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THE PODCAST READER

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THE PODCAST READER

Welcome to The Podcast Reader, a new publication for the intellectually curious and those open to new ideas, featuring selected transcripts of the world's best longform podcasts. From the overwhelming volume of podcast content, we've chosen the highlights for you.

Longform podcasts are an important new media, but the excellent content they create is underappreciated. It's easy to be distracted when listening to them. Interesting details can be missed, especially when episodes are long, and if you're finding part of a conversation uninteresting, there are no practical ways to 'skim' the material. Our printed podcast transcripts make it easier to focus on key points and follow complex ideas.

We are grateful to the podcast channels that have agreed to join us for issue one – The Jolly Swagman with Joe Walker, Conversations with Tyler Cowen, and Econtalk with Russ Roberts. Each are leaders and exemplars of this revival of an ancient art: the art of the interview. We thank them for producing this extraordinary content, and for recognising that this material deserves a new and broader platform. *The Podcast Reader* has been created to support their important work.

In this issue, we present two Joe Walker interviews with important American thinkers: Arlie Hochschild on her immersion in the culture and beliefs of the Deep South, and Nobel Prize-winning physicist Frank Wilczek on his work and current areas of focus. Meanwhile, Tyler Cowen discusses language, literature and culture with Margaret Atwood, and stagnation, innovation and what not to name your company with Peter Thiel. Finally, we bring you a discussion between Russ Roberts and Christopher Hitchens on the importance of George Orwell and his work.

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Illustrations by: Matt Ling (page 6), Cronulla Folk (pages 22 & 52), Vaughan Mossop (page 34) Melissa Grisancich (page 64). Additional editorial illustrations by Vaughan Mossop.

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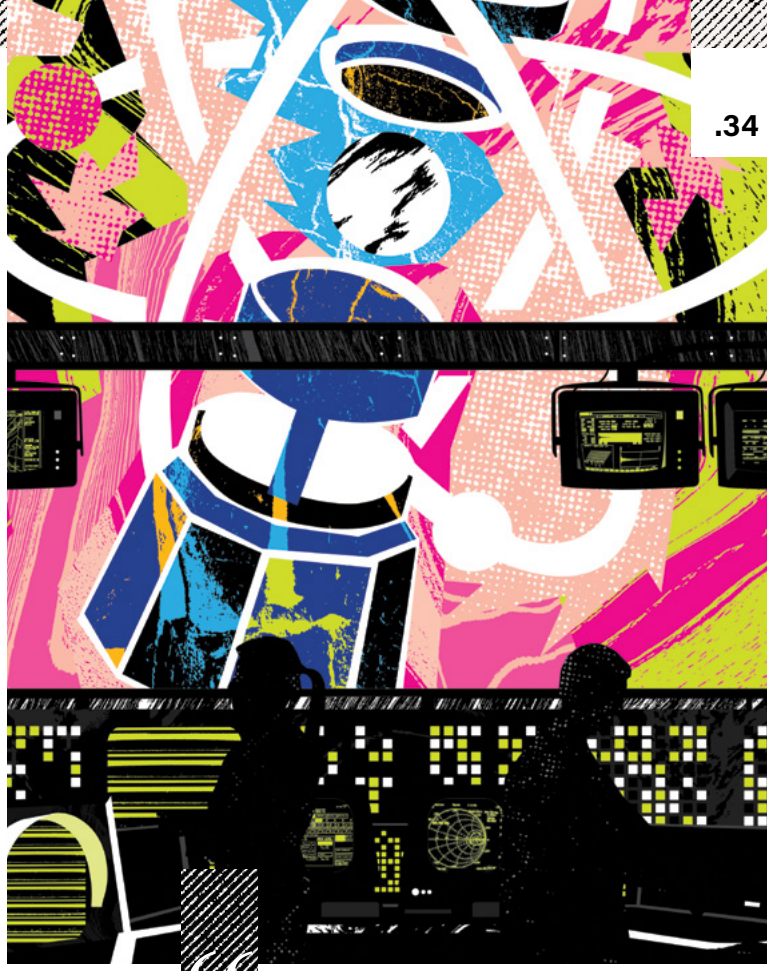

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But what [Orwell] illustrates, by his commitment to language as the partner of truth, is that 'views' do not really count; that it matters not what you think, but how you think."

CHRISTOPHER HITCHENS

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THE PODCAST READER

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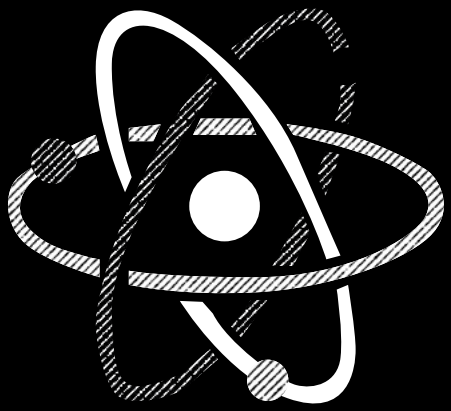

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FRANK WILCZEK PAGE 34

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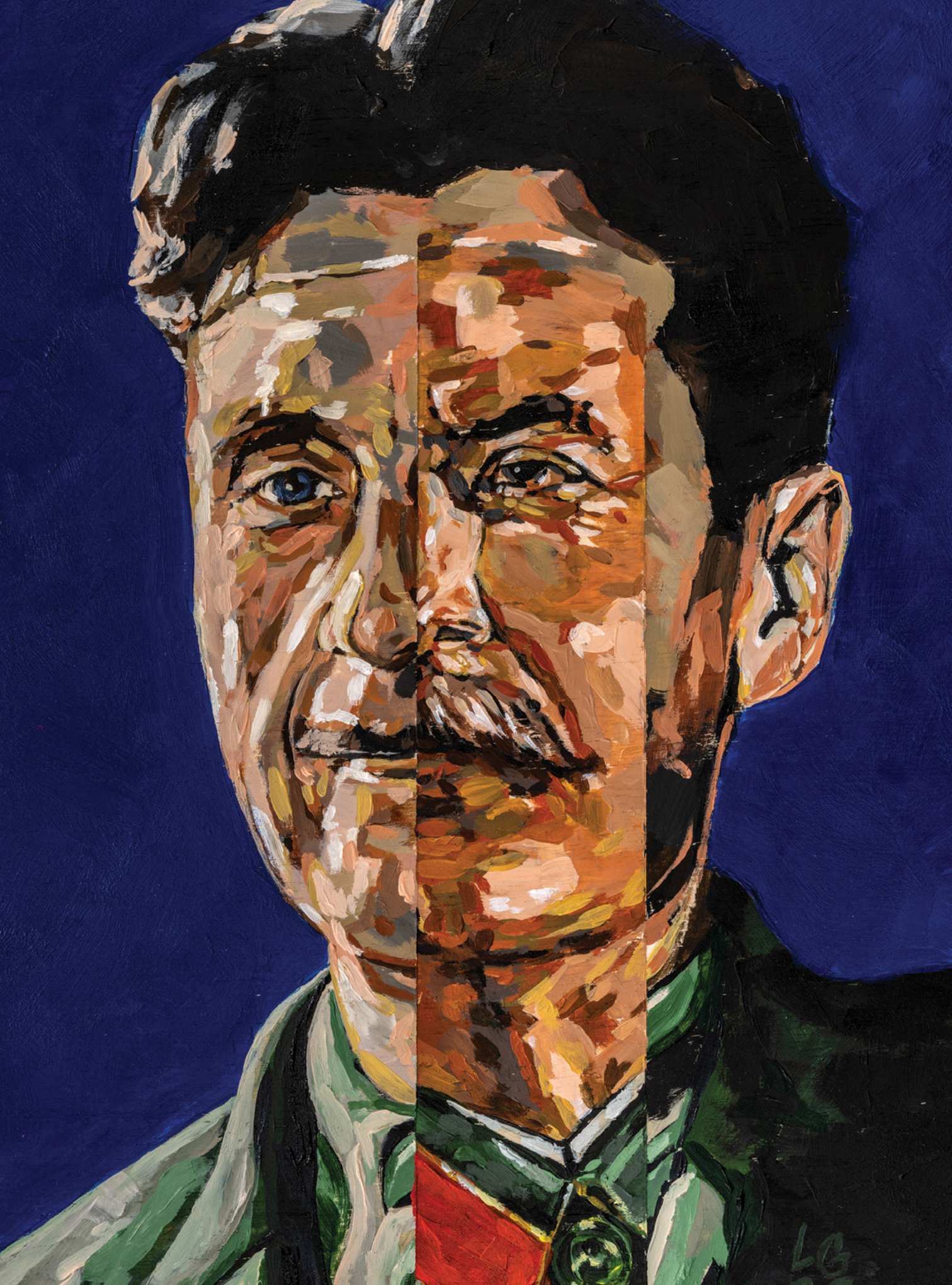


THE REAL POWER OF ORWELL

A PROPHECY FOR THE TWENTY-FIRST CENTURY

CHRISTOPHER HITCHENS
ON
ECONTALK (2009)

Interview by Russ Roberts

Russ Roberts: Today is 7th August, 2009, and my guest is Christopher Hitchens. He's the author of many books, essays and articles, including the book, *Why Orwell Matters*, which is our topic for today. Welcome to EconTalk.
Christopher Hitchens: Nice of you to have me.
RR: You start by saying that Orwell was right about the three big issues of the twentieth century: imperialism, fascism and Stalinism. Give us the flavour of what he was right about.
CH: Well, to tell you in that order, which is the order in which they occur, and also I think probably the necessary order, Orwell's first rebellion against power – illegitimate power, as he thought of it – was against the assumption that the world would be ruled indefinitely by white Europeans, and that Indians, Africans, Chinese and Latin Americans, people like that, would just have to lump it. He saw, with great prescience, that that wasn't going to last very much longer anyway, whether it was justifiable or not.

He'd also, as a colonial policeman in Burma, which was then part of the British Empire in Asia, seen the ugly side of it, and I think had guessed at the dirty secret that underlay it: the 'master-slave' relationship, as Nietzsche calls it, and the unpleasant sexual side of that, which is available to you if you read his novel, *Burmese Days*. I'll phrase it as crisply as I can. The most–
RR: It's a family show, so...
CH: Of course, and with due regard to the values of that, the best way of putting it would be that the most qualified and educated Burmese man would never be allowed as a member of the English club in town, hard as he might try. But the least educated Burmese woman would be admitted to the British colonial officers' mansion, by the backdoor, as a mistress. In fact, Flory, the policeman in Orwell's novel, *Burmese Days*, as it turns out actually bought his woman as a concubine from her family, so she is, in effect, something like a comfort woman or a slave.

No one knows why Orwell came back on leave and resigned his commission in that police force, but I believe I do know the reason. I think he thought if he went on doing it, he would become a sadist and a racist, and he'd already become a bit of both. And it's a great help, if you're going to be an antifascist, which he later becomes, to have some insight into the horrible psychodramatic nature of fascism. The sexual warp that is part of it, the thrill of domination. And not just the thrill of domination, but the thrill of being dominated.

This is eternally present in all of Orwell's writing, and gives him an insight that many others don't possess. He understands immediately there's something utterly wicked and pornographic about fascism. It has to be resisted; it's a life and death question. He hardly even writes anything against it, it's so obvious to him it has to be opposed. He goes off to fight, and early, in Spain, and therefore you can cross off the second of the two things you mentioned. He's a prescient opponent of fascism.

RR: I want you to give a little background of his Spanish involvement, for listeners who may not be aware of the Spanish Civil War.

CH: Indeed. In Spain, in 1936, the Spanish people elected a government that was, broadly speaking, as we call it, republican. It was hostile to the traditional ancient Spanish Castilian monarchy, critical of the power of the church and the undue economic influence of the church. Generally secular left-leaning. A great threat to traditional Spain, which replied in the form of a military coup, organised from its African colonies by General Franco to put down Catalonian and Basque nationalism, which were also part of the republican court. And to restore the Catholic, Christian, centralised, Madrid-based unity of Spain on a traditional monarchist and feudal basis, and wasn't ashamed in this enterprise to ask for the military help of Hitler and Mussolini, which was what made it an international cause.

So, of those who had decided that Hitler and Mussolini had already gone far enough, many were brave enough to take themselves physically to Spain to fight in the armies of the republic as volunteers. Orwell was one of those.

Now, I hope I've succeeded in explaining some of the transition between Orwell's anti-imperialism, anti-colonialism, anti-racism, and antifascism and anti-Nazism. But here's where he becomes an immortal figure instead of just a distinguished one. Within the Spanish Civil War, there was another civil war within the left, because as a counterweight to the support of Franco by Hitler and Mussolini, the Spanish republic turned for arms, for money and for diplomatic support to Stalin's Russia, which was believed by many people at the time, many of the working class, and many of the intellectual classes too, to be a new utopia, to have solved the problems of racism and colonialism, imperialism, capitalism and fascism.

Who needs to ask any more questions? We already have a heaven on earth; it's on the other side of the Ural Mountains. Far away, but ruled by a beneficent, godlike person out of whose bottom the sun shines daily, Joseph Stalin. Joseph Vissarionovich Jughashvili, the greatest Georgian of his generation. In discovering that this was a huge lie, and that those who believed it were capable of anything, was Orwell's third-greatest achievement. And he did it while he was accused of something that must've wounded him very much: of undermining the antifascist front by telling the truth.

Put yourself in that position: what am I supposed to do? If I tell the truth, I'm going to be accused of undermining the left in its hour of need in Spain. I'm going to tell the truth anyway. I'm going to say what is obvious to me. Communism is a fraud, at best. And a monstrous tyranny, more probably. And I've seen it in action, I know what it's like. And not all your listeners will know who Czesław Miłosz was, but some of them will.

RR: I don't.

CH: Well, he's dead now. He died at the age of about 98. He was the greatest Polish intellectual of the twentieth century, seconded only by Leszek Kołakowski. And he wrote a famous book called *The Captive Mind*, which was a big bestseller in the United States in the 1950s, when he, Miłosz, left Poland, having been a communist. He left the Polish government and moved to the US.

RR: That's the poet?

CH: He's a poet. A very famous poet and essayist.

RR: Yeah, got the Nobel Prize.

CH: In *The Captive Mind*, he says that when he got hold of a pirate edition of *Nineteen Eighty-Four*, which was being passed around inside the Communist Party in Poland in secret, read by the cognoscenti, they were all absolutely amazed. How does this guy understand so well how the system works? When they found out who the author was, and that it was an Englishman who had never been to the Soviet Union, who had never been to a communist country, they thought that's not possible. He can't have got it so right without having lived under it. There's something wrong here.

When you think that Miłosz is passing around

a secret book within the inner party, and that *Nineteen Eighty-Four* is about the passing around of a secret book within the inner party, and it's in 1951 that he writes this and about 1950 that the book comes out … I think it's probably one of the greatest compliments ever paid by one author to another. Orwell never lives to see Miłosz publish this. But, in fact, in Catalonia, in Barcelona, Orwell had lived under a briefly communist regime, before most people had in Europe. He'd seen what the Communist Party was like and how it behaved when it was in the saddle, when it thought it was on the winning side, and he'd known what it was to live under a terror, and to have people disappear without explanation, and to have censorship and fear.

