



Recorded Events

Bill McKibben discusses *Falter*

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[00:00:36] And welcome to this program with Bill McKibben. So but I think all the rest of us are delighted to welcome Bill McKibben back to Seattle. So. So thank you for attending this much awaited program with Bill McKibben co presented by Seattle Public Library. The Elliott Bay Book Company and I'm Karen Maeda Allman of the Elliott Bay Book Company and also the University of Washington's program on the environment and 350.org. So thanks to all and a special thank you to the Seattle Public Library Foundation for supporting programs like these not only at the central library and branches but also out in the community. And finally thank you to the Seattle Times for generous promotional support. As always we're going to start with some remarks from Bill McKibben author of *Falter* followed by an opportunity to ask questions. So Bill McKibben has been with us many times including with his first book *The End of Nature* which public was published in in 1989. My goodness you were in your 20s then and he's spoken at Elliott Bay on every occasion since then and we're very pleased that he's with us again. And now please welcome Gary Handwerk the director of the program on the environment at the University of Washington our co-sponsor tonight and he will make some introductory remarks and introduce our author. So please welcome Gary.

[00:02:17] Actually I'm just here to field test the mike because we're about the same height so he can gauge whether he needs to lean down into it or can stand up. I want to begin by repeating these important lines the University Washington acknowledges that the Coast Salish peoples of this land the land which touches the shared waters of all tribes and bands within the Suquamish, Tulalip and Muckleshoot nations. Wow. I get to introduce Bill McKibben. Except he doesn't really need to be introduced to most of you. I'd guess that almost all of you know who he is what he's done. You've read his books and or worked in or alongside the organizations that he has helped to create and inspire

and the rest of you were probably dragged here by the person sitting next to you who already told you all about Bill McKibben on your way to the talk.

For anyone who does need more information. We all know how to find it. It's on Wikipedia. He's there. So I don't need to tell you about the series of Conversation altering globally impactful books he's published or about 350 dot org. One of the biggest ground up. media savvy activist organizations ever created or his role as an internationally prominent social and environmental activist. He was one of the earliest and most prescient voices on the issue of climate change. He's someone whose scope as a thinker writer and critic has never ceased to expand. And I want to apply to him some words from somebody else that I think of as a great writer.

[00:04:01] John McPhee who described David Brower the person who kind of made the modern Sierra Club in a book that he wrote in these terms. His field. Being the relationship of everything to everything else. and how it is not working. is so comprehensive that no one can comprehend it. A big challenge for him and I think really for all of us. But tonight is about Falter. And so I really do want to underscore my perspective. I'm a literary critic by trade that Bill McKibben really is a great writer. It's a talent that we badly need in addressing contemporary issues. He knows how to make words do things that badly need doing and how to do that with rigour, wit, intelligence and grace. So Bill McKibben does not need to be introduced to you. But he does need to be introduced to a lot of people that you know. Someone is bound to ask in a quick Q and A because this always happens. What can I do next. What's the best thing I can do. Falter is packed with answers. Large and small to that particular question. If that's your question I suggest you begin with part for an outside chance. But let me offer one additional suggestion. That you buy borrow or simply and gently lift up from a friend's desk and take with you a copy of this book. that you read it. The whole thing.

[00:05:38] I'm a professor. That's an assignment. but that you then pass it on. Not to one of your eco friends or one of your bio allies. but to someone likely to be neutral indifferent or just uninformed. If you belong to a book club pitch it to them. And then as you do this. Ask each of those people to pass it on in turn.

[00:06:06] My apologies if that affects the royalty stream. Anyway I plan to do that.

[00:06:14] As a child of the great American Midwest as we think of ourselves. I have two siblings who I really have little doubt voted.

[00:06:25] Let me just say differently than I did in recent elections. I'm going to send them copies of this book with my instructions to read it and work pass it on. At some risk I think of actually damaging those personal relationships. Because we now need to take risks like that large and small. So buy a book take one out from the library start a chain of books of words. Of acts and of changes because books do change the world. No one book all by itself. But what Bill McKibben has to say in falter is as impassioned urgent. For sighted and wise as The End of Nature was 30 years ago he makes you think. Rather he lets you think and he does. I think if his readers hope he is probably the

cheery est prophet of doom I've ever read. So with the deepest possible respect and the strongest imaginable gratitude I present to you Bill McKibben. Carrie thank you. so much for that.

[00:07:49] Kind introduction. It's really your words especially about books in general are very moving and powerful. So thank you for that and thank you also for the program on the environment.

[00:08:03] I was I was saying earlier I meet your graduates out and about in the world doing good things. So that's the greatest mark of good teaching and so thanks to all who are doing that. And thank you to the library and thank you very much to all my old friends at Elliott Bay one of the things I will you know I've written a lot about local economies and things over the years.

[00:08:27] And I will just say that communities that took their. Local bookstore for granted. No longer have a local bookstore. So I support them in one way or another. I am less dour and grim tonight than I usually am. You're a man. That's that's not saying much and they'll be you know a certain amount of grim news. But it's really really good to be in Seattle.

[00:09:02] I'm really happy. I'm always happy to be. It's always makes me happy to be in Seattle. I flew in. Yesterday with the great mountain shining through the window which made me think not only of of the couple of times I got to climate but more that time I got to go around it with my father and my uncle on the Wonderland trail and that remarkable wilderness. And it's so wonderful to see my cousins Craig and Sarah here. You know my. Grandfather was mayor of Kirkland back in the day when it was a little tiny shipbuilding town. Few places have changed quite as much I think over the years. But this place remains very very special to me and for other reasons that I'll get to also because it holds some of the greatest activists I've ever met.

[00:10:08] Let me talk a little bit about this book for a few minutes.

[00:10:13] I'll read you a little bit from it in a few minutes but not very much because it's not really the kind of book that benefits enormously from being read out loud. It's not poetry you're all capable of reading. It'll be fine. I do want to talk a little bit about the reflections that have you

know that kind of came over me as I was finishing it up and thinking about it because it does come 30 years after the end of nature and that was 30 years ago. And one of the.

