



FLICC: the Techniques of Science Denial



**Fake
Experts**



**Logical
Fallacies**



**Impossible
Expectations**



**Conspiracy
Theories**



**Cherry
Picking**



Ambiguity



**False
Analogy**



**Misrepre-
sentation**



**Oversimp-
lification**



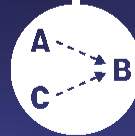
**Red
Herring**



Anecdote



**False
Choice**

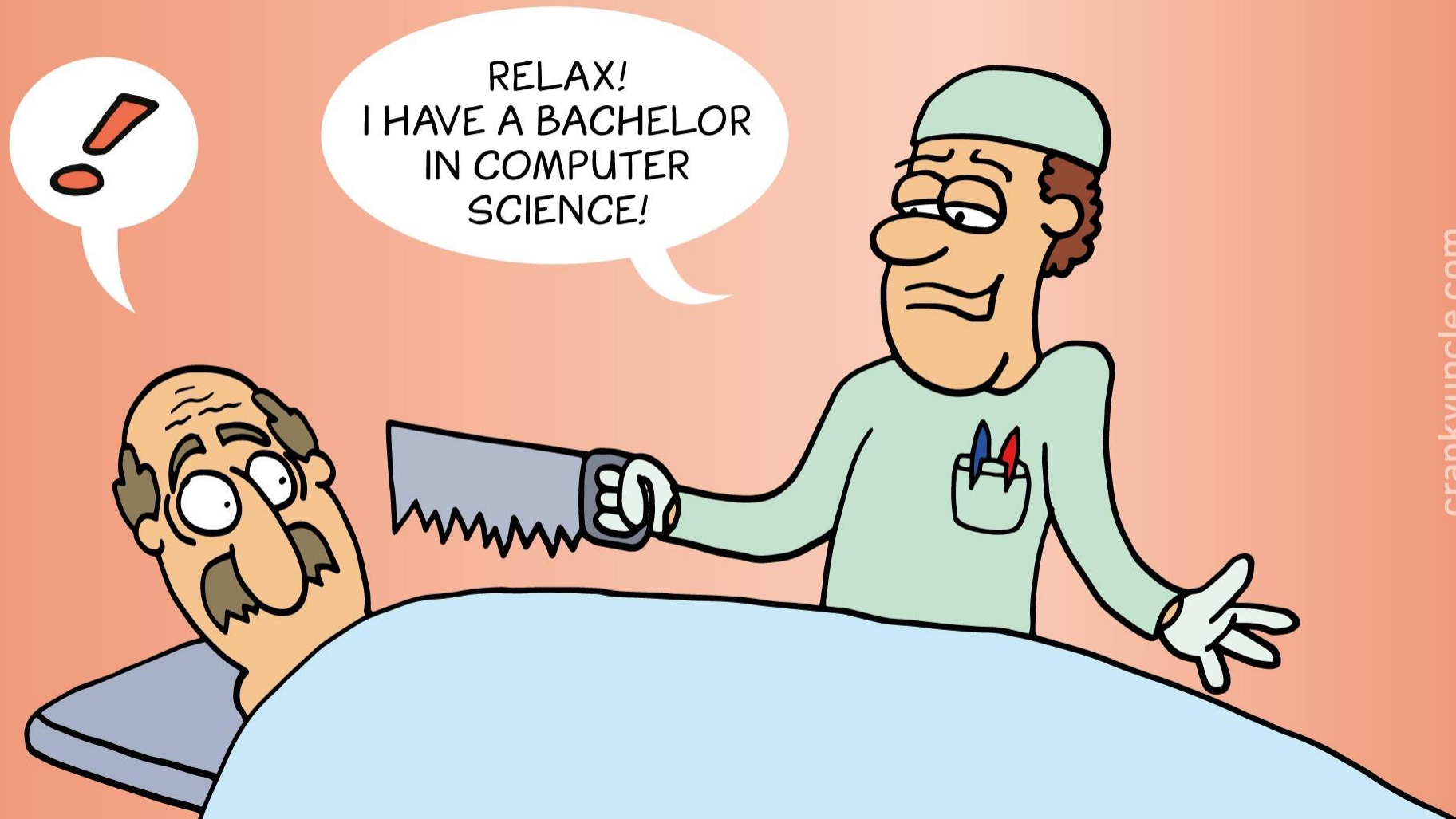


**Single
Cause**



Fake Experts

Presenting an unqualified person or institution as a source of credible information.



Global Warming Petition Project

*31,487 American scientists have signed this petition,
including 9,029 with PhDs*

Petition

We urge the United States government to reject the global warming agreement that was written in Kyoto, Japan in December, 1997, and any other similar proposals. The proposed limits on greenhouse gases would harm the environment, hinder the advance of science and technology, and damage the health and welfare of mankind.

There is no convincing scientific evidence that human release of carbon dioxide, methane, or other greenhouse gases is causing or will, in the foreseeable future, cause catastrophic heating of the Earth's atmosphere and disruption of the Earth's climate. Moreover, there is substantial scientific evidence that increases in atmospheric carbon dioxide produce many beneficial effects upon the natural plant and animal environments of the Earth.



Logical Fallacies

Arguments where the conclusion doesn't logically follow from the premises. Also known as a non sequitur.



“I have blue eyes therefore
I know quantum physics.”



Impossible Expectations

Demanding unrealistic standards of certainty
before acting on the science.



YOU'LL HIT
THE GROUND IN 12
TO 15 SECONDS.



GET BACK TO
ME WHEN YOU HAVE
MORE CERTAINTY!



Conspiracy Theories

Proposing a secret plan to implement a nefarious scheme such as hiding a truth or perpetuating misinformation.



Donald J. Trump 

@realDonaldTrump



The concept of global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive.