If only for a brief time, it was a lesson for life. For the rest of his life, which was to consist of another decade or a bit, he devoted himself to combating the prevalent illusion among intellectuals, which was that communism was the future and, if you like, that that would be a radiant and a nice future. He said it's neither – it's horrible and it will fail. And thus, the closing years of his life – which were spent desperately ill fighting tuberculosis – see the publishing of a lot of very important anti-communist essays and two great classic novels: *Animal Farm* and, as he's dying, *Nineteen Eighty-Four*.

So that's number three, and number three is a synthesis of the previous two. In other words, I think in his 46 years, you can think of his life as being all of a piece, in that he was able to diagnose, analyse and fictionalise, and critically oppose, all the forms of illegitimate power of man over man that the twentieth century was able to furnish us.

RR: And trumpeted a warning that we still listen to and still hear. It's really rather an incredible thing, how well-read people still read his books, they still talk about his ideas. Those are the things he opposed. Tell us what he was pro? He was anti-imperialist, anti-fascist, anti-Stalinist. What did he embrace?

Just to set it up, we're going to talk a little about whether he was a man of the left or the right. It's not so easy to talk about what he was pro, given what he was opposed to. It doesn't naturally follow sometimes.

CH: He was a natural egalitarian. He didn't have much use for any form of privilege. He was rather an austere person. One can picture him as a solider, actually probably a junior officer in, say, Oliver Cromwell's army, as a bit of a puritan. Strict, but not humourless. Very suspicious of anything overtly ornate or decorative, such as monarchy or the flummery of religion, which he always despised. Very fond of the English people. There's a lot of talk about how he was quintessentially English, though, in fact, the first book he ever wrote was a critique, written in French, of British oppression of Burma, British economic exploitation of Burma. *How Britain Under Develops Burma*, it was called. He spoke perfect French.

His most English-centred novel is called *Coming Up For Air*. It's about a nostalgia for the English countryside in the Thames Valley. It was actually written in Morocco. He fought in Spain, was wounded, very nearly killed. Shot in the throat. He was a policeman in Burma. He spoke several Burmese regional languages and also Hindi. So, he was extremely untypical as an Englishman, but he liked the – here's the word one can't avoid in discussing him – the 'decency' of the English people. He thought that they were humane, that they were friendly, that they had an innate sense of fairness and generosity. He thought that, in fact, they were so nice you could even make socialists of them, because an English socialism would have to be free of the deformities that I secretly suspect he thought were largely imported by continental types who didn't have our advantages. I'm afraid I think that that is true of him.

RR: But he was a socialist?

CH: He was a socialist to the end of his life, and the only party he ever joined was a group called the Independent Labour Party, a left splinter from the old Labour Party, that was associated with the writing and the resistance to Stalin of Leon Trotsky. That's why, when he went to Spain instead of joining, as most of the volunteers for the republic did, the International Brigade, which was run as a front organisation – though not everyone knew it, an AstroTurf organisation instead of a grassroots one – by the Communist Party. He ended up in a smaller, more left, more radical group called the Partido Obrero de Unificación Marxista, POUM, the Workers' Party of Marxist Unification, which was not exactly a Trotskyist group, but was identified with the left opposition to Stalin. And if he hadn't, by that odd coincidence, drifted into

that group, he might not have been able to tell the truth as he saw it, and as we now know it to have been true, about what the communists were doing in Spain in those days. And not just in Spain.

The midnight of the century, as people used to refer to it, was the time of the Hitler-Stalin pact, or the rehearsal for it, when the two great totalitarian empires of Europe suddenly decide they have – what is obvious to everyone, or should've been – more in common with each other than with democracy, and made a formal military pact. The worst moment of all.

RR: Then when it was broken, of course, Stalin just couldn't believe it. It's one of the stranger moments in history, that when Hitler invades Russia, the Soviet Union, I'm told that Stalin refused to believe the accounts.

CH: That's true, absolutely true. Trotsky predicted it. He saw that after Neville Chamberlain had produced the sellout at Munich, where, as Trotsky put it, the British conservatives would sell democracy everywhere in Europe if it would give them 10 more years' domination of India (which was what Hitler was offering them), Hitler's exchange proposal was, 'Leave Europe to me, I won't attack you or your empire. We'll do our own carve up.' Trotsky says, 'Now Mr Chamberlain has done that, the next move is obvious. Mr Hitler will now make a pact with Mr Stalin.' That's his logical next move; he's been freed to do it.

And he just happened to add – because Trotsky had this wonderful power of prescience – 'And by the way, when this pact breaks down, it won't be Stalin who breaks it.' Weird. I mean, someone could've got 90 per cent of that right. To get it 110 per cent right is quite good.

RR: Yeah, that's incredible. I want to talk about the Spanish Civil War for a minute, because for that generation, it was the transcendent international event. It's almost unimaginable to us today that intellectual elites volunteered to go fight and risk their lives. When we think of all the causes that the intellectual elites have followed since then, most of them don't involve personal risk. They involve standing back from the fray and cherry-picking points and making easy pat remarks. It's hard to imagine that the great writers of today would go … I mean, the only thing I can think of that's even vaguely analogous would be the football player who volunteered to go to Iraq at the beginning of the Iraq War.

CH: Mr Tillman. There was a man called Ben Tillman. I don't know what game he played. He was a famous sportsman…

RR: He was a football player.

CH: He was killed in Afghanistan. Unfortunately, by our side.

RR: And he was a successful athlete. But the idea that…

CH: No, no. I mean, you're picking the wrong analogy. The analogy is with the support of many European intellectuals and poets for the Greek War of Independence, the Greek revolution against the Ottoman Empire in the 1820s, where the most famous figure of course is George Noel Gordon, better known as Lord Byron, who died at Missolonghi, not in battle but of disease. But died having tried to help raise a contingent to fight for the freedom of Greece.

RR: But that was then, right?

CH: Yes, but that is what gives birth to the idea of the Romantic movement, which is a huge influence throughout the next century.

In Spain, by the way, it is true that a number of writers and intellectuals and poets in England, very famously W.H. Auden, Stephen Spender, at least visited Spain, if they didn't fight there. John Cornford, a great poet and contemporary of theirs, was killed there, as a member of the Communist Party. Innumerable other less renowned writers were associated with it. But the ranks of the international brigade were largely made of Jewish garment workers from the east end of London, Welsh coal miners, Scottish coal miners and engineers from the Midlands.

Here's what I think is the crucial thing. The labour movement of Germany, the most important labour movement in history, the most successful, the best organised, the most democratic, go under to Hitler without a shot being fired. We'd seen the same happen in Austria in 1934. One after another of the great achievements of European socialism, the European labour movement, just fall to fascism, and decided: not in Spain. In Spain we're going to draw the line. The working class is going to fight back now.

RR: Interesting.

CH: Yeah. 'They shall not pass', was the slogan.

> ... he was extremely untypical as an Englishman, but he liked the – here's the word one can't avoid in discussing him – the 'decency' of the English people. He thought that they were humane, that they were friendly, that they had an innate sense of fairness and generosity.

This time, there will be a fight. They did prevent the fascists from taking Madrid at the Battle of Jarama. It's still a song and story and legend that not all compromises with, and subversion of the cause by, Stalinism can take away. The international brigades for a while barred the road to fascism with their bodies in Spain. No one who's read the story properly can be unaffected by it emotionally or fail to think of it as being, as Bernard Knox, the great classicist, who went to fight there said, '... a personal as well as a political tragedy that they lost.'

For Orwell to take on these people, people of this prestige at the time – literary prestige, political prestige, moral prestige, class prestige if you want, all of this – and say, 'Yes, you're quite right. We have to bar the road to fascism, but you're quite wrong in saying that you have to do it as a communist,' that's to become the loneliest person in the world.

RR: Yeah, it's a little subtle for most people.

CH: It's to risk complete ... not just isolation, but the worst kinds of calumny and slander, which are indeed going to fall on him. He's going to be accused of every kind of treason and treachery and lying. When he wrote his book, *Nineteen Eighty-Four*, first, about the loneliness of Winston Smith, the person who thinks he may be the only person left in the world who's seen through Big Brother, its working title was *The Last Man in Europe*. When he handed it into Martin Secker of Secker & Warburg, that's what it was called. Martin Secker was the first person in Europe to read it, and said, 'I think we need another title,' and I think he was right, by the way.

RR: But that's the way Orwell thought of himself, to some extent.

CH: Yes – without becoming a monomaniac, or an egomaniac I mean to say, without becoming too solipsistic about himself, he remained always a fairly modest person. But he could've fallen victim to the temptation to think he was the lone prophet crying in the wilderness–

RR: Jeremiah.

CH: ... with no one listening, yes.

RR: Is it your phrase, 'the power of facing'?

CH: No, it's his. I wanted to call my book *The Power of Facing*.

RR: Explain the phrase.

CH: Orwell said ... I think it's in his essay, *Why I Write*. He said from a fairly young age he always

knew what he wanted to do, which was to be an independent writer. And he said he knew he had, for this task, already the following two bits of equipment: a certain literary ability, and a power of facing unpleasant facts. It's an oddly constructed phrase. One might say the ability to face, or the awareness of, or the unwillingness to duck unpleasant … It's just 'a power of facing.'

RR: It's a beautiful one.

CH: It's very good. And his willingness to see facts that were not conducive to peace of mind, or a docile party line attitude, or an ability to go along to get along. He would always know how the facts are stubborn things, as John Adams put it. By the way, I'd like you to ask me a question about John Adams in a moment.

RR: All right. I was going to ask something about Thomas Jefferson.

CH: Well, it's the same. Not to allow myself too long a throat-clearing here, but having said I hope convincingly that on the three critical points on the twentieth century he was right, I should say the one critical aspect of the century I think he got wrong, or didn't get right, was the rise to prominence of America, the United States of America, and the American idea. Orwell had reservations about America that were partly cultural. He had the slight English snobbery about American mass culture, though he admired aspects of it. He liked Mark Twain, for example, very much, and he didn't like American films. He didn't like American comic books; he thought they were a bad influence on English youth.

He also saw that though the British Empire was bad, the taking over of its colonies by America might not be that wonderful either. He was in touch with some good people in the US around the Partisan Review group – men like Dwight McDonald and Philip Rahv. He wrote a letter from London for them. They tried to encourage him to come to America, partly to have his TB cured, which would've been good, and he wanted to make a trip down the Mississippi. But he died before he could make it. I wish we had had Orwell on the Mississippi.

But most of what he writes about America is either rather slight or rather condescending. He didn't have enough of a historic sense of its rise and importance. But here's something I think I'm the only person to have noticed. In *Nineteen Eighty-Four*, what is the opening sentence of the novel? I'm only asking rhetorically. The opening sentence is, 'It was a bright cold day in April, and all the clocks were striking 13.' That's how the novel opens …. you suddenly know you're in another world.

When I wrote my book, I didn't know that John Adams had said, when he was trying to get the Declaration of Independence organised, 'We have to make 13 clocks all strike at the same time. It won't work unless all 13 colonies join.' I hadn't known that. But I had noticed, and it is in my book, that in the dictionary of Newspeak (that's the end of *Nineteen Eighty-Four*, where he describes the new language of totalitarianism, the attempt to organise a dictionary that makes certain thoughts unthinkable, certain concepts unavailable to the human mind, by jargonised, propagandistic language), he gives an example of a sentence that couldn't be rendered in Newspeak, and it's this: 'We hold these truths to be self-evident…' The Jeffersonian preamble could not be rendered into Newspeak.

Now, it would be wonderful if I could show that he knew that the first sentence is also an echo of John Adams because the Jeffersonian is almost the bookend at the end, because the Newspeak dictionary is an appendix to the book. But I think he had studied and appreciated the American Revolution. I know he was an admirer of Thomas Paine, as all English pamphleteers and radicals were. So, one of the many senses of the unfinished that one has with Orwell – so awful that he drowns in his own exploded lungs, of a poverty disease, like a Dickensian death, totally avoidable, at the age of 46, at the height of his powers – is that we'll never get to hear how fruitful a proper engagement between him and America might have become.

RR: Talk about Orwell's view of language, which you also mention and talk about quite a bit in the book. What was his contribution? Why does Orwell still matter when we think about language?

CH: Well, Orwell thought that a lot of the work of illegitimate power is done for it by slave volunteers who, all they need to do is to use what the French call *le langue de bois*, the wooden tongue: the tongue that has removed all meaning from language. In other words, that you would describe, say, the forced confiscation and dispossession of agriculture workers as

collectivisation. Half the job is done. If the government get it called that, they're halfway there. Euphemism is the thing that he was best at noticing. A euphemism, I would define, as the finding of a nice word for a nasty thing. There are so many. I suppose the most famous one now – so famous that no one ever uses it – would be 'collateral damage' for 'civilian casualties'. No one would be able to say that with a straight face anymore.

Even to use the word 'purge', which we now think of as a hateful word, we didn't at the time. Purge as a cleansing – for the mass murder, by show trial and disappearance and secret execution, of your political opponents. Appeasement, remember, at the time, was the word that Tories themselves used. Appeasement means the peaceful composition of differences. It's an agreeable word. It's a euphemism.

The word 'collaboration' now doesn't ever have quite the same ring as it once did. So that's the revenge of history on euphemisms. If I was to describe you as ethically challenged, you would know that there was a deadly sting to that, because it was once a term that was used to soften the description of something disagreeable, such as disability or crippledom, to give it its right term. So, Orwell was dead set against all that, and he gave tremendous examples in his criticism, his essayistic literary criticism, of the way in which propaganda imports itself into the language, and put people on their guard against it. I think he taught not just his own generation but succeeding ones the importance of that. It's impossible to overestimate it.

RR: So many of his fictional euphemisms became the real thing. We think of Big Brother as a frightening phrase. It obviously was meant to be a term of familial warmth and affection.

CH: Absolutely.

RR: But we now know it, because of Orwell, to be synonymous with evil and oppression. It's a little strange that people use his name as an adjective to mean the misuse of language. If something is Orwellian, it means it's a euphemism.

CH: Yes, it's like people say Kafkaesque of something that Kafka would've hated.

RR: It's true.

CH: This is pardonable, I think. I mean, one can't probably avoid it. But if you describe a person as an Orwellian, you pay them a compliment. If you describe a situation as Orwellian, you're describing something that's very dark. Here's where the uses of pessimism may come in – possibly so dark as to be without a dawn. I think it may have been Lionel Trilling, but at any rate it was one of his contemporaries, who said of *Nineteen Eighty-Four* that the power of it was to completely foreclose any hope by the end. There's nothing Winston Smith can possibly do. He's been totally broken. Not just broken, he's been recruited. He loves Big Brother. The last man in Europe, the last dissident has been tamed.

Isaac Deutscher, who I otherwise admire, made this case. He said this is a situation that encourages people to despair. It teaches people that there's nothing you can do. It's reactionary, in that sense. Others, I think, are a bit more alive to it.

