

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



The Oatmeal

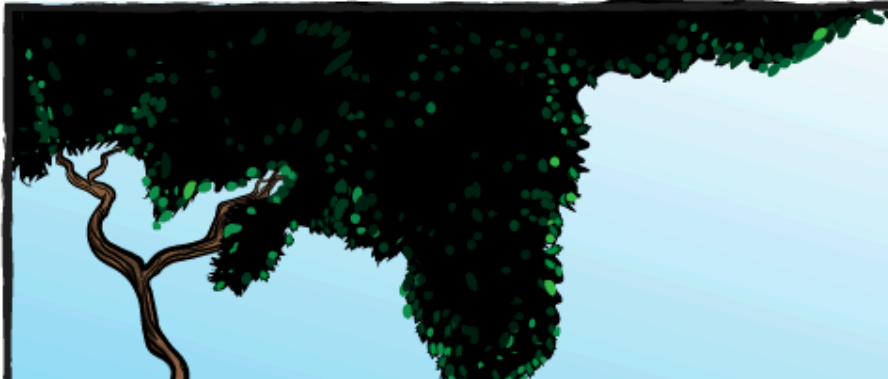
↓ Regular version
(contains profanity)

Classroom-friendly version
(no foul language)

I'm going to tell
you some things.



You're not going to believe these things I tell you.

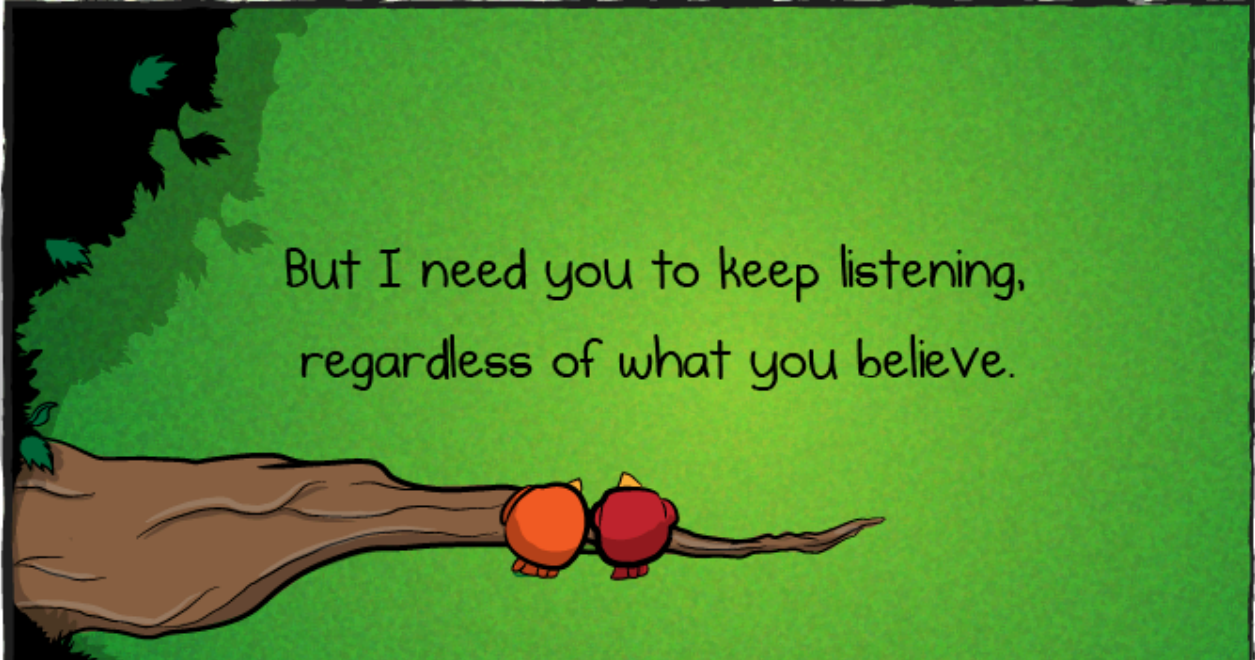




And that's okay.




You have good reason not to.



But I need you to keep listening,
regardless of what you believe.






I don't care if you're liberal, conservative,
or somewhere in between.

I don't care if you're a cat person,
a dog person, or a tarantula person.

Morning person or night owl.