2:15 PM · Nov 6, 2012 · [Twitter Web Client](#)

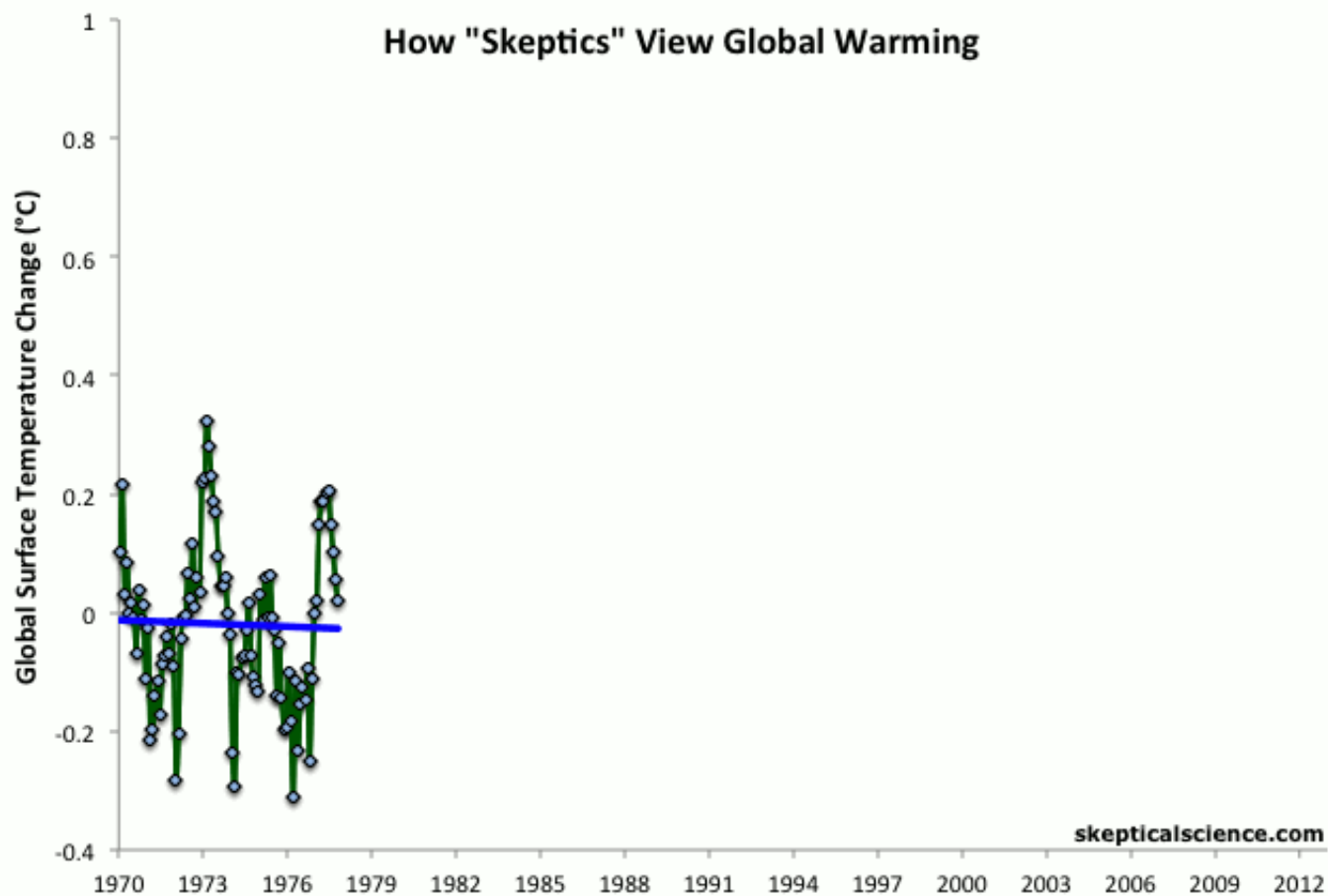
96.7K Retweets **64.7K** Likes

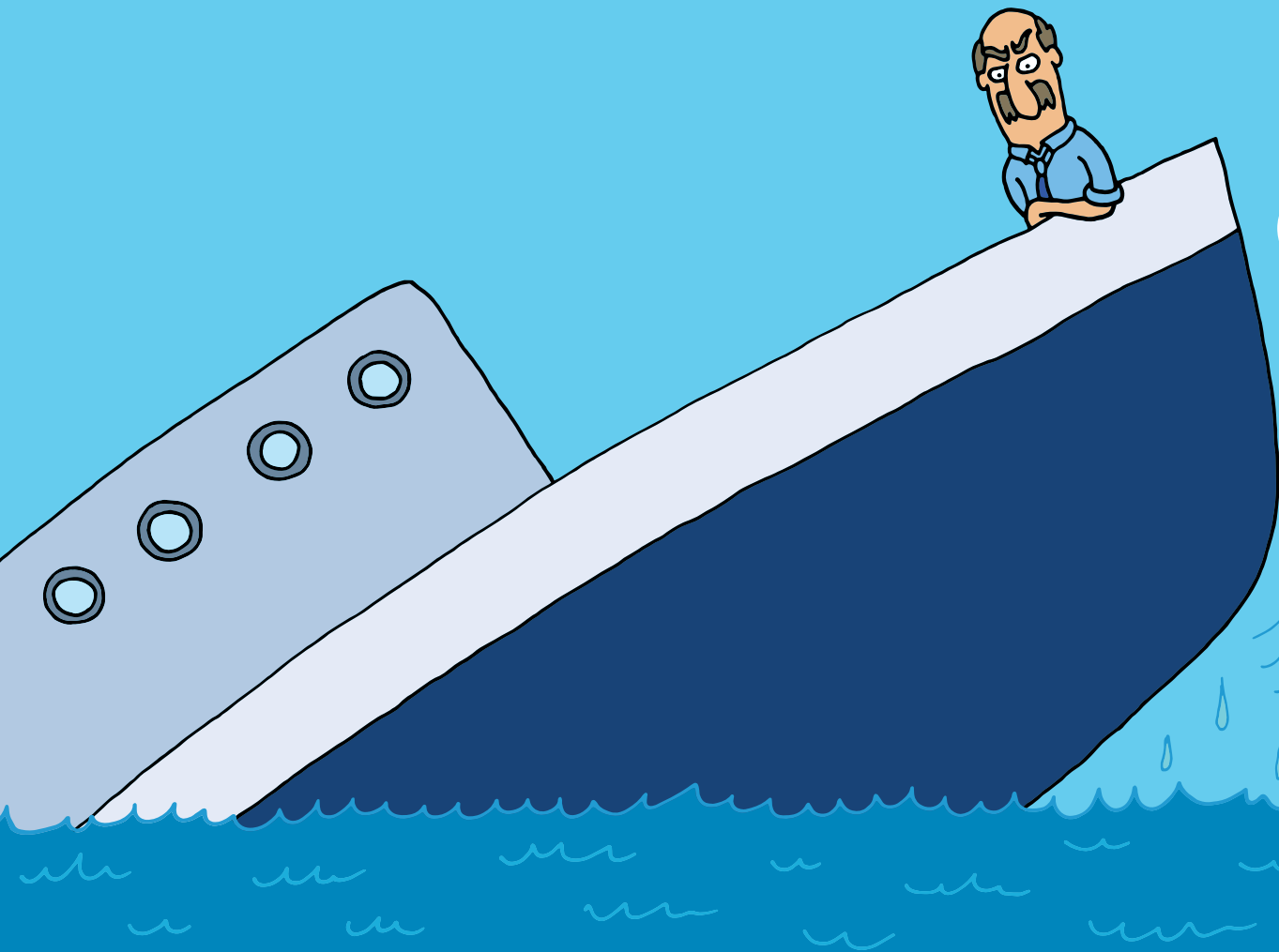


Cherry Picking

Carefully selecting data that appear to confirm one position while ignoring other data that contradicts that position.

How "Skeptics" View Global Warming





WHAT DO
YOU MEAN WE'RE