[00:10:48] Reflections that really kind of overwhelms me a little bit is the notion that change can come from fast. I always someplace the other day and someone showed me my author photograph from that first book when I was 28 years old and I had a full head of black hair and you know all that and I looked at it and it was a little bittersweet you know to see it but but that's normal and natural. That's what should happen it be weird if I didn't look different than I did 30 years ago. What's wrong is that the planet has changed enormously over that same 30 year period and that's not supposed to happen.

If you take a picture of the planet now and one from 30 years ago they look very different. They're 70 percent less sea ice in the summer Arctic. The oceans are 30 percent more acidic. Those kind of changes are not supposed to happen in short order on a planet of our size it's supposed to be and always has been through human history relatively stable. And now it's wildly unstable its systems in violent and chaotic flux. We knew 30 years ago that this would happen. The science was relatively simple and clear. We knew that when we burn coal and gas and oil we put carbon dioxide in the atmosphere and we knew its molecular structure trap heat therefore it was a very sound estimation that the planet would heat up. What we did not know was how fast and how much precisely and as it turns out scientists are by their nature conservative and they dramatically underestimated how fast we were going to see change. The changes that we're seeing now that vast melt in the Arctic the destabilisation of the great ice sheets of the Antarctic the discombobulated organ of the planet's hydrological system these things we thought were 2080 21 50 we thought they were a generation or two down the line 30 years ago. It turns out the planet was quite finely balanced and that we've managed to knock it off kilter very quickly.

[00:13:20] Sometimes we see that very dramatically. Everybody watched last fall when you know a California city literally called Paradise literally turned into hell and did it in half an hour. Okay. That's the kind of picture that once you've seen it's locked in your memory usually change even violent change takes place in places with fewer cameras so we don't see it last.

[00:13:50] Two days ago it was in Mozambique where they had their second. The two strongest cyclones in the country's history of hit in the last month. Kenneth the one that hit day before yesterday dropped six and a half feet of rain on parts of that country. Today it's our brothers and sisters in Bengal and Odisha in India that we should have in our hearts and minds. A mammoth storm is bearing down on them. The Indian government tonight is trying to evacuate 11 million people from its path. The largest evacuation in the planet's history.

[00:14:30] Those violent events are not as insidious probably in the long run as the more the more drawn out and protracted kind of events we now see around the world for instance the

enormous droughts that are now commonplace and that make it impossible for life to go on as before as you know in the first decade of this century.

[00:15:00] We had the biggest drought that's ever taken place as far as we know in that belt of land. That in my schoolboy days we called the Fertile Crescent that drove a million farmers off their land in Syria. into the cities and helped spark the civil war. That in turn drove a million refugees toward Western Europe. That in turn discombobulated the politics of that continent in the central highlands of Honduras and Guatemala. A deep drought caused by the fact that there's nearby and much hotter ocean on both

sides of Central America has driven perhaps a million people off those farms and many of them ending up on our border discombobulating our politics.

[00:15:47] Now imagine that the U.N. estimate for climate refugees in this century the low end is 200 million and the high end is a billion one in seven human beings on the move. If we let climate continue along its current course. That's not possible. None of the things that will happen if we allow the temperature to increase the three degrees Celsius or so that we're currently on track for none of those things are possible for civilizations to endure.

[00:16:26] Last summer in some of the cities of Asia and the Middle East we had the highest reliably recorded temperatures ever on planet Earth. One hundred and twenty nine degrees along the Persian Gulf. Some of that was accompanied by humidity so high that the what the what the weatherman calls the feels like temperature that the heat index was 165 degrees. Human beings can't survive at one hundred and twenty nine degrees for more than a few hours outdoors your body can't cool off fast enough to cope with that. But on the current trajectory we're on the estimation is that there'll be a huge swath of territory running through much of India the North China Plain the rest of Asia where those temperatures become routine in the summer.

[00:17:24] That. Means that in essence the planet is starting to shrink the zone of habitable. earth that we can live on which has been expanding ever since we left Africa is now contracting on the coasts.

[00:17:42] As you know sea level rise begins to dawn. The planners for our major cities on the low lying islands and deltas of the world the water already begins to intrude.

[00:17:58] This is by far. The biggest thing that humans have ever done. by far.

[00:18:07] And we're still fairly near the beginning of this story the one degree we've increased the temperature so far has been very bad but the damage from increasing to 2 degrees Celsius or 3 degrees won't be linear. It will be exponential which is why there is an extraordinary urgency at the moment.

[00:18:27] So just keep that in your mind that we're on a shrinking planet that is in effect closer to the sun than it used to be. That's what's happened in the course of a few decades. Second thing that I've been reflecting on a lot is the degree to which. I managed to mis analyze in a way what was going on 30 years ago. And this is something I kick myself for regularly.

[00:19:02] I thought.

[00:19:04] That we were engaged in an argument about climate change and hence it was really important to write books and have studies and produce data and have symposiums and teach classes and on and on and on all of which is important. But.

[00:19:23] But.

[00:19:25] Sometime in you know I mean actually to tell you how naive I was when I wrote The End of Nature at 28. I think probably my theory of change was people will read my book and then they will change. And even when I was disillusioned of that the thought was that we would eventually adduce enough evidence that our leaders would begin finally to act and to do things at a certain point when that didn't happen.

[00:20:02] It really dawned on me that I had gotten it wrong. We were not in an argument we'd won the argument by 1995 at the latest the Intergovernmental Panel on Climate Change in its first real big report said human beings are warming up the planet it's going to be very bad and here's what you need to do when nothing happened for some years after that it finally dawned on me that we were not really in an argument at all we were in a fight and the fight was what fights are always about money and power and the people on the other side of this fight the fossil fuel industry the richest industry in the planet's history were willing they were willing in order to expend extend their business model a few decades to break the planet. And that sounds hyperbolic. I try hard not to exaggerate ever and I don't think I would have said that even three or four years ago. But over the last three or four years we've had remarkable investigative reporting from the L.A. Times from Columbia Journalism School from Inside

Climate News from all kinds of places that. That made very clear. that beginning in the 1980s the fossil fuel industry knew absolutely everything there was to know about climate change. In retrospect this makes great sense. I mean these were the richest companies on earth. They had great scientists on their staff and their product was carbon. Of course they would find out what was up with it. And they did. By 1982 or 1983 we know from documents and whistleblowers that say senior scientists at Exxon had informed senior management at Exxon how fast and how much it was going to worm their estimates were correct and their estimates were believed. Exxon began to build every drilling rig it built higher to compensate for the rise in sea level that they knew was in the offing.