RR: It's a cheap shot.

CH: Well, I think Deutscher meant it genuinely. Others a little more alive to what Orwell was trying to do said, 'No, because if you can imagine it being that bad, you can, in fact, imagine not overcoming it, but preventing it.'

RR: Yeah. It was a klaxon.

CH: Don't think yourself into Winston Smith's situation. Think of what you can do to stop yourself from collaborating and becoming someone in that situation. And in that respect, we can say that the book is genuinely historic because of the impact that it had in the enslaved countries of the Soviet sphere, among not just intellectuals, but people who later became leaders of independent trade unions and so forth.

RR: And how do we know that?

CH: I've met people in Czechoslovakia, as it then was, the Czech and Slovak lands, in Poland, in East Germany, who were enormously affected by reading *Animal Farm* and/or *Nineteen Eighty-Four* in various samizdat editions. Orwell was very insistent that he would allow these books to be translated and distributed, originally, in Ukrainian. In fact, the only intro he wrote to *Nineteen Eighty-Four* was for a pirate Ukrainian edition, produced by a group of rank and file Ukrainian socialists who had been prisoners of war, who were in a displaced persons camp in 1945. He said, 'You can have the book, you can have the copyright, here's

my introduction, here's why the book is not anti-socialist but it's anti-Stalin, here's why it's on the side of freedom. It's not Cold War propaganda. It doesn't come from a supporter of British imperialism.' Important in itself, by the way. Well, this example was followed by pirate editions in every known language, and I'm willing to bet you that something will happen in my lifetime and yours ... *Nineteen Eighty-Four* is not yet available in Chinese, or not in mainland China. But it will be. I predict there will be an edition of it.

RR: No doubt.

CH: And *Animal Farm* has been produced as a musical in Beijing. I'd love to see. I have not attended a performance. It is not yet available, except that any Chinese person would know how to get hold of some version of it on the internet. And there will be a North Korean version.

No one has ever been able to go to North Korea, as I have myself, without surveying the most perfected, hideous totalitarianism that may ever have been attempted, without immediately having recourse to a quotation from *Nineteen Eighty-Four*. It's impossible to see it or even think about it without thinking about Orwell. This is an achievement of quite a high order. It means that the relevance of the book will go on, and possibly become even more acute.

And I'll add one more thing, which is that *Animal Farm* is banned by the Ministry of Education in almost every Islamic country. In some cases, because of its mention of pigs, but not all mentions of pigs are forbidden by Islam. Pigs can be understood ... after all, pigs are not represented exactly in a heroic light in *Animal Farm*. No, it's very clear, and it was made very clear indeed by the prohibition of it in Iran that it is banned as a satire upon absolutism. It's banned in the same way as the Shah of Iran didn't like having public performances of *Macbeth*. So again, it has, in these attacks upon itself ... it earns the compliments that are only accrued by great literature.

RR: You've mentioned in passing something you talk about at length in the book, which is the left's reaction to Orwell, and I think the way you put it is, it's a little strange that an anti-imperialist, deep defender of the working class, and a strong egalitarian, should be almost

... if you offered him a car, say, he wouldn't have particularly known what to do with it. If you had said, you could have a house twice as big as the one you live in, he'd say, 'Well, actually, the one I live in is all I want.' It may be nice to be immune from certain temptations."

caricatured when talked about by the left. So, talk about why that is. You've mentioned it in passing already, but talk about it in more detail.
CH: Yes. There's a deadly trap door built into a large floor of the left mentality, if I haven't mixed the metaphor by phrasing it like that. And it's this: that it's quite right to value solidarity, it's quite right to value fraternity, and all of these things that keep the movement together in hard times. But what this can undervalue, or even treat with suspicion, is the person who thinks for himself or herself, who can be suspected of being a traitor, a blackleg, someone who lets down the front of solidarity and fraternity that's necessary in war.
RR: Or worse, gives comfort to the other side.
CH: In fact, the vulgar phrase for this, which isn't a leftist phrase, actually – it's one that any public school or regimental or team spirit conservative would recognise too – you don't give aid and comfort to the enemy. You don't spread alarm and despondency among your own side. It's a tribal feeling rather than a leftist one. But it's peculiar to the left in that it can be like being a strike-breaker, or someone who is a traitor.
RR: Scab, by the way, is not a euphemism.
CH: Well no, scab is by no means, nor in a way is blackleg or scab herder or any of the other equivalent terms. This has another element that's, I would say, a leftist one in its way, which is ... a form of levelling rather than a form of egalitarianism, that says people who do such things do so for the lowest motive. That once you've found the lowest motive for someone breaking ranks, you've probably found the correct one. In my own lifetime, I met Claud Cockburn, who was a very, very important journalist on the left in the 1930s and, subsequently, until his death in the early 1980s. He was considered a very admirable man despite his long, long membership of the Communist Party.

And he was, indeed, a very brave and very humorous and very original writer. But he believed that Orwell and those like him in Spain who had criticised the popular front and the Soviet role in it, were consciously doing the work of Hitler.
RR: Consciously?
CH: Consciously, yes.
RR: That's the key part. So, an anti-communist is pro-fascist, by definition?
CH: Well by a certain metric, that must be so. And that's what the *Daily Worker* said, and they spread all kinds of other communist-inspired slanders against Orwell, all of them having the effect of attacking his motives, his character. And made a very spirited and quite successful attempt to make sure that his work from Spain did not see print. It didn't get printed in the *New Statesman*, which had a very strong fellow travelling wing at the time. It was the leading left cultural magazine in Britain. I used to work for it myself. In the 1930s, you could say it had the combined effect in Britain and the English-speaking world of *The New Republic* and *The Nation* combined. They were strong enough to make sure that he never got published there, the place it would've been most important to publish him. The Left Book Club didn't publish him. *Homage to Catalonia* didn't get published in that quarter, though it could have done. The book, in fact, is hardly read by anyone until after the Second World War.

And *Animal Farm* had a very, very hard time indeed getting a publisher, because of the efforts of someone we now know to have been a KGB agent in the British Ministry of Information, a man named Peter Smollett, alias SMOLKA, who tirelessly worked to put around the idea, among wartime publishers, that Orwell, in criticising the great Soviet ally, was undermining the war effort against Hitler. A line which also seems to persuade TS Elliot, although he was a friend of Orwell's and had been invited by Orwell to appear on his BBC show, to decline to publish *Animal Farm* on the grounds that it was anti-Soviet. So Orwell is in the position of being accused of selling himself out to the other side, in order to get sales and publicity, and is then denied these things by the same people.
RR: He got the last laugh, but he wasn't alive to really hear much of it or enjoy much of it.
CH: Actually, he gave away to, as I told you, Ukrainian, Polish and Serb anti-communists – usually socialists, social democratic groups – the right to publish for free, if it would help the cause. Eventually he would've made some money out of *Nineteen Eighty-Four*, but wouldn't make the changes to *Animal Farm* that were required by the Book of the Month Club in America and the *Reader's Digest* for their nomination, so signed away vast numbers

of royalties because he wouldn't amend the book to make it anti-communist in the way that they thought it ought to be.

RR: Good choice. With an eye towards history, not towards the quality of his dinner and his flat.

CH: It's a strange thing. He doesn't really seem to have cared. I mean, if you offered him a car, say, he wouldn't have particularly known what to do with it. If you had said, you could have a house twice as big as the one you live in, he'd say, 'Well, actually, the one I live in is all I want.' It may be nice to be immune from certain temptations.

RR: Yeah. I was intrigued to see in the book that Orwell had reviewed *The Road to Serfdom*. What was his view of Hayek and Hayek's worries about totalitarianism?

CH: The role played by Friedrich August von Hayek in British politics in 1944, '45 is a forgotten episode now, but at the time it was of huge importance. Winston Churchill made a speech in the 1945 election, having vanquished the Nazi empire or helped to do so, having led the British people through very hard times, saying that the plan of the Labour Party to institute national healthcare and other comparable socialising reforms might be all very well in its way, but would in practice require – and he said this advisedly, and I would say ill-advisedly – a Gestapo of bureaucracy to implement. That you couldn't have national healthcare without black-uniformed, jack-booted enforcers.

Well, the British working class was actually in no mood to be talked to in that tone of voice by then. It had been through the slump after the First World War where it lost the flower of its young men in the trenches on the western front, for not very much gain. Through the general strike, through the collapse of the gold standard. All of these things, by the way, are identified very much with Winston Churchill. Through the long conservative collapse in front of fascism. Through a bloody awful war. What housing they had had been bombarded. A lot of them hadn't even been allowed to join the armed forces, they were so ill. There were so many people with deficiency diseases, things like rickets, bad teeth, poor eyesight. I mean, third-world health conditions. They were pretty determined to vote that the end of the war would bring the end of this sort of regime of neglect, and then to be told that they were voting for the Gestapo was just a little much.

RR: It didn't sell so well.

CH: Churchill's rhetoric wasn't always as golden as some people think. Anyway, it is said, perhaps unjustly, that that speech was suggested to Churchill by Hayek himself. I have some reason to doubt it, but it certainly was influenced by what Hayek had written in *The Road to Serfdom*. And Hayek did have a position as some kind of consultant at that point, to the Conservative central office, to the research department of the Tory party. So, he got blamed for what became known as the 'Gestapo speech', and there's no doubt in my mind the Gestapo speech helped Churchill to lose that election, though I'm pretty certain the Tories under any leadership would've lost that one for historical reasons.

At any rate, at around that time, David Astra at the *Observer* has the clever idea of asking Orwell to review *The Road to Serfdom*. By the way, it's the difference a good editor can make, to think 'there's this book by this relatively unknown Austrian, I wonder who'd make a good reviewer for it', and to think of Orwell. Because it leaps off the page when you see it in the *Collected Orwell*. Orwell on Hayek. Who thought of asking him to do that?

It's a short piece. It shows that he's clearly read and understood the book, and he begins by saying, 'This is the wrong book at the wrong time. The working class has been through fascism, war, slump, mass unemployment. It much prefers the risks that are run by state intervention to the risks that are posed by a continuation of laissez-faire, or capitalism, as they used to know it. And they've made up their minds to this.' However, he then adds, almost as an afterthought, 'It would be stupid to ignore the point that Professor Von Hayek is making, which is that if a certain share of the national income and the gross domestic product passes under state control, past a certain point, that will become a tyranny, and the citizen will lose his liberty, and if he loses that he may also lose his welfare.

It's not unlike the Benjamin Franklin admonition: don't trade liberty for security because you may end up with neither. It would be nice to think that was in Orwell's mind too. But anyway, there it is. And this at a time when

Suddenly, at the end of the war, the earth appears to be covered in military superpowers, whose rivalry – this is Orwell's great insight – may conceal a secret sympathy they have with one another, and a common interest in maintaining a balance of terror."

the social democratic, at any rate, consensus among the British intellectuals, including conservative ones, is almost 100 per cent. So, once again, he manages to be the one who is just slightly out of step, just slightly not in tune, who can see beyond the view that welfare state Toryism, or conservative social democracy, is the most one can expect from an economy, of society from now on.

RR: And as someone who would like to see the world move towards a smaller role for government and government spending, it is remarkable how much freedom we have preserved. There are disputes about how free we really are – half-empty, half-full – but it seems to me that the worst fears are not yet realised. And yet government grows bigger every few years in the US, and in Europe it may start to reach a level where people are going to push back a little bit, but it doesn't seem to be obvious.

CH: Harold Laski, an advisor to the Labour Party in that same election, who I think alternated in the chair at the London School of Economics with Hayek (I could be wrong about that) used to say, in response to Hayekian and Churchillian criticism, 'Look, if you can plan for tyranny, if you can plan for state control … perhaps you can plan for freedom as well.' It's not inevitable that planning is only a one-way street. I think a lot of people felt comforted by that, and thought, well, freeing people from fear, the simple terror that if they got sick that would be the end of their lives … it wouldn't just be the end of their lives physically, as healthy people, but they wouldn't have a job or a house either. Everything would go, they couldn't raise their children, they couldn't educate them. Take that away by some government intervention, are you saying people are less free or more? More, come on. This went on working, I think, as did analogous concepts such as the New Deal … and didn't begin to hit diminishing returns until quite late. Churchill's view, therefore, was considered by many people alarmist, and the Conservative Party went out of its way to drop it. Orwell was more worried by state control over things like the media and the war economy.

RR: Rightfully so.

CH: Yeah. When he thought of an over-mighty state, he thought of things like the nuclear state. In fact, one of his very best short essays

is written in, I think, 1946. It's post-Nagasaki, post-Hiroshima. And it's called *You and the Atom Bomb*. He gets a lot of work done in a few hundred words, and he says, 'Of course the immediate fear is that of annihilation and apocalypse, but there's another fear that one might pay attention to, that no one's drawn attention to yet. What if this kind of weaponry makes the state completely invulnerable, so that no guerrilla warfare, no insurrection, no revolution, could ever overthrow it? The state would be armoured behind … [he doesn't say plutonium, but behind a shield that was impenetrable]. It would lead necessarily to a tyranny, which would have the horrible idea of being un-over-throwable.'

RR: Interesting observation.

CH: Yes. But he was certainly aware of the risk of the withering away of the state – of replacing the government of men, with the administration of things. The sight of this had been lost by the struggle to replace predatory and fascistic capitalism and imperialism with social democratic government, where government was considered axiomatically good for that reason. But the idea was that one should always have a weather eye to the over-mighty state. Suddenly, at the end of the war, the earth appears to be covered in military superpowers, whose rivalry – this is Orwell's great insight – may conceal a secret sympathy they have with one another, and a common interest in maintaining a balance of terror. There were moments in the Cold War where one was forced to think that that might be what was going on, that the Cold War had become about itself only, and no larger or nobler subject. It was never quite true, but it was never quite untrue either.

RR: Well, certainly.

CH: There were certainly managers of it, people like Henry Kissinger for example, and possibly Hal Sonnenfeldt, who felt far more sympathy with the managers of crisis in Beijing and in Moscow than they did with troublesome movements in subordinate countries like Czechoslovakia or Vietnam. So Orwell's never completely wrong, and even when he's wrong he's got hold of an insight that needs to be retained.

RR: So he was, in your mind, a leftist, but he was also embraced by the right?

CH: A radical, certainly. Because of his emergence out of a family and a society that he had every reason to distrust. I mean, his father after all had made a living out of selling Indian opium, under British imperial auspices, to China. It's fascinating – there's no mention of any father in any of Orwell's works at all, except very occasional, very distant and always very negative references.

RR: At least he called it Big Brother. Could've been worse.

CH: Then you see, it's Big Brother, whereas obviously the analogy to the totalitarian dictatorship is the unchanging eternal father.

RR: Yeah, but paternalistic–

CH: He's already coped with that in an early essay in which he says that his initial problem with Christianity – I think this is in *Such Were the Joys*, his book about his prep school – was that you had to love a father figure who you also had to fear. An insuperable problem for Christianity, of course, that he saw coming right away. But also, we know that he was fond of this mother. We know that he couldn't bring himself to talk about his father, and that his general attitude to family life was somewhat distraught.