SINKING? I'M MOVING
UPWARDS!



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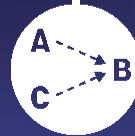
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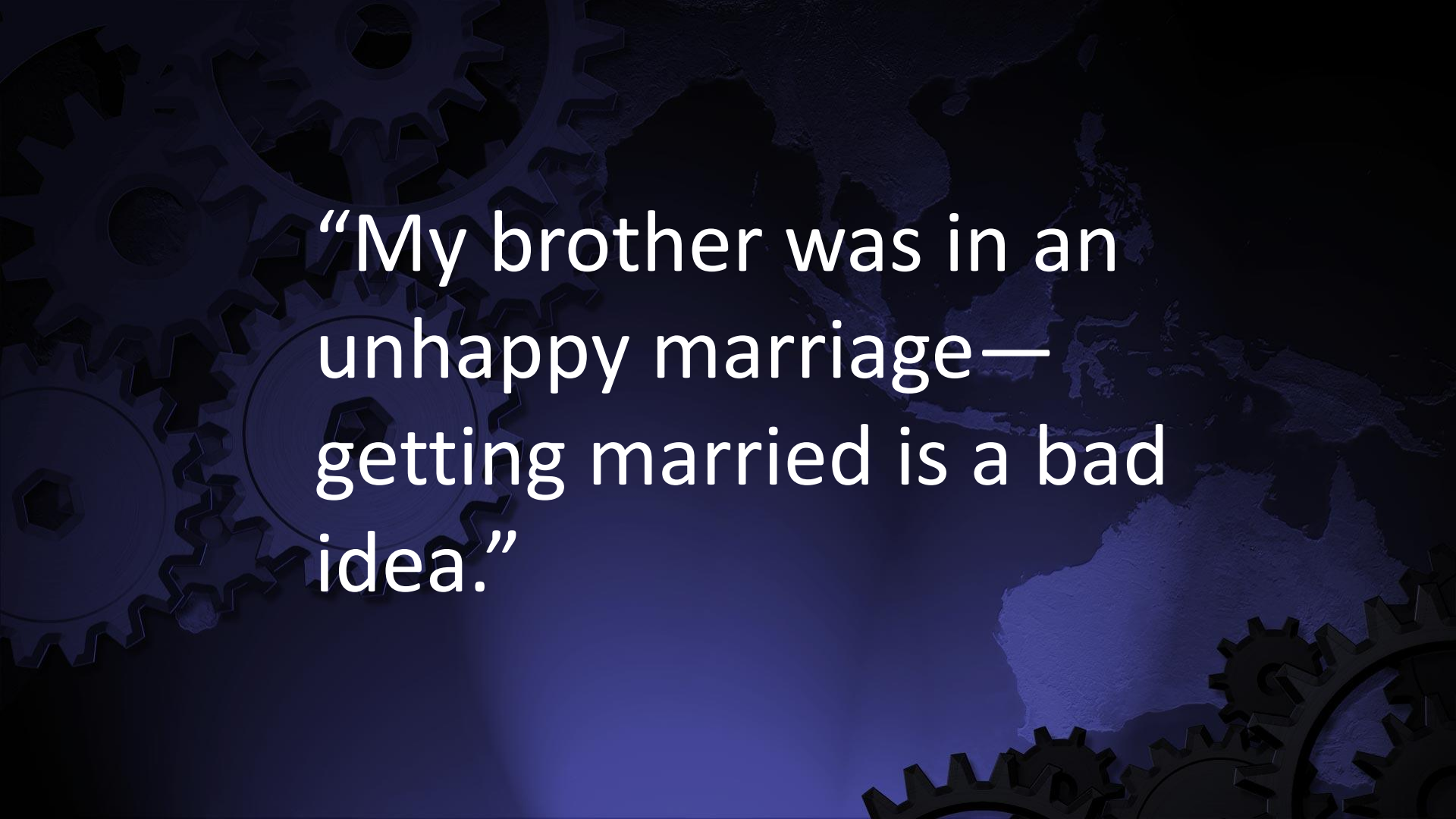


**Single
Cause**



Anecdote

Using personal experience or isolated examples instead of sound arguments or compelling evidence.