[00:22:02] They began planning where they were going to bid for leases in the Arctic. When they when it melted as they knew it would. What they didn't do of course was tell any of the rest of us. Instead they began carefully and expensively building this architecture of deceit and denial and disinformation hiring the veterans of the tobacco wars and the DDT wars and everything else. Some of the people they hire were the same people who'd smeared Rachel Carson in the 1960s and set out to work building is edifice of doubt. That was their design. They kept us locked for 30 years in an utterly phony debate about whether or not global warming was real. A debate that both sides knew the answer to. When the debate began. That's the thing always to bear in mind. It's just that one of them was willing to lie about it and that lie cost us the three decades. That would mean. If you if you're a sort of fan of alternate history you know man in the High Castle kind of stuff. You know the alternate history here is imagine that on the day that Jim Hansen NASA scientist testifies before Congress in 1988 that global warming is very real and is now underway. Imagine if that evening the CEO of Exxon had gone on

the evening news to say you know what our scientists find exactly the same thing that strikes me by the way is the absolute minimum that any moral or ethical code would demand. OK but. Had he done that. It's not like anyone would have said Exxon's just a bunch of alarmists pay them no attention. You know everyone would have said OK we've got a problem. We best get to work. They did exactly the opposite.

[00:24:04] And as a result instead of taking the kind of fairly minor course corrections that we could have taken 30 years ago that would have gotten us in a whole different direction. Now we've not only wasted 30 years we've spent that 30 years sprinting in the opposite direction. We've emitted more carbon dioxide since 1990 than in all the years before 1990.

[00:24:31] Ok.

[00:24:32] So that leads to the third reflection. Which is that in a fight. A movement is a good thing to have. A necessary thing to have.

[00:24:47] When we sat down to kind of analyze a little bit or think about it it was very clear that we were never going to match the fossil fuel industry dollar for dollar. That was not a possibility day. I'm not a theologian. I've never risen higher in the ecclesial hierarchy than Methodist Sunday school teacher but it's my firm belief that the fossil fuel industry has more money than God. So this was not a.

[00:25:16] This was not. That's not how we were going to do it. Okay we were going to have to build a movement and and so that's what we started out doing and I'll tell just a tiny bit about the history of that because it leads to a very.

[00:25:33] True leads to the present moment in powerful ways. Ten years ago there really was no climate movement at all we set out to make one 350 dawg. When I say we at the beginning it was myself and seven undergraduates at Middlebury All right teach which was a ludicrous proposition. You know there were seven students there are seven continents. Each one took one.

[00:25:57] We got to work that guy the guy who did the Antarctic also was responsible for the Internet.

[00:26:03] Ok so you know off we went and because of a certain amount of beginner's luck and because there was an unfilled ecological niche out there lots of people were very worried about climate change around the world or worried about its effects. If there's not somebody someplace called an environmentalist there's always somebody who's worried about war and peace about development about hunger about public health about women's rights about all the things we're not going to have on a rapidly degrading planet. And so they were our natural allies when we went out around the world. The first day of action we did which was just about 10 years ago. A little bit less 10 years ago next falling. Yes. We managed to coordinate 50 200 demonstrations in 181 countries around the world. CNN called it the most widespread day of political action on the planet history. And we went on to do this. We've organized about 20000 of

these demonstrations around the world and we went very quickly from that educational work to confrontational work because we have no choice. Time is short. And so you know seven or eight years ago with the help of people in this room we started the fight against the Keystone pipeline and that was good partly because against considerable odds we've managed to keep that pipeline from being built. It's still very much a threat.

[00:27:32] Mr. Trump's very eager to build it. We're working hard but it wasn't just that that kept that 800000 barrels of oil a day in the ground. It's that it demonstrated to everybody that the oil industry was not bullet proof. And now people fight everything every coal miner every frack well every oil port everything gets fired. And we did the divestment campaign a year later that's tried to go after the financial strength of the fossil fuel industry and at this point we're at eight trillion dollars worth of endowments and portfolios that have divested. And it's taking its toll. Shell Oil. called it in their last annual report a material risk to their business. The coal companies said earlier this year at their energy conference in Houston they said we really can't raise investment capital anymore for expansion because too many funds have divested so thanks to all who have worked there and now I know that this is not news. I know. that this is not news to any of you because there is no place. That's been better at doing this work than Seattle. And it is such a privilege to have tonight in the audience some of the people who are just absolutely my you know old and close comrades. Emily Johnston from Seattle 350 use one of my great heroes and.

[00:29:08] KC Golden who's the chair of the 350 dot org board and has worked harder than just about anybody in this international effort. And. and. and.

[00:29:18] I know all the people out here that have so many people who have worked so hard I know who they are. I know that it's the love my nation up at Cherry Point in Bellingham that that made sure that there was not a big coal port there and I know that there are so many other people who help draw what KC called the sort of thin green line across the Pacific Northwest to block but there were six coal ports proposed up and down the Oregon and Washington coast and not a one of them are gonna be built because people came together. to make.

[00:29:57] And it's been beautiful beautiful to watch that and it's helped enormously.

[00:30:04] You can't get the coal out of the Powder River Basin to Asia without going through this part of the world. That's just geography. Okay. And so it's stuck where it is and that's an enormous gift to the planet that people have given. And I know that people have fought like hell in order to get a price on carbon. And the recent election and I know the only reason we did it was because of the enormous airdrop of money that the fossil fuel industry poured in. And the only thing I can tell you is at least that's 20 or 30 million dollars.

[00:30:39] They don't have to do some other bad thing with in the meantime. OK.

[00:30:45] And I know that this has been one of the places that people have now started to take the work around the Green New Deal super seriously. That's been so beautiful to watch. I have to have a certain kind of particular joy in watching it because the young people of the Sunrise movement were pushing this around the country are mostly veterans of the campus fossil fuel divestment campaigns.

