

RECORDING 1: Interview with my grandmother Judy

[EVAN]: So first I'm just gonna explain the goals of the project. So the main goals are to document the everyday experience of using and producing energy as it is changed over the twentieth and twenty-first centuries. One of the goals is to build up student skills in carrying out interview-based research, and also to teach students about energy in its recent history.

[EVAN]: So the structure of the interview is, I mean, it's simple. I'll ask a question, and you can answer. You can also choose not to answer. If you want, that's perfectly – that's totally okay.

[JUDY]: I have no secrets.

[EVAN]: And, after the interviews are done, it's recorded, and then the recording will be stored at the University of Chicago, and people might be able to access it. So just, that's probably where it's gonna go. Do you have any questions about any of that?

[JUDY]: No, I don't. Thank you.

[EVAN]: Awesome. Okay, I'm just gonna make a quick statement for the transcript. I just. I kind of have to do this.

[EVAN]: This is [EVAN]. I am interviewing my grandparents on the evening of Sunday, February 26th, 2023. We are interviewing over Zoom, and I'm in my dorm room while my grandparents are in their home. *[This interview is specifically with my grandmother, Judy.]*

[EVAN]: Okay. So here's the first question. What do you think about when I use the word energy?

[JUDY]: I think about all kinds of things, all different kinds of energy... solar,, all kinds of things. I'm not sure what to say. There's so many different types. It's just. Oh, Evan, I don't know.

[EVAN]: So could you talk a little more about solar like...

[JUDY]: Yes, I think solar is crucial, to use – I'm planning to have solar put on the house. It's a natural way to keep our lives healthy. It's fairly expensive, but I like the fact that it's natural. You're using the sun the way it's supposed to be used.

[EVAN]: Yeah. So when you say it's natural. Do you mean like it comes from the sun, and that's good like. Could you elaborate a little more on the natural part?

[JUDY]: I just think that there's different types of energy and different types of ways of heating your home, or... I just think that solar energy, for business and for your home, is important to realize that we don't have to depend on PG&E [Pacific Gas & Electric]. Or you don't have to depend on other companies, when you can use what God gave us – energy from the sun. It just makes sense.

[EVAN]: Yeah, definitely. So have you considered like getting solar on your home, or–

[JUDY]: Yes, I have! I've talked to a couple of different people like... Ryan, your cousin Ryan. He's working for a company that is going to make homes completely off the grid.

[EVAN]: Oh...

[JUDY]: That's what he's doing, and I asked him if I should have solar, and he said a couple of different things. He said “Probably because we're older it probably won't be economical for us. But, it doesn't matter if it's economical for us, because when we sell our home someone else can benefit by using the solar panels. You can either buy them or them or whatever...”

[JUDY]: But yeah, he's working on a project that's going completely off the grid. I said, “Come over to my house and do that for me!” He can't, but: he has a lot of good ideas about solar, so I depend on him for his expertise.

[EVAN]: So you mentioned that solar was expensive. and you mentioned that, like also you have PG&E. Does that mean that PG&E is a little less expensive? What's your perception of PG&E?

[JUDY]: I hate PG&E! It's the worst. I... try not to use electricity around the house. I try not to have lights on. I try not to... I just don't think PG&E is good for the environment. I just think there are other ways... natural ways that we can be using solar power and energy.

[JUDY]: PG&E just gouges people... totally gouges people, and we get nothing from it.

[EVAN]: So, like, maybe they make you pay a lot for [electricity] when they shouldn't have to do that, and solar is like an alternative to that?

[JUDY]: Well, solar, um... We can probably do the type of solar that we can... sell it back. Store the power, and then sell it back. And that way we can help someone else. [. . .]

[Conversation veers off-track, including personal information.]

[JUDY]: So, anyway, I have called a couple of different solar companies, and they're very eager to come out. But the one I'm going to use is a company that's run by veterans. Army, Navy veterans. I want to support them and get solar at the same time.

[EVAN]: Interesting... So when would you say that you first heard about solar and first started considering it?

[JUDY]: I've been thinking about it for a couple of years. Grandpa's not really enthusiastic about it... I'm just gonna have them come over and give me an estimate, and explain it a little better to us. I don't think he understands – we both don't really understand a lot of it, so we have to be more informed... to what the capabilities are.

[EVAN]: Makes sense. You mentioned that Grandpa Ron wasn't very enthusiastic about it. Could you give me a reason why you think that, or why it is that way?

[JUDY]: He's an idiot. Is that good enough?

[EVAN]: Yeah, it makes sense. Do you have a little elaboration, or like, why is he an idiot?

[JUDY]: Well, he's not really eager to look at new ideas. He's pretty stubborn in his ways... and I tend to move ahead. And if it comes down to it I'll just go ahead and do it, and he'll go along with it. But he would never initiate it himself.

[JUDY]: But if we do it, he'll go "Oh, this is great."

[EVAN]: Makes sense. Would you say that solar is pretty new, or like it's something that you just thought of? Or you think it's like a new thing that's just happening right now? Or maybe, do you think it started a couple of years ago?

[JUDY]: Oh yeah, a couple years ago, it's wonderful. I've been thinking about it for a while... and I keep getting emails from a couple of different places, like "Hey, we want to come out and talk to you, and... I have to get on board and quit talking about it and do it.

[EVAN]: Yeah, makes sense. So you mentioned that, like the one of the reasons why PG&E is bad, is that it kind of gouges people? I think that makes sense. Could you elaborate a little more on why you think that?

[JUDY]: Well, I don't think they're responsible for what they do. All the wildfires that we've experienced in California, because of their misuse of the electricity poles... They haven't gotten

on board with what it should be, putting things underground. They're waiting. California burns, and finally they're going to say "Oh yeah, now we're gonna go underground.