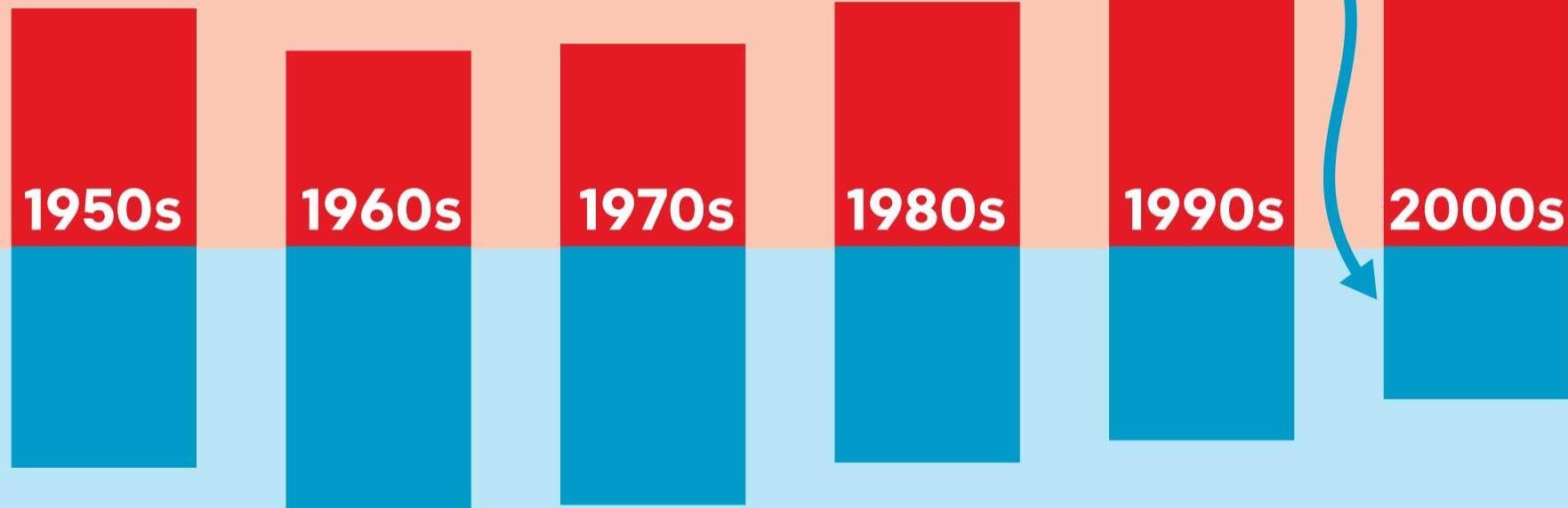
“My brother was in an
unhappy marriage—
getting married is a bad
idea.”



IT'S
COLD...

...GLOBAL
WARMING DOESN'T
EXIST!

Hot record
temperatures



Twice as many *hot*
records *as cold*

Cold record
temperatures



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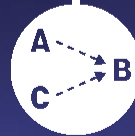
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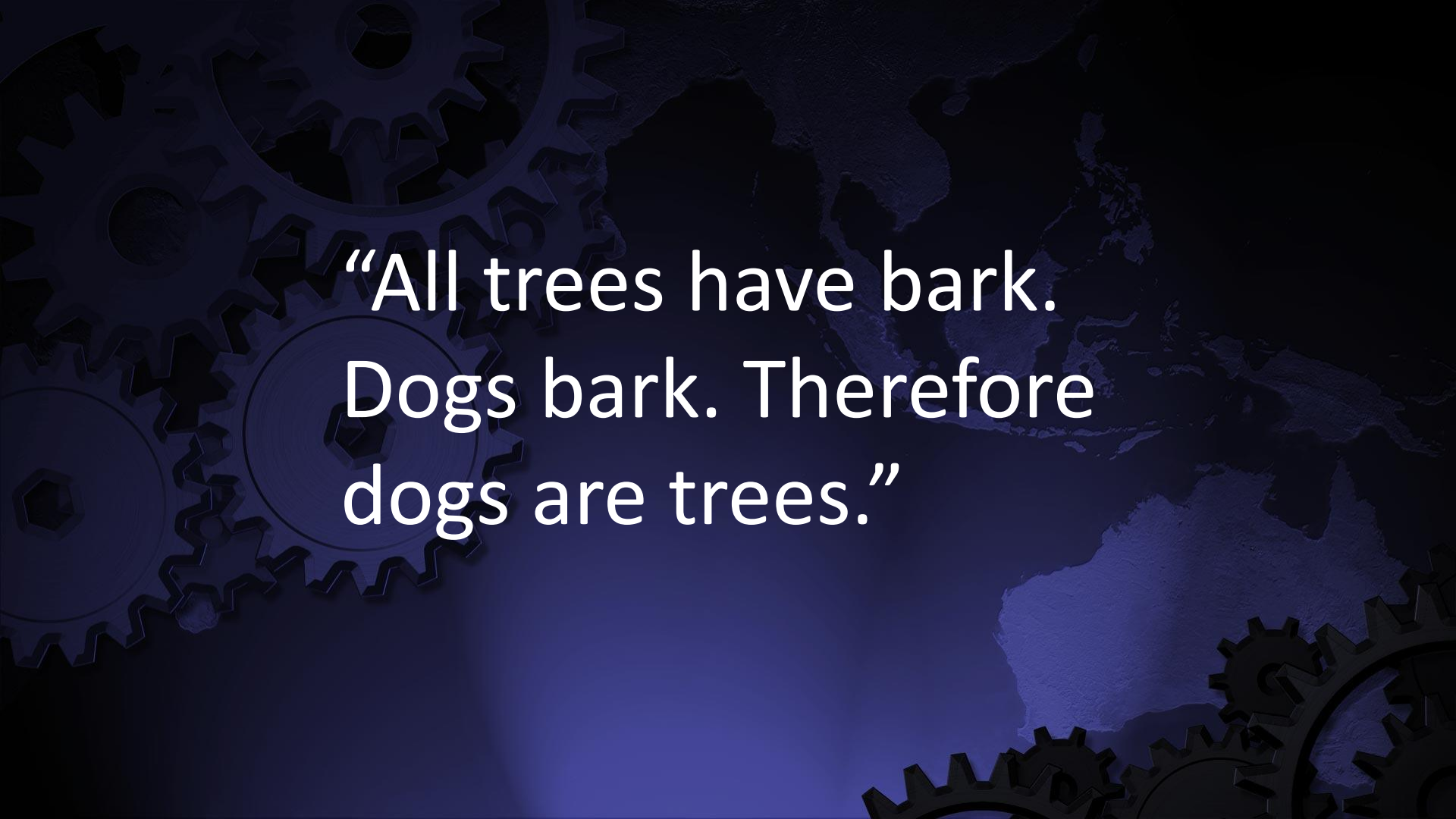


