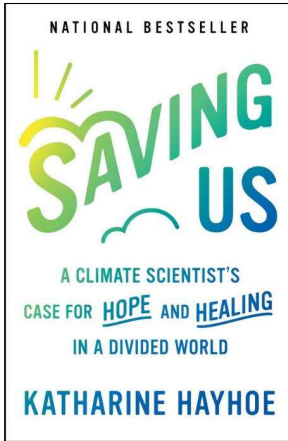


1/30/2024

CLIMATE CHANGE: PUTTING HOPE INTO ACTION

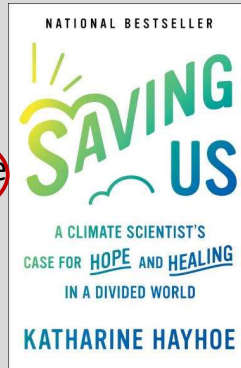


SECTION 2 – WHY FACTS MATTER – AND WHY THEY ARE NOT ENOUGH

THIS WEEK (Session 2)

Sections from *Saving Us...*

- 1- The Problem and the Solution
- 2- Why Facts Matter – and Are Not Enough
- 3- The Threat Multiplier
- 4- We Can Fix It
- 5- You Can Make a Difference



Chapters:

- 4 – The Facts Are the Facts
- 5 – The Problem with Facts
- 6 – The Fear Factor
- 7 – The Guilt Complex

This week we're looking at Section 2 – Why facts matter but aren't enough.

Hayhoe lays out the facts/science (Ch 4), the problem with basing arguments only on facts (Ch 5), and why fear, peer pressure, and guilt (Ch 6-7) aren't effective means of inspiring meaningful action.

ZOMBIE ARGUMENTS (Ch. 4)

Zombie Argument: scientific-sounding objections that have been debunked but won't go away.

"...the key when these zombie arguments surface is to **have an answer, but to keep it short.**

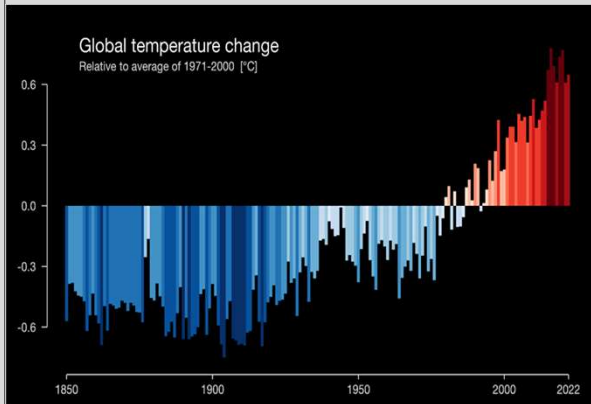
Acknowledge the objection, and provide a brief response. Then **pivot promptly to connecting over shared values rather than divisive arguments**, from the heart rather than the head."
(p. 39)



The science behind climate change has been around for a while and is pretty solid. Researchers at Exxon knew about this in the 1970s! Yet, we still see “scientific-sounding” objections being used... Or we hear folks argue that we don't know enough about it to make a difference... Or the fix is worse than the problem.

These aren't true. Hayhoe lays out reasons in her book. The problem with these zombie arguments is that they distract from doing anything while preserving a status quo that isn't going to get better. Hayhoe recommends being ready for a short, to-the-point response and then pivot to connecting on shared values that can lead to action.

COUNTERING THE ZOMBIE ARGUMENTS (Ch. 4)



2 main questions to address:

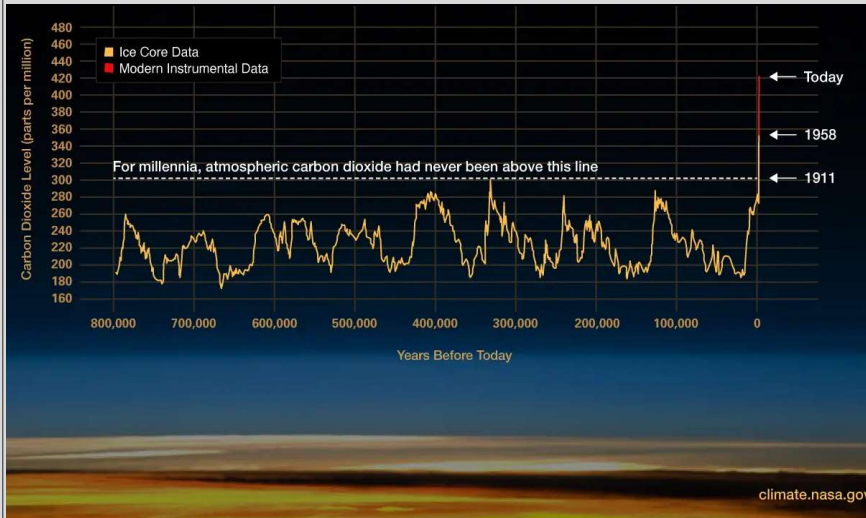
- (1) Is this part of a natural cycle?
Haven't we had warmer times in the past?
- (2) How do we know that humans are the cause?

Source: www.showyourstripes.info

Here are the key questions to address: Is the warming part of a cycle or does it go beyond what we'd expect? How can we be sure that humans are the cause?

Natural cycles act to distribute energy around the planet. In a natural cycle, warming areas are balanced by cooling areas elsewhere. Today the entire planet, including the oceans which have served as a buffer, are warming at the same time.

LONG-TERM CO₂ TRENDS



Source: NASA <https://climate.nasa.gov/evidence/>

Changing CO₂ levels (from ice cores):

Since the 50s, we're in uncharted territory.

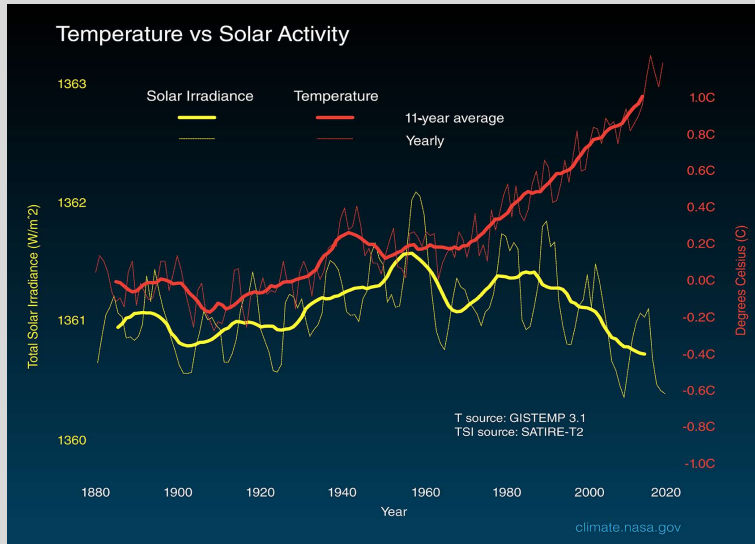
This is our doing, not a natural cycle.

Updated graph from NASA (climate.nasa.gov)

“We’ve had higher temperatures in the past.” While dinosaurs didn’t have thermometers, we can measure CO₂ levels in air bubbles trapped in ice cores that date back 400,000 (or more) years. During the Ice Ages, CO₂ levels were around 180-200 ppm. In the warmer interglacial periods, CO₂ rose to around 280 ppm. You can see the natural fluctuations/cycles throughout earth’s history.

Around the 1950s, CO₂ in the atmosphere rose to levels we’d never seen before. We exceeded 400 ppm in 2013 and levels continue to increase sharply. That is our doing, not a natural cycle.

TEMPERATURE VS SOLAR ACTIVITY



Source: NASA https://climate.nasa.gov/climate_resources/24/

From NASA:

Trends in temperature vs solar activity.

Temperatures should be dropping, not rising right now.

How do we know humans are the cause? Look at other possible explanations for warming. Hayhoe addresses these in Ch. 4.

