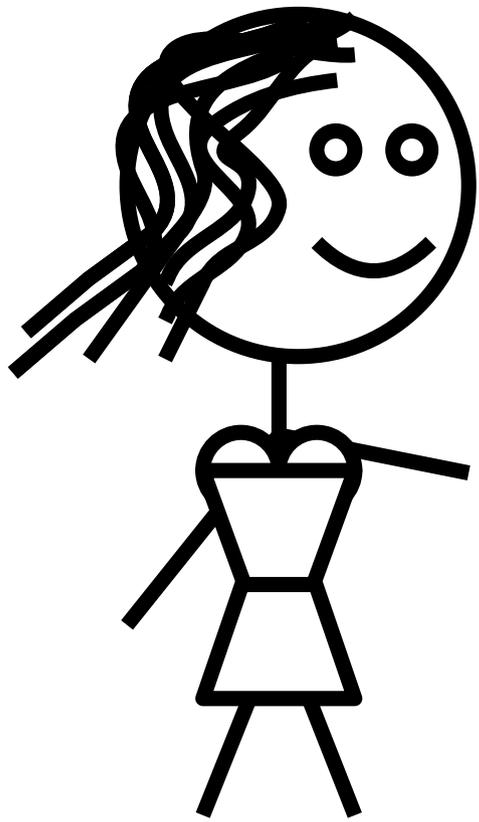




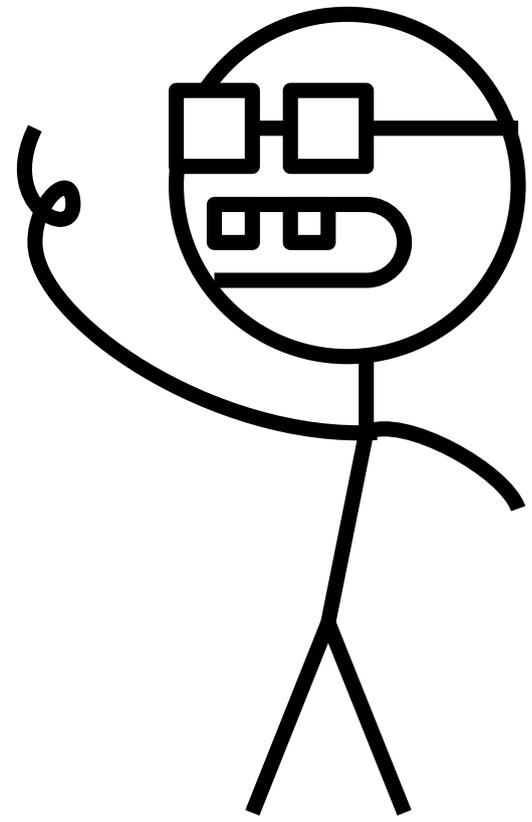
If only I knew how
much they cost.



**You're so funny!
Maybe you and me
could sleep together?**



Actually...



Grand Challenges



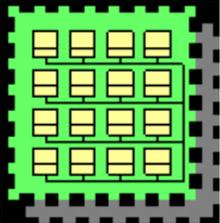
μ GC1: Batteries Not Included:

Minimizing the energy demands of electronics



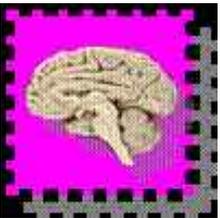
μ GC2: Silicon meets Life:

Interfacing electronics to biology



μ GC3: Moore for Less:

Performance-driven design for next-generation chip technology



μ GC4: Building Brains:

Neurologically-inspired electronic systems



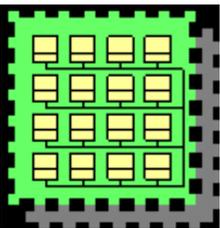
μ GC1: Batteries Not Included:

Minimizing the energy demands of electronics



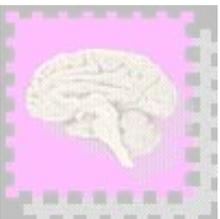
μ GC2: Silicon meets Life:

Interfacing electronics to biology



μ GC3: Moore for Less:

Performance-driven design for next-generation chip technology



μ GC4: Building Brains:

Neurologically-inspired electronic systems

Cache Hierarchy **Harvard Architecture**

Programming Languages

Binary Arithmetic

Stacks **Cache Structure**

Debuggers

Common Sense

Von Neumann Architecture

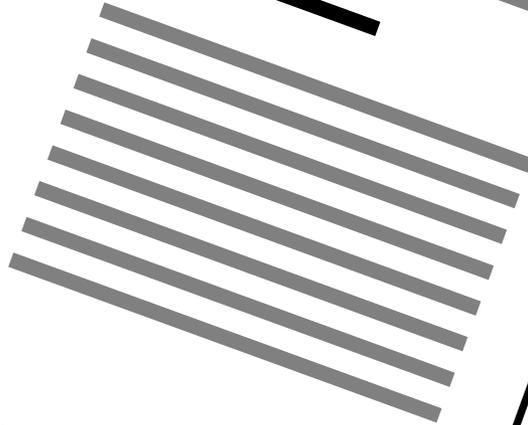
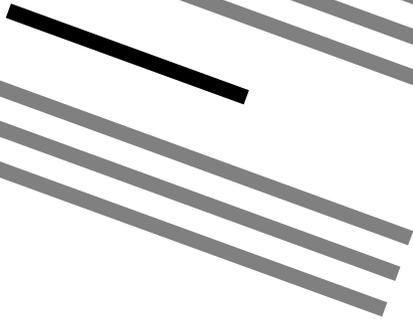
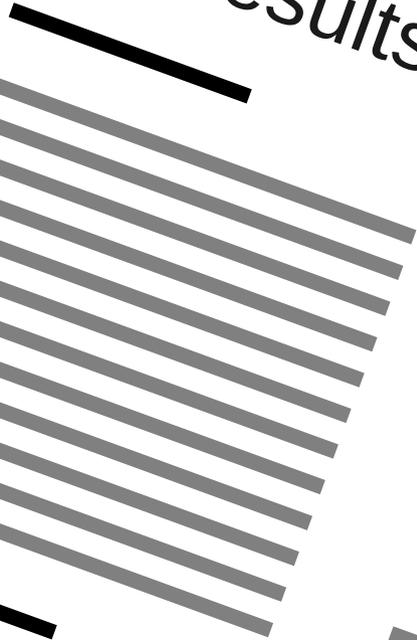
Program Counters