So, because of his hatred for imperialism, for British class snobbery and democracy, for all the so-called vices and so-called virtues he thought were vices of the suburban, small-time aspirant – those who hated the working-class but feared and grovelled to the class immediately above them – he was not going to be able to express his dissent in the conservative form. He had no choice but to move to the left and to the underdogs and the working class. That's why it's interesting that when he sees that Hayek has a critique of illegitimate power, even though it comes from the right-wing, that he's at once able to summarise in a few sentences what that critique is.

RR: And the virtue of it.

CH: And the virtue of it, yes.

RR: Well he strikes all as a truth-teller, which is part of the power of facing, and part of the integrity you talk about in the book.

CH: I forget now who it is he writes about, but I came across it looking for something else the other night. He's writing about someone whose religious opinions he finds ridiculous. Even contemptible. But he says there's something charming about the person, and he says if all Christians were like this guy, the reputation of

religion might not have sunk as low as it has. I'm paraphrasing this poorly, but he was always willing to be fair to an individual even if that person represented a cause or a party that he found objectionable.

RR: We're almost out of time. I want to turn to Christopher Hitchens, who strikes me as a somewhat Orwellian figure, used in a complimentary way. A mix of apparent contradictions, someone who's taken political stands that I'm sure have cost you some calumny. Maybe not up to the level of Orwell's, or maybe, I don't know. But do you see yourself in his footsteps?

CH: No, no. I've had to write very firmly about this, because some people have very kindly said what you just said, and others less kindly have said, 'Aha, Hitchens wants the mantle of Orwell,' and so forth, by which they don't intend the compliment.

RR: It's non-Orwellian in that way. It's a paradox.

CH: And I say for whatever reason, kindness and generosity or its obverse, that anyone might want to say this, it wouldn't be true. I mean, the most conspicuous thing about Orwell is his moral courage. He never had a steady publisher, never had a steady job, he never had a steady income. He was always ill. He was always insecure, and he often had to risk, and did risk, his life. I haven't had to do any of these things. I have a hard time filling the quota of stuff that people want me to write and publish. I've always got something I'm supposed to be doing, for which there's a space already reserved once I've written it. That wasn't always true, I have to say, but my struggle in the garret wasn't a very epic one.

RR: Well, you've lived past 46, so that helps.

CH: And also I would've been dead 14 years ago if I was him, having had the last few years of that life rendered very horrible by poverty and illness and unhappiness. So, I've never had to find out how I would shape up if I was threatened with poverty or imprisonment or death, or obscurity if I carried on the way I was. I've never had to know what that would be like. So, in other words, the comparison is absurd. However, I don't mind saying, and I think it's clear to some people, that ever since I first read him, everything he's had to say has weighed with me. And if that didn't show, I would be

... the visible, palpable relationship within the writing of Orwell between language, truth and logic, between plain, honest speech and transparent political positions, detestation for euphemisms, for falsification. It'll get you a long way."

surprised. He must be the person I most often quote or cite, quite unashamedly, using it, I hope, as much for support as for illumination.

I was thinking this morning of something actually, while I was trying to write my own memoir. The job of the intellectual, the so-called public intellectual as we're now for some reason doomed to call it, is or ought to be to say something along the following lines: it's more complicated than that. You mustn't simplify this, there's more complexity to the subject. That's what an intellectual should be doing to public discourse. But then there are occasions when it seems to me that the reverse is the case, that actually what the really thoughtful person should be saying is, actually, it's simple.

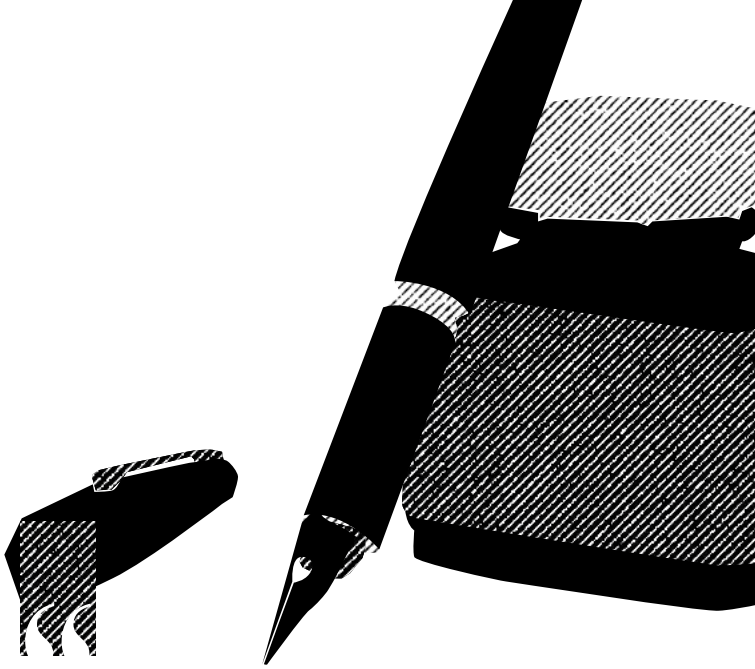
RR: Couldn't agree more.

CH: Do not make complexity here where none is required. I was trying to imagine what Barack Obama would say if he was asked about Salman Rushdie. Would he say, 'Of course I'm for free expression over religious sensibilities every time?' He's never been asked. But in his campaign to remake our relationship with the Muslim world, no one's ever asked him the fatwa question. Could he just give a straight reply, and no dancing around? I bet you he could not.

RR: Tough one.

CH: Whereas the most boring thing I ever said about Salman Rushdie was the only thing I wanted to say, which was you hope to be on his side, there's no other side you can possibly be on. I understand what complexities people want to introduce, but I'm here to repudiate them and say, 'No, no, keep it simple.' Orwell's very good in that way. It's very hard to tell what the truth is, and some people even say that you can't quite do that, that there may not even be such a thing as objective truth. That doesn't mean you shouldn't try for it, but crucially it doesn't mean the following attempted corollary, which is you wouldn't know a lie when you saw one. You may not be able to detect or identify the truth every time, but you sure can identify a lie. And if you refuse yourself the lie, say, 'I just won't tell any, even if it suits me or my cause. I won't do it, I make that simple renunciation,' it's amazing what you'll have to do instead.

This is, some people might say, simplistic. But in that case, then the word simplistic deserves an upgrade. I was just brooding on this this



... it shows what anyone can do, with just a few resources – the ability to write, the power of facing unpleasant facts, the refusal of the lie, and a bit of moral and physical guts ..."

morning and I realised that being even able to think or argue in this way, even if it's not very profound, does have its utility. And I get it at any rate from the visible, palpable relationship within the writing of Orwell between language, truth and logic, between plain, honest speech and transparent political positions, detestation for euphemisms, for falsification. It'll get you a long way.

Lionel Trilling says in his introduction to *Homage to Catalonia*, the first time the book was ever published in the US, long after Orwell was dead, he said that the great thing about Orwell is he's not a hero. He's uncomfortable for that reason, because it shows what anyone can do with just a few resources – the ability to write, the power of facing unpleasant facts, the refusal of the lie, and a bit of moral and physical guts, as we used to say in English schools. Courage. You can peel away all the flummery of fascism, colonialism, Stalinism, religion just like that.

And, of course, people hate this, because they think only a hero can do this, so they're excused. But there are no excuses. You could have done this too. With a bit of effort, a bit more self-criticism, a bit more use of your own faculties, you could have done it too. I make this point in the book, and Richard Posner wrote an excoriating attack on me, which was very clever. 'What do you mean he wasn't a hero? He went to Spain, he took a bullet in the throat. He threw up a job when he had no other job to go to. He fought off illness. He wrote two certainly very great novels, hundreds of very great essays. Are you saying this is an ordinary guy?'

Well, actually I think I can have that both ways. Yes, I think I can say that it shows how the qualities of heroism and virtue are accessible to ordinary people, if they will absolutely keep driving themselves and not excusing themselves or making excuses for others. This is why the qualities that he evinces are going to remain important to us, as long as the English language is used.

Another little thing he got completely right – writing to his friend Mulk Raj Anand, a writer in Bombay who had been working for the BBC Indian Service, and who was attacked in India for writing novels in English, saying 'you're using the conqueror's language, you're using the language of the white man', and was attacked in England for being a 'babu', a sort of wannabe white man who was really a wop in disguise – Orwell said, 'Pay no attention to this. It doesn't matter how you're insulted. You'll get insults from both sides of this. But what's going to happen, and it'll happen quite soon, is there will be a whole department of English literature written by Indians, and great advances in the novel and in fiction in general and criticism will be made. I mean, it'll be like American literature is. It'll be a whole subject in itself.' He must've written that to Anand in the mid-1940s. Now, no literate person can go into a bookstore and not see or not have read or picked up, by now, something by Rohinton Mistry or Salman Rushdie or Hanif Kureishi or Vikram Seth.

RR: Naipaul.

CH: Vidiadhar Naipaul. Well he's from Trinidad, but yes. And Shiva Naipaul, also from Trinidad, but yes of the Indian diaspora. Arundhati Roy – I have huge disagreements with a lot of what she writes, but she writes it very beautifully. Gita Mehta, another great woman Indian writer. And others who I'm sure I haven't even heard of – Indians writing in Uganda, probably in English, or in South Africa. Undoubtedly, there are names I don't know. Very interesting or very clever to have noticed that, on the thing they prided themselves in most, their language, the English could be outbid, outdone by people who they looked down upon. I mean it's really true.

So language, truth, logic, a certain attachment to historical irony, understanding some of the laws of unintended consequences – if you do this, you can go a long way.

RR: My guest today has been Christopher Hitchens. Thanks for being part of EconTalk.

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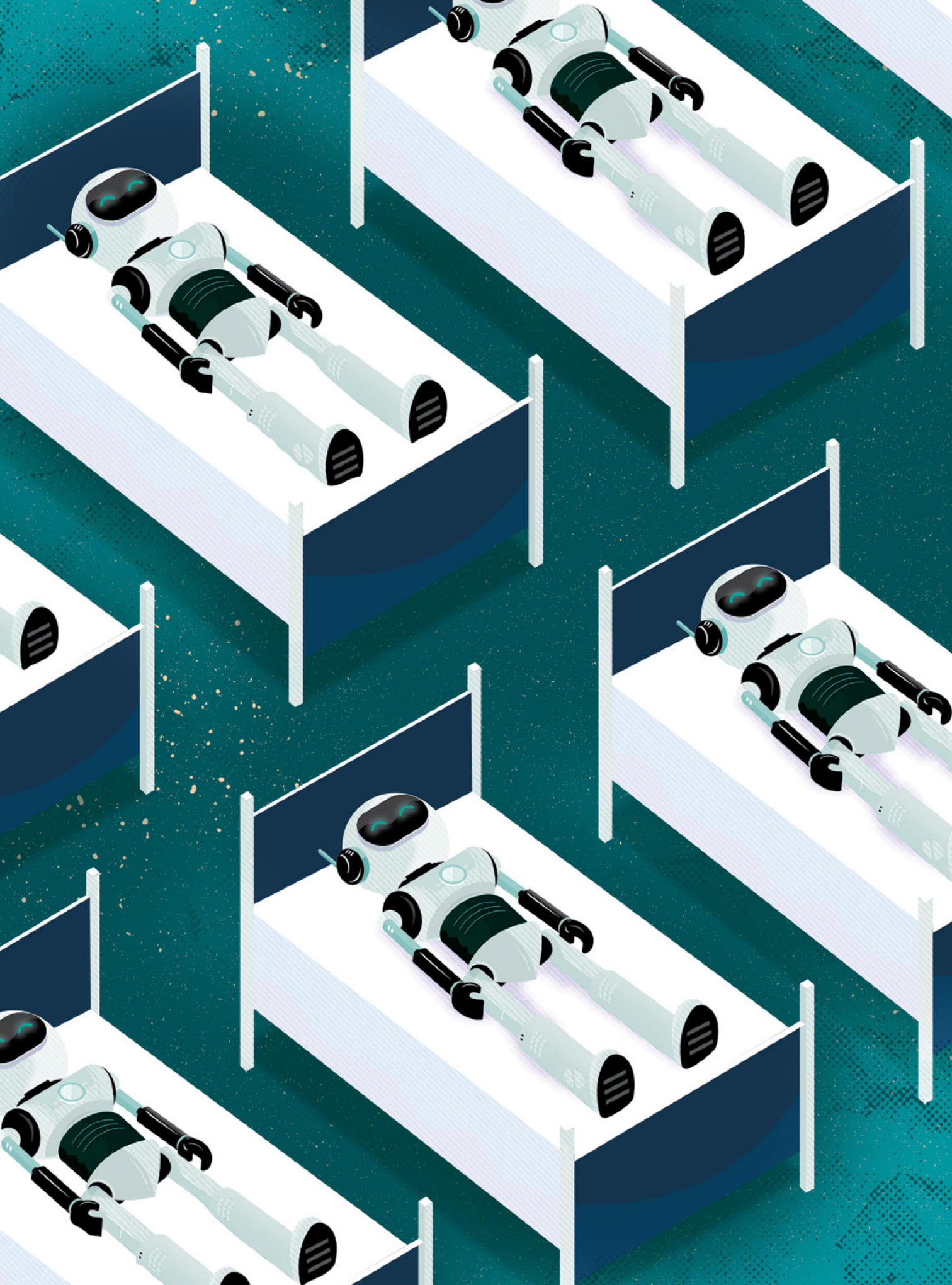

STAGNATION, SUCCESS AND THE PROBLEMS WITH SOCIAL CONVENTION

HELPING PEOPLE START COMPANIES THAT WILL CHANGE THE WORLD

PETER THIEL
ON
CONVERSATIONS WITH TYLER (2015)

Interview by Tyler Cowen

Tyler Cowen: It has been my view for years that Peter Thiel is one of the most important public intellectuals of our time. Throughout the course of history, he will be recognised as such. Peter himself doesn't need an introduction. He has a best-selling book. His role in PayPal, Facebook, Palantir, many other companies, is well known. Peter is a dynamo. There is no one like him. But the purpose today is to focus on Peter's views as a public intellectual.

Let's start with some questions about stagnation. You're well known for arguing, 'they promised us flying cars and all we got is 140 characters'; 'technological progress has slowed down.' How is it you think that we're most likely to get out of the great stagnation, when that happens?

Peter Thiel: I think there are three separate things. There's the question of stagnation. I think we've had a lot of innovation in computers, information technology, the internet, mobile internet – the world of 'bits.' Not so much in the world of atoms: supersonic travel, space travel, new forms of energy, new forms of medicine, new medical devices, etc. It's sort of been this two-track area of innovation.

There are a lot of questions of what has caused it and I think maybe that's a good place to start in terms of what gets you out of it. As a first cut, I would say that we have lived in a world in which bits were unregulated and atoms were regulated.