[00:31:12] They got out of school and they wanted to keep working. And by God they came up with something good. This green new deal is the first legislation we've had at a scale that that is commensurate with the scale of the crisis that we're facing.

[00:31:28] And it's remarkable to see its popularity and it was been wonderful of course to watch this spread of school strikes around the world one of the great marvels there's ever been. I'm told that even in the front row there started school striking in December. and. has been.

[00:31:51] Added ever since.

[00:31:58] And he is by no means alone. You know all around the world this is going on.

[00:32:06] Some credit Thornberg is truly a marvel. She's turns out to be as great up close as from a distance and and and just I mean her basic notion.

[00:32:20] That it was that if our leaders were not serious about preparing for the future not taking the steps necessary to prepare the planet for the future then it was a little rich to demand that she sit in school for eight hours every day pretending to prepare for her own future. That idea really struck home. And so all over the world this is happening and I think it's happening around this country again tomorrow. There'll be people out all over the place and I'm sure in Seattle. Is there a place where people are rallying in Seattle tomorrow around this. 10:00 a.m. Occidental Park. You've got your marching orders. There are more to the point. One of the things that young people have been asking and I've been in a lot of these climate strike rallies and you know I was just in I was just in Denver a couple of days ago where I got to meet a young woman named haven Coleman who's been one of the coordinators around the country she and I had written an op ed piece together via the Internet for the Los Angeles Times in this sort of form of a like absence excuse you could give your principal for like why you couldn't be in school because you had to save the planet.

[00:33:45] You know one of the things she was saying and that crowd has been saying they're real saying is time for adults to back this up. Okay.

[00:33:59] A year something wonderful but also slightly undignified about letting 12 year olds do all the work.

[00:34:07] Ok.

[00:34:10] Second we're going to be. So we're gonna be watch watch this space. Check in with 350 Seattle and 350 dawg or whoever else because there's going to be a big broad announcement soon of climate strikes for all ages beginning in the fall and we're

going to need people to do it. Not everybody can't. Some people need a day's wages and can't miss one. And some people work for bosses who would fire them if they didn't show up. But if you're not in that category then we need you deeply involved. We need to disrupt if only for a day at a time at least to start. We need to disrupt business as usual because it is precisely business as usual that is doing us in. It's the fact that we get up every day and more or less do the same thing that we did the day before. Even as the worst crisis that ever engulfed the planet is engulfing the planet. That's the problem. So we somehow have to short circuit that process and we can't. It is beginning to work. We are in a climate moment yesterday pressed by the creative non-violence of extinction rebellion in London the. The. United Kingdom House of Commons passed a resolution declaring that we were in a climate emergency. That's a Tory government. Okay. Conservative government in the UK that did that. That's a real sign that we're getting somewhere there was a poll that CNN released yesterday showing that for voters in the Democratic primary climate change is now the number one issue and by a large margin above health care about the economy about absolutely anything else. I got to tell you.

[00:36:03] I've waited my entire adult life to start seeing that kind of moment emerge and it's emerging because you worked very very hard for a long time to make it happen and thank you to everyone who did.

[00:36:20] Which makes it. Harder for me to say the other thing that I need to say which is.

[00:36:27] Even at this very good moment there is no guarantee that we're going to win this fight. And this one of the things that's really sort of.

[00:36:38] Pounded in on me over the years.

[00:36:44] We waited a long time to get started. The momentum of change is enormous. We're obviously not going to stop global warming. At best we're going to stop it from getting so out of control that it cuts the legs out from under our civilization's.

[00:37:03] Even that's hard at this point. The reason that it's hard obviously is because this is the first timed test that we've ever faced. OK. it's different from all our other political.

[00:37:21] Issues precisely because of that time element.

[00:37:25] Everything else we do. You know we advance best through compromise.

[00:37:34] That's really how human relations mostly have to work. You know we strike some position in the middle and come back in a few years and go a little further and so on and so forth. Human institutions economies societies families change best when they change slowly and gradually. That's just the nature of who we are.

[00:37:59] But in this case that's not a possibility because the negotiation that we're carrying on is not with other human beings. In the end I mean there's a lot of

negotiations with other humans embedded in it. You know Republicans versus Democrats industry versus environmentalists. You know on and on and on. But the fundamental negotiation is human beings and physics and that's the worst kind of negotiation because physics just doesn't care. You know it's going to do what it's going to do. So our job is to do more or less what it demands.

[00:38:36] Ok. And that's hard because of that time element. Dr. King my particular hero would say at the end of every talk that he gave he would quote from the great Massachusetts abolitionist Theodore Parker. He would say the arc of the moral universe is long but it bends toward justice. This may take a while but we're gonna win. The arc of the physical universe is short and it bends toward heat. If we don't win soon we don't win. Hence the urgency. Which. I guess another way of saying this is and I'm rattled on too long and I'll stop soon. Another way of saying this is. The planet is now miles outside its comfort zone. It's being wrenched by truly. Dramatic forces now that we have unleashed. So we need to be some ways outside our comfort zone to.

[00:39:47] That's going to mean different things for different people it's meant different things for me over the years among other things it's meant learning how to do this not how to do it very well you can tell I'm not a kind of orator by nature or anything. But for a writer I mean writers are basically introverts you know.

[00:40:09] I'm happy to be with you here today but I'd rather be in my room typing. OK. That's what I like to do.

[00:40:17] But I've learned to do otherwise. I also didn't occur to me you know through most of the first 40 or 45 years of my life that I was going to sort of start regularly ending up in handcuffs. You know that was also novel. And and not always pleasant but you know at least for people whose skin is the color of most of the people in this room. Not the end of the world either the end of the world is the end of the world. So that's why one does what one does. I don't know what it's going to be for you. It may just be having to go and talk to all your neighbors and everyone in your office to tell them why they need to join this Climate Strike. OK maybe that's hard for you just to go out and talk. to people and if it is then you need to do it and summon up that whatever it is. That's what we need people doing and we need you doing it now. There is no point in keeping your powder dry for the you know final emergency because the final emergency is actually underway right now in a world where they're trying to evacuate 11 million people in the course of an evening out of the Bay of Bengal. That's a world that needs everything we can throw at it now.

