

# REWIND: Inheriting Climate Change

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Announcer: This is Climate One, changing the conversation about energy, economy and the environment.

In his book "A Generation of Sociopaths: How the Baby Boomers Betrayed America," Gen-Xer Bruce Gibney argues that aging baby boomers are holding up progress and it's time they got out of the way.

Bruce Gibney: They're gonna die before climate probably has a very significant impact on their lives. So if we the American people are the principals, if our agents don't share the same goals and time horizons as we do, then there's a risk of a serious mismatch.

Announcer: Should the boomers take their Cadillacs and beachfront property and fade into the sunset? Sustainability expert Wilford Welch doesn't think so. He believes that his generation owes it to their grandchildren not to lead the charge against climate change, but to offer support.

Wilford Welch: Because we are the generation that has had the benefit of the fossil fuel generation, and now we have a responsibility to give something back to those people who now are going to get the effect of it.

Announcer: Inheriting climate change - up next on Climate One.

Announcer: Do the Baby Boomers owe Millennials a clean planet?

Welcome to Climate One - changing the conversation about America's energy, economy and environment. Climate One conversations - with oil companies and environmentalists, Republicans and Democrats - are recorded before a live audience and hosted by Greg Dalton.

Today on the program, Greg talks with leaders working across generations to educate people about the promise of clean energy, and the perils of staying married to fossil fuels. We'll start things off with former venture capitalist Bruce Gibney. As a partner in the Founders Fund, Gibney championed the philosophy that startups should change the world, not just build a business. After leaving the company in 2012, Gibney turned to writing. His new book is "A Generation of Sociopaths: How the Baby Boomers Betrayed America."

Here's our conversation about Inheriting Climate Change.

Greg Dalton: Welcome, Bruce. You have a quote on the back of your book that I'd like to read and it says, "Boomers squandered the greatest inheritance in history and are shamelessly irresponsible about crises from entitlement to the environment." What do you really think? Tell us what you mean by that.

Bruce Gibney: Right. So this is mainly a description of boomer political culture and obviously the sort of standard culture that sort of underwrites the entire boomer political culture. So my argument is not about individual boomers although there are probably some politicians who fall well within the DSM's description of antisocial personality disorder. So you can take a pick. New options have been added to the table.

So there are a variety of sort of indicators that you can look for. One of the questions, can you have an antisocial society, right, so antisocial personality disorders the DSM-5's name for what used to be called -

Greg Dalton: DSM being?

Bruce Gibney: I'm sorry, the Diagnostic and Statistical Manual of Mental Disorders.

So in the particular inventory that I was interested in, the antisocial personality disorder, you start looking for a number of traits so, improvidence, the inability to plan for the future, lack of empathy and not caring about other people, let's say younger people, people who might be alive when they're no icecaps, back anything, hostility, you know, inability to form lasting relationships and a whole sort of series of these things. And sometimes these things are auto correlated and sometimes they don't. So what I did was I looked at boomer political culture and we do have fairly decent longitudinal data about the boomers, right, so I start the boom in 1940 for cultural reasons and I focused mainly on sort of white middle-class boomers, it's not a fairly homogenous majoritarian experience, right. So the experience of minorities is radically different and in some ways they just sort of affirm that we disenfranchised until 1965 and then again after Shelby County.

So, you know, I focused on that we have sort of a long period of data and I sort of look for behaviors that map on to the sort of syndrome and how you're gonna, you know, demonstrate that people, you know, a generation is improvident. So we have the Cohort Savings data for people, you know, stretching in some cases back seven decades, we know how, you know, people have behaved and they've saved less and less. And they've accumulated more and more debts. Some of those debts will be passed down and not all the debts are financial although they are quite considerable and I'll get to how that impacts the environment later on. You know, if you care about the environment you actually probably should care about the national debt as well. And some of those debts are in the form of, you know, "deferred maintenance on infrastructure", that's just actually a liability, it's not deferred anything. It's a pothole.

And, you know, the creation of, you know, a vast and fairly useless penal regime, you know, so now we have human deferred liabilities that we're gonna have to do something about, running down the free higher public education system that was built up after World War II and so on down the line. And one is the sort of key nonfinancial debts that's being passed on is the environmental debt that we owe. And so, you know, some people have said, well, you know, isn't it the case that, you know, we've been using fossil fuels for a long time it's just not a boomer problem. And that's true, right? I mean like, you know, if you wanted to push all the way back, you know, I'd ask Elon to build a time machine, I go back, I kill Zog who invented fire and the cave and, you know, so we can push it back too far.

But the question is, when did we become aware that environment and in particular global warming

was becoming a serious problem. Now people as early as the late 19th century were aware of the theoretical possibility that certain gases would contribute potentially to dangerous global warming. Alexander Graham Bell, I mean, he's a fairly prescient guy was one of them. There was a Swede, he was for global warming as Colbert pointed out he was in Sweden, so that was, you know, somewhat understandable. But by the 1970s, there was a growing concern actually that human emissions of various gases in particular of carbon dioxide would pose problems down the line. So, you know, the sort of first multinational body to look at the influence of gases emitted on a warming climate was not the sort of famous IPCC, but actually it was the climate panel convened by Jimmy Carter in 1978, 1979.