If you are starting a computer software company, that costs maybe $100,000. To get a new drug through the FDA, maybe in the order of a billion dollars or so. If the FDA were regulating video game technologies, and you had to do a double-blind study to make sure that the video games weren't addictive, damaging to your brain, etc… these things are very overdetermined, it's driven by many different factors. My narrow attempt to get out of it is not necessarily to come to DC and beg the regulators to be more reasonable. It is just to try to find ways for people to succeed at the margins.

Because I think the other thing that has driven stagnation is hysteresis. When you have a history of failure, that becomes discouraging and so failure begets failure. No halfway sane parent would encourage their kids to study nuclear engineering today, whereas there are a lot of people going into software.

The history of success in software is encouraging more people to go into it and drive more innovation. And the history of failure in these other areas has been very discouraging. Where I would start would be, if you have some signal successes in other areas, then that can set a precedent, and you can somehow turn what's been a vicious cycle into a virtuous cycle.

TC: If you have to make a prediction, which breakthrough in particular will get us out of the stagnation? What's your pick?

PT: Probably the most natural ones are all these things that are at the boundary of information technology in atoms and bits.

TC: Artificial intelligence? Biotech?

PT: AI feels slightly overhyped. Biotech, a lot could happen. It feels heavily regulated. But if you've got self-driving cars, that would be a significant innovation that would change a decent amount at the margins. There are some regulatory challenges with it, but it's sort of right at the intersection of the things that could happen.

I think the most natural hope is that information technology starts to broaden out and impact this world of atoms. Then we're going to have this question about whether the technology outpaces the politics, or vice versa.

TC: What number should I keep my eye on? Let's say you're going to take a long nap and I need someone to tell me, 'Tyler, we're out of the great stagnation now.' What's the impersonal indicator that I should look at?

PT: I disagree with the premise of that question. I don't think the future is this fixed thing that just exists. I don't think there's something automatic about the great stagnation ending or not ending. I always believe in human agency and so I think it matters a great deal whether people end it or not.

There was this hyper-optimistic book by Kurzweil, *The Singularity Is Near*; we had all these accelerating charts. I also disagree with that, not just because I'm more pessimistic, but I disagree with the vision of the future where all you have to do is sit back, eat popcorn and watch the movie unfold.

I think the future is open to us to decide what to do with. If you take a nap, if you encourage everybody else to take a nap, then the great stagnation is never going to end.

TC: Is there a chance that, intellectually, we've become so complacent that our worldviews have changed? Some writers have suggested the decline of mainline Protestantism has intellectually changed America forever. The sense of what can be accomplished, our unwillingness to repeat, say, the Manhattan Project, or Apollo. Is it possible we're simply in that forever, and it's a downward spiral, and the longer you're in it the harder it is to get out? It's not really about bits.

PT: It's certainly possible that it's something like that. But I do think that there's certainly, at the margins, always things that we can do.

I am somewhat pessimistic about the possibility of government being a key, a place where the great stagnation gets reversed. There is a sense that a letter from Einstein to the White House would get lost in the mail room today. You could not even do Apollo.

Take something like the SDI program in the 1980s. The debate in the 1980s was, it's a dangerous first-strike weapon versus a great defensive technology. Whereas today, people would say that SDI was just this fictional thing that would have never worked. Again, it's this very odd way that our expectations have been dramatically reduced. But I do think there's a question about where in the private sector can you coordinate things on a big enough scale? Silicon Valley start-ups have been a way to do it, and maybe there's some class of somewhat

larger companies.

My PayPal colleague Elon Musk started both SpaceX and Tesla, which are extremely charismatic businesses involving somewhat larger-scale, complex coordination, getting a lot of different pieces together to work. Not as big as we could do, perhaps, if you had a well-functioning government. But I think that's not realistic.

TC: Given that energy prices are now so low, are you more optimistic about peak oil than you used to be, or do you think that's a temporary blip on the horizon?

PT: I'm surprised by how much they've collapsed. I would say on the oil side they are still higher than they were in 2002, 2003. The jury is still very much out on how well it's going to work. I think the big question is, what's the equilibrium price at which fracking is really going to work? We've had something like $450 billion that has gone into the fracking industry in the last four or five years, and there's a question whether at $50 per barrel of oil you can actually get a positive return on that money. The striking thing, even as of summer 2014, when oil was still at $100-plus a barrel, was even though you had these two boom stories – you had the Silicon Valley IT story, and you had the fracking, mid-US growth story – how much smaller the fortunes were that were being made in the fracking industry. This led me to think that, somehow, it was not as great an innovation as was happening on the IT side. Or more marginal, harder to get it to work. I think if it barely worked at $100, it'll be very interesting to see how it works at $50.

The intellectual question that I ask at the start of my book is, 'Tell me something that's true that very few people agree with you on.' This is a terrific interview question. Even when people can read on the internet that you're going to ask this question of everybody you interview, they still find it really hard to answer. And it's hard to answer not because people don't have any ideas. Everyone has things they believe to be true that other people won't agree with you on. But they're not things you want to say.

TC: Tell me something that's true that everyone agrees with you on?

PT: Well there are lots of things that are true that everyone agrees with me on. For example, even this idea that the university system is somewhat

I am somewhat pessimistic about the possibility of government being a key, a place where the great stagnation gets reversed. There is a sense that a letter from Einstein to the White House would get lost in the mail room today. You could not even do Apollo.

screwed up and broken. This is not even a heterodox or a very controversial idea anymore. There was an article in *TechCrunch* where the writer starts with 'this is going to be super controversial' and then you look through the comments – there were about 350 comments and about 70 per cent in their favour. So, the idea that the education system is badly broken is not controversial. The ideas that are really controversial are the ones I don't even want to tell you. I want to be more careful than that. I gave you these halfway, in-between ideas that are a little bit edgier.

But I will also go a bit out on a limb: I think the monopoly idea, that the goal of every successful business is to have a monopoly, is on the border of what I want to say. But the really good ideas are way more dangerous than that.

TC: Let me give you my opinion on how I've tried to fit different parts of your thoughts together. This doesn't have to be true; it's just my mental model of Peter Thiel. That you're one of a lot of thinkers who takes the idea of original sin – it doesn't have to be a theological commitment – seriously. Tocqueville wrote in the nineteenth century that America eventually would evolve to be a land of complacent people who were going to stop believing in original sin and stick to a kind of conformist mediocrity. So, you have taken this to heart. The world out there is deeply weird. Even though there appears to be free entry into ideas production, because of René Girard-like ideas, for the people who deviate, someone comes down on them pretty hard. There's excess conformity. The original sin in people's motives gets magnified at the social level. There are distortions out there. It's a gnostic theology, and a relatively small number of people who can see through those distortions can be great entrepreneurs, or can tell the truth about politics.

It's all ultimately some kind of bundled, implicitly theological, but not necessarily involving belief in God, but theological perspective about the nature of people. And it ends up spreading to all the different parts of society and that, to me, has been what ties your thoughts together. But that's a hypothesis; let's hear your reaction to that.

PT: I think the way original sin normally works is that it resides in individuals, in one way or another. And so, theologically, I would place it much more in society. I think society is both something that's very real and very powerful, but on the whole, quite problematic. We always run the risk of losing sight of that. I don't know if it's strictly the awareness of it that solves it. Certainly, there probably are some people who are just oblivious to it. In Silicon Valley, I point out that many of the more successful entrepreneurs seem to be suffering from a mild form of Asperger's where it's like they are missing the imitation, socialisation gene.

TC: And that's a plus, right?

PT: It happens to be a plus for innovation and creating great companies. But I think we should turn this around as a critique of our society. We need to ask: what is it about our society where those of us who do not suffer from Asperger's are at some massive disadvantage because we will be talked out of our interesting, original, creative ideas before they are even fully formed? We'll notice that it is a little bit too weird. Maybe I'll just go ahead and open the restaurant that I've been talking about, that everyone else can understand and agree with, or do something extremely safe and conventional, and therefore hypercompetitive, and probably not that great an idea.

I'd say a lot of these people may not understand this larger theory about society; they are somewhat oblivious to it. Now, certainly my own experience was a bit more related to where I grew up in Northern California. It was this hyper-tracked process, where one of my friends wrote in my eighth-grade junior high school yearbook, 'I know you're going to get into Stanford in four years.' Four years later I got into Stanford, then I got into Stanford Law School. You won all the conventionally tracked competitions, you ended up at a big law firm in Manhattan. From the outside, it was a place where everybody wanted to get in. On the inside, it was a place where everybody wanted to get out.

I left after seven months and three days. One of the people down the hall from me said that it was great to see me leave, 'I had no idea it was possible to escape from Alcatraz', they said.

TC: What did you learn there?

PT: I learned that I was incredibly prone to this problem of social convention. The psychological terminology would be that I had a rolling quarter-life crisis in my mid-twenties.

The religious terminology would be that I had a quasi-conversion experience where I realised the value system was deeply corrupt and needed to be questioned. I do think one of the ways of challenging convention, the Asperger's way, is just to be vaguely oblivious to it all, and continue apace. Then I think there is another modality where you just become aware of how conventional our conventions really are, and then that becomes an indirect route of trying to start thinking for yourself.

TC: In your view, perhaps the contemporary world is becoming stranger, or weirder, or more shaped by individuals who are different, precisely because conformity is being piled on other places. So, if the movers and shakers become people who are, in some way, neuro-diverse, then the world will be more surprising in a way? That's what we expect at different margins, at different corners. This will accumulate. It may not ever feel like we're getting out of the great stagnation, but each bit of change we get is a more different change than we would get, say, in 1957, where everything was done by guys with white shirts and starched collars, hoping they would be able to buy a little pocket calculator someday.

PT: I think the innovation that we are getting is driven in strange ways. I worry that the conformity problem is actually more acute than it was in the 1950s or 60s, so that the category of the eccentric scientist, or even the eccentric professor, is a species that is steadily going extinct because there is less space for that in our research universities than there used to be.

I worry that perhaps, if anything, it's a little bit the other way. It's very hard to measure these things, but I think that in politics, the conventional approach is to simply look at pollsters. What are your positions going to be? You just look at the polls, you figure this out, and it works fairly well. At the end of the day, that's probably not how the system really changes. It probably will be changed by some idiosyncratic people who have really strong convictions and are, over time, able to convince more people of them. But whether this means that we have more or less change is hard to evaluate. It always comes from these somewhat nonconventional channels.

TC: Let's say you're trying to select people for your Peter Thiel fellowships, or maybe to work for one of your companies, or to start a new company with. Just you, Peter Thiel, as a judge of talent, what trait do you look for in that person that is being undervalued by others? The rest of the world out there is way too conformist, so there must then be unexploited profit opportunities in finding people. If you're less conformist, which I'm very willing to believe, what is it you look for?

PT: It's very difficult to reduce it to any single traits, because what you're looking for are these almost Zen-like opposites. You want people who are both really stubborn and really open-minded. That's a little bit contradictory. You want people who are idiosyncratic and really different, but then who can work well together in teams. So maybe not 180-degrees opposite, but like 175 degrees.

TC: This is why you like Hegel?

PT: I don't like Hegel that much. I think if you focus too much on one or the other end of it, you would get it completely wrong. I like where you get these combinations of unusual traits, so if you have people with some really interesting, very different ideas, that suggests we're in the idiosyncratic category. Then the important question becomes: would they actually be able to function socially and execute? Then maybe the teamwork question you'd ask would be, what's the prehistory of this company? How did you meet, how long have you been working together, and if there's a long prehistory, that would be good on the other side. I think it's always getting these combinations right.

TC: There's an interview with you when someone asks, 'What's the Straussian reading of your book, *Zero to One*?' You say something like, 'The Straussian reading is don't be an entrepreneur.' Yet at the same time, society has this problem that too many people go down tracks of conservative career choices: if you come out of a top school, you work for a consulting firm, or you go into finance. It's now become a new kind of conservative choice, maybe, to go to Silicon Valley. Given the difficulties of becoming an entrepreneur, and the pull of conformity, what kind of intellectual or ideological reconstruction do we need to get people out of these conservative career choices?

PT: It's hard to say. I think 'entrepreneur' is one of these very odd terms. You'll ask somebody,

'What do you want to be doing in five, ten years?' 'Oh, it's very clear, I want to be an entrepreneur.' It's just this vague, empty term. It's like 'I want to be rich', or 'I want to be famous.' I am actually quite skeptical of that as a term, so yes, I did say the Straussian reading of *Zero to One* was that, perhaps – I had the adverb in – perhaps you should not be an entrepreneur. It was because on one level, the book gives advice about how you would go about building a business, but then on another level, you could also read every single chapter as discouraging people from going into business as well. If you give the core advice that you should start a business that's going to be a monopoly, then that discourages a lot of people who don't have an idea for a monopoly, so maybe they shouldn't be starting businesses. My view is we should be starting more good businesses and fewer bad ones. Not more businesses or start-ups in the abstract. Yes, there is always this psychosocial bubble question. I don't think we're in a tech bubble today, like we were in 1999, 2000. I actually don't think the public is involved in quite the same way, and so I'm not worried about it like I would have been then.

TC: I had someone email me a question; let me read it off and tell us what you think: 'What do you think a well-educated but zero marginal product worker in his mid-thirties should do to remake himself for the next thirty years?'

PT: I'm always super hesitant to answer questions that are so abstract. If there was some general answer to the question, it would almost certainly be wrong.

TC: Correct.

PT: If I give you some general answer, and everybody could follow it, and did, it would be the wrong thing to do. Certainly, there still seems to be a shortage of people in IT. If you're reasonably talented, you can get training in software and coding in a fairly short period of time, and get in an employable job. It's sort of an odd cultural thing in our society where we still think of computer programming as such a geeky, bad career choice for people that even after a decade in which it's worked surprisingly well, there are still far too few people going into it. I think that's a safe, general one. Petroleum engineering, that's the other amazing one that has not yet attracted more people into it, in spite of a decade-long boom.

TC: If you think of the cultural achievement of mankind, or at least the US, or maybe just California, and you asked the question, 'Has that too seen a great stagnation, or is artistic creativity still reaching new and higher peaks?' Just how general and pervasive is this phenomenon of stagnation? If it's intellectual in its roots, you might think that it's applying to everything?

PT: I think it's very hard to measure in a number of these dimensions. I think artistic things, things of a very qualitative nature, are hard to measure. I certainly think Hollywood is producing fewer great movies relative to twenty, thirty, forty years ago. On the other hand, there are a lot of good TV shows.

TC: What's your favourite TV show?

PT: It's all sort of this crazy schlocky stuff like Game of Thrones. I don't watch that much TV, but I think there are a lot of things like this that work. It's hard to measure. I think the technology and science questions are ones that I find very interesting. I think they are somewhat more measurable than a lot of the qualitative social ones. I suspect we're not innovating as much in those dimensions, either, but I think with that one, you'd just end up projecting your own biases onto society.

TC: In the back room, we were talking about Japan, and a recent trip of yours to Japan. Maybe you would like to relay some of what you were saying?