[00:41:44] So let me. And by saying reading a tiny bit just devoted to the idea that. the other thing that just hits me over and over and over again which is that it's worth.

[00:41:59] Doing all this for many reasons including the fact that we were born onto an absolutely gorgeous planet with quite an amazing and interesting. Species to be a part

of. Okay. I started I ended this book oddly enough in Cape Cape Canaveral in Florida because one of the things I talked about a lot in the book and I haven't talked about tonight. I didn't do a very good job of summarizing my book for you. You'll actually have to read it.

[00:42:34] But one of the things that I talk about a lot is the kind of rise of this philosophy over the last 40 years that caused us I think grave trouble. The kind of libertarian notion that really took hold in the 1980s had just the wrong moment that markets solve all problems that government is the problem that there is no such thing as society that our job is to look out for ourselves. And you can trace it through the fossil fuel industry and the Koch brothers and you can also trace it through the great tech barons of our time. You know as I've looked at all those

guys especially the tech titans or you know all of whom very much want the government off their backs telling them not at all what to do.

[00:43:21] You know as Mark Zuckerberg said famously we wish to move fast and break things. And boy has he. You know one of the things that's most remarkable about all these guys is their deepest wish is to leave. They're all building rocket ships. And.

[00:43:52] There are times when I think you know that would not be the worst outcome you know imaginable. But they're definitely not taking the rest of us with them. So. So.

[00:44:04] I went down to Cape Canaveral to watch one of Elon Musk's rockets launch and I'm a sucker for this. I was nine when Apollo 11 landed on the moon. I thought it was the greatest thing ever star and I still think it might be you know just about the moon and it was fun to watch those rocket take off into the atmosphere but much more fun actually turned out to be what happened the day before. I spent the day before out touring Cape Canaveral with a couple of guys from NASA PR guy and a biologist and I'd been warned in advance not to ask them about climate change because that would just get them in trouble. And I didn't want to get them fired you know. And anyway it turned out there was no need to ask at all. Because the problem was absolutely blindingly obvious.

[00:44:48] We climbed up a small hill overlooking Launch Complex 39 where the Apollo missions left for the moon and where any future Mars mission would likely begin. The ocean was a few hundred yards away perfect in the sense that if something goes wrong the rocket falls into the sea but not so perfect given that the sea is now rising. NASA started worrying about this sometime after the turn of the century and worried it accelerated dramatically after Hurricane Sandy in 2011. Sandy didn't hit Cape Canaveral or hit New York City but even at a distance of a couple of hundred miles. The great storm churned up waves strong enough to break through the barrier of dunes and very nearly swamped the launch complex and so those dunes were rebuilt.

[00:45:31] They found hundred and eighty urged from one hundred and eighty million cubic yards of sand and they planted it with tens of thousands of native shrubs to hold it

all in place and so far it's worked in least until a few more big glaciers crashed into the Southern Ocean or you know a storm hits head on our escape route to outer space is safe for the moment okay.

[00:45:58] But what impressed me more than the new Dune was the sheer affection that these two men had for the landscape where they worked. Kennedy Space Center is the Merritt Island

Wildlife Refuge said Greg Harland. We use less than 10 percent of her industrial purposes. When you look at the beach it's like 1872 Florida said the longest undisturbed stretch on the Atlantic coast. We launch people into space from the middle of a wildlife refuge. That's amazing. They talk for a long time about their favorite local species. The brown pelican skimming the ocean just off the beach. The Florida scrub jays the gopher tortoise when they were rebuilding the dune they carefully bucket trapped and relocated every last one of those tortoises before I left. They drove me half an hour across the swamp to a pond near the Space Center headquarters building just because they wanted me to see some alligators and we could see these snouts surfacing near the bank in each corner of the pond. A sign had been carefully placed by NASA that alligators in this area occur here naturally they were not placed here. They are not pets putting food in the water will cause them to become accustomed to people and they'll have to be removed and destroyed. Something about that sign moved me tremendously. It would've been easy enough to poison the pond just as it would've been easy and. To bulldoze the girl for tortoise. But NASA didn't because of a long series of affectionate laws that drew on an emerging understanding of who we are. John Muir in some ways the first self-conscious Western environmentalist crossed Florida on his thousand mile walk from Louisville to the Gulf of Mexico in 1867 a trip he used to form his first heretical thoughts about the meaning of being human.

[00:47:39] From his diary the world we are told was made especially for man a presumption not supported by all the facts. A numerous class of men are painfully astonished whenever they find anything living or dead and all God's universe which they cannot eat or render in some way what they call useful to themselves. His proof that this self centeredness was wrong was the alligator numbers of which he could hear roaring in the swamp as he camped nearby and which clearly caused man mostly trouble. But the alligator was wonderful nonetheless. Muir thought a remarkable creature perfectly adapted to his landscape. I have better thoughts of those alligators now that I've seen them at home he wrote. Indeed he addressed the creatures directly honorable representatives of the great screen of an older creation man you long enjoy your lilies and rushes and be blessed. No one then with a mouthful of terror stricken man by way of desert. Most of us don't go as far as Mira. We still wince when we root of some gator emerging from the water hazard and the sixth hole to chomp down on an unwary golfer but his basic idea that all of creation matters has made some real headway. That evening Harland and tanker drew me a crude map to a beach where I could wait the hours until the predawn rocket launch a beach where they said I'd be likely to spot a

loggerhead sea turtle coming ashore to lay her eggs and so I lay on the sand north of Patrick Air Force Base and south of the sign erected by the Brevard County Historical Commission to commemorate that here in 1965.

[00:49:20] Barbara Eden emerged from her bottle to greet her astronaut at the start of I Dream of Jeannie. A key feature of my early intellectual life. the beach was deserted and under a near full moon. It was easy to see a turtle Trundle from the sea. She lumbered deliberately to a spot

near the dune where she used her powerful legs to excavate a pit. She spent an hour laying eggs and even from 30 yards away I could hear her heavy breathing in between the whisper of her of the waves and then having covered her clutch. She tracked back to the ocean in the fashion of others like her. For the last hundred and twenty million years that humans have made her life harder is undeniable in some places sea turtles are eaten and many more their habitats been eaten away often by beachside cities. That in turn foster the raccoons and foxes that delight in digging up turtle eggs. But humans have also now set aside beaches for turtles and of organized patrols to protect their nests. In some places they cage each nesting wire to keep the raccoons at bay. Even the new dune built along the launchpad complex was designed in part to block the lights that often confused the turtles are merging to build their nests. And so in places populations have begun to rebound.