Deterministic Code Execution

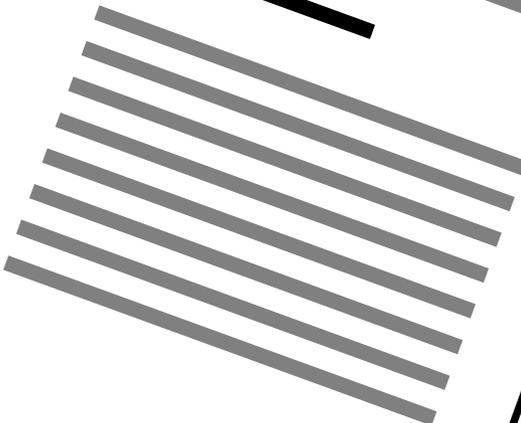
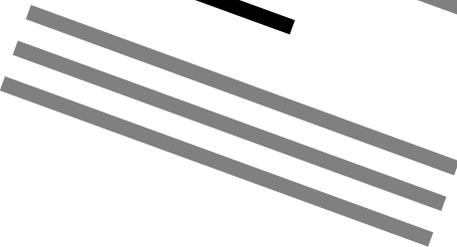
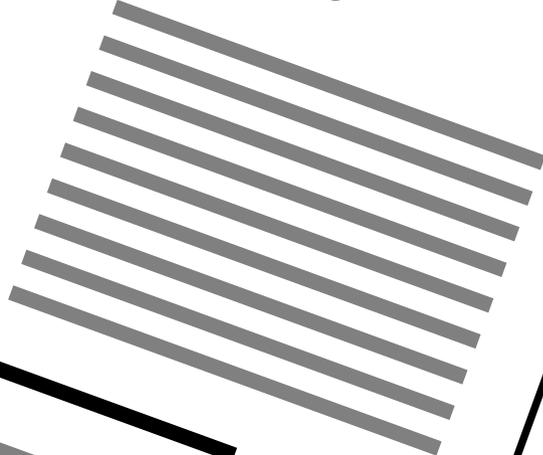
Linear Memory

Sequential Code

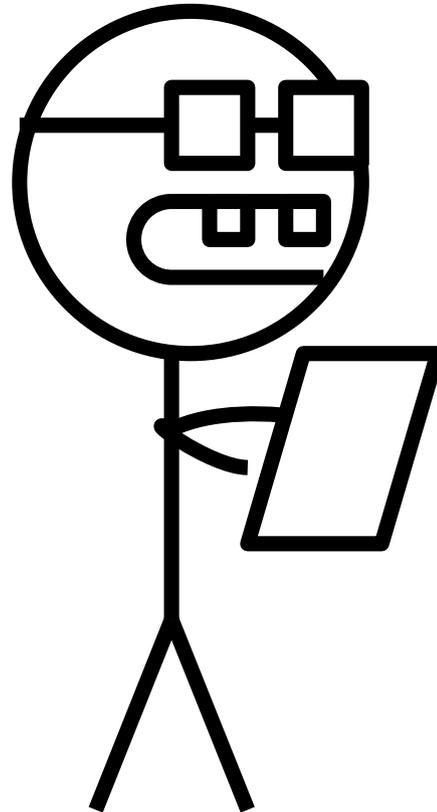
We got rid of stacks and
have solved the parallelism
problem and here are the
results to prove it!