PT: They always want you to say things that are sort of contrarian and surprising, and so they asked me at this discussion I was giving in Japan. And the answer that I came up with, which was both flattering to the audience, but somewhat disturbing from our perspective, was I think we always think of Japan as this hyper-imitative, non-creative culture of extreme conformity. My suggestion is that perhaps at this point, Japan is the least conformist, the least imitative country in the world. There's actually a lot of interesting aesthetic cultural stuff going on. There are still a lot of very successful types of businesses. There's innovation in food production, all sorts of interesting areas. But then it's an indictment of the West, where I think Japan is no longer the Japan of the Meiji Restoration of the 1870s, or the Japan of the cheap plastic imitation toys of the 1950s. It's a country that no longer thinks it can get that much by copying the West.

There's probably still some narrow interest in IT and software. Outside of that, I think they are copying the US and Western Europe less and less. People aren't even learning English that much anymore. They're speaking less English than they were fifteen, twenty years ago. The golf courses are all getting shut down and converted to solar farms; people don't even want to play golf anymore. I think we need to take this as a real critique of our society – that they're finding less that's desirable to imitate in the US or Western Europe.

TC: I'll name a few items, and you tell me if you think they're overrated or underrated. John Maynard Keynes, overrated or underrated?

PT: Still massively overrated, but perhaps not as much as he used to be.

TC: New York City, overrated or underrated?

PT: That's massively overrated.

TC: Why?

PT: We had a twenty-five-year boom in finance, from 1982 to 2007. I think that's slowly abating. It's going to be increasingly regulated, and so if you want a long/short blue state trade, you want to be long California, short New York. The long/short red state trade, by the way, is long Texas, short Virginia. If you ask, what do Virginia and New York have in common, and what do Texas and California have in common? Both Texas and California are very inward-focused places. California, both the Hollywood version and the Silicon Valley version, are very focused in on themselves. Texas is also a very inward-focused place. What Virginia and New York, or let's say DC and New York City, have in common is that they're centres of globalisation. Finance is an industry that's fundamentally leveraged to globalisation, and DC is fundamentally leveraged to international geopolitics.

I would bet on globalisation slowly being in abeyance. I think with the benefit of hindsight, we will realise that 2007 was not just the peak year of the finance boom, but also the peak year of globalisation, like maybe 1913. Happily, it hasn't resulted in a world war, at least not yet, but I think we are in this period where globalisation is steadily pulling back. And so you want to be in places or industries that are levered to things other than globalisation.

TC: I tend to agree with that. As you may know, before 2007, trade was going up at a rate three times higher than world GDP. Post the crisis, trade and world GDP are going up at about the same rate. I think in rate terms, that has peaked. So, you see California and Texas, in a way, as being like Japan. You're long Japan, also, but that's underrated.

PT: I'd be relatively long Japan. I wouldn't be long France, but maybe that's even underrated because it's probably still somewhat anti-globalisation, and the marginal tax rates probably will go down in France at some point. But yes, I'd be long the things that are not as levered to globalisation. I would be skeptical of London, New York City, places like that.

TC: How about China?

PT: China is hard to evaluate on this globalisation metric, because, on some level, the growth story is linked to exports and globalisation. Then at the same time, it has these capital controls and all of these ways that it's somewhat separate. I find it very hard to evaluate. I do think it's interesting that the questions about China are being asked less often in the US today than they were a decade ago. In 2005, it was a very widespread question: in what year will China overtake the US? A decade later, it's reasonable to think that it's a decade closer to when this will happen. It's a much less commonly asked question. At the end of the day I suspect we are underestimating China, but it may be very hard to invest. I've always thought that you could only participate in the Chinese boom if you are a well-connected, card-carrying member of the Chinese Communist Party. I'm not, and so it's not been a place that I've really focused that much.

TC: Think of a place like Brazil. I tend to think of Brazil as fairly inward-looking. If you're on a bus in Brazil, you hear Brazilian music, typically, not American pop music. You think Brazil is underrated, or overrated, economically? Do you agree with my characterisation of it is as relatively inward-looking, and if it's an exception, what would account for that?

PT: It's relatively inward-looking. Actually, one other metric for inward- versus outward-looking is which countries were first taken over by Facebook, how Facebook spread all over the world. It started with the US, then other English-speaking countries. Then it went to all the small European countries where people spoke English: Switzerland, Holland, Scandinavian countries. The ones that were

the hardest to break into were the ones with the very separate language groups. Brazil was much harder than the rest of Latin America. Brazil is a self-contained country where most of the people in the world who speak Portuguese live, and Portugal barely counts. I do think it qualifies on the inward-looking piece. If you look at the history over the last 150 years, I think there have been four points where people were hyper-bullish on Brazil. I'm not going to get them exactly right, but there was one prior to the First World War, there was one in the 1950s, in the 1960s and in the 1970s.

TC: That's right.

PT: There was one, again, in recent years, and they all turned out to be false dawns. They were all linked to Brazil being tied into globalisation. The optimism about Brazil was always from its potential when it becomes linked to globalisation, and then the disappointment happens when it turns out it doesn't work. There was this giant energy company called OGX. The guy who started it was worth $30 billion in 2011. He's now worth -$1 billion. He had a McLaren parked in his living room in the villa, on a pedestal. He had just divorced his wife. He told me, 'I can now park my car wherever I want.'

They had all these offshore oil concessions they'd gotten from the government, in relatively shallow water. It seemed like a fantastic investment. Then, it turned out you could only get Brazilian oil service companies to develop it. There were no Brazilian oil service companies. Maybe the oil didn't exist at all. Maybe the whole thing was a giant fraud. Very hard to tell. These things work when people are bullish about integration, and globalisation, and then the reality sets back in. It could be the case that it's fairly decoupled, and the excess optimism came from people thinking it wasn't.

TC: In the back, we were talking about good and bad names for companies. If you could tell us your view on this, how important is the name of a company? What are a few good names, and why, and what are a few bad names?

PT: A slight aesthetic thing I believe in very strongly is that the names of companies are often very predictive of future failure or success. PayPal was a very friendly name. It was the friend that helps you pay. Napster was a bad name. It was the music sharing site. You nap some music, you nap a kid. That sounds

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like a bad thing to be doing. It's no wonder the government then comes in and shuts the company down within a few years. You want to be very careful how you name companies. In the sharing economy context, I like Airbnb way more than Uber. Airbnb sounds like this very innocent, virtual bed and breakfast. It's a light, nonthreatening company. Uber sounds like a bad name from Germany in the 1930s. What are you exactly above? Maybe the law? This is probably something that, again, from a government regulatory perspective, Airbnb is a vastly better name than Uber. On the social networking side, I would say that I actually think Facebook was a very good name. MySpace was a more problematic name.

TC: How about United States? Overrated or underrated? And consider the name.

PT: It's hard for us to have good intuitions about this, because we are so used to it and so embedded in the history. Certainly, this is all atavistic and way too old-fashioned, but I'd be sympathetic to the nineteenth-century spelling, where the U was lowercase.

TC: In chess. First move. E4 or D4. Which is better?

PT: It's probably the case that D4 is marginally better at this point, because it looks like there are certain defenses to E4 that are very hard to break, like the Berlin defense. But I still always play E4. It's what I've gotten used to.

TC: Because it's the attacking move?

PT: It's the attacking move, and if you're short of world champion level, I always enjoy increasing the risk and volatility in the game.

TC: You were born in Germany. You are fluent in German. That's part of your background. How do you think that's influenced your worldview, what I would call your implicit theology, how the different pieces of Peter Thiel's ideas fit together? What's the role there, and do you still sometimes dream in German?

PT: We spoke German at home. We moved to the US when I was one year old, and we spoke German at home for the first twelve years. My parents didn't have a TV. We got a TV set at age twelve, and then the English language overtook everything. It's hard to generalise. California and Germany are extremely opposite kinds of places. I think of California as both very optimistic and somewhat desperate. You have 20,000 people a year move to Los Angeles to become movie stars, and maybe twenty of them make it.

TC: It's like Beach Boys music. Sounds optimistic on the surface but it's deeply sad and melancholy.

PT: It may be something like that. I think of Germany as always incredibly pessimistic, but very comfortable. It is this very big contrast. I'm not sure pessimism is generally that helpful an attitude to have, but the German pessimism is probably a helpful corrective, in the midst of the hyper-optimism that permeates Silicon Valley.

If you are a mildly pessimistic person, you might do well in a place where people are insanely optimistic. If you are a mildly optimistic person, you would do well in a place where people are insanely pessimistic, like, say, Germany.

TC: So maybe you are this mix of German pessimism and California optimism. Just like you said for Peter Thiel fellowships, you look for people who embody these Zen-like contradictions. Maybe that's one of yours: that the extreme pessimism has to do with the weirdness of the world, and the difficulty of breaking through the conformity, but at some level, you think it can be done, and you've done it.

PT: I always think extreme pessimism or extreme optimism on their own terms, are not terribly healthy attitudes to have, because extreme pessimism tells you there's no point in doing anything. Extreme optimism tells you there is no need to do anything. They converge on doing nothing. A healthy attitude is always something that's milder – mild optimism, mild pessimism. I average out to a mild version, even though maybe the components are extreme. On average, it comes out somewhere in the middle.

TC: I was emailed this question. What is your maximum likelihood estimate of when you will die? At what age?

PT: It depends a lot on what we do about this stuff. Again, it's not as though the future exists on its own…

TC: But you are forecasting you.

PT: It depends on what I do, and what I get other people to do in the next few decades. These things can go in very different directions. Whenever I look at the signs on these areas, I think there are many innovations that could happen, and then I think it's incredibly slow.

I think that it's always a mistake to be too focused on prestige and status. This is always the great temptation in many areas. Academia is one that's extremely prone to this. I would always be long substance, short status.

If I had to make a straightforward forecast, I would do a straight-line extrapolation, where life expectancy has gone up something like, 2.2 to 2.5 years per decade, since 1840. That would probably get me into my early to mid-nineties.

Then, you add maybe ten years, so somewhere 100 to 110. That would be a pretty good upper case. There's a lot of variability. If things end up stagnant, it'll be not much more than what people would expect today. If things accelerate, it could be a lot longer.

TC: A lot of those gains in life expectancy have come from people younger than eighty. People who reached eighty in, say, 1870, did only marginally worse than people who reach eighty today. That's since I tend to be more pessimistic about many people reaching 100, though I would give you, in relative terms, perhaps the best chance of anyone in this room.

PT: That was true in the first half of the twentieth century. In recent decades, more of the gains have come from somewhat older people, not necessarily from people who are eighty and up, but say people who are sixty, sixty-five, seventy, of being able to live significantly longer than they were in the past. But you are right. We are not going to get that many gains from reductions in infant mortality, or things of that sort. It will come from people who are somewhat older, hopefully living both longer and healthier lives.

TC: What's your favourite novel?

PT: The classic one I always give is *Lord of the Rings*. If you want something a little more intellectual, it's probably the Bulgakov novel *The Master and Margarita* where the devil shows up in Stalinist Russia and succeeds, giving everybody what they want, and everything goes haywire. It's hard, because no one believes he's real.

TC: New Testament, or Old Testament? Which has influenced you more, and why?

PT: I'd have to go with the New Testament. These things are always subject to so much interpretation. I don't think any of these holy books stand on their own. If they did, that's always an antireligious argument at the end of the day.

TC: The Hebrew Bible, to me, has more of this dialectic that we found in a lot of the other topics. A mix of optimism and pessimism. Much more irony, multiple voices, varying perspectives. My answer would be the Hebrew

Bible has influenced me much more than the New Testament, which has hardly influenced me at all. You are different in that way, but what is it in your character, intellect, or background, do you think that accounts for that difference, given some of the other things you've said?

PT: I would disagree with that characterisation of it. I think Christ is a very complex, ambiguous figure in many ways, which makes the interpretation quite difficult. I think almost everything that Christ said could be described as an answer to something that's true, that most people did not agree on. I think, for the most part, it was necessary for Christ to be very careful how he expressed himself. It was mostly in these extremely parabolic, indirect modalities, because if it had been too direct, it would have been very dangerous. It was John Locke, in *The Reasonableness of Christianity*, who said that Christ obviously had to mislead people, since if he had not done so, the authorities might have tried to kill him.

TC: There's a kind of Straussian Christ here?

PT: That's the Straussian interpretation of Christ. It didn't end in a particularly Straussian way, but it was at least true for most of his ministry.

TC: What do you hope to spend the next year thinking about, ideas or questions you haven't thought through already, that will be your focus in the next year or two to come? Things that we haven't talked about already.

PT: I don't know if it's ever really this top-down agenda that I try to set. A lot of what I end up doing is somewhat serendipitous. You talk with a lot of interesting people. You try to figure out what are some great technologies, great entrepreneurs to work with in different ways. That's how you end up getting very interesting perspectives, and how you change your mind on things. The overarching agenda is always to try to figure out some way to get out of the stagnation by literally helping people to start companies that will change the world.

TC: You've done many start-ups, funded many others, you've written *Zero to One* on start-ups. If you think of the Institute for Humane Studies and Mercatus Center as a kind of start-up, we are together in one location. We have a critical mass of people here, studying notions of liberty and individual responsibility. We have, more or less, a common intellectual background in some ways. I wouldn't say we have a monopoly, but the space of doing liberty-oriented ideas in a university setting is by no means what everyone is jumping at doing, to say the least. If you think of us as a start-up, embodying at least some characteristics that have something to do with what you've praised, what advice would you give us at the margin, for being successful in the future?

PT: All those elements are quite good. I think that it's always a mistake to be too focused on prestige and status. This is always the great temptation in many areas. Academia is one that's extremely prone to this. I would always be long substance, short status. The temptation is to try to get more respectability within an academic setting, or within a broader audience. If you try to get respectability, it will always come at a price of softening the edges, modulating what you say. You want to always put substance over status. If that was a single overarching theme, that would be a very, very healthy one to maintain.

TC: Peter, thank you very much.

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PHYSICS: THE NEXT FRONTIERS

THE HARD WORK OF CREATION

FRANK WILCZEK
ON
THE JOLLY SWAGMAN (2021)

Interview by Joe Walker

Joe Walker: I do not know what I may appear to the world', wrote Isaac Newton, 'but to myself I seem to have been only like a boy playing on the seashore, and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me.'

My guest has helped humanity to glimpse a portion of that great ocean. Frank Wilczek won the Nobel Prize in physics in 2004 for the discovery of asymptotic freedom in the theory of the strong interaction. In this conversation, Frank and I don't directly discuss the work that won him the Nobel Prize. He has discussed it in a million other interviews, so allow me to paraphrase it here so that you have some context heading into the conversation.

Physicists like to systematise. One way they systematise is by trying to discover the basic building blocks of matter. Another way is to find out the forces that act between those building blocks. In the case of matter, physicists were able to divide matter up into atoms, and the atoms into nuclei and electrons, and then the nuclei into protons and neutrons. By smashing protons, or protons and electrons together, particle physicists discovered leptons and quarks, with quarks being, as far as we know, the smallest particle of all. As physicists were busy reducing matter to its tiniest components, they were uncovering the four fundamental forces that acted between those tiny components.