[JUDY]: Where we live now, everything is underground. And we don't have shortages, we don't have outages, and we don't have problems. And I think PG&E is years and years behind what they should have done to protect the environment.

[EVAN]: That makes sense. What do you think PG&E should have done to protect the environment?

[JUDY]: Oh, they should have gone underground with all the utility poles for sure. Absolutely, everywhere. That's basic. It's basic, and they haven't done it. And it's their fault. It's their fault that California is burning.

[EVAN]: Because of the utility poles?

[JUDY]: Yes, yes! They short out, and they start fires, and... people lose their lives and their homes because PG&E is so stubborn and selfish. They don't want to do what's best for people. They do what's best for them. It's absolutely terrible.

[EVAN]: Yeah. Um... I'm just thinking of how I want to continue.

[EVAN]: I mean, we definitely know PG&E's not super great with what they do. When do you think you first became aware of this, or first started thinking like, "Yeah, these guys are doing some shady stuff?"

[JUDY]: Oh, like 20 years ago... They just think about their bottom line, and they don't think about what's good for others. What's good for the environment, especially the environment. People are dying and their homes are ruined, and they're.. Our beautiful forests are gone, and it's criminal.

[EVAN]: Yeah. Yeah, definitely. So obviously PG&E's been doing a lot of bad stuff. How do you think they've gotten away with it? Like, they should have been called out.

[JUDY]: They're a monopoly. They don't care. They do what's best for them. They don't care what happens to people. They just want their bottom line there. They don't listen to what people need or want. They do what they want. It's criminal. [. . .]

[Conversation trails off.]

[JUDY]: You know, I was just telling your dad that when our kids were little, I didn't like the use of... lights on in the house all the time. So we had a star chart. And if somebody turned off a light in a room that wasn't being used, they could put a star on their chart.

[EVAN]: Hmm.

[JUDY]: And so it got to the point where lights were going on and off. It looked like a circus, and they [the kids] say, "I want a star, I got another star." And I say, "Wait, wait, wait. You can't turn on a light and turn it off and get a star. You have to *manage* the house. When you see a light on, you need to be responsible.

[JUDY]: But it was funny to watch them do it. Matt and Beth and Dan, your dad, loved getting stars on their chart, so.. And even here I turn lights out all the time. And try not to use energy when it is not needed. It's a waste.

[JUDY]: So it looks like we're living in the dark, because we are. I just can't use energy willy-nilly. I have to need it to use it.

[EVAN]: Make sense... Could you tell me more about the star chart, like what? So when you put a star on the chart, what was the reward for the stars?

[JUDY]: The star chart was not just for energy use. It was for good deeds, kindness to others... In fact, I still have a star chart in the garage. And Matt, Beth, and your dad have all the stars. Kevin, Jeff, and Greg couldn't care less. They have like 3-6 stars.

[JUDY]: But it was a way to hopefully encourage them to do good deeds. Be kind to others. Think about their environment. And it worked really well. It's really fun. And at the end of the chart... I mean, they get their special candy or... go to a movie or something like that.

[EVAN]: Yeah, makes sense. So would you say that, like, let's say, turning off the lights was like a good deed?

[JUDY]: Yes, definitely. Or a good deed... helping someone with their homework. Or just being kind, or... there were a lot of different ways to get a star.

[JUDY]: But I do specifically remember the lights going on and off, and on, and off. It was really funny.

[EVAN]: Why would you say that saving energy is a good deed?

[JUDY]: Why not? I mean, why waste what God gave us? That's ridiculous. We've got to... we've got to improve our world, and I don't know how to do it other than just be mindful. Not just solar... wind power, and all kinds of different energies. We have an obligation to take care of the world.

[EVAN]: Cool. That makes a lot of sense. Do you have a negative memory of something involving energy?

[JUDY]: Negative, like what? I don't think so. What would that be? Give me a hint.

[EVAN]: It could be anything. You know, like there's a lot of examples of energy like gasoline, or nuclear energy, or oil, or electricity. So anything like that, and anything negative... or maybe just a memory of energy. It doesn't have to be negative.

[JUDY]: I mean, not really. No.

[EVAN]: That's fair. Hmm... Does anything about energy in general worry you? Do you think that we need to change something about how we use energy?

[JUDY]: Oh, it totally worries me! The waste! The total waste of energy just bothers me [to] no end. If you drive into San Francisco or anywhere, all the lights are on in buildings that don't have to be on. It's wasteful. There's no excuse for that. There's no excuse for wasting energy.

[JUDY]: It just makes me sad to think of the waste.

[EVAN]: Yeah, it is sad. Do you think anybody in particular wastes more energy, or should be more careful of energy? It could be anybody.

[JUDY]: Well, I think the big companies, the oil companies, and PG&E of course. They take advantage of people, and take advantage of the environment, and we have practically no say. And it really makes me angry.

[EVAN]: Yeah. Could you elaborate more on the big companies? Like what they're doing wrong, and how maybe to fix it?

[JUDY]: Well... I think for the oil companies. It's criminal. I mean, people cannot go to work.. They cannot drive their cars because of the gasoline problems, and nobody cares. Nobody tries to help the poor working man that wants to go to work and support his family.

[JUDY]: And the gasoline prices are astronomical. and we have an obligation. Our country has an obligation to make it fair. That people can go to the store, or even take a small vacation, and not be worried about all the money they're spending. It's not right. Our government could easily, *easily* take care of that problem.

[JUDY]: Our president... they say "Oh, when you're at war, or whatever, gasoline prices should go down." Well, that's never happened! What are you talking about? They just raise the prices. And what can we do? We can't do anything.