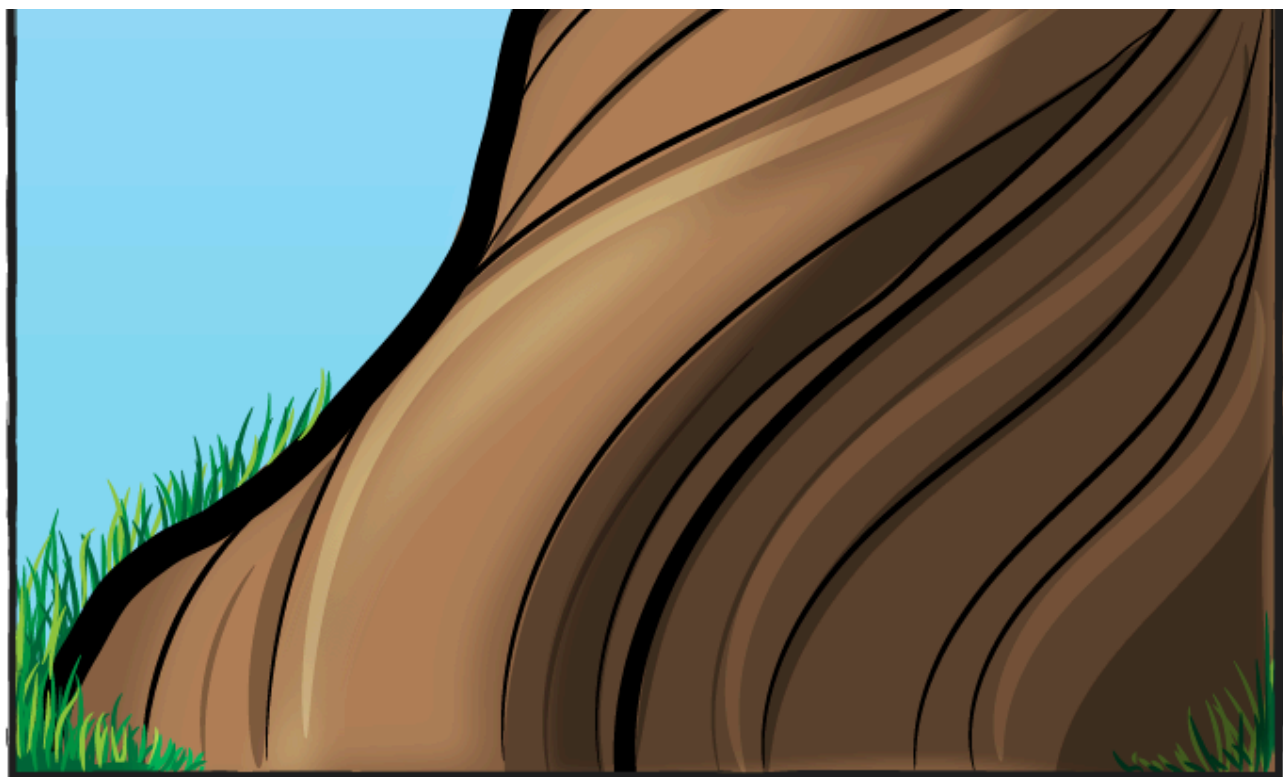
iPhone or Android.

Coke or Pepsi.

The image features a light blue background with two white, stylized clouds. On the right side, there is a large, vertical, wavy structure with a brown and tan color gradient, outlined in black. The structure has a textured, layered appearance. The text is positioned on the left side of the image.

I don't care.

All I care about is that
you read this to the end.

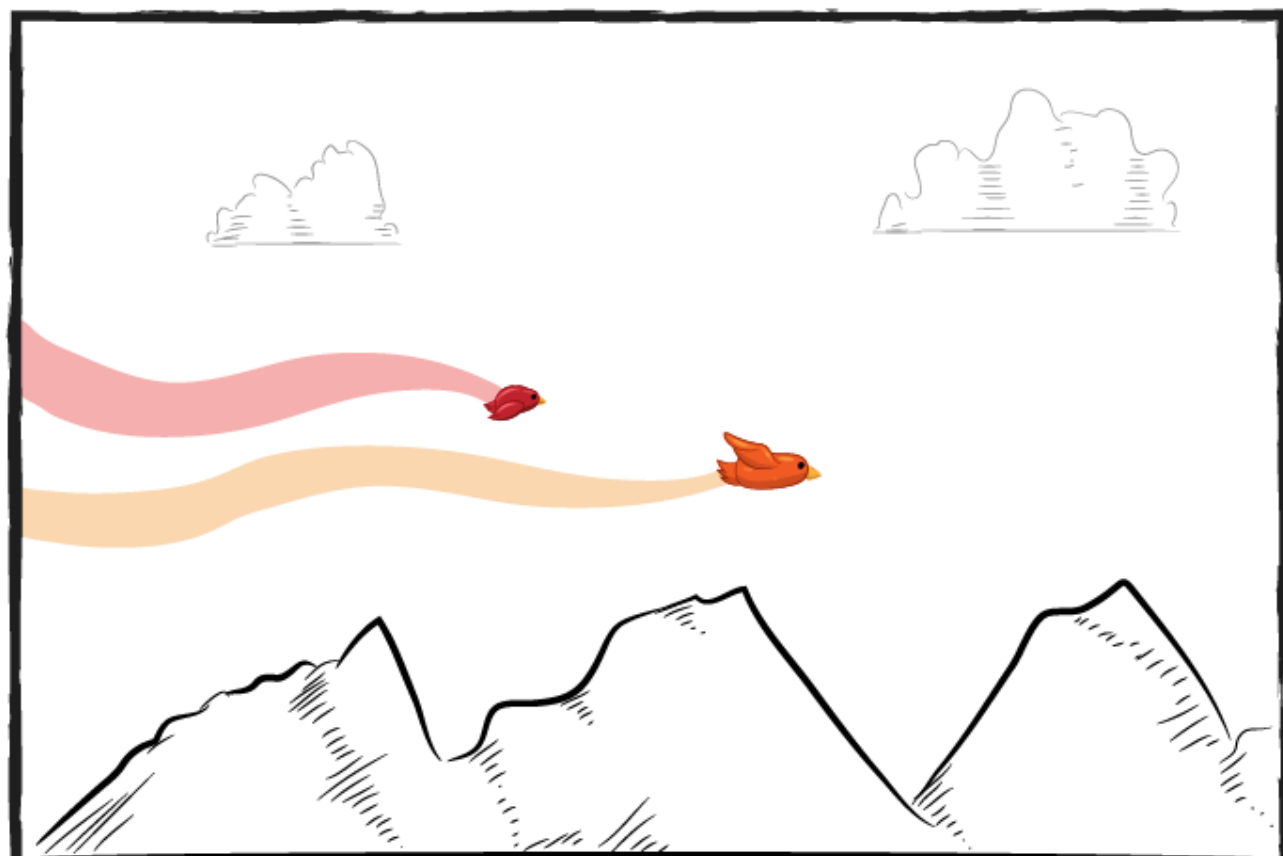


Sound good?