[00:50:40] Which makes me think among other things about human beings we are messy creatures often prone to short sightedness selfish susceptible to greed in a trumping moment with racism and nationalism resurgent.

[00:50:58] You could argue that our disappearance would be no great loss.

[00:51:02] And yet most of us most of the time are pretty wonderful.

[00:51:07] Funny kind another name for human solidarity is love. And when I think about our world in its present form that is what overwhelms me. The human love that works to feed the hungry and clothe the naked the love that comes together in defense of sea turtles and sea ice and a wall all surround us. That is good. The love that lets each of us see we're not the most important thing on Earth and makes us okay with that.

[00:51:33] The love that welcomes us imperfect into the world and surrounds us when we die even especially in its twilight. The human game is graceful and compelling. So there I end there I end. Thank you.

[00:52:04] So I'm going to lean into I I've talked on much too long for which I apologize. And but was a few minutes left for questions and comments and critique abuse. Whatever you have in mind and I'll lean forward into this mic so you can use those mics and raise a hand and somebody will get you a mic.

[00:52:28] Mr. McKibben I go on about a by the way man. Hey Castle I read the original book but I would Harken has to remember another book by Conrad called The Heart of

Darkness. And I would say one other thing too because it just shames me deeply that these young people like Gretta. This girl greater now they have to provide the example for all of us adults you shames me deeply. We all have to get out there as adults and support these children. It is their life. And they know it. All she did was speak the truth to all these international leaders. I mean she spoke the truth the unvarnished truth leaving nothing out. And they couldn't take it. She wilted them a little girl. How about the rest of us getting on board. I want to ask you Mr. McKibben one other thing. I mean I've read all your books I'm curious about saying. Have you heard about the. This is my little nightmare I want to pass it on to you briefly. You heard about the global ocean conveyor and the trouble at my cousins. Yes. So I guess I can talk about that for a second if you want.

[00:53:31] Well I mean I just do my thought well you probably doesn't know his family doesn't know global. Stop you there. Why don't we let Mr. McKibben Go ahead.

[00:53:42] Yeah go ahead. Yeah.

[00:53:51] Yes I mean this is one of the many phenomena on earth to worry about the world's water circulates in part because of differences in salinity which drives density which in turn drives these great ocean conveyor belts that bring a lot of actually bring a lot of heat up from the equator towards the poles. If you look at a map of a sort of heat map of the planet it's gotten hotter every place on planet Earth over the last 30 years except for a few pixels on the map right beneath Greenland because Greenland's melting so rapidly and pouring cold fresh water into the North Atlantic that people are beginning to be able to measure some kind of slowdown in that conveyor belt if it happens. Not good. This is one of a number of tipping points one should bear in mind. We don't know precisely where they are because we haven't carried out this experiment before at least with people around to watch it. So it behooves us to stop just as soon as we possibly can. There are other tipping points. We had a study a couple of weeks ago indicating that melting permafrost may produce something like 10 times more methane than we were counting on as it melted. So far we haven't caught a break from physics anywhere ok and everything. I mean the the the single most used phrase in the lexicon of climate scientists is faster than expected. All right. So that's why we need to be faster than expected in slowing things down so we're not forcing this system anymore.

[00:55:31] I have a question over here. You talked a little bit about your theory of change. Thirty years ago I thought you just had to explain things and now it's more about activism. Where does the political system in the political process come into your theory of change.

[00:55:46] So this is a very good question. Where does the political process come in and I think it's an important component. I don't think that the way that we solve this problem is by electing someone who then solves it for us. That's not going to happen. The prize. The prize that activists play for. On a scale this big is not a piece of legislation or a particular candidate. It is a change in the Zeit Geist. A change in what

we perceive as normal and natural and obvious. Now we've seen that happen. We've seen it happen in our lifetime six or seven years ago. Barack Obama and Hillary Clinton were still against gay marriage. OK 20 years ago 15 years ago there are people in this room like me old enough to remember when it wasn't even an issue because it was so obviously not something that was ever going to happen.

[00:56:41] But then people did great organizing and it flipped very fast and now you know not even really anyone you know even Mike Pence people don't try to repeal it. You know they understand that this is the new reality. This will be harder because no one made a trillion dollars a year being a bigot and people do make a trillion dollars a year selling hydrocarbons. But the point is the same.

[00:57:06] So everything we do divestment stopping pipelines the amazing flood of chi activists that Seattle poured into the harbor to block Shell's drilling rig you know every single thing that we do is about that change in those eight Geist ultimately.

[00:57:27] And so is our work around politics. That's an important venue. What we're trying very hard to do this year is make sure that all of the Democratic candidates are climate candidates 350 set up this.

[00:57:45] Setup.

[00:57:45] We've said we have this an arm a 350 Action 5 0 1 C for C for political action group that our main job is to produce the scorecard. It's been now quite prominent of who's getting where and the three issues that we're sort of are people truly in support of something like a Green New Deal real dramatic action. Are people really going to use executive action to keep it in the ground that is to block drilling and mining on federal land and stop all the new fossil fuel infrastructure projects they can. And will they stop taking money from the fossil fuel industry. Those are the three questions that we ask. And boy so far so good. Bunch of people are beginning to weigh in this week from Texas. Mr. O'ROURKE not only put forward a a five trillion dollar climate plan he also yesterday said that because and he said quite clearly because activists kept asking him to. He had now decided not to take money from the fossil

fuel industry and return the money he'd gotten. So that attempt to shift that I mean we used to worry we used to.

[00:59:10] Scrape and vague that they would ask one climate question on the national debates and they never did. Never did ask one last time around and the Democratic leader next the climate question they asked what's the most important issue facing the planet.

