**PLANET MONEY** 

## The Pigou Club

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SYLVIE DOUGLIS, BYLINE: This is PLANET MONEY from NPR.

SARAH GONZALEZ, HOST:

So there's this club about a tax. I mean, it's sort of a club. It's named after a dead economist named Arthur Cecil Pigou. It's the Pigou Club.

GREG MANKIW: The Pigou Club has never had a meeting.

(LAUGHTER)

GONZALEZ: Aw, OK.

MANKIW: The only thing it's had is it's had some blog posts where I welcome people to the Pigou Club.

GONZALEZ: This is the guy who created the club, Harvard economist Greg Mankiw. And what's really interesting about this club that is not really a club is that it's about a tax that a surprisingly wide array of people think is a good idea.

MANKIW: Economists are famous for disagreeing with one another, but there's certain areas where we do have an agreement, and this is one of them.

GONZALEZ: Greg was an adviser to President George W. Bush. Greg's obviously in the club. He's like the president of the club. Also in the club, Paul Krugman, maybe the most famous liberal economist in America today. Republican Senator Lindsey Graham - club member. Al Gore, Rex Tillerson, former Exxon Mobil CEO and Donald Trump's former secretary of state - in the club.

So do people who are in this Pigou Club of yours - do they all know that they're in this club?

MANKIW: I don't know. Probably not.

GONZALEZ: Oh.

(LAUGHTER)

GONZALEZ: Because I saw, like, Leonardo DiCaprio is in this club.

MANKIW: Well, you know, he - I have actually met him personally, and so he's very much in favor of this as a policy. So, sure, he's a member of the club. He's probably our most prominent member of the club.

GONZALEZ: Bill Gates? Bill Gates is in the club. That's prominent.

MANKIW: Oh, that's pretty good.

GONZALEZ: Yeah.

MANKIW: That's true.

GONZALEZ: OK, here's what this club is really about. It's about a special type of tax called a Pigouvian tax. And today, the type of Pigouvian tax that people talk about the most is a tax on carbon emissions, a carbon tax.

Why don't you call it the Carbon Tax Club?

MANKIW: (Laughter) Well, I think it's always nice to honor our intellectual forebears.

GONZALEZ: OK, most people have never heard of Pigou. Even most people in the Pigou Club have never heard of Pigou.

MANKIW: If you read my textbook, you would know about Pigou because not only do I talk about corrective taxes, there's a picture of Pigou in there. So he's prominently featured, with only a few other economists. Adam Smith is prominently featured - John Maynard Keynes. So to actually get your picture in my textbook, you got to be pretty important. Pigou is one of those.

GONZALEZ: Oh, really (laughter)? OK, good to know.

A hundred years ago, Pigou came up with this big idea for fixing enormous problems. And today, people, whole countries are starting to use it.

(SOUNDBITE OF AARON KELLEY, ET AL.'S "STINKBUG STARDUST AND THE TREMORS THAT WE KNOW OF")

GONZALEZ: Hello, and welcome to PLANET MONEY. I'm Sarah Gonzalez.

JACOB GOLDSTEIN, HOST:

And I'm Jacob Goldstein.

GONZALEZ: Today on the show, Arthur Cecil Pigou.

GOLDSTEIN: Sarah, I have been really interested in Pigou's ideas for a long time, but I never really knew anything about him or where the ideas come from.

GONZALEZ: You're going to know everything there is to know about Pigou.

GOLDSTEIN: Great.

GONZALEZ: Also, there will be graphs...

GOLDSTEIN: Yes.

GONZALEZ: ...And Canadians.

GOLDSTEIN: I'm in.

GONZALEZ: Nahid Aslanbeigui is a Pigou expert, has been studying Pigou since the '80s, wrote a book on Arthur Cecil Pigou.

Are you in the Pigou Club?

NAHID ASLANBEIGUI: I'm not significant enough for Mankiw to ask.

GONZALEZ: Oh, no. You wrote the book on Pigou.

ASLANBEIGUI: Yes. So, Gregory Mankiw, if you're listening, I should be inducted to the Pigou Club.

GONZALEZ: Pigou was born in England in 1877.

GOLDSTEIN: OK, sounds like the beginning of a story.

GONZALEZ: And for 35 years, Pigou was the only professor of economics at Cambridge University. And he started when he was really young - 30. Everyone called him The Prof.

How do you think Pigou would feel about all this attention he's getting these days?