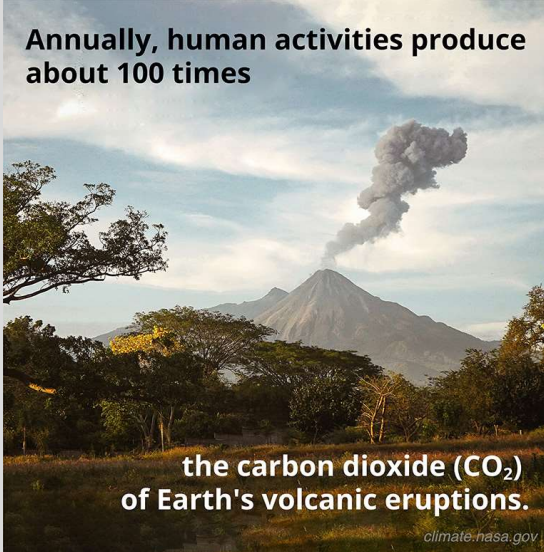
This illustrates the trends in solar radiation reaching us vs the change in temperature.

The amount of the sun's energy reaching us can be measured. That has been declining since the 1970s.

Earth's long-term orbit track is oblong rather than circular. There are times when the earth's orbit is farther out from the sun. This is happening now. Based on our position in that track, we should be cooling, not warming

EFFECTS OF VOLCANIC ACTIVITY

Annually, human activities produce about 100 times



the carbon dioxide (CO₂) of Earth's volcanic eruptions.

climate.nasa.gov

From NASA:

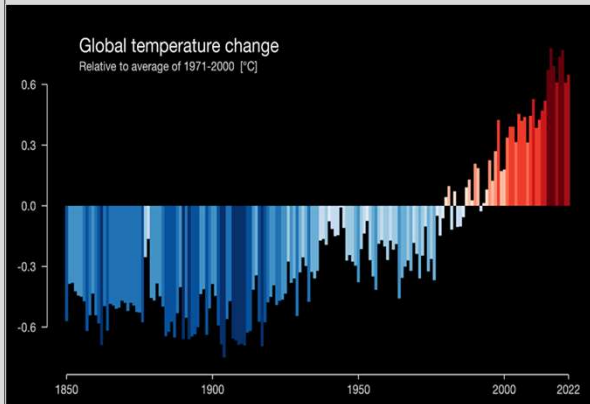
Human activities produce 100X the amount of CO₂ and 6-7X the amount of methane as volcanic eruptions.

Source: NASA https://climate.nasa.gov/climate_resources/24/

Also from NASA: human activities contribute far more greenhouse gases than volcanic activity. Additionally, volcanic eruptions spew particles into the atmosphere that reflect solar radiation away from the earth. These tend to result in cooling.

The bottom line here: If our current climate was controlled only by natural causes, our temperatures should be cooling rather than warming. That means that the warming trends we see now are what's happening AFTER the warming impacts have been laid on top of what would have been an otherwise cooling cycle.

THE BOTTOM LINE



“Dozens of studies indicate that the most likely amount of warming humans are responsible for is more than 100 percent. How...? Because **according to natural factors, the planet should be cooling, not warming. We are the cause of all of the observed warming—and then some. (p. 47)**

Source: www.showyourstripes.info

Here are the key questions to address: Is the warming part of a cycle or does it go beyond what we'd expect? How can we be sure that humans are the cause?

Natural cycles act to distribute energy around the planet. In a natural cycle, warming areas are balanced by cooling areas elsewhere. Today the entire planet, including the oceans which have served as a buffer, are warming at the same time.

THE PROBLEM WITH FACTS (Ch. 5)

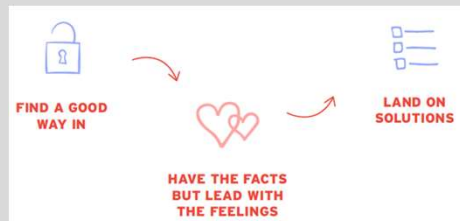
“...when it comes to making up our minds about something, **emotions usually come first and reason second.**” (p. 53)

“If rejecting climate change is part of what we believe makes us a good person, then we don’t interpret arguments to the contrary as ‘you’re wrong.’ Rather, we hear them saying ‘you’re a bad person.’ ...It tends to make us double down on our denial in a kind of **backfire effect.**” (p. 56)

We humans are complicated and contradictory. We like to think we’re using our minds when it is our emotions and our identity that are driving us. We like to think we are good people and will resist anything that might make us look like a bad person. This is not just with climate change – it drives our response to other polarizing issues as well. It’s why those in charge want to dictate what is said and taught.