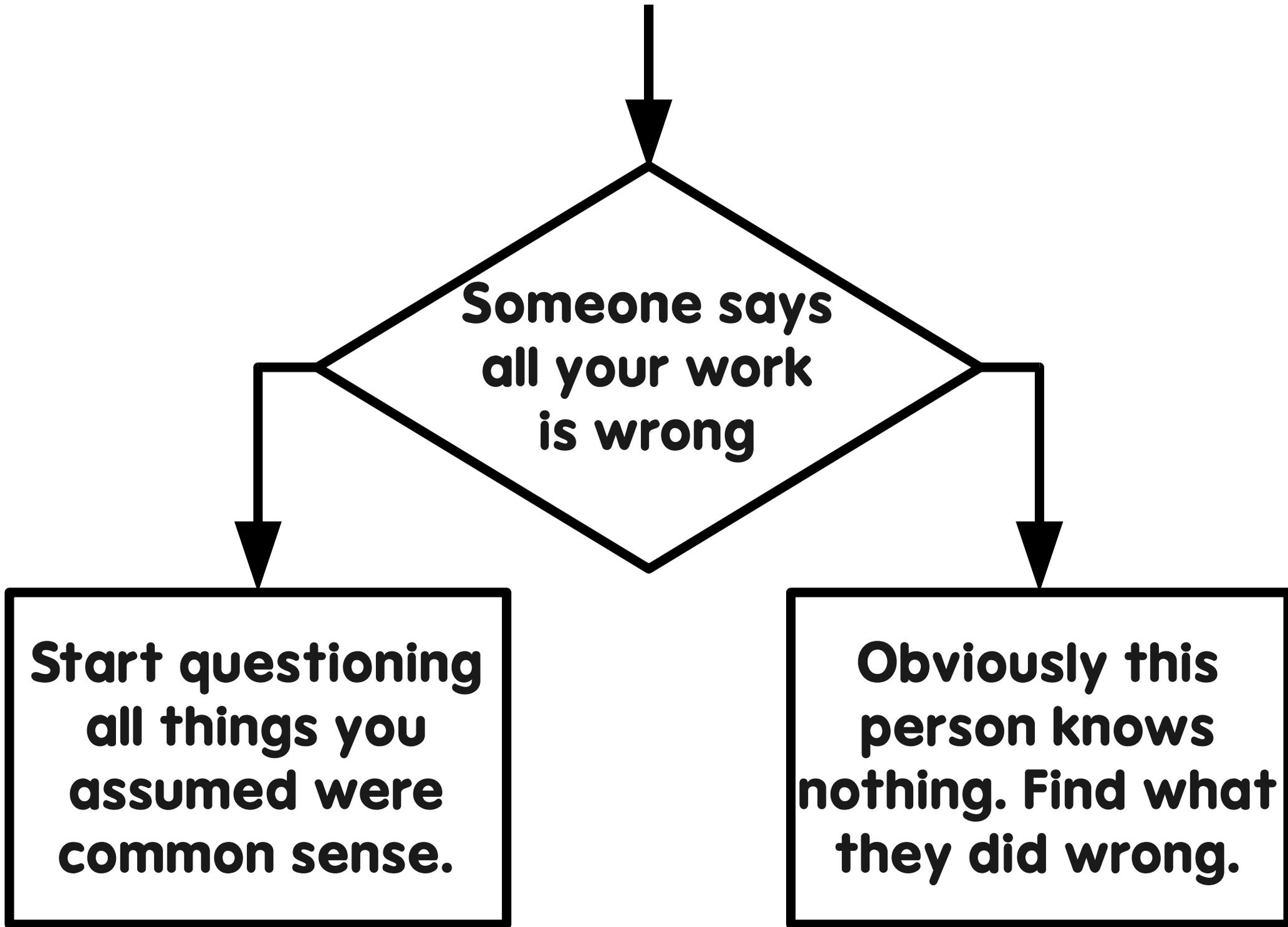


We made a benchmark run
25% faster, but it assumes
the impossible and it defies
common sense



**Allow me to examine this
work and with an open mind
determine whether this is
a step in the right direction**



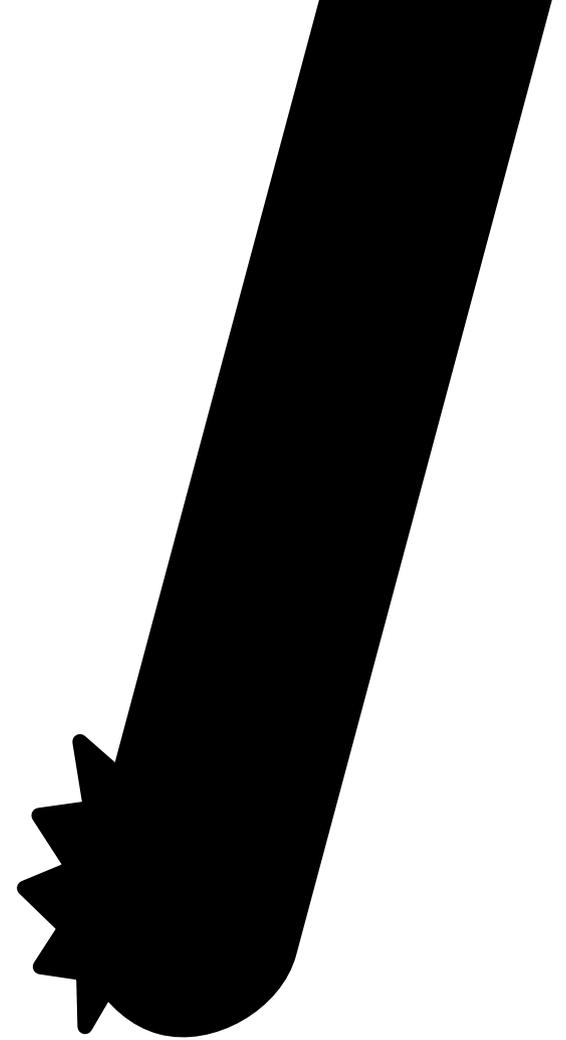
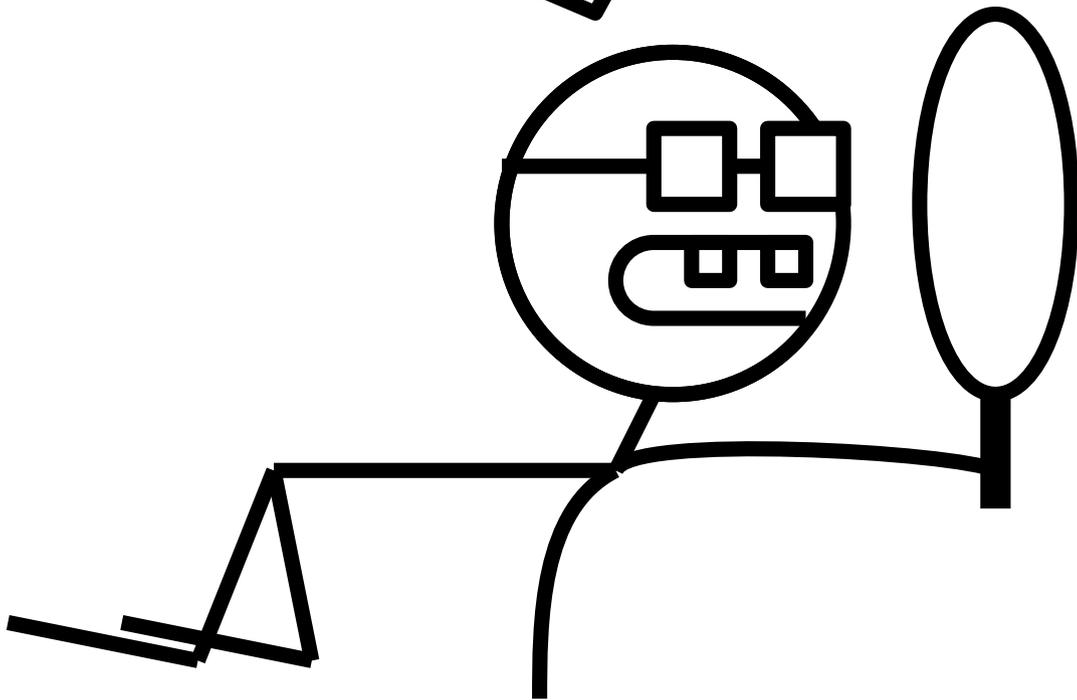