So we're aware of the potential for environment to be a problem by the late 1970s, but we've seen sort of no action that's adequate to the task since then. And, you know, it's helpful to compare that to what we saw both under Republicans and Democrats during previous environmental crises. So in the late 1940s, toxic smog settled on Donora, Pennsylvania which is just outside of Pittsburgh and a few people died and there was an outcry and people said you need to do something about this. There are these toxic pollutants that the factories are emitting and we have to have a response, and a study group was convened and then, you know, the states were allowed to engage in their own experiments and then Eisenhower began pushing through work at the federal level.

By 1963, the Clean Air Act was passed. So, you know, it's about 15 years. So maybe sort of optimistically you would say that, you know, sort of by let's say 1995, you know, action would be taken especially because you had a younger sort of, you know, progressive president. But really nothing serious happened in response. So it does seem that boomer political culture is something of an outlier relative to prior political cultures in its ability to sort of plan for the future, and the environment obviously is a key part of that future.

Greg Dalton: So if someone cares about climate change which usually is on the left, why should they care about the financial debt which is usually more of a concern on the political right?

Bruce Gibney: Sure. So, you know, when I was born in the 1970s, national debt to GDP was 34% and as of the end of last year it was 106% on a gross basis. And, you know, we're going to exceed the World War II peaks in the 2030s and if the Trump tax plan is passed in its entirety, you know, which is all two pages of it, it will happen in the late 2020s. And the problem is, you know, in order to deal successfully with climate we're going to have to spend money and the more money that we have to pay to service the interest on the debt, the more money that we divert to shoring up an unreformed entitlement system for older people, the less fiscal room for maneuver we're gonna have to deal with climate change. So, you know, it's very difficult. It would've been very difficult when debt was about 120% of GDP in 1946 to go back and ask the United States to fight another war. People were tired, people have died, they didn't want to pay for it.

And if we find ourselves in the same position in the 2030s, you know, people might respond, you know, we're sort of fed up. We don't have the fiscal room. It's difficult enough to, you know, pay for a house, much less, you know, a college education. We just don't want to spend the money and the problem will just, you know, compound. So we have fairly reasonable methods to address it now. We have the fiscal room to address it now. We can either spend that money on tax cuts or we can start spending on research and development, we can spend on the environment, we can spend it on a whole list of other things that are important to everyone, but especially younger people.

Greg Dalton: So how would the Trump plan for healthcare and for tax cuts affect this ability to address the climate debt and the financial debt?

Bruce Gibney: Right. So it's difficult for me to address the health care plan because like 217

members of the House I haven't read it.

[Laughter]

With respect to, you know, the debt, you know, because roughly ballpark, you know, the approximate cost of the tax plan would add an additional 5 trillion - 4 trillion to 7 trillion roughly to the national debt over 10 years. It's not per year but over 10 years. But one of the problems is the fiscal position in this country is already fairly bad so that the deficit which is going to be about minus 2.5% of GDP right now is going to expand to minus 5% under the business as usual scenario within 10 years. So, you know, we're already in a bad position. So it's going to take a bad problem to make it vastly worse and we're gonna end the 2020s in a much worse fiscal position and that's exactly when, you know, people will want to make extremely expensive investments in climate.

In the end, those investments will be worth it. But it's hard when you ask people, you know, and just to service the debt, you know, sort of, you know, I think the highest marginal tax rate in the late 2020s which is the rate that people who are not working, people who are under 50 today, will be paying, I think it's gonna rise to 39.6, it will subside briefly if the tax cut is passed under reconciliation and then it will rise probably my guess is to 54% to 58% at the highest level. And it will probably trickle all the way down through the tax tables, right. And so if people are already paying that much federal taxes, now that's just the final rate, not the effective rate, but that's the one people want to focus on, you know. And then they're asked to pay let's say a 5% climate surcharge, there might be incredible political resistance whereas if you guys will pay 1% climate surcharge now, people might actually, you know, sort of get behind it or at least younger people might get behind that.

Greg Dalton: But you don't think that'll happen because still the boomers are in charge and you think they should no longer be in charge.

Bruce Gibney: Yes. So I think we have a principal agent age dilemma. So just to be clear, the boomers are in charge. We have a boomer in the White House as we have since Clinton, you know. Under my definition, which is more cultural, it was not clear that Barack Obama was a boomer; in fact he actually disliked that label which I think is very telling. You know, boomers were an outright majority of the electorate in 1982 and even though their percentage has gone down, their rate of voting participation has gone up. They controlled 79% of the seats in the House in 2008 and still have control of supermajority today. So they're definitely in charge. But here's the way in which that's probably problematic. Even if you don't buy my sort of the description of them as a political culture having antisocial personality disorder, the reason why that's a problem is we have a principal agent dilemma. And the principal agent dilemma is, you know, if you have somebody who's working for you, your attorney, your doctor, whatever, some fiduciary, you want them to be acting in your best interest and you want them to be able see things from your point of view. And if you have a seventy-year-old guy, to take a random example, you know, his time horizon for his beachfront property might be let's say 15 years.