Then let's begin.





You may have heard that
George Washington had

 **wooden teeth.** 

I put the fir in
first amendment.





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.





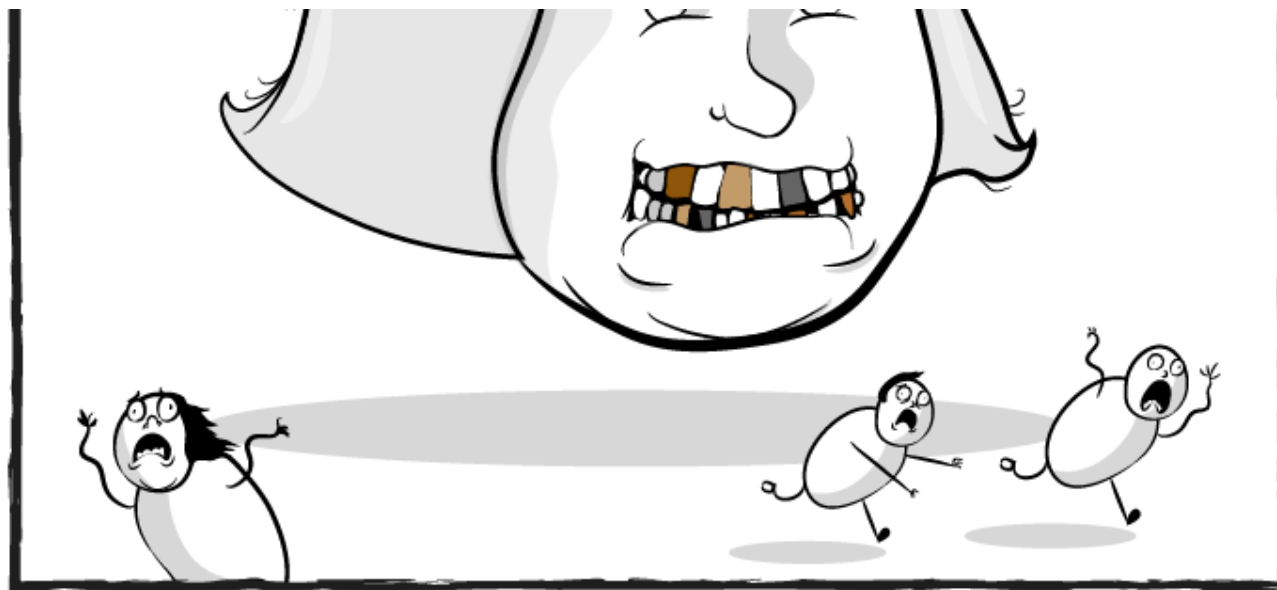
Except it isn't true.

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.





Sources: [★ SOURCE 1](#) [★ SOURCE 2](#) [★ SOURCE 3](#)

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

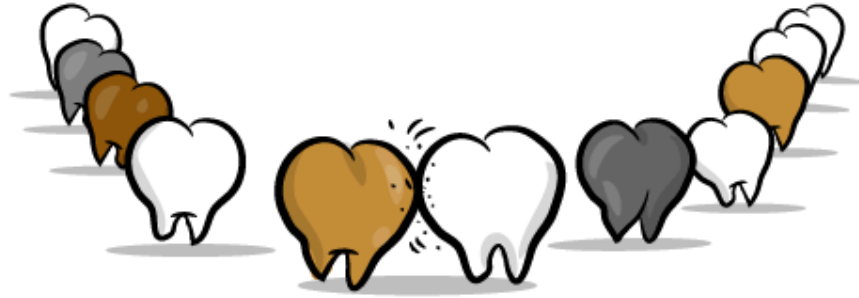
how did it *feel* to learn this new fact
about George Washington's teeth?

• • •

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 and George Washington's teeth come up in conversation, you're going to proudly impart this newfound knowledge to your fellow partygoers.



Yes?



Terrific, let's continue.

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:

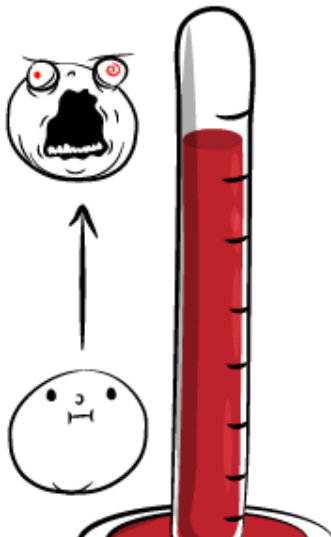
I am not here to convince you that
George Washington was a bad person.

I could go through all my cited sources and
cherry-pick arguments that either
deify or ~~demonize~~ demonize George Washington.

I could paint a portrait of a monster,
or I could exonerate a patriot.

But as I said before, I don't care.

It's not the point.



The point

is to give you an emotional
barometer of how you feel
when presented with new ideas.



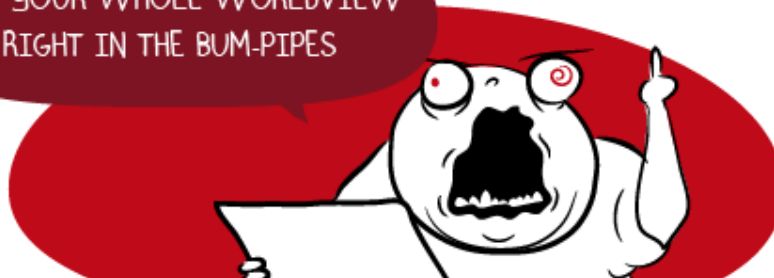
Because you may have noticed that the first fact about George Washington's teeth was rather easy to accept.