**Someone says
all your work
is wrong**

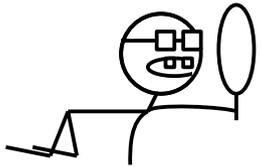
**Start questioning
all things you
assumed were
common sense.**

**Obviously this
person knows
nothing. Find what
they did wrong.**

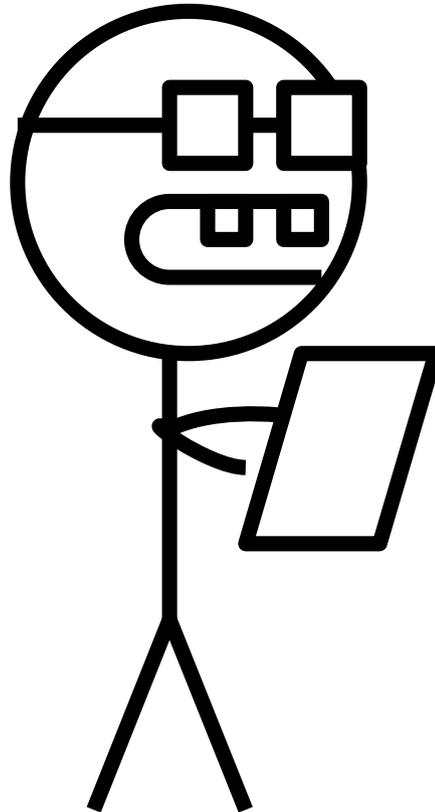
**This work looks
slightly rough
around the edges**



YOU
ARE A
MORON!