[00:59:26] And one of the Democratic debates and to his great credit Mr Sanders said climate change of course climate change of course you know which was great. But now our job is to make sure that that's the answer everyone gives because it both reflects and reinforces this change in the Zeit Geist. And it's coming. If the U.K. House of Commons has declared a climate emergency. That's a good sign. I suspect that

whoever wins the Democratic nomination will take this issue and try to ram it down the throat of the incumbent because I don't think that there is widespread support at all for his notion that this is a hoax manufactured by the Chinese.

[01:00:11] I think it's one of the places where he's most thoroughly out of touch with what's the emerging kind of body of opinion. We better try and make it so anyway.

[01:00:20] Good question. I thank you for being here. Thank you for also speaking to the extent that extinction rebellion has and forcing change within social movements and the role in that. And your call to action. I thank you for that but I'm wondering what larger environmental NGOs and the responsibility that you have within the United States as we face stacked courts and the rise of eco terrorism prosecution for legal defense. I just want to. Would love to hear what your thoughts are on that and whether or not the expansion of services will need to expand as we seek existentialism within this century and our society. And also just thank you for speaking to humanity and love and looking at the beauty of our world and just and in the aspect of love. Looking at the ties the inextricable ties of militarism and climate change and the role that Boeing specifically has in facilitating that. So thank you.

[01:01:33] Good questions. Look it's definitely getting tougher in certain ways to do this work in a number of states now. We've they've passed laws that are putting draconian penalties on people who literally specifically who protest pipelines. And you're trying to pass them and many more. This is nothing compared to what's going on in much of the rest of the world. Our work gets steadily harder in country after country that are cracking down on environmental NGOs. The playbook that Vladimir Putin put forward in Russia to just drive any NGOs out had been adopted by autocrats from India to Turkey to Brazil now to and so many of our colleagues in 350 because we work in every country on earth except North Korea. You know they face truly

grave pressures and people get killed. So you mean happily in this country we retain at least some.

[01:02:35] Freedom of action. But you have to be sometimes do some of this stuff you have to be willing to to sacrifice. I know Emily Johnston who did was he did one of these valve turning operations up in the upper Midwest to stop the flow. I mean she said at the time.

[01:02:55] That if she had to go to jail for a long time she was willing to do it because it was worth it. I don't know if I mean I thank heaven that she hasn't had to go to jail for a long time because she's actually far more valuable to us on the outside than the inside you know. But I understand the impulse. I don't think for the moment that we that we need most of us to be doing that. I don't want people doing things that get them in jail for 20 years because I think at the moment that the real prize lies in things like these climate strikes that allow us to bring huge numbers of people in and numbers in the end or what we'll tell we're coming up next spring to the fiftieth anniversary of Earth Day.

[01:03:39] Earth Day now is sort of changed and you go to the park and it's fun and whatever. The first Earth Day was not like that.

[01:03:46] There were 20 million Americans in the street one in 10 of the then population. And a lot of them were fairly pissed off and. That turned out 10 percent to be enough. Okay. Over the next four years Richard Nixon who for the younger of you was a Republican president without an environmental bone in his body.

[01:04:11] Okay. He signed the Clean Water Act the Clean Air Act the Endangered Species Act that every single law that we and he signed them because he had no choice because enough people had because the Zeit Geist had changed decisively for a little while. So it is our job to figure out cleverly how to do that again and it's going to be different in different places. There are things that people can't do in India that we can do and there are things that people can do in the UK that we can't do and so on and so forth. We've got to navigate all that. That's what movements do. But as I say it's going to require everyone stepping outside their comfort zones whatever those are to one degree or another. So very good question. I don't know enough to do that. Someone else is going to have to handle the bowling stuff because I'm not that's close to home and I'm far from mine. So thank you for that.

[01:05:05] Great. We have a question from somebody here. So I'm curious about why it is that the U.S. is not emulating some of the great yet small countries in the world that are doing a lot

to battle climate change. May I mentioned Denmark that's trying to be carbon neutral by either 2030 2035. I believe so. I am wondering what we can do as communities to shift to alternative energy sources such as wind and solar and what rate of adoption we need to be at within the next 10 20 30 years in order to kind of you know get with the program. Sure.

[01:05:52] So these are very good questions. And I mean the answer to the question of why the U.S. isn't like Denmark is it's difficult and disappointing. Boy I wish it was and I will say that that I've known Bernie for many years and Denmark is his you know it when he thinks about like what he was. That's precisely what he wants. And he'll say it is Denmark. The question of how quickly we need to go is ever so quickly. Literally as fast as we can because it's not like I mean we're not we're way past where we should be already 350 dawg.

[01:06:36] You know that number 350 is how many parts per million CO₂ is a safe level in the atmosphere we're at 414 as of today and we're going up a couple of parts per million per year. We're we're we're not in your lifetime or mine going to get back to 350. So I mean. what the IPCC said the Intergovernmental Panel on Climate Change said last year in their report that came out in the fall. Best report they've done yet because it did the best job of kind of putting a date on things. It said that if we wanted to come anywhere close to meeting the targets we'd set in Paris that we had to be fully underway with a fundamental transformation of the energy economy by 2030 and we

had to be done by 2050 if the whole world is going to be decarbonise by 2050. Those of us in the rich world need to be ahead of the curve on that. That's why the Green New Deal sets this very ambitious stretch goal of getting there by something like that at least with the electric system by 2030. Okay. Don't know if it can be done but it's definitely the right pace to be aiming at and perhaps it can be done. The engineers have given us an enormous gift. I mean the price of a solar panel has fallen 90 percent in the last decade. This is the cheapest way to generate electrons on our planet. There was a study that came out this afternoon that said if you could get in the city of sprawling city of Los Angeles that most of you have flown into the airport once or twice and seen it just stretching as far as you can see if you could take just 75000 rooftops there of people's homes and put solar panels on them and couple them with the now ever cheaper batteries you could eliminate an entire gas plant gas fired power plant with a virtual power plant on people's roofs. We can do that everywhere now. If we set our minds to it it just takes that kind of extraordinary work. So that's what we've got to push for.

[01:08:47] Question here we have time for two more to come.

[01:08:50] Hi Bill. I'm one of those coal activists from 350 0. 0. One foot two things one can take two kids in the fence. Get a selfie with European to the because they're the ones that are sitting out at the courthouse and fighters.