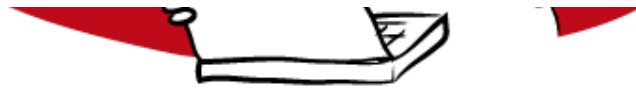
I would even wager that when I told you the first fact, you accepted it without question.



But when I told you the second fact, you immediately checked my sources and are now furiously composing an informed-yet-incendiary retort which you will boldly deliver to me in the form of a sour, blustering Facebook comment.

FUCK YOUR WHOLE WORLDVIEW
RIGHT IN THE BUM-PIPES





And that's okay

That's all part of it

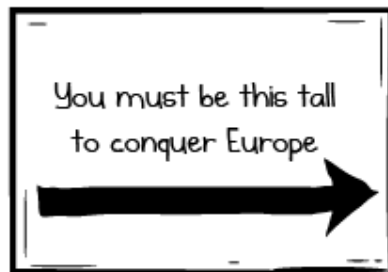


Let's try a few more.

. . .

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



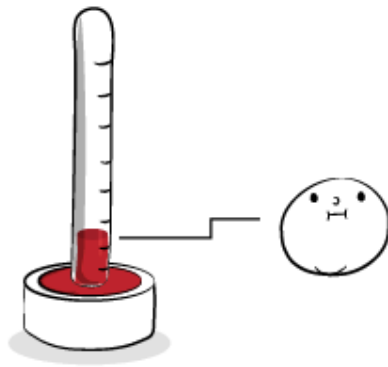
3. Oh God
still in shock



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.

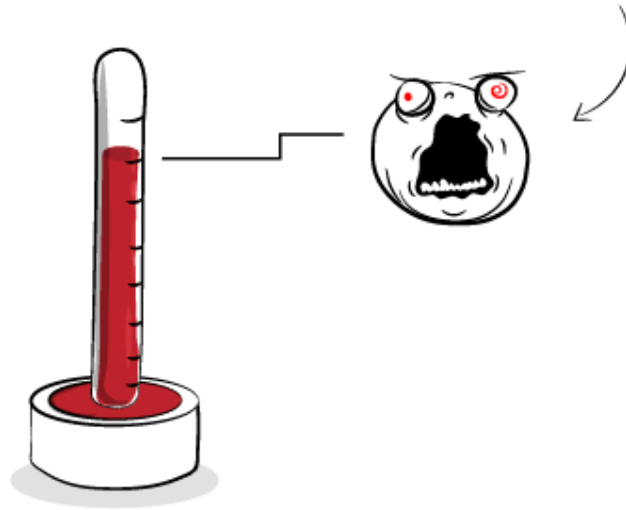
Sources: [★ SOURCE 1](#) [★ SOURCE 2](#) [★ SOURCE 3](#)

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
batshit-fucking-bonkers to me. }

It turns out batshit-fucking-bonkers has a name in the world of neuroscience.

It's called the

backfire effect.

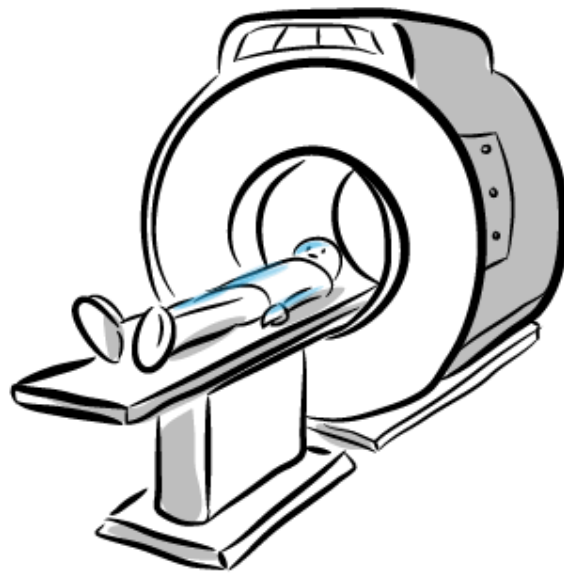
and it's a well-documented
psychological behavior.





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.



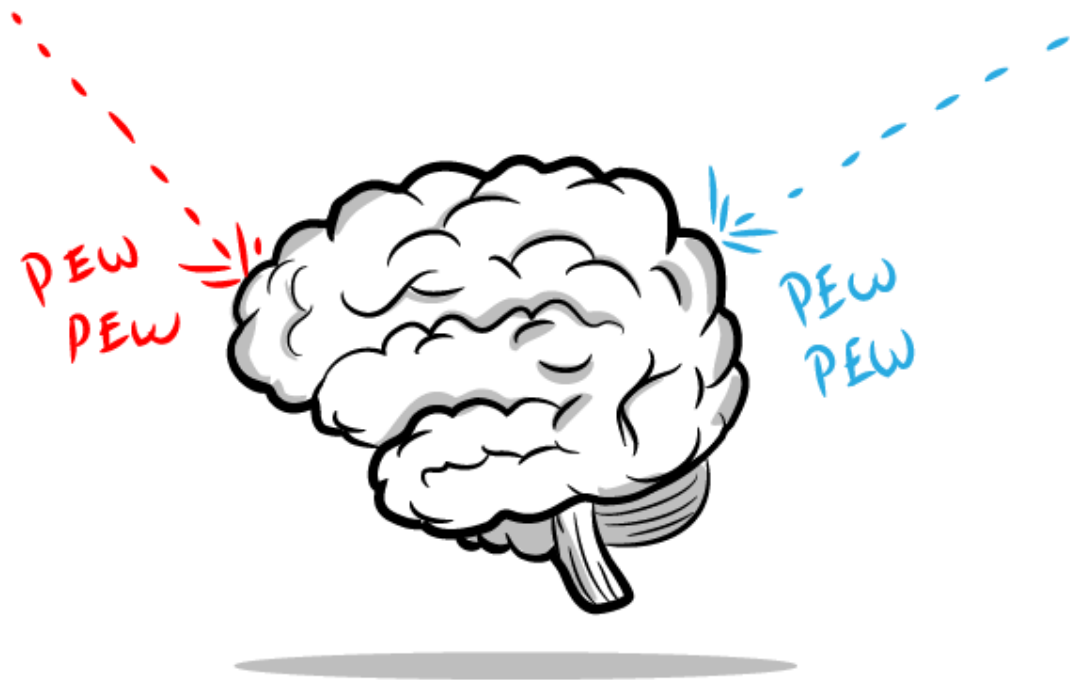
Once inside, they were presented with
counterarguments to strongly held
political beliefs.