And in 15 years, it's probably fine to go around driving a Cadillac and, you know, mine coal and so on and so forth. Because within that 15-year time frame of his own planning within the time frame of his own imagination, it's not actually a problem for him. And we actually see this for example in public surveys of boomers as a whole, you know, just slightly more than a fifth of them believe that climate change will have a significant impact on their lives. And in this they are correct, right. They're gonna die before climate probably has a very significant impact on their lives. So as sort of our agents, right, so if we the American people are the principals, right, in theory they work for us, you know, if our agents don't share the same goals and time horizons as we do then there's a risk of a serious mismatch.

Greg Dalton: So most people in Silicon Valley tend to be, well the range of course senior people at Google, et cetera. many boomers, Eric Schmidt, you know, born in what, '55, but there's a lot of a generation of young entrepreneurs who fit the category you just described, the 40-year-olds who ought to be concerned about climate impacting them. Is that part of their consciousness and their business plan? Or do they think that their wealth will insulate them and they'll be okay because they can buy a place on the hill if their waterfront place gets inundated.

Bruce Gibney: They can buy many places on many hills. But, you know, some of them are concerned with the issue right so, you know, we can question whether or not they're doing nearly enough.

But there has been a trend, right, sort of towards like, you know, net zero on their data centers right, trying to reduce their carbon footprint on their data centers and so on and so forth, you know, driving a Tesla because of course the batteries themselves are made of completely non-toxic materials. You know, that's fine. Actually, it's better to have a Tesla than to have like a 1972 Cadillac Eldorado. So that's good. But I think, you know, environment is sort of like a quasi-public good, much like national defense or the highways or foreign policy. It's not something that you can ask even the most talented entrepreneur like Elon to go out and fix by himself. Now, he can make significant contributions to this, right, so electric car is better than again the Caddy Eldorado right and, you know, he wants a backup bus for Mars in case we don't fix the climate problem so he is working on the rocket so that we can all escape. By all I mean not that many.

[Laughter]

Greg Dalton: All who could afford. Yes.

Bruce Gibney: I'm happy to offer you a friends and family discount. I can do it. But it's not a problem you can ask, you know, a single company to solve and therefore it sort falls outside of their decision-making matrix, right

Greg Dalton: You really take - you know, because to say that a lot of things went in the wrong direction during the era of the boomers, SAT tests went down when they were taking them and then up since then, and then breast-feeding went in the wrong direction. All sorts of things, you blame Dr. Spock, lots of things. Are you angry at all at any boomers that you personally know? You dedicate the book to your parents. Knowing what you -

[Laughter]

Bruce Gibney: Sure. You know, I don't think that we've even enjoyed our strongest run of presidents in the union's history, right. So I think that's problematic. I don't think we've enjoyed the most forward-thinking senior congressional leadership. So I am angry at some boomer policymakers. At individual boomers sort of less so. I do worry, you know, sort of I am frustrated and, you know, it's been 25 years of this. I'm not sure that people actually improve at age 70, you'll find out I guess, or maybe they don't become radically different maybe they're just great to begin with, all right. But I don't think they're going to become radically different. So I don't think we can expect a lot from the present political class and I'd like to see them move on. I think they're standing in the way of genuine progress.

[Applause]

Greg Dalton: We're gonna bring some boomers up here in a minute. If you're just joining us we've been talking with Bruce Gibney at Climate One. He is the author of the new book, A Generation of Sociopaths: How the Boomers Betrayed America. I'm Greg Dalton. Ignacio Ochoa and Raul Endeha [ph] are two youth organizers at the Sierra Club in Southern California. They talk about the

challenges of educating older generations. Let's listen.

[Start Clip]

Male Speaker: My name is Raul Medelsnes [ph] and I live in Mecca, California. I am volunteering with the Sierra Club San Gorgonio Chapter. Air quality is one of the biggest issues in my community.

Male Speaker: My name is Ignacio Enrico Ochoa, Jr. I'm 25 years old, born and raised in Coachella, California. The work I do is centered around clean energy. We're trying to get California to 100% renewables.

Male Speaker: I mean, I'm 19. I would say I'm an older soul. But approaching people that are a lot older than me it's a bit difficult because I see that we just have different perspectives. I feel it's more resistant to change if anything. It's like aging. It's I guess to some people it's scary and seeing their life and seeing everything evolve, you know, it's just frightening.

Male Speaker: That whole Sierra Club, you know, typically older white demographic, it's still kind of there, but this is a time of shift. It's mostly people of color. It involves the youth of color I should say. I think, you know, with the power of technology has really evened the playing field because an older person had more power in community because they had more connections. They have lived through life and a young person has to go through and make those connections. But when you have a phone in your hand, you get those connections that the phone helps you find those connections faster.

[End Clip]

Announcer: We're talking about cross-generational climate concerns here at Climate One. You can listen to all of our programs and subscribe to our podcast at our website: [climate-one-dot-org](http://climate-one-dot-org). We'll continue the conversation and welcome three more guests, right after this.