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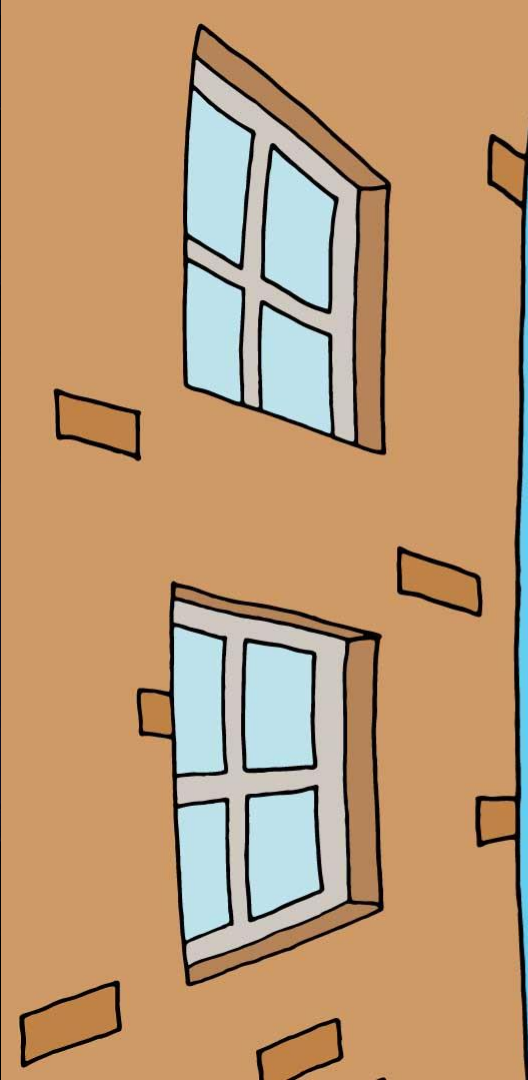


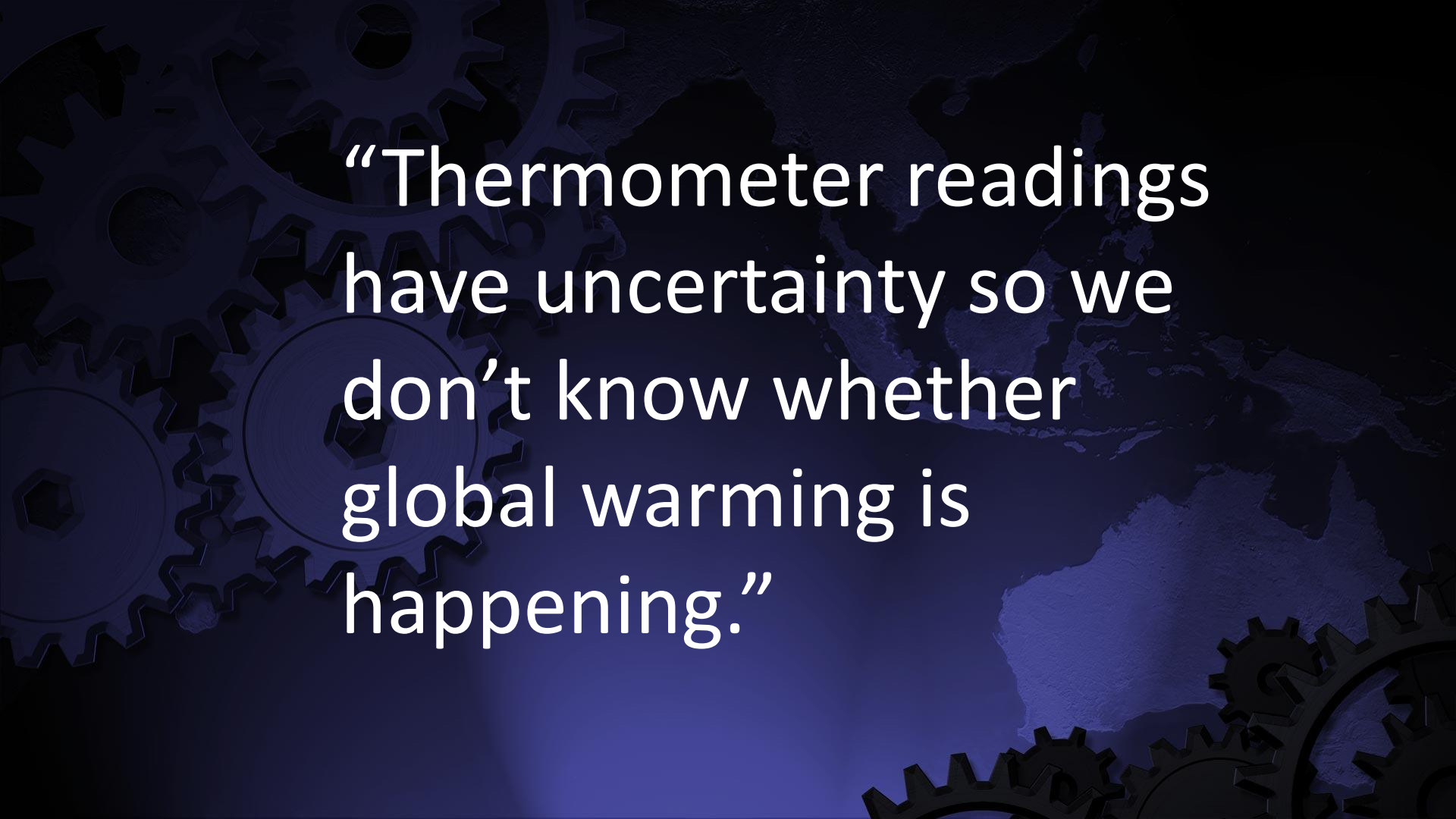
Ambiguity

Using ambiguous language in order to lead to a misleading conclusion.



“All trees have bark.
Dogs bark. Therefore
dogs are trees.”