**After studying this work for
four, maybe five minutes I say:
WROOOOOONG!
Your talk is of bullocks**

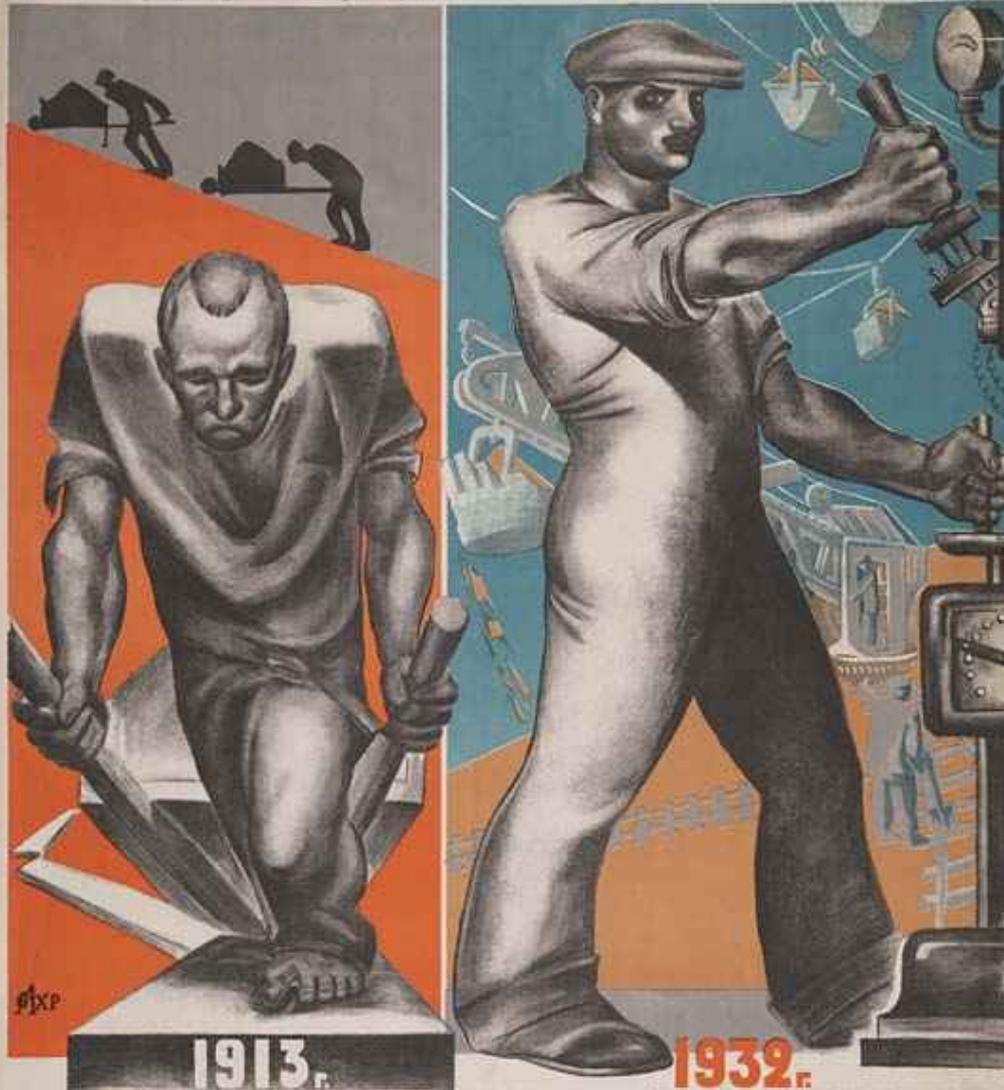


Isn't that the point of the
Grand Challenges?



ТРУД В ПЯТИЛЕТКЕ

Надеемся, чтобы все понятия, что нам принадлежат России, — это мы, рабочие и крестьянские массы своей деятельностью, своей строгой трудовой дисциплиной, только мы можем преодолеть старые экономические условия существования и перейти к жизни великой хозяйственной план!



Ф.ХР.

1913.

1932.

Ростовская область: 1) в 1932 году в промышленности и строительстве достигнута пятикратная производительность труда по сравнению с 1913 годом; 2) в сельском хозяйстве достигнута двукратная производительность труда по сравнению с 1913 годом; 3) в промышленности и строительстве достигнута двукратная производительность труда по сравнению с 1913 годом; 4) в сельском хозяйстве достигнута двукратная производительность труда по сравнению с 1913 годом.

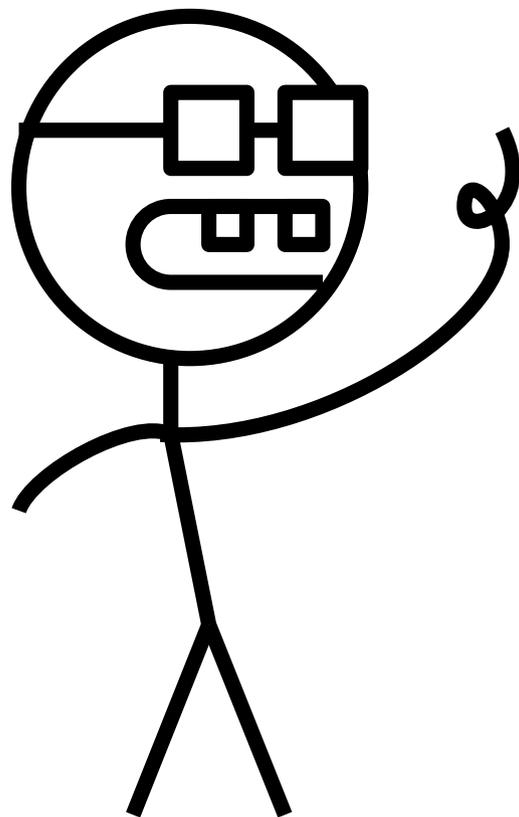


Работа по рационализации всего народного хозяйства своей главной и решающей предпосылкой имеет ШИРОКОЕ ВОВЛЕЧЕНИЕ В НЕЕ РАБОЧИХ И КРЕСТЬЯНСКИХ МАСС. Лишь при самой решительной борьбе с непроизводительными тратами, халатностью и небрежностью работы, нерешительным и нерадикальным отношением к средствам производства и своему собственному труду, отставками техническими формами хозяйства (устаревшая техника в индустрии, трехполье, соха и проч. в сельском хозяйстве) возможна «пятилетняя» победа трудящихся.

Solutions?

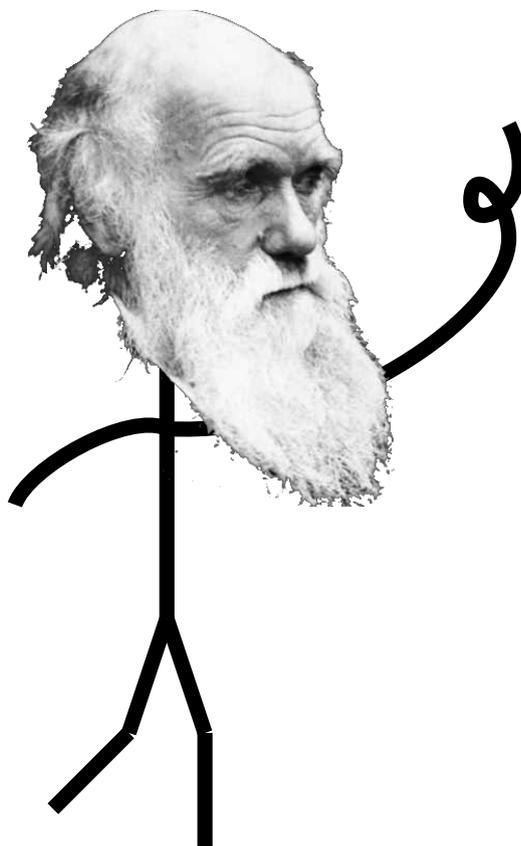
Stagnancy!