[EVAN]: Yeah.

[JUDY]: It's unbelievable. I just can't... I just get tears in my eyes thinking about it.

[EVAN]: Yeah, makes sense, totally. The gasoline prices right now are not good at all, and it's not a good situation to be in.

[JUDY]: Yeah, no way... and they're making billions and billions of dollars. And that's what it is. It's money. Greed, total greed. And the American people, the little people that work, are paying for it... when they can't even afford it.

[EVAN]: Yeah.

[JUDY]: I'm getting mad. [chuckles]

[EVAN]: So you mentioned the government, and maybe they're not doing what they should be doing. What do you think the government should do to stop the oil companies?

[JUDY]: It's a good question. I don't know what the answer is. I really don't.

[EVAN]: It's a hard question.

[JUDY]: It's a hard question. I mean, where are we getting the oil – I don't think we're getting oil from Russia anymore, or... I mean everybody just wants their \$5 worth of whatever, and it doesn't matter who they hurt. It doesn't matter.

[JUDY]: They want what they want, and they'll do anything to get it and damn the people.

[EVAN]: Yeah. The companies don't always have our best interests in mind. You mentioned getting oil from Russia. What made you say that?

[JUDY]: Well, I don't know how much of our oil comes from Russia. All I know now is that Russia is having a problem selling their oil. Hmm.

[JUDY]: And it's hard to know whether we should be getting oil from our own country. Nobody wants to drill. Nobody wants to wreck the environment, and I understand that. That's another issue altogether... We have to just go solar. Period. Solar cars, everything.

[JUDY]: And screw them. Excuse my language. I mean, just go solar. Cars, everything. And we'll all be better off. Totally better off.

[EVAN]: Oh, yeah.

[JUDY]: It's not, I don't know in my lifetime if solar cars will be the norm, because I'm 80. But I'm hoping in the next few years we're going to see more solar cars.

[EVAN]: I hope so, too.

[JUDY]: It's not too far off. Maybe not for me. But it's got to happen. it's got to.

[EVAN]: Yeah, I think you mentioned that oil drilling wrecks the environment. What made you say that?

[JUDY]: Well, I don't know how much oil is available in the United States. But I know there are a lot of people that are against trying to drill for oil in the United States, because they feel that it's going to ruin the environment.

[JUDY]: I don't know that much about it. So I can't really say. But oil is not the answer. Solar's the answer. So forget the oil, we don't need it.

[EVAN]: Would you think it would be okay if someone else did the oil and gave it to us? Or do you think that it'd be better for no one to do oil?

[JUDY]: Nobody does oil. No way. It pollutes everything. It's brutal. No, we don't need it. That's not going to happen in my lifetime, but I'm hoping we'll get close to it.

[EVAN]: I hope we get close.

[JUDY]: We've ruined. We've ruined our atmosphere. We've ruined the air. We've ruined the environment. The oceans, everything! We've ruined it, for our kids, your kids. It's absolutely sinful, what happened. Sinful. Ooh, I'm getting mad.

[EVAN]: It's – it's a topic that makes you mad. Sorry about that. I mean, talking about oil companies for 10 minutes is gonna make anybody mad!.

[JUDY]: It's not your fault. I just get annoyed easily over that.

[EVAN]: Um, can you think of an example where you heard of oil companies destroying the environment, or like people getting mad. Can you remember a time that happened, and how it made you feel when it happened?

[JUDY]: Well, I was born in 1942, and we didn't – that was just never an issue. We never talked about it. It didn't seem to be a problem. But the population in the United States, and all over, people need energy.

[JUDY]: And the oil companies have taken advantage of the fact that we need this energy, instead of looking for... a more reliable source other than oil. They just keep dragging oil out of the ground and polluting the world.

[EVAN]: Yeah, totally.

[JUDY]: Why don't they try harder to make clean energy? It can't be that hard. It can't be.

[EVAN]: Yeah, totally. I think you mentioned that, maybe early in your life, no one really knew about the oil companies, right? Could you elaborate a little more on that, or...?

[JUDY]: We just – it was never really an issue. We didn't. We just got gas in our car. It was cheap. We turned the light on and off. I don't remember anything where it was an issue. We probably should have started then. Paid more attention.

[EVAN]: Can you remember one of the first times where maybe you're like “Oh shoot, I should have started paying attention to this?”

[JUDY]: Yes. I'd say, probably... about 40 years ago. I was more aware of what was going on, and how the world was turning, and the air was not good. The water wasn't good. And it's all because of what we've done, and what we've allowed to happen. I don't know what the answer is. I don't know how people can help. I really don't know.

[EVAN]: So you'd say, maybe around the 1980s, like 40 years ago?

[JUDY]: Maybe the 70s. I was more aware of what was going on. I had a lot of little babies running around. I wasn't really in tune with a lot of things.

[EVAN]: Can you think of a particular event that was like, “Oh, oh shoot!” Is there anything that sticks out, or was it slow?

[JUDY]: Yeah, it was slow.

[EVAN]: Yeah, makes sense. So I mean, we've been talking about oil for a little while. Can you think of things in your life that need oil, or could use solar? Like how it might affect your life, if you change from oil to solar.

[JUDY]: I don't think I need oil at all. I don't want oil. At all. What's the point? I don't need it. It's poison. Poison to the environment. Poison to everybody. Solar has got to be the answer. Yeah.

[JUDY]: I don't use oil at all, in the house. I use some gas because I have a gas stove. And I do put gas in the car. But I try not to go places.

[EVAN]: Yeah... So, I think we've been talking about how energy is kind of worrisome, right? There's some things that they're doing that are kind of concerning. Am I understanding what we discussed correctly?

[JUDY]: Yes, yes.