Before the twentieth century, we knew about two of these forces because they were the two that were macroscopically visible: the gravitational force and the electromagnetic force. During the twentieth century, when physicists started prying into the interiors of atoms, they discovered the other two forces: a weak force, which is responsible for the radioactive decay of atoms, and a strong force that holds the atomic nucleus together. Until Frank Wilczek entered the scene, physicists had observed something strange about the strong force, which not only binds together protons and neutrons, but also the quarks that make them up. The strong force became weaker at high energies or at shorter distances,

meaning that the three quarks within a proton can sometimes appear to dance around each other freely. This was unexpected, because if you looked to the other forces for reference, the opposite happens. The gravitational forces get stronger at shorter distances. So do electromagnetic forces and, indeed, the strong force is so powerful that no free quarks have ever been observed.

How to resolve this conundrum? Well, as a young graduate student at Princeton, Frank, working with another physicist, David Gross, came up with a theory to reconcile these basic principles and the strange observation. They postulated that when quarks come really close to one another, the attraction abates, and they behave like free particles. This is called asymptotic freedom. Frank says that he remembers saying to David, if the experiments bear this out, we'll get the Nobel Prize. They did the calculations in the winter of 1972 and they published in the spring. That summer, Frank went to his first ever conference, a small gathering of physicists, and Richard Feynman was there – *the* Richard Feynman – and he talked about Frank's work, calling it really important. Frank was just 21 years old at the time. The rest, of course, was scientific history.

It also turned out, for reasons that I have no ability to understand, that asymptotic freedom was an important foundation stone for our ability to construct a grand unified theory, because it showed that the electromagnetic weak and strong forces have much in common, and are perhaps different aspects of a single force. Beyond all of this, beyond the work that won Frank the Nobel Prize, he is responsible for a plethora of other scientific contributions, from particles – well, hypothetical particles, like axions and anions – to time crystals. He is also the author of many brilliant books, including *A Beautiful Question* and, most recently, *Fundamentals: 10 Keys to Reality*. In this wide-ranging conversation, Frank and I discuss his childhood and upbringing, how you can tell whether you really know something, machine learning, the power of words, humility versus self-respect, living in Einstein's house, which Frank did for almost a decade, and much, much more.

Frank Wilczek, welcome.

Frank Wilczek: Good to be here.

JW: Frank, your earliest memory involves a coffee percolator. Take me back to that.

FW: It was when I was a small child. I don't know exactly when, but I suspect I was either two or maybe three, or maybe one. It was certainly a pre-verbal memory, so maybe it was one. Anyway, it's all in images, and I remember my parents had a coffee percolator. It had seven large pieces that you could take apart and put back together. I just remember I was on the floor in the kitchen. I can call the image to mind still to this day, very clearly.

This was something in the outside world that could be manipulated, that wasn't me somehow, but yet not entirely out of my control. I started to take it apart and put it back together. I guess, fortunately, there was more or less only one way you could put it together, so I was able to practise. I took it apart and put it back together to try to understand that this thing, which you normally saw on the outside also had an inside, and that different things could fit together, and if you took them apart and put them back together, they would still fit. It was a moment where I realised things about the physical world.

JW: Do you have a sense of when, as a kid, you first knew you were smart?

FW: My mother would say all kinds of things, but I didn't really give much weight to that. When I went to school, I found that things came very easily to me, which I sort of took for granted. I didn't think that meant I was smarter, just that that's the way it was, and things that took other kids longer, I could absorb faster. Then, it really came to a head when I was in the first grade and they started giving us tests. They called in my parents and said, oh you've got to do something. I got wind of it, and they moved me from one class to another. I was kind of young for my grade, but they put me into a class for older kids, and then I skipped grades. At that point, I knew that I was a little bit different than most of the other kids.

JW: Tell me about your parents.

FW: My parents were second-generation Americans. Their parents came from Europe. My father's family came from Poland. My mother's family came from a small region in Italy, although my grandparents met in the US. My parents grew up in the Depression, with very limited resources. My father quit

high school in order to support the family. He worked as a kind of technician, a radio and TV repairman, in the very early days of television. He was a very bright guy, but not very well educated. When I was going to school, he was taking night classes and learning calculus. I was very interested in his books, and also very intrigued because he brought all these broken radios and little experimental televisions with two-inch diagonal screens home.

My mother was one of the happiest people I've ever known. She was very joyful. She did graduate from high school and did very well, but she was very much embedded in the culture of the time where the expectations were that she would get married and keep a home, and that's what she did. She would go around the house singing, a lot. And she had quite a good voice, not trained, but quite a good voice, and was very, very supportive.

My father was a little bit distant, but also supportive in an abstract way. We spoke only English at home because their languages were different. We didn't have a lot of money, but we were certainly not poor, and I never thought of myself as deprived. We never had to worry about getting fed or anything of that sort, but we certainly didn't have luxuries. There weren't a lot of books around the house either. At one point I wanted to play the piano, but our apartment was too small for that. We couldn't really do it.

We lived in a very vibrant neighbourhood. I guess that was also very important; it was full of people like my parents (in a broad sense): children of immigrants, second-generation, people who had aspirations for their kids. That was the kind of culture I was embedded in, in New York City.

JW: Leaping ahead to 2004, can you describe what it was like telling your parents that you'd won the Nobel Prize? They must've been so proud.

FW: They were, but the circumstances were maybe not the happiest. There was a little glitch on the way. Let me tell you; it's a funny story. The Nobel Prize was announced at 6.00 am, but they called me earlier, at about five o'clock in the morning. I was in the shower at the time, so I didn't hear the phone ring. My wife brought our mobile phone and said someone's calling, sounds like a Swedish accent. You know, it's not entirely a surprise. Of course, I took the call. I got out of the shower and I was soaking wet. I thought that it would be just somebody saying oh, congratulations, you won the Nobel Prize. Goodbye. It wasn't that. I got congratulations from several different people and instructions about how to deal with the press.

After all that, the next thing I did was call my parents. My father answered the phone. I guess by this time it was like 5.30 am and he said, 'Do you know what time it is? What are you calling me about? Whatever you're selling, I don't want it, and if you call again, I'll call the cops!' I told him, no, it's your son. I got the Nobel Prize, and it was very special, especially for my father, I think, who was very much into science himself and admired that culture and would have loved to have made a contribution, but felt because of the circumstances of his life, he wasn't in a position to do so. It meant a tremendous amount to him to see that his son did what he would have liked to do.

JW: Like me, Frank, you were raised a Catholic. How did Bertrand Russell cause you to lose your faith in religion?

FW: Well, Bertrand Russell is a beautiful writer. My parents weren't terribly religious, but they did bring me up in the church, so I went to catechism class and things like that, and I took it very, very seriously. I was very worried about going to hell, and I was inspired by the idea that you could be a saint, sort of guaranteed eternal bliss or whatever. I was impressed by the ceremonies. In a way, I was much more religious than they were, but I was learning about science too, so there were these parallel things. I was very interested in philosophy and logic and mathematics, and that brought me to Bertrand Russell.

Bertrand Russell wrote beautifully on many subjects, from mathematical logic – which is what I first encountered – to religion and ethics. Losing faith in my religion wasn't solely due to his influence, but there was growing tension in my mind over what we were getting exposed to in catechism class. There was an intense period during my preparation for confirmation – kind of a retreat for a few days where they laid it on thick, so to speak – and that brought things to a head, because I felt tremendous tension between what I was being told about the universe and how things actually work.

... there's this level you get to where you can work in concepts, and develop intuition about how things will behave, without actually having to go step-by-step through the derivations.

I did my confirmation. At that point I was thinking I should try to be a saint, maybe I'll be a priest. But then it all broke for me. Partly, because the influence of Bertrand Russell's writings brought me to the view that the account of things that I was getting from the scriptures and catechism class was not so much wrong – if there were mistakes here and there, or simplifications so that people could understand it, that would be one thing – but it was lacking in grandeur. The grandeur of the universe. There were many, many secrets that could have been revealed, and that would have been really impressive.

What really struck me is that there were so many ways God could have made it easier to believe in Him that He didn't make use of. He could have said, well, if you grind glass this way and that, you'll see these fantastic wonders that I've produced. Or you can see what things are made of and cure diseases, but none of that was there. It dawned on me that these scriptures were just what they looked like: people, not very sophisticated, trying to come to grips with the world, and so that was very deflating.

JW: For me, I lost my faith, semi-ironically, when I was learning about world religions at school, because I realised many of these beliefs are mutually exclusive, and it's probably more likely that none of them is correct than one of them is correct and all the others are wrong. How do you personally find or create meaning in an apparently godless universe?

FW: Well, I keep looking. There's so much to understand and learn, and it's mind-expanding to do that. I guess I'm lucky in my choice of mother. As I told you, she was a very happy person, and that, together with my father's curiosity, means I've lived a very charmed life in that I've been able to do what I love, and be good at it, and never really had to feel insecurity. I have a wonderful wife and family. All those things are in the background as a secure base. So, there's joy, there's just joy in life. I wish I could live forever. I wish various things could be better, but I've gotten so many gifts that I didn't really earn, that it seems kind of cranky to complain, and there is still so much to look forward to. I'm finding meanings, more and more meanings. I understand more and more, and it's wonderful. I try not to be too greedy. That's about it. I guess that's my philosophy,

such as it is.

JW: You were reading Einstein's books and papers, even in high school, and you made it one of your goals to not just read, but understand his original paper on general relativity.

FW: Yes.

JW: By the time you entered college at the University of Chicago, you thought you had achieved that.

FW: Yes, I did.

JW: In hindsight, do you think you genuinely understood it at the time?

FW: Well, yes and no. I definitely did understand it line by line. I worked through it. Probably, there were things here and there that I didn't derive for myself or check the algebra, but it's a very nicely written paper. It has the reputation of being extremely difficult, but by the standards of theoretical physics literature, it's actually a very easy paper to read. It has a nice section on tensor calculus, which starts almost from scratch and derives everything you need. So, I could read it and understand the flow of ideas. I certainly did not, at that time, have the background to really conceptualise where it fit and why it was a big step past Newton, and how difficult it was and how rare these kinds of insights are. I certainly didn't understand things well enough to go from that paper to the next steps. I didn't see the germs of cosmology or black holes or anything in the paper. I understood what was in the paper – no more, no less.

JW: Well, I can't say that for general relativity, which is way above my pay grade, but at times I've felt that, or persuaded myself, that I understood special relativity, and I recommend the 1905 paper in which Einstein sets it out, the paper called *On the Electrodynamics of Moving Bodies*. It's really worth reading even just as a piece of scientific history; it's pretty short and clear.

FW: It's very short and clear, until he starts talking about Maxwell's equations and their invariants. But the analysis of space and time, and getting to the physical effects of time dilation, and all the most conceptual things – that's all self-contained. I think at the end he does the more advanced discussion of Maxwell's equations, which was the way he came to it. But he really got to the bottom of things and was able to present the essence in a much simpler way than he found it.

JW: I also love his explanation in his book, *Relativity: the Special and General Theory*, which was written for a popular audience. He uses the example of the train, the embankment, and the two bolts of lightning at either end of the train, to explain the relativity of simultaneity. I read that and felt, 'Yeah, I get this, it's so intuitive.' But maybe I don't. I probably don't. I'm curious: what does it mean to think you understand something, but to actually not properly understand it? How can you check whether or not you understand something properly? I'm looking for ways to avoid the Dunning-Kruger effect.

FW: Well, there are different levels of understanding, so there's one-word understanding that covers a multitude of levels of ability. Just as, for instance, right now, I'm trying to learn Swedish. I can read simple texts pretty well, and I'm starting to get to the level where I can understand spoken Swedish with the help of context and things like that. My ability to speak is primitive, but all these things improve. If you watch how a baby develops, there are different levels of skill with language that they develop over time. I'll never have the kind of fluency that I have with English, and ability to write something that approximates literature. It's like that in science too; there are different levels of understanding things.

There's a very profound statement by Dirac, another great physicist like Einstein who said, 'I feel I understand an equation when I can predict its consequences without actually solving it.' So, there's this level you get to where you can work in concepts, and develop intuition about how things will behave, without actually having to go step-by-step through the derivations. That typically only comes after working a lot of examples. But I don't think it's any different from things like learning how to play the piano; there are different levels. The crudest level is you learn that there's a thing called a piano and there are notes and you can play the notes, and you can learn the names of the notes and so forth. That's the very crudest level. And, in principle, that gives you the ability to play anything. But the ability to do it fluently and integrate a lot of information in real time, that's different.

It's the same in physics; there are different levels. You can understand basic things about the physical world, and understand them from

different perspectives, but if you want to make a contribution yourself to pushing the frontiers, that's a different thing. Then you really have to command the subject and have confidence that you can do calculations and understand how things will work if you change them.

So I guess if I had to summarise that cloud of ideas briefly, I would say that depth of knowledge is when you can deviate a little from the conditions of what you've actually learned. It doesn't have to be literally what you've just read. If you change things a little bit, you can still make sense of it, and you can realise its implications.

JW: Is it true that at one point you owned and lived in Einstein's house in Princeton?

FW: Yes. For about 10 years we lived at 112 Mercer Street.

JW: Does it still have artefacts and memorabilia from his time in the place?

FW: It had a little bit. Einstein died, I believe in 1955, and then for quite a few years, the house was lived in by Helen Dukas, his secretary, and I believe his sister – the two old ladies lived there. The house was falling down around them, and they didn't have the energy to keep it up. I found out that the famous study where you sometimes see pictures of Einstein working was actually something that was added to the house and built by a friend of Einstein's, and was not built very well, and that was kind of falling down. So, we had to do a lot of renovations before we moved in.

The place was owned by the Institute for Advanced Study, which Einstein worked at, and he left it to them, and they offered it to me as part of the recruitment process. Of course, they took most of the stuff out first. But there were a few gems left. There was a toy that was given to Einstein, which apparently he was very fond of, which shows a clown balancing with a long stick like a tightrope walker, illustrating gravity. That little thing was used as a prop in a movie that was filmed at 112 Mercer Street.

There were a couple of notable things; more is coming back to me as I think about it. Probably the two most notable things were a piano – a Bechstein piano, a very good piano. I used that for many years, for the whole time I was there. That was Einstein's piano and it was in pretty good shape. Then, there was also the bed that he slept in, I think, and that was not in good shape. After trying it out for a few days, we just got rid of it because it was not salvageable. There was also some nice furniture, but it was so nice that we didn't feel comfortable using it, so we had one room where we put that stuff. That was kind of the 'museum' section of our house, although we never used it as a museum, of course. Eventually we did donate it to the museum.

JW: Did you draw inspiration from living in his old house?

FW: Well, it was very gratifying and inspiring in a way. Yes, it was inspiring. Physics can be a struggle. If you're doing research at the frontiers, most of your ideas don't work and it can be depressing sometimes, or ideas don't come, so there are down periods, or you're doing things that you're not very enthusiastic about, at least in my case. But I would come home and walk into this house, which I lived in, and say, 'Wow, you live in Einstein's house, that's pretty good. You've come a long way since Glen Oaks.' And so it did buoy my spirits in that way, that was the main thing I would say.