ASLANBEIGUI: (Laughter) I think he would welcome the discussion, but he would not

necessarily welcome being a celebrity.

GONZALEZ: Everything we know about Pigou is kind of patchwork-y because Pigou didn't want us to know about him.

ASLANBEIGUI: I think he thought his life would be subject to a lot of scrutiny after his death, so he destroyed his private correspondence. He was a very private man.

GONZALEZ: And describe what did he look like? What did he dress like?

ASLANBEIGUI: Interesting. He was very handsome.

GONZALEZ: Oh, was he?

ASLANBEIGUI: Very, very handsome. He had wavy hair...

GONZALEZ: Oh.

ASLANBEIGUI: ...Blue eyes, very fit, tall. But he didn't care about clothes very much.

GONZALEZ: Pigou loved the outdoors. He was a serious mountain climber, would show up to fancy economic lunches in his climbing clothes with an ice ax. And all of the...

GOLDSTEIN: That's compelling. That's tough. This is a look of, like, rugged Prof.

GONZALEZ: All these other economists would be like, get it together, Pigou. But Pigou cared about the world, and he cared about people. He cared about people living in poverty, kids working in factories, maternity leave. He wanted mothers to get maternity leave a hundred years ago.

ASLANBEIGUI: Yes.

GONZALEZ: How progressive of Pigou.

ASLANBEIGUI: Yes, he was a progressive, like a lot of the late Victorians.

GONZALEZ: So Pigou loved the outdoors. And he was living near London at this time, the early 1900s, when air pollution had become a huge problem.

GOLDSTEIN: They're burning coal, right? And it's like - you see those old pictures where it's, like, dark in the middle of the day. It's, like, worse pollution than you can imagine now.

GONZALEZ: Yeah. And the smog was called, at the time, London fog. Some people called it pea soup.

ASLANBEIGUI: It looked like pea soup if you make split pea soup with yellow split peas. It was thick. It covered everything. It was an oily substance that covered furniture, enter your rooms. You would breathe it. It killed people. It killed animals.

GONZALEZ: And Pigou thought about this not just as an outdoorsman but as an economist. As an economist, he also saw the cost of London fog. He thought it would increase health care costs. It would affect vegetation, livestock. It would wreck your furniture. Everyone would have to buy new furniture. Everyone had to wash their clothes more often. Those are all costs. And the people burning the coal weren't going to be paying for this; innocent bystanders would.

GOLDSTEIN: This is a problem economists have since come to call a negative externality, right? Negative because it's bad. It's negative. And external because it is some innocent third party being affected.

GONZALEZ: It's not the company burning the coal to make the product, and it's not the person buying the product. It's just all the random people who have to breathe the polluted air.

GOLDSTEIN: All the people who are external to the buying and selling of the product. And Pigou was the person who gave us this whole framework for thinking about negative externalities.

GONZALEZ: And to be clear, Pigou didn't, like, discover that sometimes private companies do things that hurt society. But what Pigou did was come up with a solution to the problem. And he laid out this solution in this key graph in a book he published called "Wealth And Welfare."

GOLDSTEIN: And then, like, once that came out, everybody was like, great. Pigou, thanks. We got it.

GONZALEZ: Yup, instant fame - no. Economists of 1912 - they weren't quite ready for Pigou's graph.

ASLANBEIGUI: Well, they were baffled by it. Some people criticized it. And in the future editions of his book, I think he eliminated that graph. He didn't use it anymore.

GONZALEZ: He took it out.

ASLANBEIGUI: He took it out because there were complaints.

GONZALEZ: What were they complaining about?

ASLANBEIGUI: It was too complicated. His vocabulary - you have to really work through it very hard to understand what he's saying.

GONZALEZ: Like anyone who writes anything in the early 1900s.

ASLANBEIGUI: Some are worse than others.

GONZALEZ: OK.

ASLANBEIGUI: I think his text is worse.

GONZALEZ: Oh, oh, OK.

ASLANBEIGUI: Yes.

GONZALEZ: Interesting.

ASLANBEIGUI: Yes.

GONZALEZ: OK. So here, Jacob, is his terrible, not-easy-to-understand graph.

GOLDSTEIN: OK. Apart from this condition, ON may be either greater or less than OM, according to the relations that subsist between the curves where ON is - blah, blah, blah. And then there is a graph that is just brutal, just totally unintelligible.

GONZALEZ: Yeah. And Nahid was basically like, you will never understand this graph.

