



The Oatmeal

Comics

Blog

Books

Shop



Comics: [Random](#) [Most Popular](#) [All](#) [Cats](#) [Grammar](#) [Food](#) [Animals](#) [Tech](#)

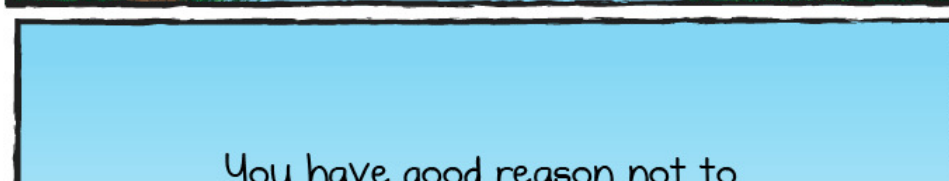
You're not going to believe
what I'm about to tell you.

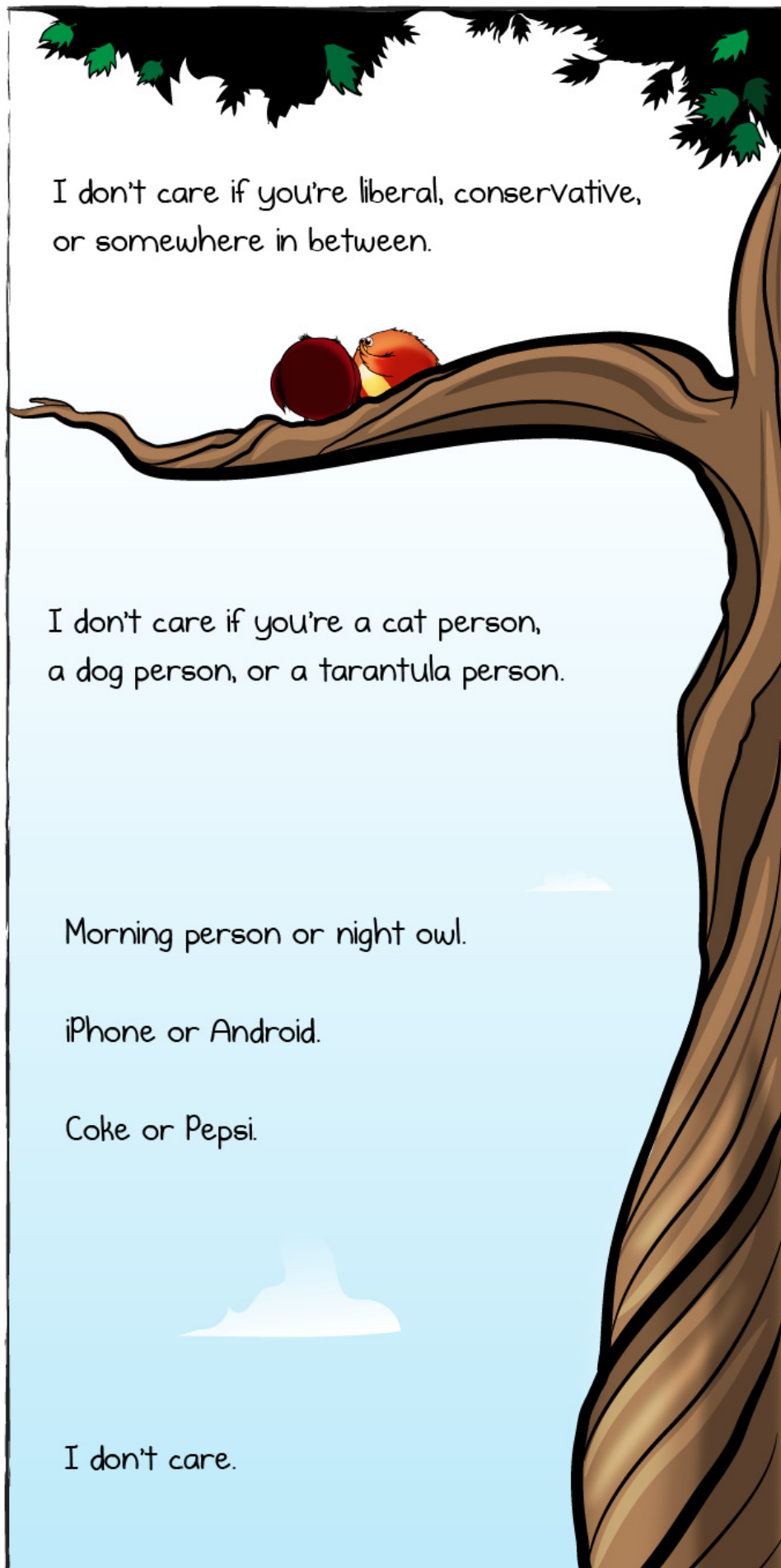


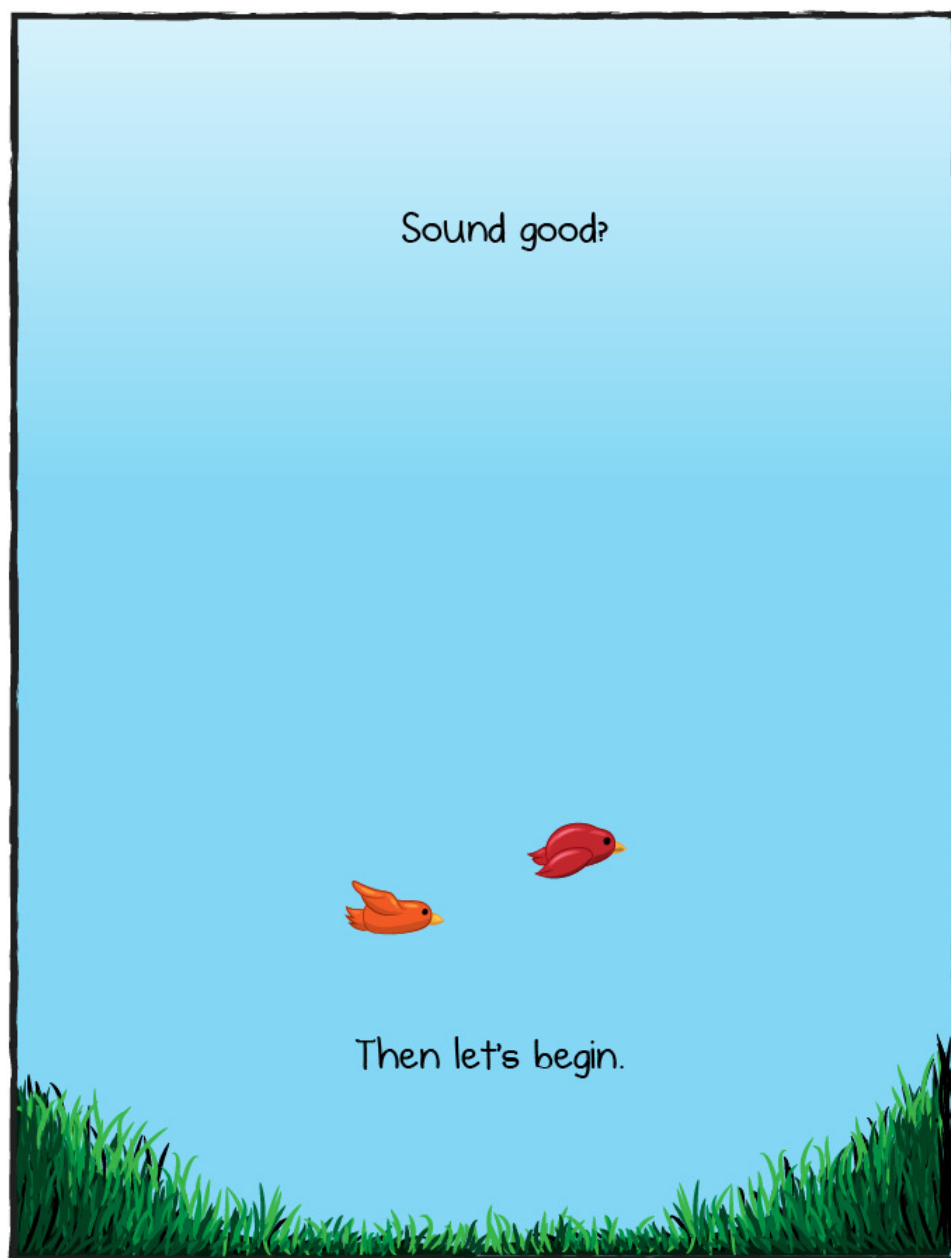
The Oatmeal

Regular version
(contains profanity)

↓ Classroom-friendly version
(no foul language)









He lost most of his teeth in his twenties
and had a set of dentures made out of wood.