THE PROBLEM WITH FACTS (Ch. 5)

“Facts are incredibly important because they explain how the world works, whether we like it or not. They are often essential to changing our minds if we are not polarized on the issue. They can even change our minds if we are polarized, but **only if they can be shared in a way that is able to sidestep the polarization.” (p. 59)**



The challenge is how to use facts in ways that are not polarizing. This is why Katharine Hayhoe advocates finding a way in based on common connections rather than disagreement. Build bridges first, use facts but focus on personal experiences and feelings. Move to solutions that we can do.

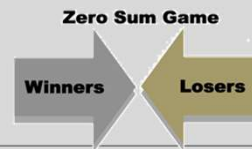
FEAR AND GUILT (Ch. 6-7)

FEAR

“To be human is to be a bundle of contradictions—and to have an aversion to anxiety. We do not accept climate change because we wish to avoid the anxiety it generates...”(p. 69)

“... **Shaming is a zero-sum game.** One person wins only at the expense of another.” (p. 74)

“Guilt can motivate us to change. Like fear, though, it can shut us down if we carry it with us long-term, or if it’s used as a weapon against us.” (p. 76)



In Chapters 6 and 7, Hayhoe writes that fear and guilt are not good motivators. Fear can generate anxiety or paralysis. We may either avoid the issue altogether to avoid anxiety or become so overwhelmed we don't know how to begin to respond. Guilt, shaming, peer pressure may be short-term motivators, but are unlikely to result in long-term solutions.

WHAT'S FAITH GOT TO DO WITH IT?

Start Here



**Love God with all
your heart, mind,
body, and soul.**

**Love your neighbor
as yourself.**

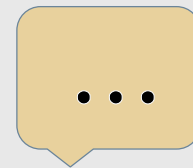
“Love starts with speaking truth: making people fully aware of the risks ...in a manner that is relevant and practical to them. But it also offers compassion, understanding, and acceptance: the opposite of guilt and shame. Love bolsters our courage, too; what will we not do for those we love? And finally, it opens the door to that most ephemeral and sought after of emotions, hope.” (p. 82-83)

We have a calling as Christians: Can you love God without caring for God's creation? Can you love your neighbor without caring about the impacts of climate change on their lives?

Referencing Paul's letter to Timothy: “God has not given us a spirit of fear. ...We have been given a spirit of love, to have compassion for others, which means caring for others, putting their needs first as we act. ...how do we move beyond fear or shame? By acting from love... Love starts with speaking truth: making people fully aware of the risks and the choices they face in a manner that is relevant and practical to them. But it also offers compassion, understanding, and acceptance: the opposite of guilt and shame. Love bolsters our courage, too; what will we not do for those and that we love? And finally, it opens the door to that most ephemeral and sought after of emotions, hope. (p. 82-83)

What jumped out at you in Section 2?

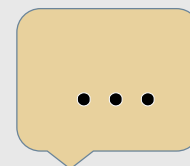
Discussion



That's the wrap. Before jumping into discussion questions, what jumped out at you in Section 2?

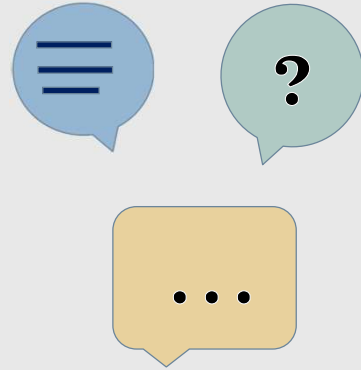
What is your reaction to Hayhoe’s conclusion that humans “are the cause of all of the observed warming—and then some” (p. 47) in Chapter 4 (*The Facts Are the Facts*)?

Discussion



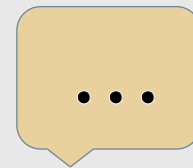
What is your reaction to Hayhoe’s comment “...when it comes to making up our minds about something, emotions usually come first and reason second” (p. 53) in Chapter 5 (*The Problem with Facts*)? When have you seen the “backfire effect” play out in conversations?

Discussion



What is your take away from this section about what is likely and not likely to work in terms of talking to someone else about climate change?

Discussion



How does your faith guide you in your conversations with others on controversial topics? How do you approach people with whom you disagree?

Discussion