GOLDSTEIN: OK, fair enough. I'll give up now.

GONZALEZ: Move on. Don't even try.

GOLDSTEIN: OK.

GONZALEZ: So luckily for us, later on, economists simplified Pigou's famous graph, so here is the more-easy-to-understand Pigou graph.

GOLDSTEIN: I'm waving my hands. OK, we're doing graphs on the radio. Yes, it's hard, but we're PLANET MONEY. We're going to do it.

GONZALEZ: OK, so there's an x-axis and a y-axis.

GOLDSTEIN: Yeah, the classic econ graph. Vertical axis is price. The horizontal axis is quantity. OK, so far so good. There's these two lines going up and to the right - basic, you know, positive slope lines on the graph. And one of them says PMC.

GONZALEZ: Which is private marginal cost.

GOLDSTEIN: OK, so private marginal cost. This is, like, the classic idea of cost, right? Like, let's go back to the Pigou London fog, early 1900s world. Sarah, say you have a factory in London. You are burning coal to make your products - whatever you're making.

GONZALEZ: Socks. I'm making socks.

GOLDSTEIN: OK. So this line, the private marginal cost line, is the cost for you to make socks in your coal-burning, polluting factory.

GONZALEZ: That's the private marginal cost.

GOLDSTEIN: OK. And then this other line says SMC.

GONZALEZ: SMC - that's the social marginal cost, and that would be the cost on society for me to make my socks.

GOLDSTEIN: So that one is not only the cost to you of - whatever - the wool and the labor and the machines, but also the cost of all of the pollution that your factory is emitting.

GONZALEZ: Exactly. That's the cost of everyone who gets sick from my pollution and everyone who has to wash their clothes and buy new furniture. That's the social cost. And in this graph, the social cost, the cost on society, is higher than the private cost.

GOLDSTEIN: So another way to say this then is when there is a negative externality right? - when you're running your polluting factory to make your socks, the price you're selling those socks at is too low - right? - because if I'm buying your product, I'm paying just the private cost for those socks. But the real cost, when you take into account externalities, should be higher. The socks that you're selling should be more expensive to take into account the cost of the pollution to society.

ASLANBEIGUI: That's his famous graph.

GONZALEZ: And what this graph said, for the first time to the whole entire world, was that you had to put a price on these problems or they would never be solved.

ASLANBEIGUI: You could calculate that cost and force the guilty parties to pay for it.

GONZALEZ: Like, figure out how much London fog is costing people, and then force the companies burning the coal, creating the London fog to pay for it, not the innocent bystander. That's what makes it a Pigouvian tax.

There are plenty of other taxes on things that seem bad, like cigarettes and alcohol, but those taxes are meant to prevent you, the drinker or smoker, from drinking or smoking too much. It's not intended to do anything for innocent bystanders. If you want to put a Pigouvian-style tax on alcohol, a government would have to say, OK, what problems does alcohol cause third parties? Crime - when people drink more, they're more likely to commit crimes.

Would a government have to say, OK, how much is crime costing us as a result of alcohol?

ASLANBEIGUI: Yes.

GONZALEZ: So how do you know how much crime has been caused by alcohol?

ASLANBEIGUI: Well, that's the million-dollar question, isn't it?

GONZALEZ: It's really hard to measure how much crime brought on by alcohol specifically is costing taxpayers or how much smokers who get lung cancer and don't have health insurance costs taxpayers or how much pollution costs society.

(SOUNDBITE OF ALESSANDRO RIZZO AND ELLIOT GREENWAY IRELAND SONG, "SIZZLE CHEST")

GONZALEZ: After the break, we find a real Pigouvian tax out in the wild. A whole country has put a price on pollution.

(SOUNDBITE OF ALESSANDRO RIZZO AND ELLIOT GREENWAY IRELAND SONG, "SIZZLE CHEST")

GONZALEZ: Twenty bucks.

GOLDSTEIN: Canadian.

(SOUNDBITE OF ALESSANDRO RIZZO AND ELLIOT GREENWAY IRELAND SONG, "SIZZLE CHEST")

GOLDSTEIN: So here's the story of a real Pigou tax that is a big deal in the world right now. It starts in 2016, when Justin Trudeau, the prime minister of Canada, announced that his country was about to have a carbon tax.

(SOUNDBITE OF ARCHIVED RECORDING)

PRIME MINISTER JUSTIN TRUDEAU: It will no longer be free to pollute anywhere in Canada.