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.



What the study revealed was that the same part of the brain that responds to a PHYSICAL threat responds to an INTELLECTUAL one.

This area of the brain is known as the



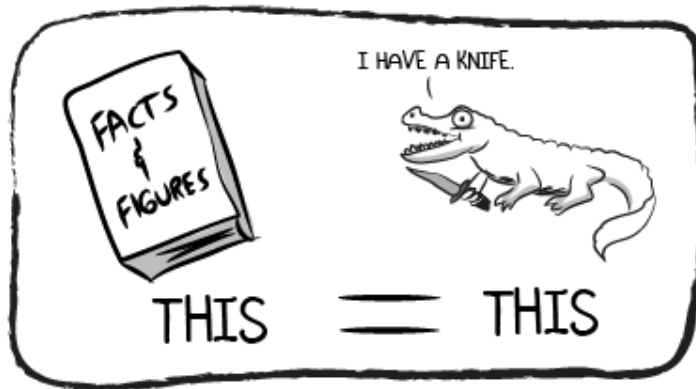
amygdala,



and it's the emotional core of your mind.

Unfortunately,

it makes us biologically wired to react to threatening information the same way we'd react to being attacked by a predator.



From an evolutionary standpoint,
it makes sense.

If you were a caveman and another caveman threw a boulder at your head, you wouldn't react by logically debating the pros and cons of getting brained.

FRANK JEALOUS OF JEFF'S NICE CAVE.
FRANK KILL JEFF AND TAKE CAVE.
GOODBYE JEFF.

Now Frank,
I think objectivity
is key here.



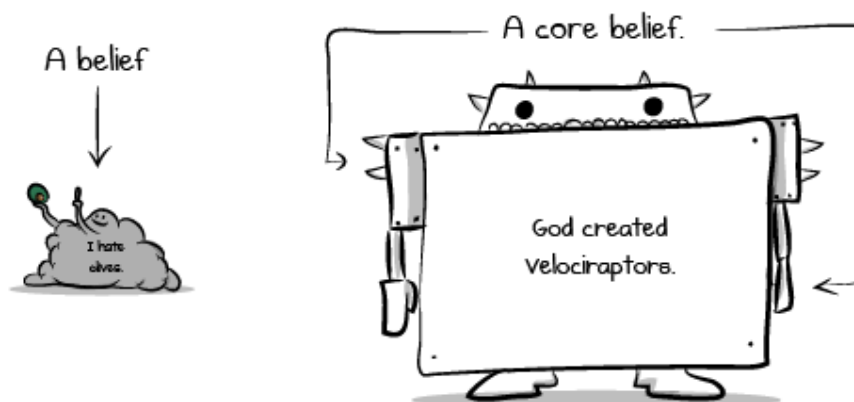


Core beliefs

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.

But there are biological reasons as well: the amygdala of your brain is screaming "BATTLE STATIONS."