[PART II]

Announcer: This is Climate One. Greg Dalton has been talking with author Bruce Gibney about the environmental legacy left by the baby boomers. We're now joined by three more guests. Carleen Cullen is the founder and executive director of Cool the Earth, a group that works within schools to educate children and their parents about climate change. Michael Ranney is a psychology professor at the University of California Berkeley. And Wilford Welch is a retired U.S. diplomat and the author of *In Our Hands: A Handbook for Intergenerational Actions to Solve the Climate Crisis*.

Let's continue with our discussion on inheriting climate change. Here's Greg Dalton.

Greg Dalton: Wilford Welch, we heard Bruce Gibney say boomers should get out of the way and we just heard two youth activists saying environmentalism is about young people of color. Is it time for white boomers to get out of the way?

Wilford Welch: No, I think it is time for the white boomers to get in totally engaged with the next generation and support them in being the leaders of the shift that has to take place. Get out of the way in terms of not anymore thinking of themselves as a leader but thinking of them as support because we are the generation that has had the benefit of the fossil fuel generation and now we have a responsibility to give something back to those people who now are going to get the effect of it.

Greg Dalton: Carleen Cullen, you like me are at the tail end of the baby boom and is it time for us to get out of the way, time to hand over power to younger people. I'm interested in your thought there on youth of color being the future of environmentalism rather than kind of the white man in the

woods.

Carleen Cullen: All right. Well, first of all I am Gen X just to clarify that.

[Laughter]

Greg Dalton: Okay. It depends on the definition but okay.

Carleen Cullen: Yeah, you know, just barely beginning. Greg and I were talking earlier and I said either way, but after hearing that evaluation I'm firmly in Gen X.

[Laughter]

Greg Dalton: You're in transition to a new generation, okay.

Carleen Cullen: Absolutely. So, you know, I have always felt since starting in climate change that kids are the essence of what's going to change our generation, the boomer's generation and eventually the planet.

Kids, white kids, African American kids, kids of color of every sort around the world, they really understand, they're not limited by our expectations of fossil fuel use and how we drive and how we get around in the world. They come to it with these open eyes and being able to teach them that where does energy come from and how can we get clean energy, they can really drive their families to change and whole societies to change. And I think that's essential.

Greg Dalton: Michael Ranney, there's a view that the older boomers, we heard from Bruce Gibney and others that, you know, older boomers maybe they watch Fox News, they're the ones who are not gonna be affected by climate. They don't think - they don't want to address it. They don't want to pay the cost for something where they don't see the benefits. Is there any potential to change their minds, those older boomers on the facts of climate?

Michael Ranney: Yeah, actually we've had pretty good success changing the minds of older boomers and actually conservatives in general. I'm an experimental psychologist by training and I run experiments, randomized experiments where we try different materials and we found five different ways to decrease denial about climate change or increase acceptance of climate change in five minutes or less. And it's true even for conservatives. It floats all the boats. One of the key things is we tell people that the information we're giving them is true, they can share with their family tonight and there's no deception involved. And that turns out to be pretty critical, they can look it up on Google later. So there are a lot of possibilities. It's certainly the case we know demographically that older people do tend to skew more conservatively and their ethnicity things involved as well. But I think fundamentally and professionally there are a lot of younger people that aren't so down with climate change as well. Although, you know, it's a correlational sort of thing.

Greg Dalton: So don't give up on the boomers. They can come around on climate and engage as well for Wilford Welch says to be part of the solution.

Carleen Cullen, you're one of seven children, you have some siblings in Texas who are skeptical about climate and drive SUVs. How do those conversations go?

Carleen Cullen: Well, when they tell you that - they ask my husband, do you read the New York Times and he says, sure. And they said, I wouldn't wipe hmmm, okay we're on radio I can't say the rest of that. But literally they wouldn't touch the New York Times. So that's how far right they are.

Greg Dalton: Wouldn't wrap fish in it, baby.

Carleen Cullen: Wouldn't wrap fish in it, there you go.

Greg Dalton: Okay.

Carleen Cullen: So, you know, the conversation it's pretty much a nonstarter no matter how much scientific evidence there is. But instead we can approach it in different ways. For instance, I can talk about the pure torque on my electric vehicle and how many more even American companies like Chevy is coming towards an electric world. So it doesn't necessarily have to be just about climate change and reducing fossil fuel use. It can also be about a better world and a better experience for them. LED lighting is much better than incandescent lighting. The same we have a real opportunity with EVs to get people moving over to that regardless of their climate or their political base.

Greg Dalton: Wilford Welch, you have numerous grandchildren. Is it easy to talk to them? Is there any guilt when you look at them and think about what the boomers have done, looking at grandchildren who will grow up in a world that Bruce Gibney described?

Wilford Welch: No, I don't have any guilt in the sense that I was born just before the Second World War or just the same time as the Second War and I have benefited all those years from the fossil fuels that have created this more is better and economic growth at all costs kind of culture. So I don't even blame the fossil fuel industry. I say the fossil fuel industry created all of this wealth and now its time has come and gone and it should've gone earlier. Okay.

So I think my responsibility with my grandchildren is, as I said earlier, to support them in this transition. And that's what is happening in the United States now in the fossil fuel industry declining no matter what Trump says and renewables are really taking off. So I'm hopeful for the future if we get our act together and I want to be part of that solution.