[EVAN]: Does any source of energy like oil stand out? Does any other source of energy make you think we should be doing something different? Or is oil the main one?

[JUDY]: Oil's the main one for me.

[EVAN]: Yeah. totally makes sense. I mean, oil is a really big energy source in the world, and it's also a really... poisonous one like you said. [. . .]

[Conversation veers off track, including personal information.]

[EVAN]: So, I think we were talking earlier... So oil pollutes the environment, and it's... causing problems, for sure. Can you think of any example in particular that kind of stood out? Or is it more a general feeling?

[JUDY]: One of the things that really bothers me is the oil tankards in the ocean, that spill millions of gallons of oil and fuel into our environment, and our oceans are so polluted now. Because all that's being carried across the sea, and being thrown into the oceans...

[JUDY]: Our fish, wildlife are ruined. They're dying off. And it's all because the men can't stop. They can't stop the greed. And it just makes me furious..

[EVAN]: Yeah, for sure. Our beautiful oceans, our beautiful sea life, are being ruined by plastic bottles and oil and garbage. It's beyond understanding.

[EVAN]: Yeah, I mean, for sure... Can you think of the first time that you heard of an oil spill, and it was like, "Oh my god", looking at what's happening right like, "How is this happening?"

[JUDY]: Yeah, it keeps on happening. They drill out there, and they spill, and they don't know what they're doing?, and they're greedy and horrible people. Horrible.

[EVAN]: Yeah. I think we have a trend of [them] being greedy, and that's why they're doing it. Could you elaborate a little more on that connection, between the greed and the oil?

[JUDY]: Well, everybody wants to do better than the other. They want to get more. More, more, more oil. And they'll do anything to get it, and they want to one-up the other.

[JUDY]: And they don't care what happens to the environment. They don't care. Obviously. Because our environment is in the toilet. They should all be shot... Did I say that? I didn't mean it.

[EVAN]: Maybe we cut that part out? *[I verified off-recording afterwards that it was OK to leave it in.]*

[JUDY]: They should all have to drink the water they pollute.

[EVAN]: Let me think... So I think one thing stands out about the, you know, "they should be drinking the water that they're polluting." Do you think the problem is that they can pollute the water, and it doesn't affect them? Or, what do you think the reason is... why they can keep doing what they're doing?

[JUDY]: They keep doing it because the dollar for them is the most important thing. It's to hell with the environment. To hell with the ocean. To hell with anything else. It's the dollar, that's all they care about.

[EVAN]: Yeah, totally.

[JUDY]: And they use anything, and use anybody, to do this. And we are all suffering. Our whole world is suffering.

[EVAN]: Mm-hmm... So how do you think that they've gotten away with it like this long? How have we not, you know, risen up and told them to stop, and made them stop?

[JUDY]: Okay, this will not be politically correct.

[EVAN]: Totally fine.

[JUDY]: I think if women ran the world, we would have less crap going on. I'm not saying all men are evil. I'm not saying that. But I think women would not allow some of this... Well, maybe somewhat. But I think in general that men are so greedy, and so power hungry, and whatever they are.

[JUDY]: I think women would do a better job servicing the oceans and the world in general. I really do. No wars. I think it would be... the world would be better off. I know it's not probably what people want to hear. But if you look back, all wars and all crap comes from men trying to outdo the other.

[JUDY]: The churches and the governments all trying to kill each other. The Indians, the black people get killed. It's all crap. I don't think women would do that. I really don't. And I think the environment is another symptom of their lack of caring.

[EVAN]: Like men's lack of caring?

[JUDY]: Yes! I mean really. I'm not a man basher. I have 5 sons, as you know. But I just think women are a little... would not allow some of the things to happen that have happened... We'll never get a chance to know. Unfortunately. [. . .]

[Conversation veers off-topic into Christianity and the Catholic Church. Sensitive parts have been omitted.]

[EVAN]: How do you think a good Christian should be acting with energy, or how should they think of energy?

[JUDY]: I think that a good Christian should preserve energy, should share energy. Should respect energy.

[EVAN]: Yeah.

[JUDY]: Should respect it. And not waste it. [. . .]

[Remainder of discussion is off-topic.]

RECORDING 2: Interview with my grandfather Ron:

[EVAN]: I'm just gonna quickly explain a couple of things about the interview, just to be clear. So the goals of this project are to document the everyday experience of using and producing energy as it has changed over the 20th and 21st centuries. Also, to build up student skills in doing interviews. And also just to teach students about energy and its history.

[EVAN]: So the structure of the interview is pretty straightforward. I'll ask questions, and you can answer them. You also have the option to not answer them. And after the interview is complete- it'll be recorded, and the recording is gonna go to the University of Chicago. It's gonna be stored there.

[EVAN]: Do you have any questions about that?

[RON]: No questions.

[EVAN]: Awesome. I'm just gonna make a quick statement for the transcript, because I'm gonna transcribe this later. This is Evan Cook. I'm interviewing my grandfather on the evening of Sunday, February 26, 2023. We are interviewing via Zoom: I am in my dorm room, and my grandparents are in their home.

[EVAN]: Cool. I just needed to say that for the recording. So yeah, now we can begin. So the first question is: What do you think about when I use the word energy?

[RON]: That's an interesting word. I don't think I've ever been- I mean, I think I know what it is, but I've never had any education or formal education, or even an intelligent conversation about it. I know it exists, probably in several forms, but I don't know.

[EVAN]: Yeah, totally makes sense. What would you say you think it is?