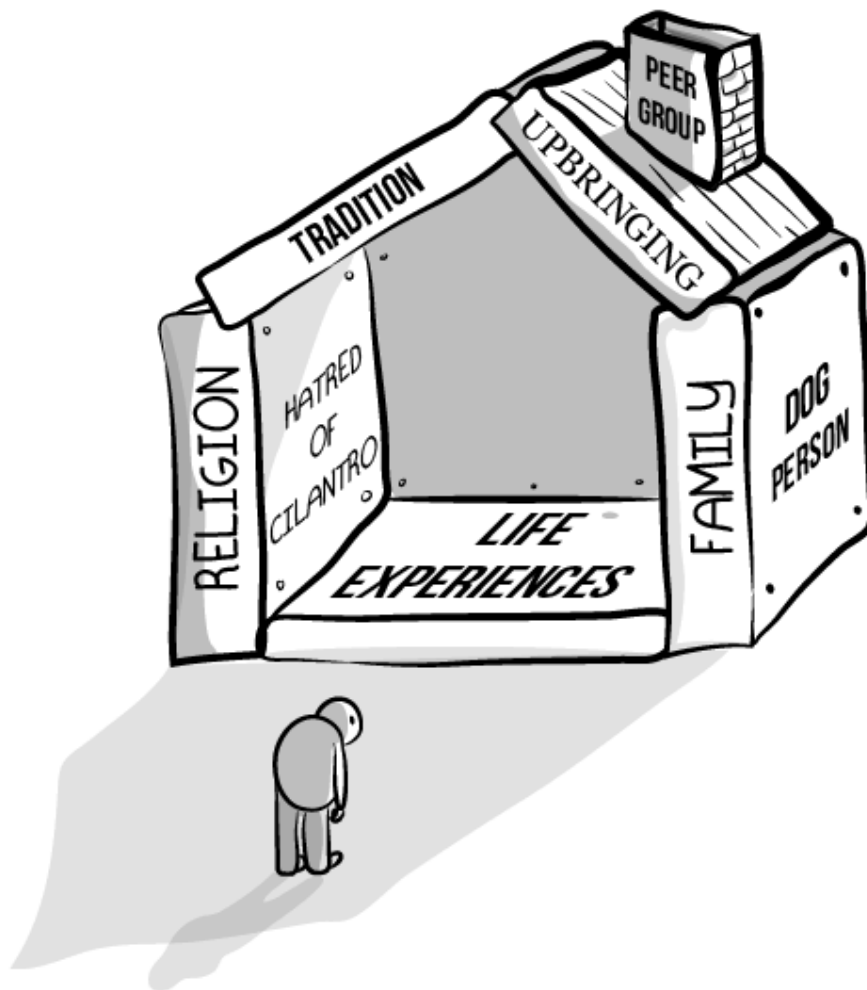


Some of you may have held a worldview that George Washington was a patriot and a hero. By presenting negative information about him

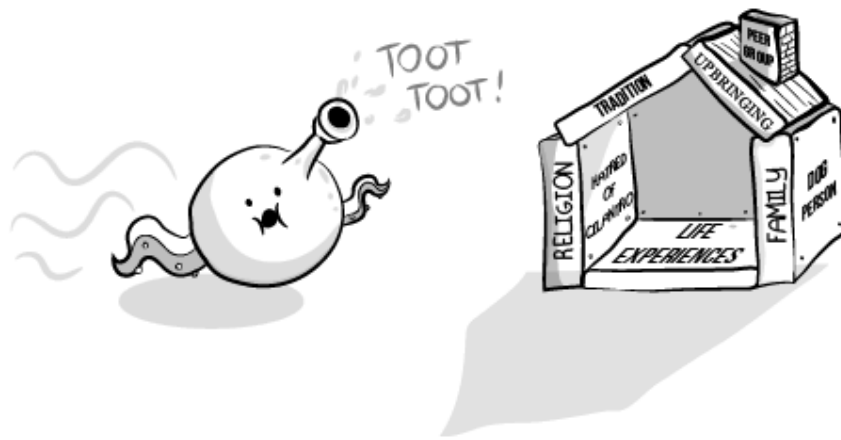
by presenting negative information about them,
it challenged that worldview.

Your brain loves consistency.
It builds a worldview like we build a house.

It has a foundation and a frame and
windows and doors and it knows exactly
how everything fits together.



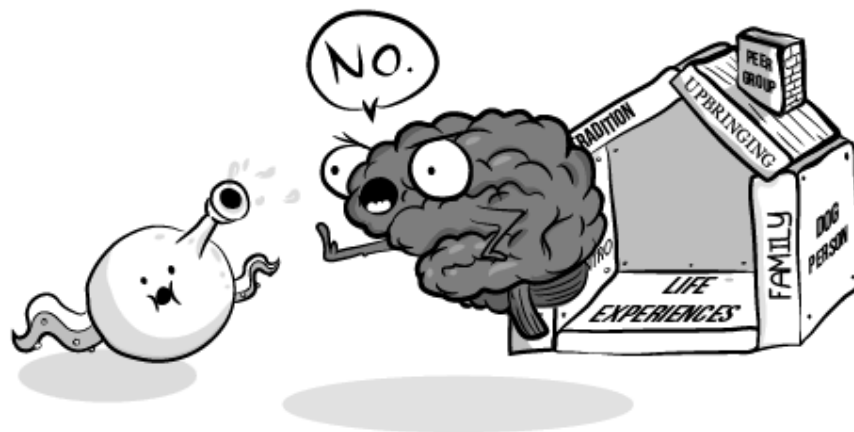
If new piece is introduced and it doesn't fit,



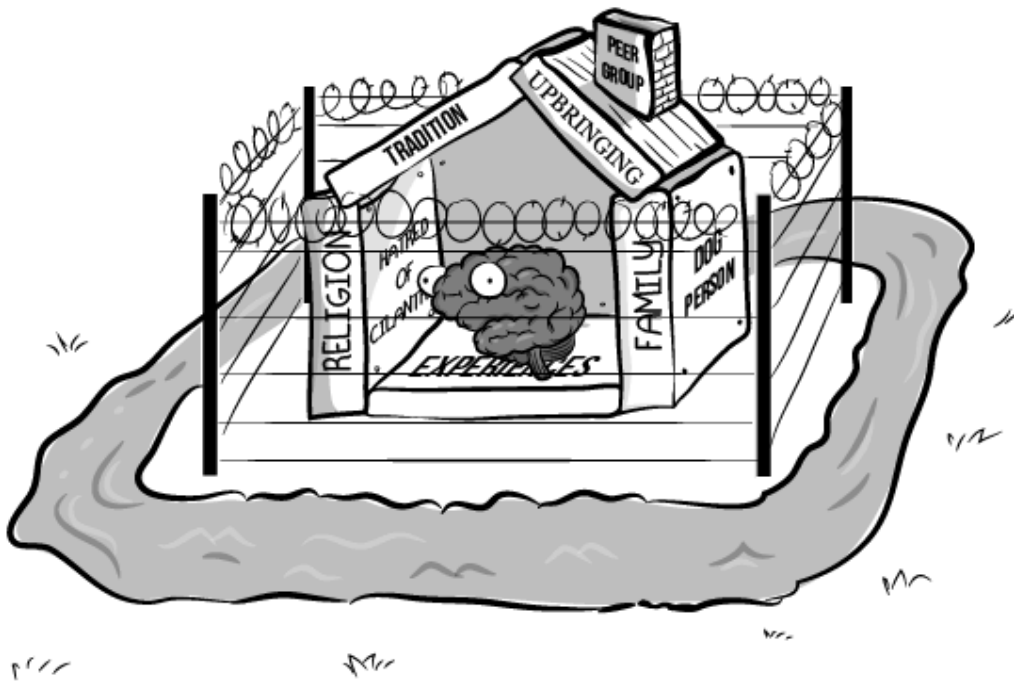
the whole house falls apart.