[01:09:09] Trained to wake up the adults so we know it. We met Ian who Ian and Zoe. Zoe. I. am really frustrated because I don't know how to get my friends to stop flying on airplanes. how.

[01:09:28] Little devices on their phones that actually do when there's a sale for a ticket. Just go some place because it's cheap. And. so how do we get folks to realize that even if they do get a price on carbon and they say so legal to fly we're still going to want to fly the airplanes and they just don't know how to handle that. What's your solution.

[01:09:54] So look there's no perfect solution to this.

[01:09:57] I mean I flew here and I've flown a lot of miles organizing this climate movement over the years and I feel bad about it and I offset by air travel but I don't think that really amounts to much. I think it's sort of like buying indulgences from the medieval church or something you know.

[01:10:15] It's very true that we have to stop casual.

[01:10:21] It does not make sense anymore to be flying someplace just because it's a few degrees warmer than it is where you are right at the moment. One way to think about that is stay put and it'll get warmer fast. The other way to think about it is you know the the the computer does offer us a method of travel that we didn't have before. I probably give 10 talks a week by Skype now around the world. They're not as good as this yet you know because you're not able to.

[01:10:57] I mean it never be as good you can't greet people you can't be in quite the same communion but they're getting better and that's the sort of thing we should try and take advantage of. Having said that let me just say I wouldn't spend most of my time worrying about this because at this point you cannot make the math of Climate Change Square one flight at a time one Tesla at a time one vegan meal at a time. These things are all important. My house is covered with solar panels. I'm proud of them. I do not try to fool myself that that's how we're going to stop climate change at this point. The only thing really that an individual can do that matters is join together with other individuals in the kind of movements that allow us to change policy at a deep level. And when that happens then we'll have many of the alternatives that we need. Like one of the reasons that people fly everywhere.

[01:11:56] One of the reasons. Hey hey man.

[01:12:00] Hey please stop eating credit got our message out because she did not believe that line any more.

[01:12:08] Ok. We disagree on this and that made her life. All right sir. Disagree on this. The choices I make man. Thank you agree on this.

[01:12:19] Maybe I'm a fucking move.

[01:12:21] Hey maybe you think there will no need to show no no. Everybody. Everybody let's just people to disagree on all these things and it's fine.

[01:12:32] We've come to different conclusions about this and I've thought hard and written about it. And you can read it and you don't need to yell or scream. It's fine to talk about it. Okay. I think why don't you.

[01:12:44] Sir I'm going to have to ask you to be talking about how cool she is in person.

[01:12:49] I'm going to have to ask you if you don't I'm not the.

[01:12:56] This is a difference of opinion and a useful point. I hear what you're saying. You need to hear what I'm saying.

[01:13:03] And you can read and think about what I've tried to say. What I'm telling you is we were able over the last 10 years to build a movement around the world because some of us were in motion to make it happen. I've explained to you that we're trying to. I'm trying to have been dramatically reducing the time I spend but here I am and here you are. So tonight we'll be able to have this conversation. What I think is the most important thing an individual can do is be somewhat less of an individual and join together with others. I do not think that if you do the math you were unlikely to be able to convert people in large enough numbers for precisely the reason that she described to individual action in order to win this fight. In the time that we have

the brute math of climate change means that if say. There's half percent of Americans who are vegan now. All right. That's useful because vegans produce less carbon per

meal than other people. If we organize like hell. All right. I'm pretty good organizer and there are people in this room are better organizers than I am. If we organize like hell it seems to me possible we could increase that by an order of magnitude that we could get 5 percent of Americans who were vegans and they'd be good with the shame and credit created.


[01:14:33] You're not alone. I was trying to explain your if we got to that 5 percent that would be useful but it wouldn't in the time that we have produced change on the scale that we need. So I'm more interested in trying to change systems. That's why I do what I do. But you should do what you think is most important you oppose. Fine. We have time for one more. Yes. All right.

[01:15:01] Thanks for being here. Appreciate it. And I wanted to know what thinking you've done to state some of the ways that you think we will come up with should we urbanize that actually we could do now in terms of the economic system that's grinding up the planet to to satisfy more and more people wanting to have learned more things all the time. What kind of economic system could work. I mean I was isn't. So I'd love to hear your thoughts.

[01:15:32] So that's a really good question. My one of my closest colleagues and all this work over the years has been Naomi Klein and her book This Changes Everything posits that climate change represents the opportunity to make shift because we have to deal with the climate to change a lot of other things as we do you know over the last 30 years. One of the things that's been as. Alarming and obvious as the rise in temperature has been say the rise in inequality in this world to the point where eight human beings one of them in Seattle control as much wealth as the bottom three and a half billion people on earth. OK so. We can't solve that overnight and we won't. But we can look for ways as we're doing the things we have to do to meet the mandates of physics to try and get where we need to go. So for instance I can't think of a more subversive change than the change to using sun and wind as our basic means of generating power. If we do that. because sun and wind is available everywhere. we'll start to undercut the power of the tiny number of people who currently are dominant on this planet because they control access to the small piles of coal and oil and gas on which we depend.

[01:17:05] They'll be rich people in a solar world but there won't be Koch brothers rich people. No one will be kowtowing to the Saudi royal family. You know we'll begin to democratize and localize one of our single most important commodities. So we should be thinking about it as we do it. It's a real opportunity and a real chance. We'll see if we can make it happen as we go along and I hope that we can. And I think it's precisely that. It's one of the things I write about a lot in this book is inequality because these things somehow are bound up together. When I

talked before about this sort of libertarian impulse and this idea the kind of Ayn Randian notion that we were altruism was a bad idea that we were individuals above all what Margaret Thatcher said once about there was no such thing as a society. There are only



individuals. The response has to be just the opposite. OK. The response has to be that we are where we have to search for human solidarity and search for it hard. That's got to be the way in which we respond.

[01:18:20] And if we can do it then we have a chance. We shall see. But it's a good place don't. go.

[01:18:42] Thanks so much to our friends at home on the environment for sponsoring the program. Thanks to Elliot Bay for sponsoring a program.

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