**Fear change!
Damn kids
on my lawn!**



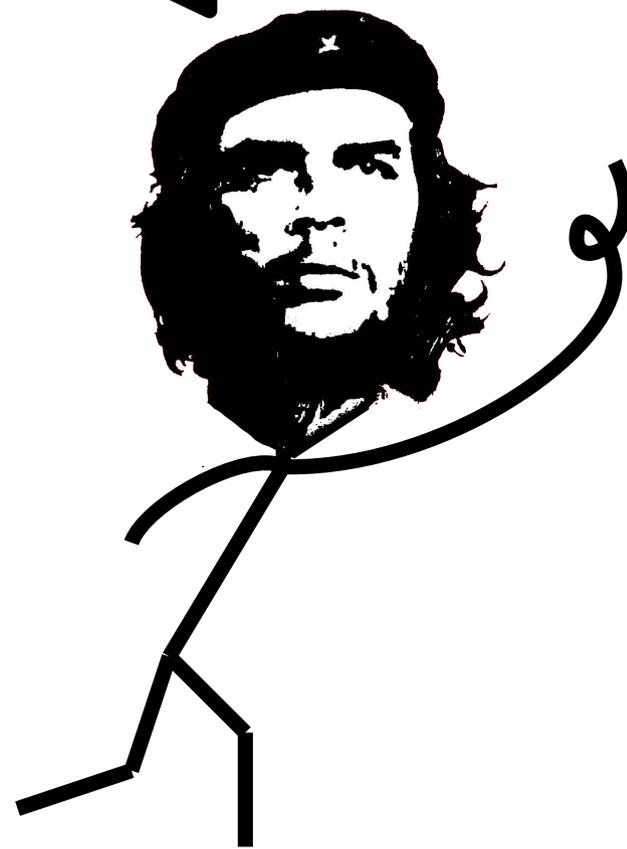
Evolution!

**Gradual
beneficial
change**



Revolution!

**Smash the
system!**





μ GC0: Not being Snobs:

Actually doing science rather than acting like arseholes



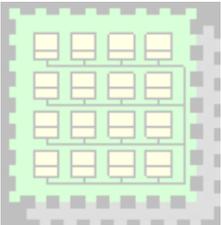
μ GC1: Batteries Not Included:

Minimizing the energy demands of electronics



μ GC2: Silicon meets Life:

Interfacing electronics to biology



μ GC3: Moore for Less:

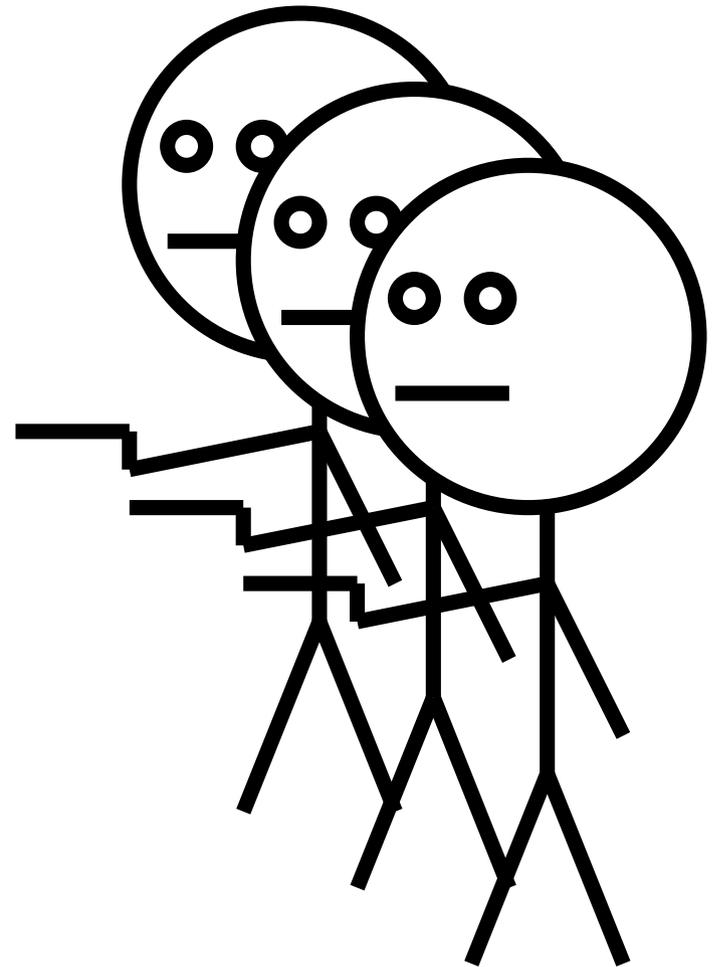
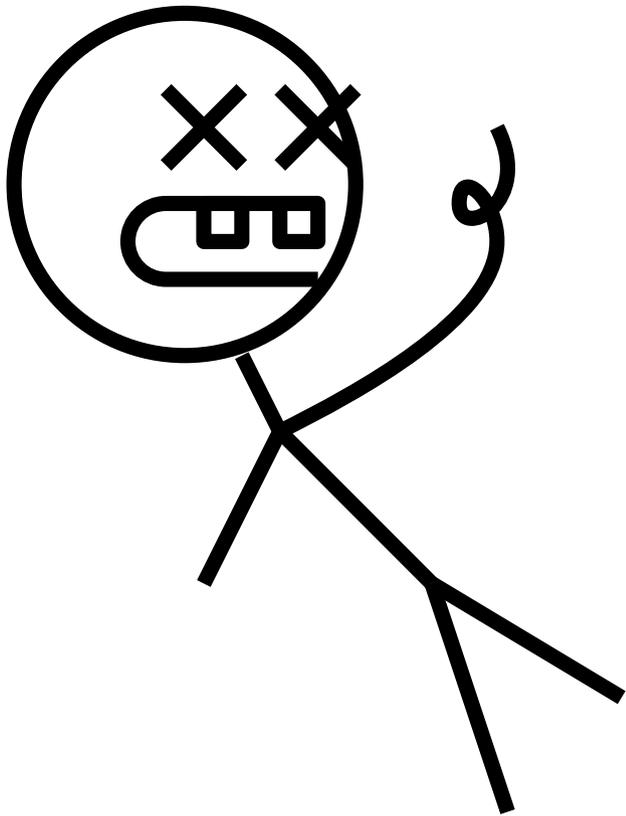
Performance-driven design for next-generation chip technology