Greg Dalton: Bruce Gibney, your take on the fossil fuel industry going away. They're still very powerful. They still control a lot of members or influence a lot of members of Congress.

Bruce Gibney: Right. So coal is going away by itself but -

Greg Dalton: Due to market forces largely.

Bruce Gibney: Right. Natural gas and oil are not, right. So, you know, on a BOE, barrel of oil equivalent, the United States out produces Saudi Arabia, plus a few other Arabian Emirates combined. And fracking is obviously, you know - so natural gases to the extent, you know, the transmission pipes aren't like leeching methane in the air and they're actually insulated and robust. You know, it is better than coal. So the United States just to be clear is in, with the exception of coal, a fossil fuel renaissance. So the idea that, you know, it's going to sort of take care of itself is probably wrong. And the idea that, you know, I do take issue, I don't think that we can rely on the boomers to - what form would that contribution take, right.

So, you know, the oldest boomers are reaching the end of their lives and the younger boomers are just, you know, they're gonna hit retirement within the decade. How will one sort of collect the, you know, many trillions of dollars required from the boomers, you know, in order to make the appropriate investments, right. So if we're talking about like an unjust enrichment, right, how do you claw back that amount of money from, you know, from people who are, you know, reaching the end of their lives or who have been resistant to contributing to the National FISC who are sort of ardent proponents of tax cuts and of dissaving, right.



How do you allocate all those costs to the boomers? What contribution is this going to take over the relevant time frame in the next 15, 20 years? And if they are going to contribute, why haven't we seen meaningful contribution yet? Why was it that, you know, sort of CAFE standards took a hiatus between 1986 under Reagan and 2010? Where was that contribution, right?

Greg Dalton: Carleen Cullen, some of the earliest people that you've trained started at eight, now they're 18, you sense that there's some coming anger that we're hearing from Bruce Gibney among the generation as they awaken and they realized what we are leaving them.

Carleen Cullen: Yes. So I think there's - one of my great fears is that this generation, the younger generation will not only have to deal the typical Freudian things that they go to therapy for about what their parents did, but now they're gonna have to go to a climate therapist as well wondering, you know, what were my parents thinking. I see that a lot of the kids feel very empowered and they see the opportunity for change and they're not afraid to say so. And they're not afraid to say so in a certain way that's not combative because combative approaches can turn a lot of people off.

Greg Dalton: Wilford Welch, you used to chair the board of the National Outdoor Leadership School which trains kids in backpacking in wilderness, kind of survival skills, is that something that you'd like to send your grandkids in case they need it in a the climate disrupted world?

Wilford Welch: Well to give a plug to something else I'm the chairman of NatureBridge which is right across here and is really doing the work that NOLS is not. I am, NOLS is part of my soul, but NOLS is providing skills to climb Mount Everest. NatureBridge and those organizations there are number of other ones too, are providing education to our young kids in stewardship of the planet and that's really what is important. And that's where I'm gonna send all of my grandchildren.

Greg Dalton: If you're just joining us, we're talking about the inheritance of climate change from boomers on to Generation X, the millennials. Our guests at Climate One today are Carleen Cullen, Founder of Cool the Earth. Bruce Gibney, Author of Generation of Sociopaths. Michael Ranney, Professor of Psychology at University of California at Berkeley and Wilford Welch, who's a speaker on sustainability. I'm Greg Dalton.

We're gonna go to our lightning round. We're gonna ask a brief questions, brief answers, starting with association. I'll mention a brief word or phrase and ask our guests for their first - the first thing that comes to their mind unfiltered, straight from the Freudian depths Michael Ranney. First, Carleen Cullen, what's the first thing that comes to your mind when I mention polar bears?

Carleen Cullen: Death.

[Laughter]

Greg Dalton: Michael Ranney, the role of culture in determining people's thoughts and behavior.

Michael Ranney: Important.

Greg Dalton: Bruce Gibney, White House advisor Steve Bannon.

[Laughter]

Bruce Gibney: Mortal.

[Laughter]

Greg Dalton: Wilford Welch, Climate One.

Wilford Welch: Oh, I love it.

Greg Dalton: True or false. Bruce Gibney, the United States has become something of a petro state?

Bruce Gibney: True.

Greg Dalton: Wilford Welch. True or false. The more money boomers leave to their kids, the better off they will be?

Wilford Welch: I would say false.

Greg Dalton: Michael Ranney, older boomers should leave most of their money to their kids instead of their third or fourth wives because their kids will need it in a hot and disrupted world?

Michael Ranney: Yeah, it's a -

[Laughter]

Greg Dalton: Sorry to those third and fourth wives. Carleen Cullen, true or false. It's harder to talk to teenagers about sex than climate change?

Carleen Cullen: No.

Greg Dalton: Michael Ranney. True or false. Many millennials need a good therapist to cope with the stress of living in a society disrupted by severe weather?

Michael Ranney: Will be true, yeah.

Greg Dalton: I think Carleen Cullen gave you a little bit of a research opportunity. Climate therapist, new term coined here.

Greg Dalton: Okay. Let's give a round to our group for getting through the gauntlet.

[Applause]

Michael Ranney, if someone encounters a climate skeptic. What's the best way to persuade them?