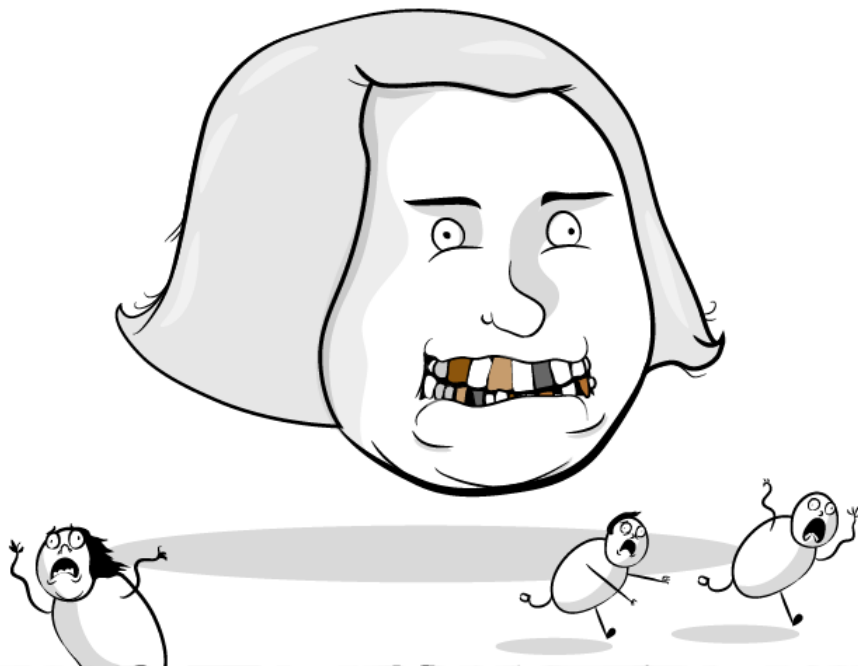
It's a disturbing visual:
the founding father, commander-in-chief,
and first President of the United States
click-clacking his way through a ham sandwich.



In 2005, at the National Museum of Dentistry in
Baltimore, laser scans were performed on
Washington's two-hundred-year old dentures,
and found them to be made of
gold, lead, hippopotamus ivory,
horse, and donkey teeth.



His mouth was a petting
Zoo of nightmares.





Upon learning this information,
I want to ask you something:

how did it *feel* to learn this new fact
about George Washington's teeth?

• • •

I stated a thing,
I provided evidence of that thing,
and presumably you now believe in
the thing I stated.

Presumably, your belief in the
composition of George Washington's
teeth has changed with little or no

friction.



Presumably, the next time you're at a party

What

if I told you George Washington
had another set of false teeth?

What if I told you this other set wasn't
made from wood, ivory, or any of the
aforementioned materials?

What if I told you it was made
from the teeth of slaves?

Sources: ★ SOURCE 1 ★ SOURCE 2 ★ SOURCE 3

Now,

let's try this again:

How did it feel to learn *this* fact
about George Washington?

• • •

Any more of that friction
I mentioned earlier?

Before we go any further,
allow me to reiterate:

{ I am not here to convince you that
George Washington was a bad person. }

Let's try a few more.

. . .

Napoleon Bonaparte was not short.

He was 5'7, which was taller than
the average Frenchman of the time.



Sources: ★ SOURCE 1 ★ SOURCE 2

Thomas Crapper did not invent the flush toilet, nor did the word "crap" come about because of his name.



Sources: ★ SOURCE 1 ★ SOURCE 2

Houseflies live for about a month,
not 24 hours.

Life is short.



False.



Sources: ★ SOURCE 1 ★ SOURCE 2

Humans don't explode in a vacuum.

Nor do we boil.

We just pass out from lack of oxygen
and then we die.

The three emotional phases
of being blown out of an airlock:

1. Shock



2. More shock



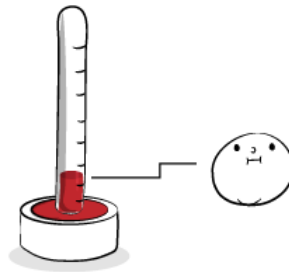
3. Oh God
still in shock



Sources: ★ SOURCE 1 ★ SOURCE 2

Again,

as you read these facts,
take stock of how you feel.



I'm guessing you softened
to the last few fairly easily.

Let's try a few more,
and then we're done.

. . .



There is **Zero evidence**
that Jesus Christ was born on
December 25th.



That's cool.
I don't mind that
you forgot my birthday ...
... for the past 2,000 years.

Sources: ★ SOURCE 1 ★ SOURCE 2 ★ SOURCE 3

The Pledge of Allegiance was
written by a socialist.

Sources: ★ SOURCE 1 ★ SOURCE 2 ★ SOURCE 3

Six of the seven justices who
voted in favor of Roe v. Wade
were Republican-appointed.