GONZALEZ: Trudeau says Canada's carbon tax is going to kick in on January 1, 2019 - \$20 per ton of carbon.

GOLDSTEIN: That seems like not that much.

GONZALEZ: Not...

GOLDSTEIN: I don't know, but it doesn't sound like - a ton of carbon sounds like a lot, and \$20 sounds like not that much.

GONZALEZ: Seems like a pretty good deal. But every year for the next three years, the price on pollution does go up by \$10.

DAVE SAWYER: So 20, 30, 40, 50 bucks by 2022. And it's CA\$50, eh? That's a joke.

GONZALEZ: This is Dave Sawyer. He's an economist with a group called EnviroEconomics. So CA\$50 - that's the most Canadians will pay for pollution, so US\$38. There's no commitment to increase the price after that.

GOLDSTEIN: And there is, of course, this question of how did they come up with that particular price?

GONZALEZ: How did they know, like, what is the right price to price pollution at?

SAWYER: Yeah. So it's - we're into political decision-making and what they think the electorate can bear.

GOLDSTEIN: What is he actually saying here, Sarah?

GONZALEZ: Yeah, what he's saying is that the price on pollution should actually be higher than \$50.

GOLDSTEIN: Oh, but everybody would be furious if the tax were higher than that.

GONZALEZ: Right.

GOLDSTEIN: OK.

GONZALEZ: The way that this whole thing works is, basically, the main sources of greenhouse gas emissions get taxed, so gasoline, coal, natural gas. And this tax basically increases the cost of everything.

GOLDSTEIN: And how much the price goes up on a given thing depends on how much carbon is emitted to make that thing and get it to you.

GONZALEZ: So, like, a loaf of bread - not a whole lot of carbon.

SAWYER: The embodied energy in your - in a loaf of bread is so small, right? You're talking not even pennies.

GONZALEZ: That's so, like, reassuring to know.

SAWYER: (Laughter).

GONZALEZ: But the things that do use more carbon, like flying or driving, those do get more expensive, so people do them less because people respond to prices.

GOLDSTEIN: Prices.

GONZALEZ: So these prices cause people to pollute a little less. Like, maybe you take the bus one day instead of driving. Maybe when the time comes to buy a new car, you buy a fuel-efficient car.

GOLDSTEIN: This is why economists and people who sort of believe in markets and prices like Pigouvian taxes, like the carbon tax, right? Because if the government puts a price on carbon, then the government doesn't have to make all these million other decisions about, you know, whatever - subsidizing solar power, subsidizing nuclear power or requiring everybody to put better insulation in their house - because the market does it, right? It gives people the incentive to make those choices to pollute less.

GONZALEZ: So this is why economists like carbon taxes. But to, like, regular people, it's a tax.

GOLDSTEIN: And people do not like taxes.

GONZALEZ: No. And last year, when Canada's carbon tax was about to kick in, Justin Trudeau was getting a ton of heat for it. So he had this idea - something to make the pollution tax go down a little easier.

SAWYER: So the federal - this federal government, the Trudeau government, came along and said, you know what? We're going to give all the money back. We're giving it all back to Canadians.

GONZALEZ: All the money we're going to collect from you, the Trudeau government said, we're going to give it all back to you. And, in fact, some of you - most of you - are going to get more money back than you spent.

GOLDSTEIN: Free money.

GONZALEZ: Free money.

GOLDSTEIN: It's not a carbon tax; it's free money.

SAWYER: Basically, they're countering the it's just another tax argument and government's going to grow. And they're like, no, government's not going to grow. We're going to give it back.

GONZALEZ: Everyone's expecting physical checks.

GOLDSTEIN: Give me my sweet carbon money.

SAWYER: Yeah. So, I mean, if you want the biggest bang for the buck, you send everybody a check, in terms of political bang, right? There's nothing like a good check in your hand. So the government wanted to do that initially.

GONZALEZ: But there was this problem. Trudeau's election was right around the corner. And if you're going to issue pollution refund checks to people, you're going to want to do it right before the election.

GOLDSTEIN: You better get it before the election. And to be clear, the opposition party running against Trudeau's party - they're running against the carbon tax, right?

GONZALEZ: They're saying, if we get elected, we are going to eliminate the carbon tax on Day 1.

GOLDSTEIN: High stakes.

GONZALEZ: And here's the thing. Issuing checks to every single person would take a ton of time - too much time. So instead, he puts a check box on everyone's income taxes and says, if you want your pollution refund, Canadians, check this box on this line.