Michael Ranney: Well, generally what I do is I try to make a little bit more apparent to them on how their denial is on a house of cards. So for instance, one of the more interesting plane rides I took recently was about a four-hour trip. And I was working on a talk and this fellow next to me said, "Oh, you believe on that climate stuff huh?" I said, "Well, yeah, it turns out I do." And he said, "Not so much for me." And I said, "Okay, so do you think earth is heating up?" And he said, "Yeah, I do." And said, "Well, why do you think it's heating up?" And he said, "It's volcanoes I think." And I said, "Oh okay. So why now in this point of history has the earth decided to heat us up? Why is there more volcanic activity now than before?" And he said, "Oh, I don't know." And I said, "Well, here I have this explanation that explains why we're getting hotter now.

And, you know, the mechanism how sunlight comes in, gets observed, sent out. Greenhouse gases don't care about the sunlight coming in, but they care a lot about the infrared going out and because we're putting more and more greenhouse gases into the atmosphere that's why we're heating up. And my explanation does explain the change and yours doesn't, so why would you believe your volcanic theory?" And so we went on for quite a while and there were other reasons that he denied

it. Some of them I think were because of his business. He was connected to the fossil fuel industry, some of it was denial.

Wilford Welch: Either way, that's a great argument.

Michael Ranney: Not that direct but indirectly denial, he had three children and I think he was afraid, you know. He was probably about 70 and I didn't think he wanted to imagine an earth in which, you know, his kids and grandkids were going to be in this trouble. And so I think that was one of his reasons for denying it. And then also as he was leaving, he said, and I don't like how political it's gotten, which is like the cultural part. And I've actually published a theory about why I think Americans are different in terms of thinking about climate. And I think culture is really important, but so he had this sort of potpourri of things and I would just keep trying to knock things out. And at the end I said, "You know we're not dead yet. We can help it. We can help these kids and grandkids and so forth." And I think it's interesting because every denier is a little bit different, might bring a different kind of panoply of reasons. But usually if you just keep knocking out the legs of the table eventually, you know, I think if I get anyone on a desert island even [unintelligible] I could turn them within, you know, a week or two.

Greg Dalton: Carleen Cullen.

Carleen Cullen: Yeah, so, you know, I just played the "what's worse?" game. You know, what's worse if you're wrong in your denial. What's worse, if I'm wrong in my belief of climate change? And, you know, pretty quickly you just look at risks and the risks of not believing in climate change, and it being true are so over the top. So impossible that you really can't go back and say, well, you know, I'm not a hundred percent sure. They can't be a hundred percent sure. But from my risk analysis and, if anybody goes down that path, that path it's pretty clear which way that they need to go.

Greg Dalton: Right. Steve Schneider was a late founding father of modern climate science at Stanford. We all take a fire insurance on our homes. This is kind of an insurance policy, even if it proves out to be not as bad as some people project.

Carleen Cullen, you've also had some run-ins with people, cops and confrontation in places like Texas and also in the San Francisco Bay Area with your school program. So tell us about some of the resistance you've met trying to bring climate into the classroom.

Carleen Cullen: Sure. So, my husband and I started this program about 10 years ago. And when we started the nomenclature of climate change and global warming really wasn't commonly used. People didn't know much about it at the time. And we started our program in Marin County, and even in Novato in Northern Marin. There was -

Greg Dalton: North of San Francisco.

Carleen Cullen: North of San Francisco. There was an incident where a parent kept harassing the principal saying that you can't bring this program to the school. You can't teach the kids this climate science that's really not science at all. And it ended up being that she had to call the police because he started harassing her at home. And so this ended up, you know, in an arrest. And but it was true across the country people, parents would come in with their laptops typically dads, sorry dads, and say, you know, this isn't true and here's why. We were kicked out of a school in Texas, you know, camera crews the whole deal, because some of the parents were up in arms that we were gonna be teaching about climate science.

But now over the past four years. We go into schools in Kansas. We go into schools in the middle, the heartland of the country. And there is virtually no resistance at all. So really it's changed

significantly the amount of acceptance about climate science, which is just fantastic.

Greg Dalton: Wilford Welch.

Wilford Welch: I think there are three ways that boomers may change their mind, these psychopaths that you talked about. One is their grandchildren. Another is guilt that we talked about. And the third I think unfortunately is the more likely and that is something really bad is gonna happen that all of a sudden in cumulative terms over the next several decades, it's not gonna be just Bangladesh that goes underwater. It's a lot of other things that are gonna hit us very close to home and they're gonna wake us up.

So, I think that unfortunately is gonna have to happen for a lot of people to wake up. But then there's also, there's a clear shift there are a lot of people in this room that I know who are working, they are boomers and they are making huge difference in terms of changing the conversation so that you can go to Kansas, okay.

Announcer: We're talking about how to span the generation gap when it comes to climate change. In a moment, we'll be back with some questions from our live audience. This is Climate One.