μ GC4: Building Brains:

Neurologically-inspired electronic systems

Actually! You should aim for the chest and not the head





μGC0: Reconsider the Structure of Scientific Ecosystem:

Find a better system for science or something? I don't know, maybe we are all screwed anyway



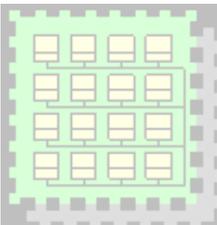
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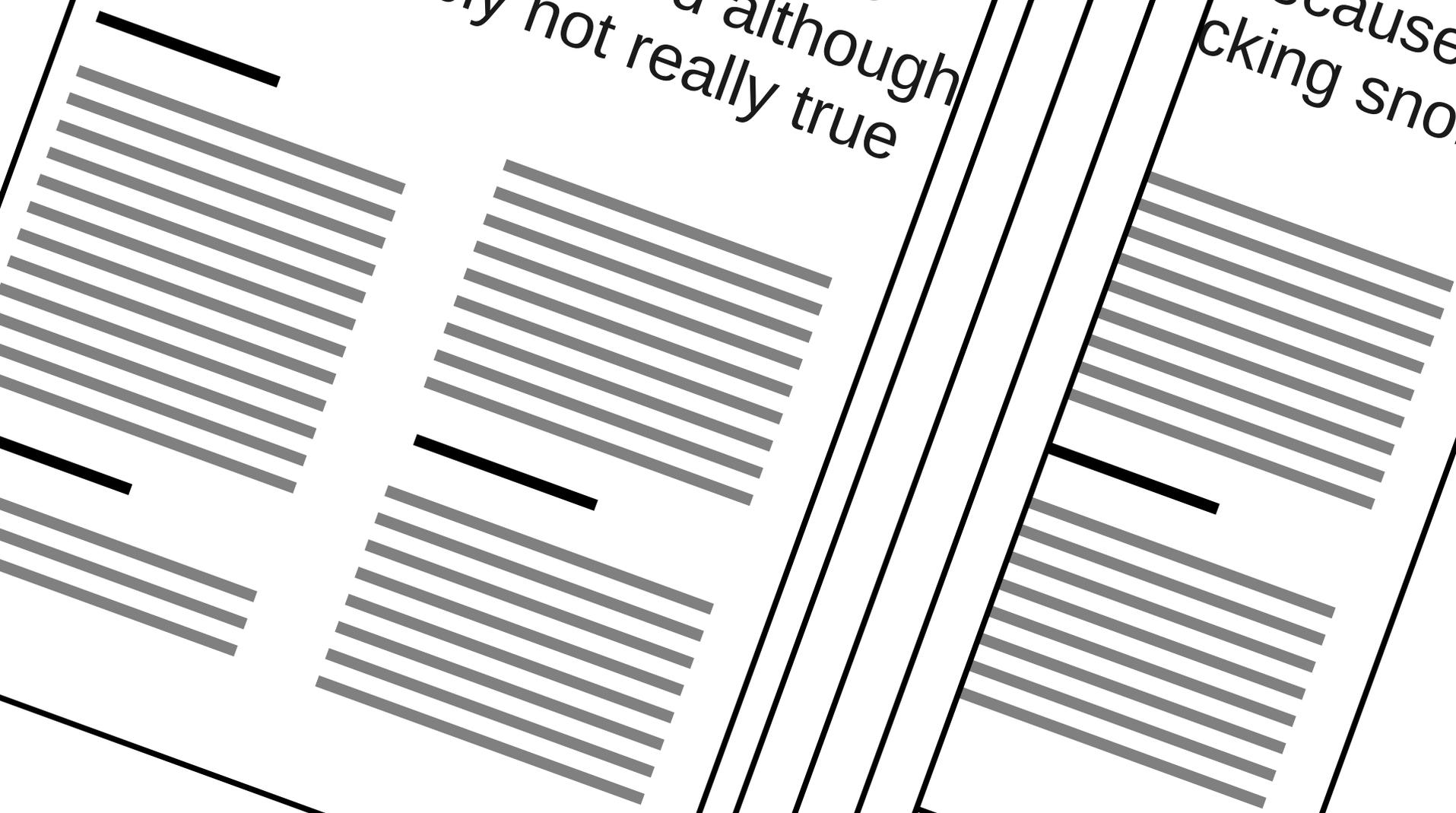