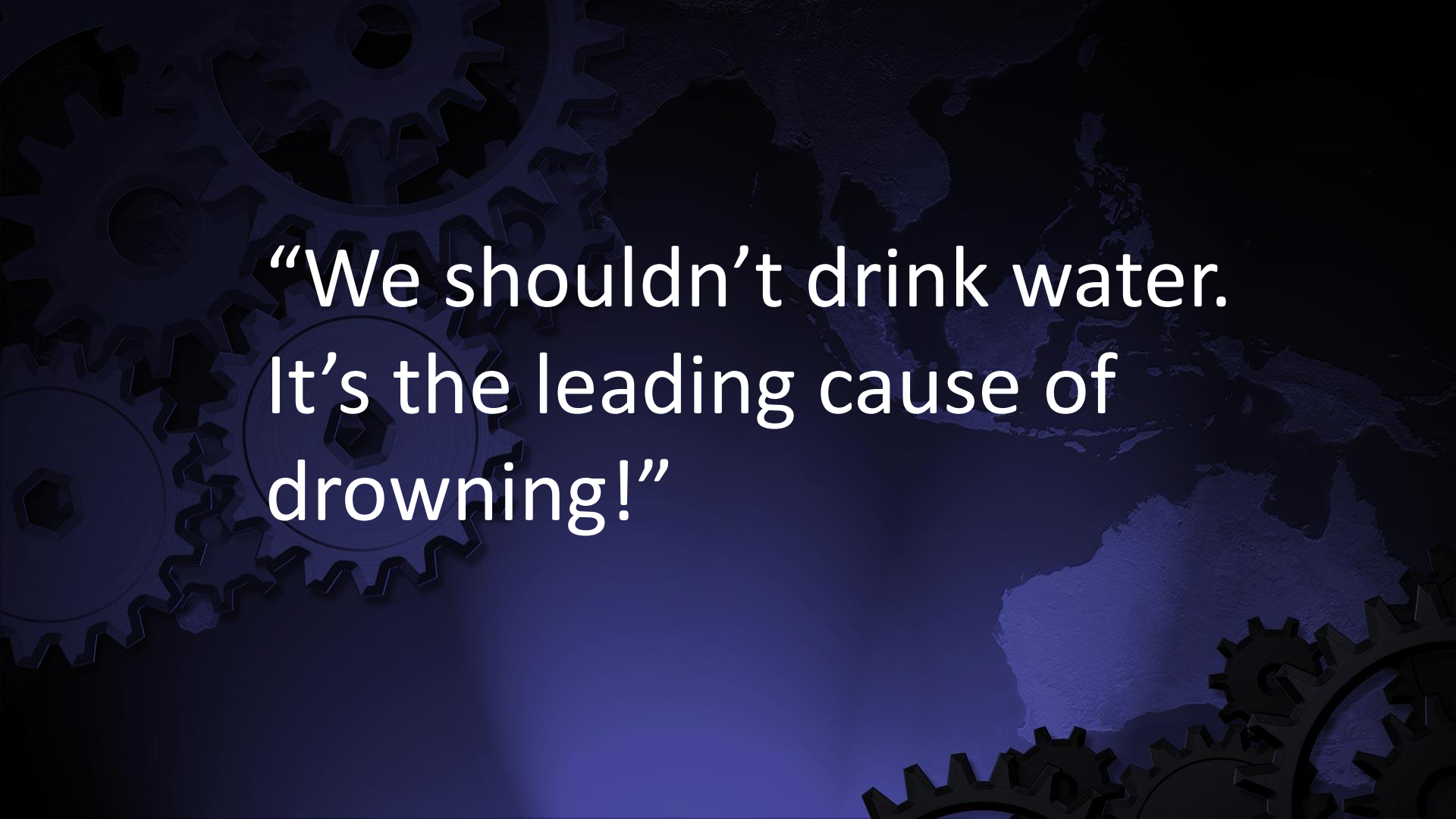


“Thermometer readings
have uncertainty so we
don’t know whether
global warming is
happening.”



Red Herring

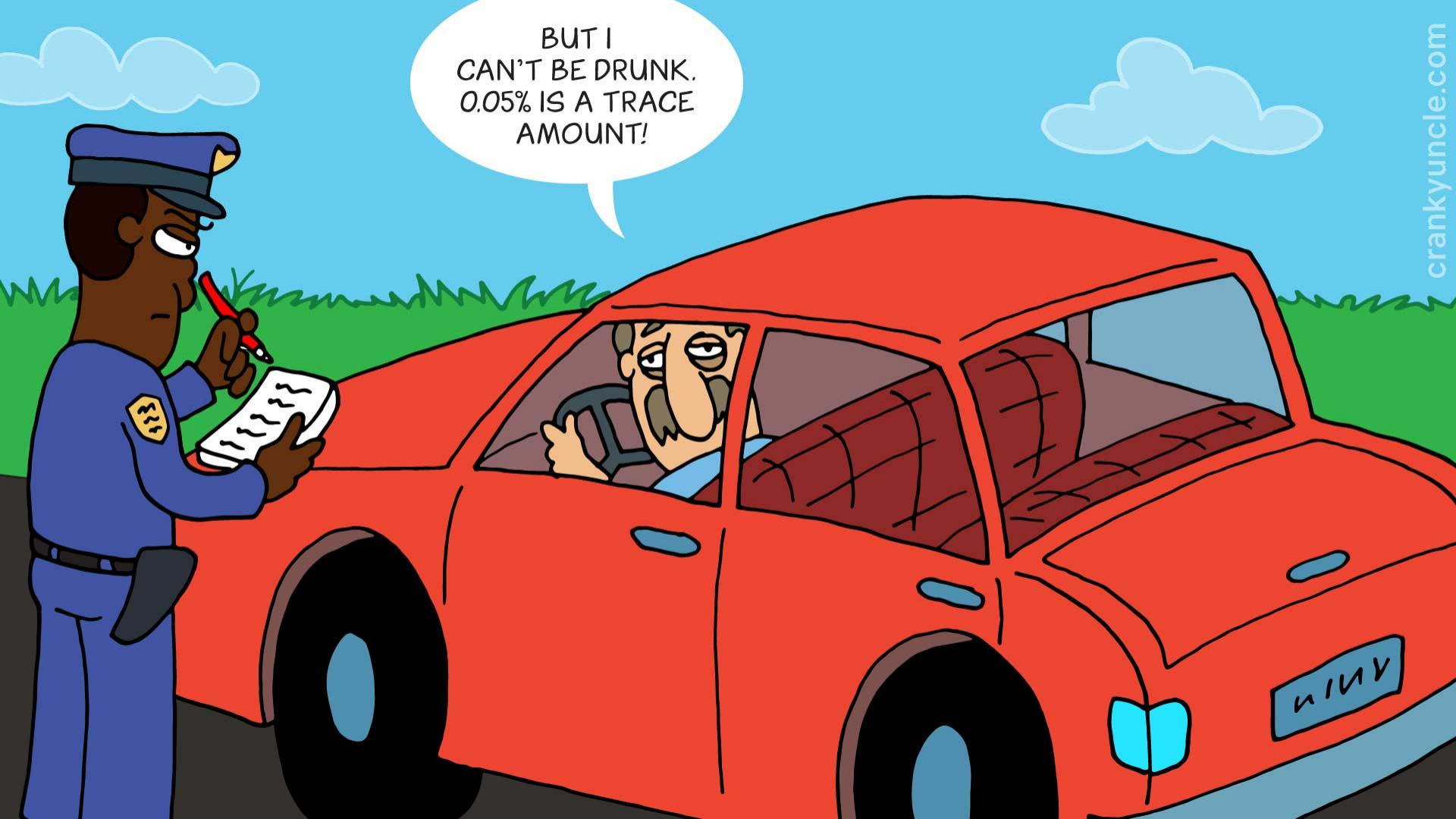
Deliberately diverting attention to an irrelevant point to distract from a more important point.