[PART III]

Announcer: This is Climate One, changing the conversation about America's energy, economy and environment. You can listen to all of our programs and subscribe to our podcast at our website: [climate-one-dot-org](http://climate-one-dot-org). Today, we're asking how baby boomers can engage with future generations in the fight against climate change. Our guests are Michael Ranney, professor of psychology at the University of California Berkeley, author and sustainability expert Wilford Welch, Carleen Cullen, former tech entrepreneur and founder of Cool the Earth, and Bruce Gibney, author of the new book *A Generation of Sociopaths: How the Baby Boomers Betrayed America*.

Let's hear some questions from our live audience.

Female Participant: Hi, my name is Noreen Nyar. Thank you so much for everyone. This has been very interesting for me. So I think a lot of people out there feeling a bit of a conflict and a lot of confusion in regards to even the Keystone Pipeline. We've seen a lot of really amazing policy shifts that we had in the past now go backwards. As Michael said, you know, this is not may be the perfect time for us to stay so politically correct when we're addressing situations that have a severely different messaging coming at us.

So as individuals who are currently leaders in the climate change space how are you addressing shifting your message to deal with the situation that we are no longer in a place where we can talk in these PC terminologies around some of the most impactful things in our generation. Thank you.

Greg Dalton: Thank you. Carleen Cullen.

Carleen Cullen: Great. Dying to answer that question. So the first thing is like Bruce had mentioned, you know, consumerism. I am absolutely in favor of consumerism and using it as a tool to advance our climate interest. If we stop driving internal combustion engine vehicles, Keystone will not need to be built, you know. Europe is advancing in electric vehicles I know they have lithium ion batteries and there's toxic stuff in there, they're not perfect. But the carbon footprint of all of us driving around in our gas cars is tremendous, it's just absolutely huge. So I look at it that we have this opportunity for Dakota and for Keystone if we just make this a radical shift to a better driving experience. This is not a sacrifice. Driving an EV is so much fun. They're just so fast and they're quiet and they're powerful. I went to Yosemite in my Volt, my Chevy Volt this past weekend and it

was a fabulous experience. So I think we have an opportunity through the things that we buy that we can influence the things such as pipelines.

Greg Dalton: Electric is sexy. Michael Ranney.

Michael Ranney: Well I think even though most of what I do is straightforward science and we have a website I should plug, [howglobalwarmingworks.org](http://howglobalwarmingworks.org) that has a number of these materials.

But really one of the reasons I got into this was because I was concerned, like many of the panelists and time is fleeting. And I think that one of the most important things you can do is hold public officials accountable. Like one of the things that Bruce sort of brought up in his book about people who only have a 15-year timeline. You can also remind people, including public officials that and even after they're dead we'll be able to analyze what they should've done, you know. And one of the reasons I do this is I don't want, you know, when I'm 95 in the nursing home to say, gee, I only wish I would've done that but, you know, Netflix was so good. I think, you know, we should remind people that even after they're gone, they will be accountable for what they haven't done for the next generation. And voting is a big way of making change.

Greg Dalton: Let's go to our next question. Welcome to Climate One.

Male Participant: I was wondering in a time where I think we're seeing an increase requirement on progressive policy change being made at the state level before it can get national consideration. If you thought it was a realistic goal to get majority state policy change to move policy conversation to the national stage or if you thought that we would have to take I guess a different path to national policy change.

Greg Dalton: Bruce Gibney, states are the incubators of democracy.

Bruce Gibney: Yeah, well there are like four states that are the incubators. When California decided that it was gonna have, you know, reasonably robust emission standards because it is such a large economy, you know, Detroit just basically had to follow along. Texas was in the same position with respect to textbooks because it was a large unitary buyer of textbooks and bought on behalf of several other states and so that drove part of the curriculum and you know what the results are on that. So there are some states that are able to drive because of their size, national policy because there is no choice you can't ignore them as a market.

But for many other things, you know, there is no substitute for national action. And unfortunately with climate this is even harder, right because not only do you have to corral all the states and national action but you have to corral all the nations or all these sort of meaningful nations. Again there are probably like four that really matter into meaningful action so it's challenging. But again this is where I think the principle agent thing comes in. If you have principles that are aligned with the long term, you know, needs of the population that does tend to work out better.

Greg Dalton: Next question. Welcome.

Female Participant: I think Carleen mentioned if you just start knocking the legs of the stool, you'll eventually convince them. And Michael mentioned that there were five psychological ways that you can most effectively, convince somebody about climate change. What's your advice on how to talk to people about these things?

Greg Dalton: Michael Ranney.

Michael Ranney: So one of the things that is pretty effective is pointing out that people don't have a

mechanism. It turns out 0% of Americans know the mechanism global warming even at like 35-word level, and even many of my colleagues and so forth.

And the reason the mechanism is important is because it's a kind of tiebreaker. That is if you have Rush Limbaugh and you have Rachel Maddow yelling it's happening, it's not happening but you don't have the meat on the bone, you know, in the way that you would perhaps understand how a toilet works. You really can't move forward in terms of understanding that.

Also statistics are very powerful. Like one of the statistics we use that others haven't really conceived of before is we ask people for every 100 record colds that occur in the United States, how many record hot highs are occurring. And so if you think that well, it's not really happening you think there's just 100 record highs to a hundred record colds. It turns out there are 204 record highs every year for every 100 record lows. So you can see what the direction of our temperature even in the United States. So there are things like that you can compare the graph of the stock market over time with the graph of temperature over time. I ran this at the University Chicago with the business school and they couldn't tell the difference between the two. They're clearly both going up and so they're really very salient ways you can make this clear and it doesn't take very much time at all.