μGC4: Building Brains:

Neurologically-inspired electronic systems

Stuff we actually wanted to say but couldn't because of fucking snobs

Stuff we have to say to appease all involved although it is probably not really true



Science 2.0

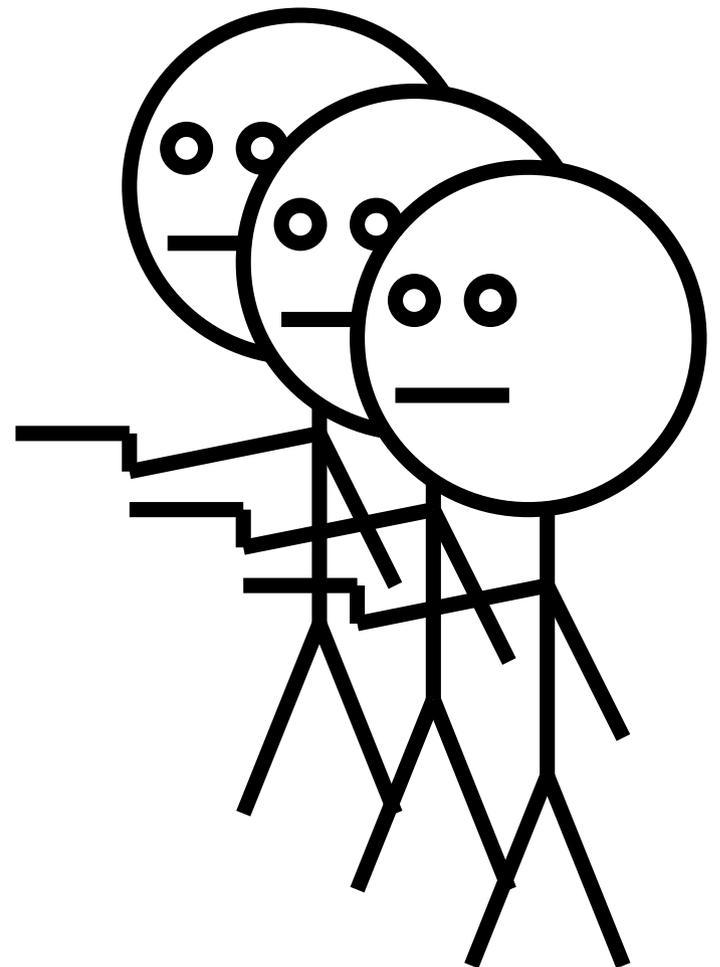
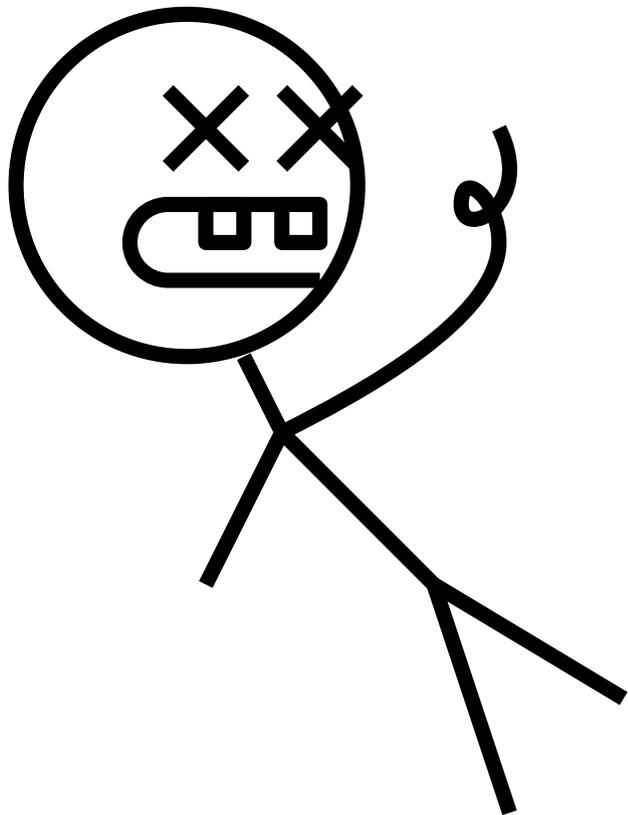
Then:

- Software
 - Closed waterfall model
- Media
 - Paid journalists
- Science
 - Multi-year projects with a massive final deliverable

Now:

- Software
 - Cyclic open-source model
- Media
 - Bloggers
- Science
 - Continuous collaborative open research clear results

**Actually! Wikipedia
IS full of lies,
and bloggers make
spelling mitsakes!**



Summary

- To solve the grand challenges we need a revolution
 - Scientific community is geared for evolution
- When we make the breakthrough, we probably won't even notice
 - We might be stuck in a local minima forever
- I have no answers
 - Throughout human history, every stagnant society based on elitism was overthrown
 - We have never tried to examine the system

Some time for questions