[RON]: I think energy is the ability to... move things, to go forward, to... Wow! That's a great question. I mean, energy – like lightning, is something that is energy. I mean, the whole universe is part of energy, the way the planets and everything moves around. I don't know. It's hard for me to even comprehend it. It's like saying “what's infinity?”. I don't know

[EVAN]: Okay. So yeah, maybe I can clarify. How would you say that energy interacts with your daily life?

[RON]: I know it interacts. But I'm not actually really aware of it. Breathing- I mean, it's like you breathe in and out, and you know that you're taking in the oxygen and all that. But you just don't really- you aren't really aware of what's really going on.

[EVAN]: Yeah. Could you elaborate a little bit on... so energy is like breathing, like you use it? And it doesn't really... like you say, you don't really notice it. Am I understanding correctly?

[RON]: Yeah. Unless you see visible signs like lightning, or just look out [at] the universe, and you know there's energy out there, the way the plants are moving, and all that kind of stuff. But well, that's a really hard question for me. It's pretty nebulous. I don't know. That's probably not what you wanted to hear, but...

[EVAN]: Oh, yeah, I mean honestly, totally fine. Yeah, I mean... Everything's right. There's no wrong answers to these. I'm just asking the questions to understand your perception. So if you give me what you think, then it's right. So it's not like, "that's wrong".

[EVAN]: Hmm. Can you think of different forms of energy that you interact with, off the top of your head?

[RON]: Different forms of energy...

[EVAN]: Like, I think you mentioned lightning is one of them.

[RON]: Yeah, that's one... Well, I know electricity is energy in some fashion... and I know what would happen if we don't have it. But I don't know, it's really hard for me. It's really hard to explain it. I've never even had to ever think of that before.

[EVAN]: Yeah, totally. What do you think would happen if we didn't have electricity?

[RON]: Well, we go back to being Neanderthals. I mean, really, you couldn't. You couldn't function without that electricity.

[EVAN]: Do you know ways of making electricity? Do you know where electricity comes from? Like where the lights come from?

[RON]: No, maybe not.

[EVAN]: Yeah. I think like Grammy Judy mentioned solar energy, like getting solar panels. What do you think about that, just as an option? [*'Grammy Judy' refers to my grandmother. We discussed solar panels in the last recording.*]

[RON]: Yeah, I would consider solar panels. I'm not sure they're effective yet... Although I see them all over the place now. People were bugging us all the time to consider solar panels for the house.

[RON]: I remember one time we were talking about...buying another- This is like 40 years ago. We were going to buy a piece of property, and we were going to put some kind of solar energy on it. And we were gonna make enough money, where we could pay for our electricity, and then sell the excess back and then make a profit.

[EVAN]: Mm-hmm.

[RON]: I'm sure that- That was 40-50 years ago, so I don't know what that is now like... But I remember that part.

[EVAN]: Yeah. If we think back to like, you know, 40-50 years ago. What did you think about the option of doing that? Did you think it was promising? Or do you think it was... not perfected? What would you say your impression was?

[RON]: I was very impressed at the time. We remember thinking about it. As it turned out, we decided not to move to that particular area and build a house there. So it kind of drifted away, but I was very fascinated with it at the time. I thought if we had done that, bought that property... It was up near Santa Rosa somewhere... I'm sure we would have done that, we would have gone with solar. Or whatever it was. It was solar. Yeah.

[RON]: And that was a time when solar was not the way it is today. Now it's almost everywhere. But back then it wasn't.

[EVAN]: Yeah, makes sense. What would you say are the benefits of solar panels?

[RON]: Oh. Well, you use an existing power source, and it doesn't really require a gigantic factory or major construction of something in order to achieve it. It sounds to me once you make the initial investment, that it's almost free. Free energy.

[EVAN]: Okay. So I think you mentioned... some energy requires a big factory to build. Can you give an example like- Why would you say that? Could you give an example, or a reason why you thought that?

[RON]: No, I could just... I mean, I can understand that once you enter [the house], you put a solar panel on a house. Then obviously, you could enlarge it, 20 or 30 or 50 times, and put it on a building, and the function would still be the same. So yeah, it's feasible.

[EVAN]: Okay. And maybe other sources of energy aren't feasible. So why is that?

[RON]: I don't know. I mean, I don't know. I don't even know what the other sources of energy are... besides sun energy. I don't know where electricity- I mean, I don't know. You go back and think about what... Edison designed the phone, when he invented, whatever the elect- how he invented all that stuff. I just don't know how he ever did that.

[EVAN]: Makes sense. Yeah, I mean it's a thing that we're not always paying attention to, right? So it makes total sense that, like [energy] might have just, you know, slipped under the radar, yeah. Let me think...

[EVAN]: Do you have a positive memory of something involving energy? Energy can be a lot of things like we mentioned. Can you think of a positive thing happening with energy at one point?

[RON]: Hmm... Like getting a shock?

[EVAN]: Something like that, yeah...

[RON]: No, wow, you know, I really can't. I can't think of it. I can't think of a time when I really experienced something, especially negat- I mean something that I was in awe about, or that I was harmed by... I don't think so. I don't remember any of those kinds of things, coming from an energy point of view.

[EVAN]: Yeah. So have you heard of, like, coal as an energy source? Or oil, maybe, or something like that. Have you heard of that at some point, or...?

[RON]: Yeah, sure. Oil and coal, like...

[EVAN]: What is your initial impression of oil and coal? As like an energy- Those could also be an energy source.

[RON]: Well, both of those things are found in the natural environment. I mean, the cost to extract is significant.

[EVAN]: Yes.

[RON]: And coal, apparently from what I read and hear[d] in the past, has more harming features to it as far as the miners – getting sick and stuff like that. And I'm not sure, I'm not aware of anything that's... except once in a while when you see or hear about an oil drill get blown up or sink in the ocean, or something. That's probably a pretty rare instance.