“We shouldn’t drink water.
It’s the leading cause of
drowning!”

The background of the slide is a dark blue gradient. It features several large, interlocking gears of different sizes, some of which are semi-transparent. A faint, light blue world map is visible in the background, centered behind the text.

“CO₂ is only 0.04 percent
of the atmosphere so can’t
have a significant effect.”



BUT I
CAN'T BE DRUNK.
0.05% IS A TRACE
AMOUNT!



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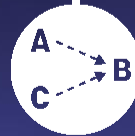
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Oversimplification

Simplifying a situation in such a way as to distort understanding, leading to erroneous conclusions.

The background is a dark blue gradient. Overlaid on this are several large, dark grey gears of different sizes, some of which are interlocking. A faint, light blue world map is visible in the background, showing the continents. The text is centered in the upper half of the image.

“CO₂ is plant food so
emitting CO₂ is good for
plants.”

GRANDPA,
I FEEL
SICK!

KEEP
EATING THAT
HEALTHY
CALCIUM!





False Choice

Presenting two options as the only possibilities, when other possibilities exist.
Also known as a false dichotomy.

DO OR DO
NOT. THERE IS
NO TRY!



The background of the slide is a dark blue gradient. It features a faint, stylized world map in a lighter blue shade. Overlaid on the map are several interlocking gears of different sizes, rendered in a dark, metallic blue color. The gears are positioned in the corners and along the sides, creating a mechanical or philosophical theme.

Which is true?

Chickens come from eggs

Eggs come from chickens

Both

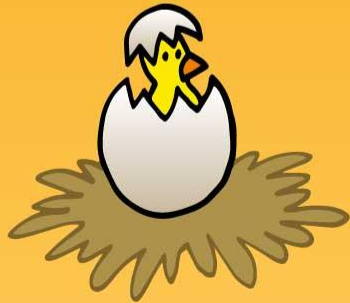
The background of the slide is a dark blue gradient. Overlaid on this are several large, dark grey gears of different sizes, some of which are interlocked. A faint, light blue world map is visible in the background, centered behind the text.

Which is true?