SAWYER: Yup, give me my rebate back. I think I had to look up the line. It's really boring. It's line 449.

GONZALEZ: Yeah. Checking a box is so much lamer than getting a check.

SAWYER: It is.

GONZALEZ: When Canadians check this box, they did see their balance on their income tax start to drop.

GOLDSTEIN: Like, if you're doing it, like, online and there's a little running tally, like, you check the box, and you see your tally go down.

SAWYER: That's exactly how it was. I did it this year. I was like, oh, yeah, that's nice. There it is.

GONZALEZ: Yeah. Oh, interesting. OK, well, that's a little more satisfying.

SAWYER: Yeah.

GOLDSTEIN: How much did he get back?

GONZALEZ: Two hundred and thirty-one dollars.

GOLDSTEIN: OK, hundreds of dollars.

GONZALEZ: Canadian, but we still like hundreds. And on average, Canadians expected to pay between \$200 and \$400 for all of their pollution for the whole year.

GOLDSTEIN: And just to be clear, in three years when the price goes up, it'll be like - what? - 500 or a thousand. I mean, that is not nothing.

GONZALEZ: Yeah, it's not nothing. But you have to remember people pay this carbon tax, and then they get this - whatever - carbon tax rebate back. And this is the beauty of Pigouvian taxes - that even though they get a rebate back, it still causes them to change their behavior to pollute less. So they try to use less gas because it's expensive.

GOLDSTEIN: And to be clear, there are a few provinces that have their own carbon

taxes. But for the most part, for this federal tax, the way Canada does it is they take all of the pollution tax that everybody pays. They put it into a big pot. And then they divide that pot evenly among everybody. So everybody gets the same amount back whether they polluted a lot or a little.

GONZALEZ: And Dave actually found that 8 out of 10 households in Canada that are part of this federal carbon tax got more money back than they spent. And that's because wealthier people pollute more. They fly more. They have big homes, which they heat. And they have bigger cars and buy more things. And so they are putting more carbon money into that big pot of carbon taxes that everyone shares.

GOLDSTEIN: And then when they divide it up, the poorer families who have paid less into that pot because they consume less get more than they put in.

SAWYER: So lots of people were better off.

GONZALEZ: Yes, they kind of get paid for the pollution that wealthier families create. The real problem that carbon taxes have is, like, a terrible name - carbon tax. No one knows what a carbon tax is or what a Pigouvian tax is. And the name suggests that it's this, like, regular, old tax, not some special, fancy tax that gives you all your money back.

GOLDSTEIN: I feel like if you want a carbon tax, you want to capture this idea that, like, you are getting paid for this. You know, that's the genius of the Trudeau move. What if you just call it, like, the annual rebate? And then if somebody tries to kill it, you can be like, they want to take your annual federal rebate away.

GONZALEZ: I think pollution has to be in it.

GOLDSTEIN: Why?

GONZALEZ: So that you feel like you are being rewarded for polluting less, which is what it is.

GOLDSTEIN: Or what if it's, like, the clean rebate?

GONZALEZ: Yes.

GOLDSTEIN: I would just go rebate - just the money. Just get people to want the money.

GONZALEZ: OK, all right.

## (SOUNDBITE OF AARON KELLEY, ET AL.'S "DON'T LOOK DOWN")

GONZALEZ: One more thing. Remember when Nahid Aslanbeigui said that she wasn't a member of the Pigou Club? I asked Greg Mankiw about that.

MANKIW: I will welcome her into the Pigou Club without a doubt. We have a very open-door policy. If you have - if you embrace a Pigouvian tax, you're a member of the Pigou Club.

## (SOUNDBITE OF AARON KELLEY, ET AL.'S "DON'T LOOK DOWN")

GOLDSTEIN: Today's show was produced in a heroic effort by Darian Woods. Alex Goldmark is our supervising producer. And Bryant Urstadt edits the show.

GONZALEZ: By the way, Nahid's co-author on her book on Pigou is Guy Oakes.

GOLDSTEIN: You can email us at planetmoney@npr.org, or find us on Twitter or Instagram - @planetmoney. I'm Jacob Goldstein.

GONZALEZ: I'm Sarah Gonzalez. This is NPR. Thanks for listening.

## (SOUNDBITE OF AARON KELLEY, ET AL.'S "DON'T LOOK DOWN")

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