[EVAN]: Yeah. I think you mentioned, maybe coal workers are getting sick, or... Could you elaborate more on... when and where did you hear about that? What did you think when you heard about it?

[RON]: Well, I remember watching the movie *Coal Miner's Daughter*. It's a true story about Dolly Parton and her husband...her father, I mean. And then there was another movie I watched, about the mines in Scotland. About the workers that would go in there every day and dig, dig, dig. They got diseases from breathing in the coal dust all the time.

[RON]: Their lives were shortened, by a lot. Years, 20 years, 30 years, sometimes. But that was 100 years ago, before they even had some safety features. So I don't know, even if the safety features they have now would... protective face masks and stuff like that. I still don't know if they're sufficient.

[EVAN]: Mm-hmm.

[RON]: Or maybe they don't even exist anymore, because I don't think coal mining is... as far as the United States goes, coal mining is not what it used to be.

[EVAN]: Yeah. So yeah, hearing that, what would you say is the most prominent source of energy in the United States, if it's not coal?

[RON]: Oil.

[EVAN]: Could you elaborate on... How is oil a factor in the United States? What do you think it's used for? Where do you think it goes?

[RON]: Oh, it turns into fuel: jet fuel, car fuel, automobile, gasoline. And I know there's a lot of other functions of oil. I'm not sure all of it translates into energy, use of energy, because some of the oil is made into other products, like plastic and stuff like that. So I don't know how that would relate to energy.

[EVAN]: Yeah, it's kind of related. It's kind of not. Definitely... So have you always been aware of what oil's been used for. Or like, maybe was there a time when you just didn't really know what oil was?

[RON]: No, I think... I mean obviously when I was a little child. Later on I knew what it was for, but it was predominantly for fuel, and gasoline, airplane fuel, car fuel, diesel fuel for trucks and boats and stuff. I wasn't aware of some of the other significant uses of oil at that time. I still don't think I'm aware of any of the other uses of oil.

[EVAN]: Yeah, it's used in a lot of different ways. So what would you say your impression of oil is? Like is it useful? Good, bad...?

[RON]: I think it's good. It helps us as a civilization move forward and generate energy. It was obviously one of the most important discoveries of all time, in my opinion.

[EVAN]: Yeah, for sure. Let me think. Do you have a memory of hearing about energy, like oil or coal, in a bad way? I think you mentioned the coal miners, and that was bad. Have you thought of oil in a bad way at some point, or maybe another source of energy in a bad way? Has that ever happened?

[RON]: No, I think I've explained to you what I recall was a bad way. The way oil was either spilled... Pipelines breaking, and the oil spilled all over the place. I remember seeing some things about... What was that one? The ship that grounded up in Alaska. So all the oil from inside the ship spilled all over the place. And sea animals, major seals and fish, were all dying. Thousands and thousands of em.

[RON]: I think it was called the Valdez, something or other. There was a big, major oil spill in a most pristine area of Alaska. And it was headlines all over the place. It was terrible. *[Referring to the 1989 Exxon Valdez Oil Spill.]*

[EVAN]: Yeah. So when did you hear about that?

[RON]: I would think that was about 30 years ago.

[EVAN]: Yeah.

[RON]: And that was the first major oil spill from a giant tanker. And I think it revolutionized a lot of the things that they did after that. More safeguards, more navigation, things to prevent running into objects that they didn't know were there.

[RON]: I kind of forget, even, what happened on that ship? How it got a hole in it, and the oil leaked. I don't know if they ran into something or what, I can't remember. *[The ship collided with*

an underwater reef. There had been other oil spills of similar volume, but the ecological impact of the Exxon Valdez spill was particularly devastating.]

[EVAN]: Yeah. So would you say, maybe... our treatment of oil and our handling of it is better than it is now- or rather, than it was 30 years ago.

[RON]: Oh, sure. Definitely. Way more safeguards are involved. They're more aware of possible accidents, and about the well, the nature, the wildlife and things like that... I think there were a lot of accidents before, that were never talked about or never hit the public awareness. So, I'm not- You know nowadays, if you hear of any kind of a spill at all, it's headlines all over the place. So I think the awareness has increased a major amount.

[EVAN]: Yeah. So I heard you mention... in the past, the news wasn't on it, or maybe it wasn't in the public awareness. Could you elaborate a little bit more on why you think that, or why it [was] the way that it [was]?

[RON]: Well, I know there was a lot of... I mean, the Valdez was a perfect example. When that accident happened, it was major headlines everywhere for months and months. Something like that had never happened before. It was like almost... it was a major, major catastrophe.

[RON]: I mean, if it did happen before nobody ever knew about it. I mean, look at World War II. There were tons of tons... I mean major oil tankers were sunk all the time, and lay at the bottom of the ocean, and the oil was leaking all over the place. They knew it was going on, but they couldn't do anything about it... It's just huge. There's got to be a thousand sunk oil tankers down the bottom of the ocean somewhere, and some of them are still leaking.

[EVAN]: So when you heard about oil tankers leaking, and in WWII when oil tankers were sunk... Were you worried at all about oil, or how it was treated, when you first heard about [the spills]?

[RON]: Yeah, I was worried. I mean, I knew that the oil was leaking, but there was no way that I was aware of the full consequences, and all the things that could happen. It was much later with the Valdez. They actually showed the wildlife that was soaked with oil, and how they were trying to save them. Clean them up, and all that kind of stuff.

[RON]: And they published statistics for months after, about the number of sea birds and wildlife that were killed because of it. So it was truly a major, major item.

[EVAN]: Yeah, so would you say it's like... Maybe you're more informed about oil now than you were before? How would you say your perception changed?