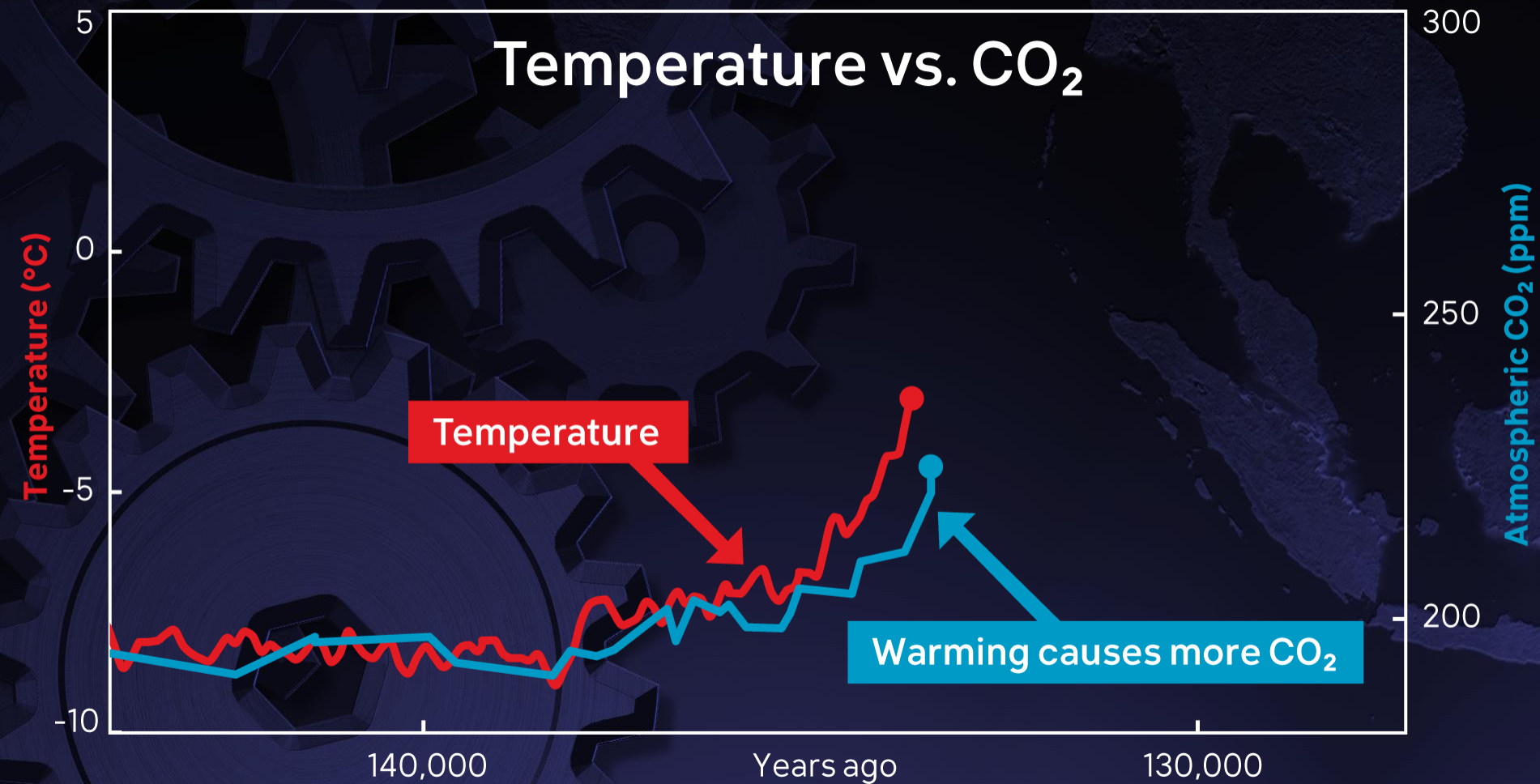
Chickens come from eggs

Eggs come from chickens

AHA!
PROOF THAT EGGS
DON'T COME FROM
CHICKENS!



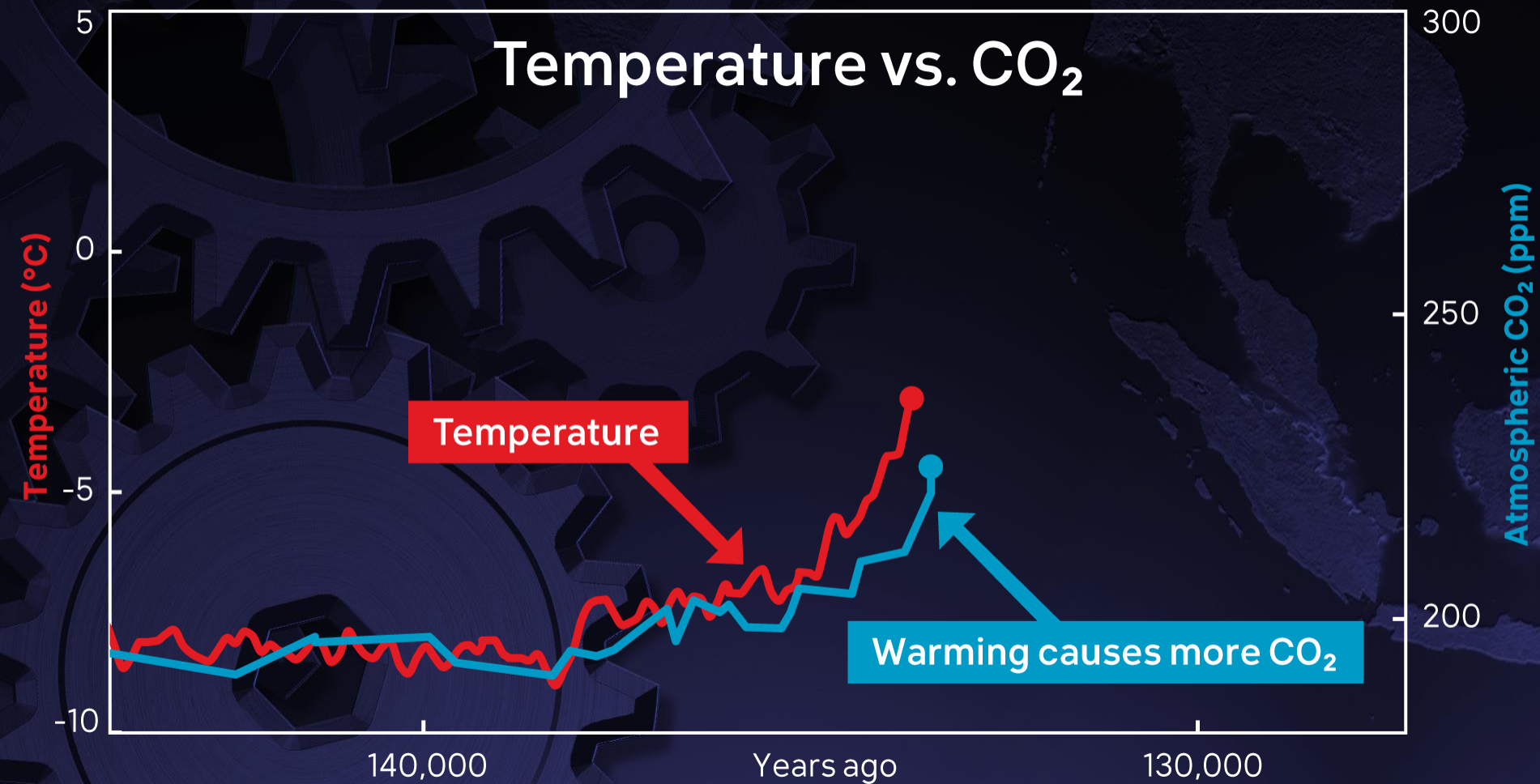
Temperature vs. CO₂



“...CO₂ actually lags T, proving
CO₂ cannot cause T changes at
all. Rather T causes CO₂.”

Man-made global warming promoters claim the high correlation between carbon dioxide (CO₂) and atmospheric temperature (T) in the 420,000 year ice core record proves CO₂ causes T to change. Herein is demonstrated how the evidence conflicts with that belief.

Temperature vs. CO₂



Temperature vs. CO₂

More CO₂ causes warming

Warming causes more CO₂

Temperature (°C)

Atmospheric CO₂ (ppm)

140,000

Years ago

130,000

300

250

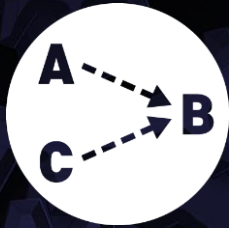
200

5

0

-5

-10



Single Cause

Assuming a single cause or reason when there might be multiple causes or reasons.



BIRDS FLY...
...SO GRAVITY IS
A HOAX!

YOU'RE
JUMPING TO
CONCLUSIONS!



**"One of the reasons
why the climate is
changing is climate
has always been
changing."**

MARC RUBIO



One of the
reasons why
the climate is
changing...



...is climate
has always
been
changing.

This person
died of
natural
causes...



...because
people have
always died of
natural causes.