Sources:

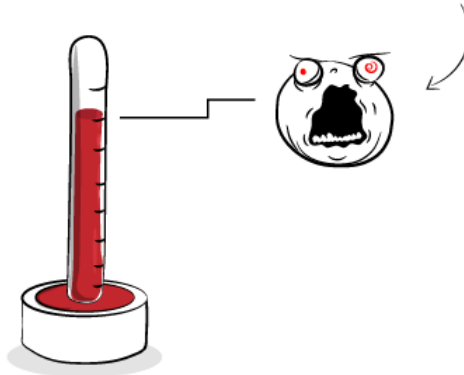
★ SOURCE 1

★ SOURCE 2

★ SOURCE 3

How'd those last three feel?

Depending on your beliefs,
I'm guessing it may have put
some of you about here?



At the very least,
you can concede that it *felt* different to
hear those statements compared to the
ones about Napoleon or houseflies.

Yes?

But why?



Why

do we easily soften to some ideas,
but not to others?



Why

do we gnash our teeth when presented
with evidence counter to our beliefs?



Why

do we not only ignore this evidence,
but dig our heels in deeper and believe more
strongly in the opposing argument?

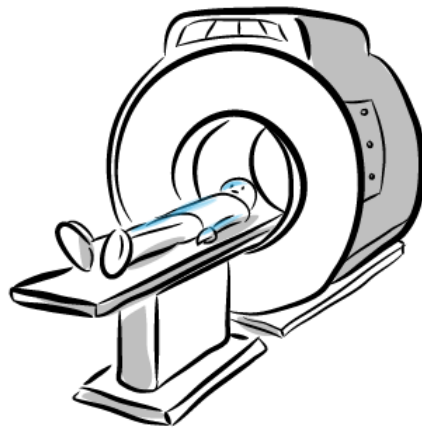
Why

would providing MORE evidence make
someone LESS likely to believe in an idea?

{ It seems backwards and }

A few years ago

at the University of Southern California's
Brain and Creativity Institute,
a study was conducted where participants
were placed into a MRI machine.



Once inside, they were presented with
counterarguments to strongly held
political beliefs.

A few examples:

"Laws restricting gun ownership should be
made more restrictive."

"Gay marriage should not be legalized."

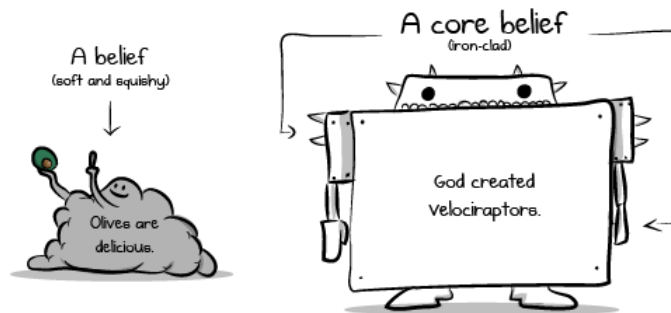
As participants were read these
counterarguments, various parts of their
brains were scanned for activity.

Core beliefs

are the beliefs which people
cherish the most deeply.

They usually develop from childhood and are
compounded by life experiences.

Core beliefs are inflexible, rigid,
and incredibly sensitive to being challenged.



When I told you that George Washington's dentures were made from animal bones, it probably didn't ruffle many feathers.

But when I suggested they were made from slave teeth, I'm guessing it caused strife with some of you.



There are obvious cultural reasons for this; slavery is a sensitive, hot-button issue.

So,

what do we do about this?

Some of you have probably been nodding along in agreement, waiting for me to deliver a series of clever, combative ways to offset the backfire effect.

The disappointing truth is that I don't have much advice for you.

I don't have a way to change the behavior of seven-point-five billion people carrying their beliefs around like precious gems wrapped in hand grenades.

The best I can do is make you aware of it,
so you can identify the backfire effect
in your own brain.

Which isn't easy. The mind can't separate
the **emotional cortex** from the **logical one**.



And one could argue that this
emotional underbelly is what
makes us human.

But I would argue that it's also
what makes us animals.



I sometimes pretend the amygdala of my brain is in my pinky toe.



When a core belief is challenged,
I imagine it yelling insane things at me.



I let it yell.



I let it have its moment.





I'm just here to tell you
that it's okay to stop.

To listen.



Inspiration

This comic was inspired by this three-part series on the [backfire effect](#) from the [You Are Not So Smart Podcast](#).