[RON]: Maybe not informed, but more aware. I think the information is obviously better on all kinds of fronts, you know?

[EVAN]: Yeah, totally. How would you say your opinion of oil has changed, from back then when it first started leaking, to now. Or maybe it's the same.

[RON]: Well, I still think that oil is an important commodity that needs to be regulated. It's safeguarded as best as we can, and it's finite. It's not gonna last forever. Although every once in a while they just find a new oil well, or a new source of oil, the one right in the middle of the United States. Just a little while ago they found a big... I don't know what they call it. Some kind of a big area in the middle of the United States was all full of oil.

[RON]: It's like, *supposedly*, going to make the United States oil-independent of any other nations around the world. But I don't know.

[EVAN]: Yeah, maybe.

[RON]: I mean at some point there's going to be no more oil. I don't know, a thousand years from now, or no.

[EVAN]: Does anything about energy or oil or solar worry you? Like immediately, or maybe like you said, maybe in the future?

[RON]: What was the question?

[EVAN]: Does anything about energy sources like oil or coal or solar worry you. Does it make you worried immediately?

[RON]: Yeah, I'm worried. I'm worried now. I mean, when you see the damage that is caused by oil spills. Or even, for example, just the train... A couple of weeks ago, a train blew up somewhere. It leaked all its contents and oil all over the place. It was just absolutely terrible. Terrifying. *[Referring to the Ohio train derailment on February 3, 2023. It was consistently on national news as of the recording of this interview.]*

[RON]: I mean, I know we're safer than we ever were before. But maybe there's room to grow and become more safe. But it's terrible, it can cause major catastrophes.

[EVAN]: Yeah, for sure. Does oil as an energy source stand out in terms of causing catastrophes? Or do you think... Does any other source of energy stand out, or is it just oil mostly?

[RON]: I think oil and solar are the two sources that I'm aware of, more than any other... So yeah – or you know, I don't know about wind. They keep talking about wind energy. I don't know. Around here they built some... what do they call them? Windmills, which capture energy from the wind. I don't know if that's even working. *[Presumably referring to wind turbines. I refer to them as windmills throughout the interview to avoid correcting him.]*

[RON]: But they build them all over the place and up in the Altamont pass. *[An area in California known for its wind turbines.]* I don't know, they've been there about 20 years. I haven't heard much about what, what good [it is].

[EVAN]: Yeah. Could you elaborate a little more on what you think the 'windmills' are doing?

[RON]: Well, I know what they're doing. They're spinning around and creating energy. But I'm not aware of what percent. Say, for example, there's 1,000 kilograms [sic] of energy. I don't know what percent the winds generate, I don't know if it's a microcosm [sic]. I would suspect that it is. I don't even know if it's worth it. I don't know. It's gotta cost a million dollars to build those giant wind turbines up in the mountains, and I don't know.

[EVAN]: Yeah.

[RON]: It might just be wishful thinking, to build them and see what happens. I don't know.

[EVAN]: Yeah. So I think we mentioned energy sources like 'windmills' being worth it. How would you define an energy source being worth it?

[RON]: Hmm. Well, it's got to be able to... Oh, that's a good question. Obviously, if you're going to spend a million dollars, you gotta generate... probably at least a million dollars of energy from the one windmill.

[RON]: I never even thought of it, but I don't know what the rate of return is on a windmill. I just don't know. I don't know what the rate of return is on a barrel of oil, either. It's probably way more than wind, but I don't know that. *[Estimates for when wind turbines become energy-neutral vary from 0.5-20 years. It is unclear how to define a 'rate of return' for oil, as it is purely consumptive.]*

[EVAN]: Yeah. So would you say that energy sources with more rate of return are better, just overall?

[RON]: Better in history? Better in the past? I'm sure the returns on energy nowadays are higher than they were, because they're more sophisticated. There's more ways to improve the turbines,

and more ways to capture the oil. I don't know about coal; coal might be dead. Probably not. As far as the United States it might be, but around the world it's not. So I don't know.

[EVAN]: Let me think... So let's say I mentioned large oil producers. Who comes to mind when you think of a large oil producer?

[RON]: Chevron, Standard Oil, Shell Oil... Monaco, that's... that's Chevron, I think. I mean it used to be [that] Shannon Oil and Chevron were the big oil companies. They still are... But those are the bigger ones. Well, there's British Petroleum too. That's a giant oil company.

[EVAN]: Yeah. And if you had to, say, pick a couple of words to describe a large oil company like BP or Chevron... How do you think of them, if you had to pick a couple of words to describe them?

[RON]: Very large companies, I think. In a lot of ways, they're inefficient. They haven't really gotten to a point where everything is more... or the proper amount of oil is extracted, without waste and spillage and things like that. So I think... I think they're too profit oriented. Their bottom line is what matters the most. And I think in some ways, I don't know. I just suspect that they cut corners whenever they can, just to make money. And the environment sometimes suffers. That's just my feeling. I don't know if I have any proof about that.

[EVAN]: Yeah, I mean...

[RON]: Some of these giant oil companies, I mean... They're so gigantic, they just have to make a profit for their shareholders. And they're going to cut corners, whatever they can.

[EVAN]: Yeah. Hmm...if you could get large oil companies to make, let's say one change, or make one piece of legislation to regulate them. What would you make?

[RON]: I think you'd have to have more inspections and more... I don't know about the government being involved, but I would like to have some kind of an independent agency be in charge of some of the safety issues in the oil industry.

[EVAN]: Yeah.

[RON]: I don't think they are [self-regulating]. They say they are, but I don't think they are. They're too profit motivated to be able to take all the necessary safety precautions. I think there's still some stuff that doesn't get handled properly. When I say stuff, I mean some things where they cut corners to make more money.