Your brain protects you by rejecting that piece.



It then builds a fence and a moat
and refuses to let in any visitors.



This is why we have the backfire effect.
It's a biological way of protecting a worldview.

Just remember that your worldview
isn't a perfect house that was built
to last forever.

It's a cheap condo,

and over time most of it will turn to shit.



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.

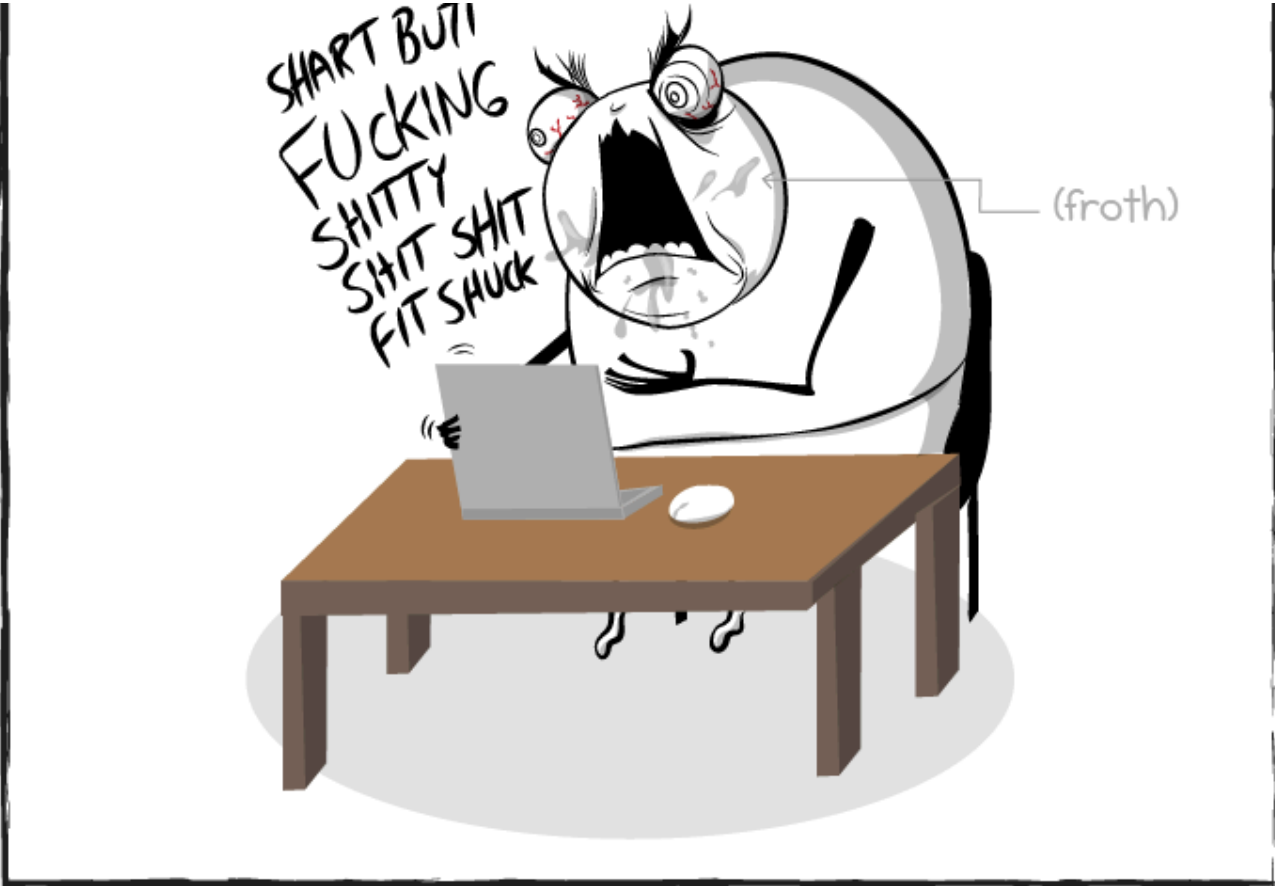
The disappointing truth is that I don't have much advice for you.

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.



Sure, there are ways of changing people's
minds that are more effective than others,
but ultimately they all fall short.

This is compounded by the internet, where
anything can be cited as a source
and every disagreement degrades into a room
full of orangutans throwing feces at one another.



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 HATE YOUR
WHOLE EVERYTHING.
FUCK YOU, TRAVIS.





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.