If you want to learn more about the backfire effect and other related behaviors (confirmation bias, deductive reasoning, etc), I **highly** recommend listening to the whole thing:

[Podcast Part 1](#) - [Podcast Part 2](#) - [Podcast Part 3](#)

I would also like to thank my wonderful girlfriend [Theresea](#) for calling my attention to the backfire effect in the first place. The past year has been rough for a lot of people, and she pointed me in a direction that could actually *help* people. Theresea: you're amazing, I love you, thank you.

USC Creativity and Brain Institute

[Neural correlates of maintaining one's political beliefs in the face of counterevidence](#)

By Sarah Gimbel and Sam Harris.

Other fun reading

[Reddit - Change My View](#)

[Wikipedia's list of common misconceptions](#)

Sources

You Are Not So Smart

[Website](#) [Podcast](#)

USC Creativity and Brain institute

<https://dornsife.usc.edu/bci/>

Wooden teeth

<http://www.nbcnews.com/id/6875436>

<http://www.mountvernon.org/george-washington/the-man-the-myth/the-trouble-with-teeth/>

<http://www.history.com/news/ask-history/did-george-washington-have-wooden-teeth>

Slave teeth

https://www.nytimes.com/2014/04/29/upshot/george-washingtons-weakness-his-teeth.html?_r=0

<http://owpapers.virginia.edu/george-washingtons...>

<http://www.snopes.com/george-washington-wooden-teeth/>

Napoleon

<https://books.google.com/books...>

<http://www.cbsnews.com/news/forget-napoleon-height-rules/>

Thomas Crapper

<http://www.snopes.com/business/names/crapper.asp>

<http://content.time.com/...>

Houseflies

<https://web.archive.org/...>

https://en.wikipedia.org/wiki/Housefly#Life_cycle

Exploding in a vacuum

<http://www.webcitation.org...>

<http://www.abc.net.au/science/...>

Jesus's birthday <https://www.ucg.org/the-good-news/biblical...>

<http://www.livescience.com/42976-when-was-jesus-born.html>

https://en.wikipedia.org/wiki/Date_of_birth_of_Jesus

The Pledge of Allegiance

<http://www.ushistory.org/documents/pledge.htm>

https://en.wikipedia.org/wiki/Francis_Bellamy

<http://boingboing.net/2016/09/10/a-socialist-wrote-the-pledge-o.html>

Roe v. Wade

http://www.heraldcourier.com/news/roe-v-wade-approved-by-republican-appointees/article_4fa2fb82-d738-5a11-95b6-650037c19451.html

https://en.wikipedia.org/wiki/Roe_v._Wade#Supreme_Court_decision

<http://www.u-s-history.com/pages/h2603.html>



The Oatmeal

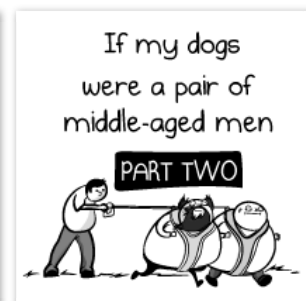
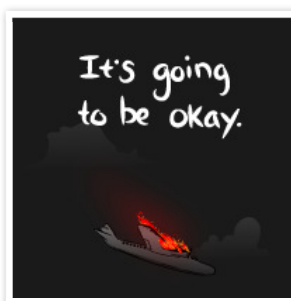
Like Page

Share this

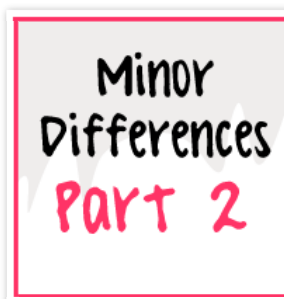
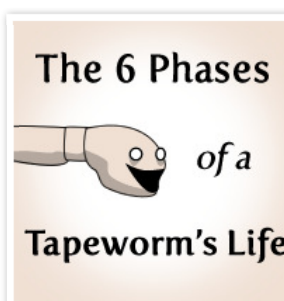
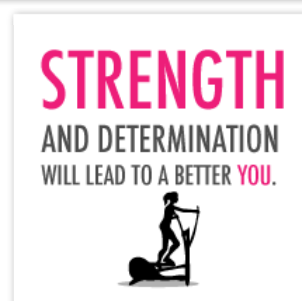




Latest Things



Random Comics





[Browse more comics >>](#)



[Home](#)

[Comics](#)

[Blog](#)

[Quizzes](#)

[About](#)

[Contact](#)

All artwork and content on this site is Copyright © 2016 Matthew Inman. Please don't steal.