[EVAN]: Is there anything else you think you wanted to mention about the oil companies, or anything that you would change about them? That you think I should know, or you want to mention?

[RON]: I think there has to be some kind of oversight. and I don't know how to do that. I don't think I want the government to be involved in it somehow... but maybe that's the only way to do it. I don't know. There has to be some agency or some... they have to take some responsibility. Yeah, on their own, to make sure that things are as safe as they possibly can be. I don't think they're there yet.

[EVAN]: Mm-hmm. [. . .]

[Conversation veers off-track.]

[EVAN]: In terms of what's happening today, like the energy situation today... Do you think we're going in the right direction, or maybe the wrong direction, or maybe a little of both?

[RON]: I don't think I know exactly what the current policies are. I mean, I think it's too unclear. As to what I mean, they talk about a lot of things like wind energy. I don't know if that's realistic. Or atomic energy. They say that... you know it used to be, "that was the future!". Now, probably not, because of the radiation... the radioactive stuff is so dangerous and so powerful. I'm not sure you want to go there.

[RON]: So I don't know... Even the oil industries have their issues, and the coal industry for sure. I don't know. I don't know what the future is. It's probably some form of nuclear power. But I don't know how to do it. I don't know if there is anybody that could- Once you make a mistake on something like that, it's forever. It's huge. It's really scary.

[EVAN]: Yeah, for sure. So for nuclear, like you said... the radiation is scary. It's dangerous. Could you give an example of that, or why you think that?

[RON]: Well, I saw the results of the atom bomb, and Hiroshima and Nagasaki, with WWII. That wasn't even a powerful atom bomb, it was just a little teeny baby one. Even today, Putin is talking about... in order to make sure he wins the war over in Ukraine. He might, he *might* use nuclear weapons. I can't even imagine him doing that for real. That would be insanity.

[EVAN]: Yeah.

[RON]: Now you're talking about things that would make the atom bomb in WWII look like a firecracker. Yeah, it's just... I think we've created a monster. And we don't know how to handle it. I don't know what the answer is. Your generation is gonna have to figure that out.

[EVAN]: Yeah, definitely.

[RON]: Good luck.

[EVAN]: Good luck, indeed!

[RON]: I wonder if there is some energy source that's out there, that we aren't even aware of at this point in time. There has to be something, I don't know what.

[EVAN]: Yeah, maybe it's just somewhere we haven't looked, right? I don't know... So, are you happy about the current state of energy? Are you worried about the current state of energy? Just like you're okay with it, like you're not okay with it...

[RON]: I don't know if worried is the right word. I just don't know what the future holds. I don't see it. I don't see any path going forward, that changes anything that we're doing now. Like nuclear was at one point supposed to be the future. Now, I doubt it. Oil is finite. Wind isn't. Coal is finite... I know there's gotta be some solution in the next fifty or hundred years about where we're going to get our energy. I don't know where they're coming from.

[EVAN]: And how would you classify what we're doing now? You don't like what we're doing now or it's okay, or...?

[RON]: I don't think we're doing enough. But that's just a gut feeling. I don't know for sure. Is there some agency, or company, or group of people that's investigating future sources of energy? I'd like to know that somebody's thinking about it. I'm just not aware. I don't know.

[RON]: I mean, maybe there's a way to handle nuclear energy, to make it safe. I don't know. It just seems too overwhelming. That is for sure. One mistake, and it's like big trouble.

[EVAN]: Yeah, for sure. Is there any other source of energy that was on your mind, or you think stands out from oil and coal and nuclear? Like anything else that seems different, or more scary, or more interesting?

[RON]: I don't know. I'm not aware of any other source. I just don't know. That's the problem. We don't. We don't know... there's got to be another source out there somewhere, I don't know where it is. It's out in the universe somewhere. I don't know where.

[EVAN]: Yeah, it's somewhere. Cool. Is there anything else you think I should know that I haven't asked about, or any important part you want to highlight?

[RON]. No, I just think it's... clearly something we have to worry about. We have to solve the problem. I don't know...I don't know where it's going. Your generation and the generations after you are going to have to figure that out. I don't see anything out there that's rational. Nuclear is not rational, wind is not rational. Oil is finite, so is coal. So I don't know what else there is. I just don't know. It's scary.

[EVAN]: Yeah, it is scary for sure. Yeah, it's totally scary.

[RON]: I know.

[EVAN]: Yeah. How would you define a rational energy source, what is rational? What does the rational energy source look like?

[RON]: Well, it would provide sufficient energy for the world. Most of the world, without doing harm to any humans or any species, or anything on the Earth like the plant life, the water, and all that stuff. Don't know.

[EVAN]: Yes.

[RON]: I don't know. My mind doesn't go there. I can't see what that would be. I mean, we see volcanoes- You know the molten lava comes flowing out of the center of the earth. I don't know if that's just... I guess that's energy, but I don't know if you can capture it in any way. I don't think so.

[EVAN]: Yeah.

[RON]: I don't know if you can somehow capture heat and turn it into energy. I don't know.

[EVAN]: Yeah, I mean it's hard. Yeah, I think that's all of the questions I have. Again, are there any other questions I haven't asked, like maybe you think is relevant to energy, or like a part that I haven't mentioned?

[RON]: No, except for, you know, the big question is what are we gonna do a hundred years from now. I don't know. Don't know for sure. I don't know where we're going.

[EVAN]: Yeah, I don't know, either.

[RON]: That's why you're taking that class, to figure it out.

[EVAN]: Yeah. Cool. Well, yeah, thank you for talking to me. Thanks for doing the interview. It's been super helpful.

[RON]: I'm glad to hear it. [. . .]

[Remainder of conversation is off-topic.]