Greg Dalton: Probably doing it without arrogance and judgment probably makes a difference.  
Carleen Cullen.

Carleen Cullen: Yeah, so, you know, because I'm not a scientist, one of the reasons is that my approach is really about personal behavior change levers. So when I talk to somebody we talk about, gosh, is the government going to solve this issue for us. We all know certainly with this administration it's not going to solve it. And even under Obama's administration it was pretty clear that we didn't have a Congress that was gonna be open to advancing real legislation because of the political divide that we have technological solutions and those are advancing but we need consumers to adopt those solutions. So what are we left with, we're left with holding up a mirror, looking in it and saying I have to be responsible for this and what are the mechanisms as an organization we look at this and we say, what are the mechanisms that we can use to help people make those behavior changes because behavior change is really hard.

So one of the mechanisms is children, children can influence their parents in a way that none of us can influence each other. So that's a tremendous opportunity as well as grandkids have been mentioned. So taking personal responsibility.

Greg Dalton: We're talking about climate inheritance at Climate One. Let's go to our next question. Welcome.

Female Participant: Hi. My name is Betsy Rosenberg and I'm a baby boomer right in the middle. My obsession is where is the media, my industry, broadcast news, and I believe that Fox perpetuating climate denial is a big part of the problem. We're eco illiterate in this country and I think that's part of the reason that Trump won.

I would love for any of you to tell me your views on isn't there any responsibility on the part of our news networks, they're supposed to be informing our citizenry, and how can we have a democracy that can even decide what to do about it if we don't have informed population.

Greg Dalton: Thank you. Michael Ranney.

Michael Ranney: So I've had a chance to teach a brief module in the graduate school of journalism actually in the Berkeley campus in which I was teaching numeracy and scientific literacy. And part of the reason I got into that was because I was concerned about how climate was being portrayed.

And often there's a sort of pseudo-balance that occurs where, you know, they have to have, you know, one of the very few climate scientists who thinks that maybe global warming isn't occurring and they grab one of the 97% who do and part of it is because, you know, they want to generate a little bit of a controversy and it's almost like, well you'd have a person who accepts gravity and one who doesn't, you know. And so I think that's part of it. The other part of it is that numeracy really isn't as high as it could be in the media in general and part of it also is there's been a neglect of climate.

So for instance, climate was like the number four voted question that should've occurred during the presidential debates, but in fact we didn't get a single question from any moderator about climate. But here was something that, you know, is really important, I mean, we all think it's important and there wasn't a single moderated question that occurred during those presidential debates or the vice presidential one.

Greg Dalton: Let's go to our next question. Welcome to Climate One. We're talking about the climate inheritance.

Female Participant: Hi. So my question is I think we saw in the last election cycle that tribalism and populism and sort of this anti-elitism thread is really strong in our country right now. What can we do to kind of make climate change or the potential terrible impacts of climate change become the issue for the people. How do we weave that in?

Greg Dalton: Michael Ranney, on the tribal point. People who watch MSNBC talk to people who watch MSNBC and believe what people who watch MSNBC think, and the same for people on Fox. How to get beyond that tribalism.

Michael Ranney: Well, there's a bit of it asymmetry actually there, a little bit more tribalism among conservatives because this is just empirically true. But there's certainly a siloing in terms of the information that people are seeing. And I think that that's part of the difficulty, part of the internet and the fake news and all. But one of things I think that's important to point out is that we need people to realize that this is a fixable problem because people do turn off and this relates to the earlier question, when they think there is no solution some colleagues of mine, Feinberg and Weller, have shown that if you can couple a solution to the problem then they're much more likely to be engaged. And that's true whether it's, you know, the relatively cheap to my mind way that we can move to sustainable power or other ways to fix the climate; they need something to hang on to. You can't just give them gloom and doom.

Greg Dalton: We've been talking about baby boomers in the environmental and financial debt they are leaving the Generation X and the millennials. Our guests have been Carleen Cullen, a former entrepreneur and founder of Cool the Earth which educates schoolchildren around the country about climate change; Bruce Gibney, a Silicon Valley investor and author of a Generation of Sociopaths: How the Baby Boomers Betrayed America; Michael Ranney is professor of psychology at the University of California Berkeley; and Wilford Welch, a retired diplomat and business consultant who now works on sustainability. Thanks for joining us. We'll see you next time everybody.

Announcer: You've been listening to Inheriting Climate Change: What Will Boomers Leave Behind? A Climate One program hosted by Greg Dalton.

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Please join us next time for another conversation about America's energy, economy, and environment.

Announcer: Climate One is the sustainability initiative at The Commonwealth Club of California. Greg Dalton is our Executive Producer and Host. Jane Ann Chien is the producer.

Kelli Pennington Directs our Audience Engagement. Carlos Manuel is our Booker and Associate Producer. The audio engineer is William Blum. I'm Anny Celsi is the audio editor

The Commonwealth Club CEO is Dr. Gloria Duffy.

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