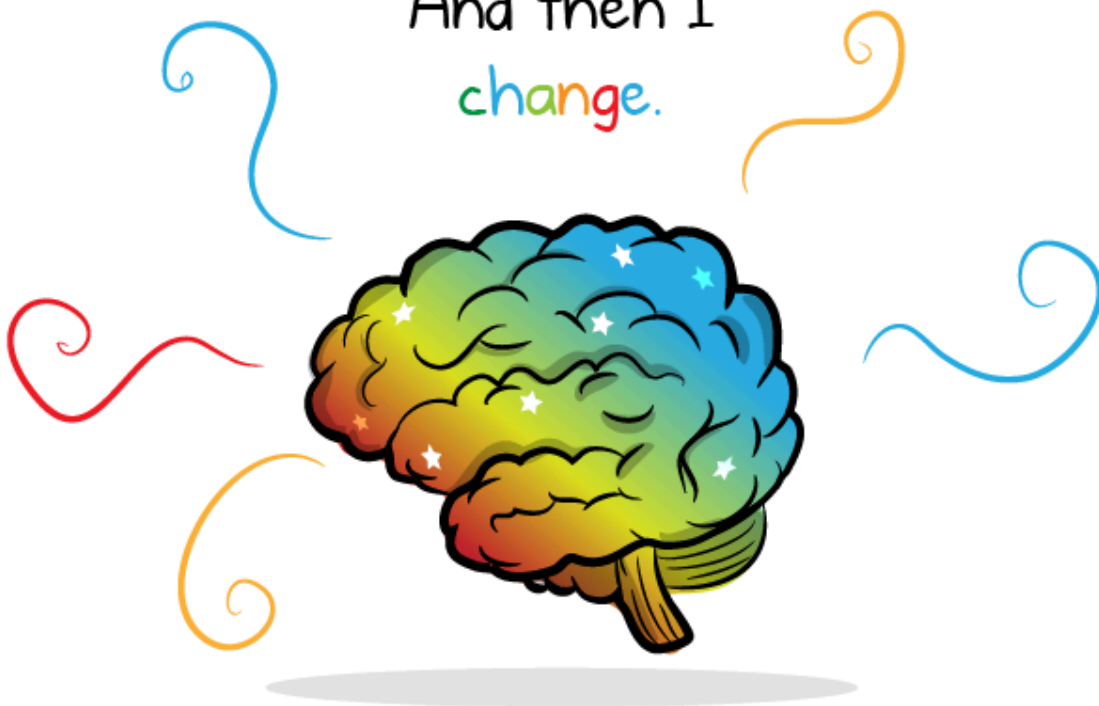
I let the emotional cortex
fight its little fight.



And then I listen.



And then I
change.






Because this universe of ours
is so achingly beautiful.

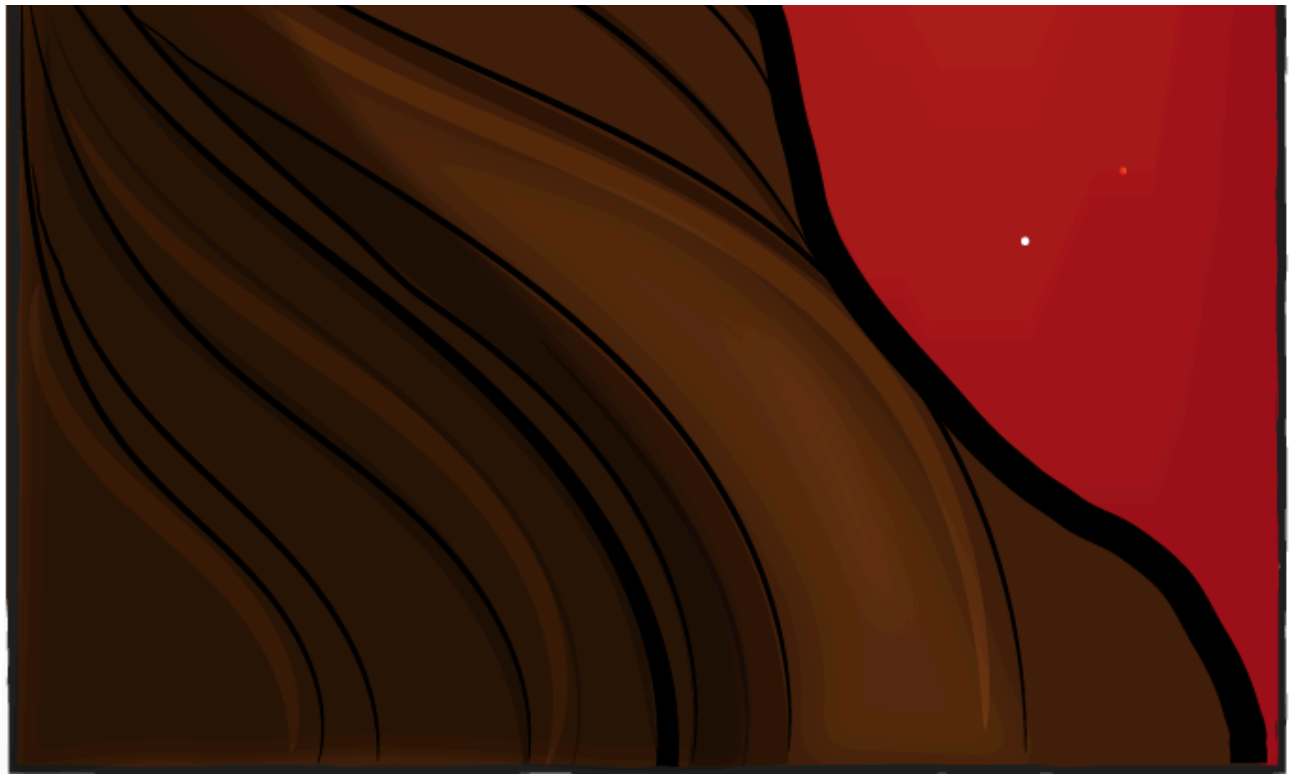
And we're all in it together.

We're all going in
the same direction.



I'm not here to take
control of the wheel.

Or to tell you
what to believe.



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

To listen.





To change.

Written & drawn by
The Octopus

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 **Theresa** 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. Theresa: 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

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