JW: At Chicago University, as an undergraduate, you stumbled onto the Quantum Theory of Angular Momentum. Why do you consider it to be one of the absolute pinnacles of human achievement?

FW: Because it's a place where two apparently entirely different conceptual universes turn out to be the same. One is the description of symmetry, in this case rotation symmetry of space. That has mathematical implications, so-called representations of the rotation group, which are quite profound. So, exploiting how things can possibly transform as you rotate. That's one domain of ideas, which mathematicians studied for its own sake, profoundly, in the seventeenth, eighteenth, nineteenth and early twentieth centuries. And then you have this entirely different thing, or superficially entirely different, which is quantum mechanics, which comes from describing the physical world and is very surprising in its structure.

In fact, to this day, it's a big problem to understand how the world we actually experience emerges from this kind of shadowy world with probabilities and abstract concepts. But the two come together in a marriage where the sum of their parts is much greater

than either one separately. So, you have these mathematical structures of representations, and then you have quantum mechanics, which tells you that these things are representations of the world, they're representations of particles and their properties.

What makes it magic is not that you can bring together different branches of mathematics, but that it is a description of reality. The deep understanding and manipulating the mathematical concepts leads you to predictions about how things behave that are really surprising, really detailed, and that work.

It's an extraordinary thing. You have beautiful ideas that were studied for their own sake. You have surprising revelations about how the world works in kind of a general framework. And then you have the two coming together to give you a really rich, detailed description of the mapping between a calculated world, and our world, and they match. It's so amazing.

JW: So, from Chicago, you get to Princeton. Take me back to those months in 1972 at Princeton: you're just 21 years old and you're working on the physics that will eventually lead to you being awarded the Nobel Prize. What were your days like?

FW: That was a wild period in my life. When I arrived at Princeton, roughly two years before, I was coming off a kind of uninterrupted run of great success in academic pursuits. So, I went to Princeton as a graduate student in mathematics fully expecting that it would continue to be easy and life would be good, but I was in for a shock. First of all, I didn't know what I wanted to do. I thought I wanted to use mathematics for something like Einstein had done or, like my other heroes, Feynman and Hermann Weyl. Or in biology, or in computer science. I wanted to do something great using mathematical skills, but I didn't know what.

I thought, 'I'll go to Princeton. That's the place where you get revelations like that. And it will be obvious what to do.' But I quickly found out by experience that it's a very different thing to learn than to create. Creation is slower, it's much less foolproof. It's harder work in many ways, and requires a different kind of focus. At least for me, learning things, especially in those days, was very, very easy. But to make the transition to doing something new when I didn't know what I wanted to do, and I didn't have the experience or command of any particular subject that it would take to really push the frontiers, it was difficult. It's hard for me even now to realise how unhappy I was then, and how I was kind of lost.

But then, after a couple of years, two miracles happened. One is that I met Betsy, still my wife, and she brought me out of that funk because it was clear there was something great to live for and she's very special, so I didn't feel alone anymore. And then I found something in physics and someone in physics that I could really glom onto. The physics department in Princeton is right next to the maths department, and the maths department is this forbidding tower, but the maths building is this kind of friendly place where you meet people. So, I wandered over there and went to seminars. I was going to seminars in everything but computers. Physics was clearly in a period of extraordinary excitement and advancement. And I could see that. This was the time when what's now called the 'standard model' or the 'core theory' was being invented. There were great new ideas about renormalisation group, about gauge theories that use the kind of mathematics that I really liked, the mathematics of symmetry, and analysis and calculation.

I went to some lectures by Ken Wilson, which I didn't understand at all, but had this sense of excitement. I went to a class on quantum field theory by David Gross and we really hit it off. He was this kind of charismatic, very, very brilliant guy, very driven, and clearly someone I could learn from and relate to. I was 21. He was 31, which at that time seemed ancient to me, but clearly he was young and dynamic. In retrospect, he was very young and very dynamic and very much on the make in the sense that he wanted to do great things and he was very ambitious. So I started talking to him and out of those conversations, we discussed a lot of things and hit on this project of putting together the gauge theories and the renormalisation group to see how they work together, because these were two kinds of different powerful strands that nobody had put together. I was just looking for a thesis project. I wanted to do something. I want to get out of this crisis by doing something. David was very interested in finding a theory of the strong interaction or proving that quantum field theory couldn't work to describe this

strong interaction. This all came together, in the right place at the right time, with the right kind of drive and talent to solve it.

JW: What do you think David saw in a young kid from Queens?

FW: I don't know. But we talked and I guess that's the short answer: we talked. That was one thing. And the other thing is, I had at least enough on the ball to become a graduate student at Princeton. So that's something; there's a funnel you have to go through to get there. And also, the course had some homework and I worked to really do elegant solutions to the problems, and he saw that. So, all those things.

JW: The same year, 1972, a book is published called *Gravitation and Cosmology* by Steven Weinberg, who's another Nobel laureate. Towards the end of the book, Weinberg's talking about how the strong interaction makes our understanding of the very early universe difficult. I'll quote him from page 597, he writes, 'It is therefore not out of the question that someday we may detect remnants of previous cycles of the history of the universe. For the present, however, such matters remain at the furthest bounds of cosmological speculation.' Do you remember when you found this book and why did it make such an impression on you?

FW: I found it not long after. It was part of my graduate course. I came to physics with very little conventional training in physics. I had taken a few courses here and there, but there were vast gaps in my knowledge. That's another reason I went to quantum field theory – I felt you didn't have to know much. If you had the mathematics at your command, you didn't have to know a lot of facts, because this was about elementary particles. It was relatively clean. You didn't have to worry about experiments or to have a lot of knowledge. It was a very naive view, but that was my view. Shortly afterwards, I wanted to exploit the insights we had gotten. Also, I just wanted to fill in the gaps. I found myself becoming a professional physicist. I said, 'You'd better be prepared to answer questions that a professional physicist is expected to know the answers to.'

The very early universe, of course, is fascinating in itself. As we mentioned before, I had been very interested in learning all about Einstein and his work because he's a personal

> But our work on asymptotic freedoms made it simple. Instead of things getting more complicated, they get simpler at high energy...

hero. And it happened that the book that I bought that had Einstein's original paper in it, also on general relativity and special relativity, had his original paper on cosmology, so I was aware of that. And Weinberg's book was a modern version of physical cosmology at the time, and so it was very natural for me to read it. And it's very well written. It's a very step-by-step, systematic, orderly exposition of what was known, so it was reasonably easy to read. But then what struck me, at the end, was when he talked about what's unknown. And one of the striking things was that the limitation in understanding the strong interaction was the barrier to making further progress. Because if you go back to the Big Bang, things get very dense, very hot, and you have lots of protons and neutrons and strongly interacting particles, people thought, and it was just utterly impenetrable. Nobody knew how to proceed. But our work on asymptotic freedoms made it simple. Instead of things getting more complicated, they get simpler at high energy, according to the theory.

I remember those last sections of Weinberg's book. I was always looking for opportunities, and it was very clear to me that now we could go back to those questions and address them in a much more intelligent, confident way, because the strong interaction was coming under control.

JW: The standard model is often thought of as a zoo of particles, but you've said that it's better understood as a realisation of principles. What do you mean by that?

FW: There are two very different things. There's kind of the core of the standard model, which is based on a few interactions, strong-weak and electromagnetic interactions, and gravity also fits in nicely in general relativity. These four all work harmoniously together and give us a profound understanding of the world. And they work on, in everyday life, just a few ingredients. There are quarks, gluons, protons and electrons, and that's really it. Gravitons are lurking in the background, holding things together on a cosmological scale. But, basically, in everyday life, that's it. If it had stopped there, people would have still been looking for a unified theory, but there wouldn't be all this grousing about how ugly the standard model is, blah, blah, blah. But at accelerators people found a lot of unstable particles. So, more kinds of quarks, whose mutual interactions are very complicated – their pattern of masses, their pattern of who decays into whom, how they couple to W and Z bosons. The details of that are not beautiful. So, there's a large domain of interactions and phenomena that are described very compactly with beautiful mathematics, sort of comparable to the mathematics of quantum theory of angular momentum that I mentioned, very much related to that, but grander, because it's more comprehensive.

Then there are the complications that you need to add on to that to do justice to these odd transient phenomena that people have discovered at accelerators. I think we can appreciate the beauty of this, of the standard model, while recognising that's not the whole story. The beautiful part is what describes ordinary matter – the kind of matter that we have in everyday life. You can describe them in a rather thin book as I did in *Fundamentals*, and do some kind of justice to it. But then if you want to bring in all the stuff that people have found at accelerators – all these very unstable particles that don't seem to have any important role in the universe, but there they are – Why are they there? What can we make? Can we make this bigger structure into something unified and beautiful? That's where it gets hairy. We hope someday that those things get brought in, but that shouldn't blind us to the beauty of what we already have.

JW: To what extent do you think the work you did during the 1970s has contributed to our ability to produce a grand unified theory?

FW: It's absolutely central. You couldn't even begin to think about a grand unified theory without first of all understanding the strong interaction. There are only four interactions, and that's one of them. So, if you're going to make a unified theory, you have to know what to unify and what it is. We found the equations, so you know what it is, and it turns out that those equations are profoundly similar, though they're richer in a way, more complicated. They have more bells and whistles, if you like, but their central idea is very similar to the idea, the high symmetry or the so-called gauge symmetry, of electrodynamics and also of the weak interactions. All three interactions, those three interactions, have a very, very similar

mathematical structure of symmetry and exchange of spin-one particles.

Gravity is a little bit different, but has a sort of family resemblance. It's based on general covariance, and it's associated with the spin-two particle instead of a spin-one particle, but it's the same family. So having these four theories with a similar conceptual structure is begging you to try to unify them. The other aspect of our contribution is not only revealing what the equations are, but also revealing this principle: that the effective strength of interactions changes with distance, or with energy, and opening up the possibility that if you calculate what happens at very short distances, or at very high energies, the interactions come together in a quantitative way. So, you can discuss unification, not only as kind of a dream, but you can draw out quantitative implications of the possibility that they unify, and it almost works. It more or less works. Of course, it involves a huge extrapolation. So, a lot of things could go wrong. It's amazing it works as well as it does.

JW: Murray Gell-Mann famously lifted the word quark from James Joyce's *Finnegans Wake* and co-opted it, as you know, as the name for the particle that he helped to discover. You've also named some particles or hypothetical particles, including the slightly less poetic axion, which you named after the laundry detergent. Which is still a better name. Names and words in physics can have a deeper impact than that, when they affect how we frame things. Talk about how you think about how words have helped or hindered our understanding of the concepts they're intended to describe?

FW: Yes – it's a very profound and underappreciated fact, not only about physics, but about all subjects. I think that having names for concepts really conditions the discourse. When you have a name for something, ideas accrete around it, a domain discourse, a literature accretes around it. And if there's no such nucleus around to accrete, then the ideas just float and don't necessarily come together in the same way. It's like when you have a super-cooled liquid, if you want to have raindrops or snow drops, you have to have nuclei around which they crystallise, around which they condense. I'm not sure I wanted to use that metaphor, but having centres around which things can organise and attract each other and have a locus is really important.

Computer scientists are learning this also in machine learning – that so-called 'unsupervised learning' is largely a matter of finding resemblances among things and putting them into categories. And that, if you think about it, that's giving them a name. So, you have things that resemble each other somehow and they cluster, and then that tells you that there is something, and you can give it a name. The computer, they don't necessarily give it a name, but they give it a memory, location and links, but it's the same idea. So having names really is a great aid to thinking. It's also a great aid, not only to individual thinking, but to how communities think, because people recognise a subject around the word. I could give many examples in physics.

JW: I know that Feynmann hated colour as a name for a charge…

FW: Yes. It's pretty stupid actually. It is sort of purposely confusing because the colour charge has nothing to do with colour in the ordinary sense. Any metaphor you try to draw doesn't work. You could stretch it if you think about not physical colour, but the perception of colour – we have three receptors and you can blend different things. But colour charge is a very, very different thing than colour in the usual way it is applied to light. That's not a good one, so you can make bad choices as well as good ones.

JW: In what sense is the name, 'the Big Bang' potentially misleading?

FW: It's potentially misleading because people usually associate explosions with some bomb, or some location, where a lot of energy concentrates and then expands out. But the Big Bang as it is currently understood is quite different. It occurred everywhere at once. So that's potentially misleading, but otherwise it's a pretty good name. It's short and gave people a convenient handle with which to associate with things that would otherwise be quite a mouthful. The hypothesis that early in its history the universe was much hotter and denser, and then it expanded out … Just saying there was a Big Bang is much more convenient and people can gather their thoughts around that body of law. As I said, the only bad thing about it, is that it's a little undignified. That it does suggest there was a place, a sort of centre, from which things expanded is not true; it occurred everywhere at the same time.

JW: Am I correct in thinking that you may be the youngest person who's contributed to the standard model?

FW: Well, it depends what you mean by contributed. I mean, people are still contributing. But the foundation of the standard model was laid in a very brief period. I would say the main ideas – people may dispute what the main ideas were – but I think there's a pretty clear circle of ideas that emerged in the late sixties, the very late sixties and early seventies, which is still to this day thought to be entirely valid and is the basis of our profound understanding of the physical world. I think quantum chromodynamics and asymptotic freedom was the last major link in the chain. And I was the youngest person involved.

JW: Am I correct in thinking that there haven't been any industrial applications of the ideas for which you won the Nobel Prize, at least not yet?

FW: Any practical implications … industrial? No, I don't think so. You would really have to stretch it. No, there have been applications to cosmology. As I mentioned, there have been tremendous applications to understanding and interpretation and designing experiments, at accelerators. So, if you count that as industrial activity... but no the honest and short answer is no. It's been applied within physics very profoundly to push the frontiers of knowledge of the early universe, of what happens at accelerators, unification, but not what any sane person would call a practical application. I don't think.

JW: According to the economist, Robert Gordon, US economic growth slowed by more than half from 3.2 per cent per year during the period from 1970 to 2006, to only 1.4 per cent during the period from 2006 to 2016. Recently on this podcast I've been asking guests whether slower economic growth since the 1970s has been causing an increase in rent-seeking or vice versa? Or maybe something else has been driving both the slow growth and the rent-seeking. I'd like to ask you the physics version of this question, because I'm interested in the sociology.

FW: Okay, good. Because I'm not prepared to answer the economics version...

JW: Fair enough. I wouldn't put you on the spot like that, but I am interested in the sociology of string theory. My question is, has the intense

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politics, for want of a better word, in the physics community, distorted the community's ability to make new major discoveries or has a reduction in the frequency of new major discoveries led to this kind of bitter in-fighting and politics in the physics community?

FW: Well, first of all, I'm not prepared to accept the premise that there's been bitter in-fighting and politics.

JW: Fair enough.

FW: There has been some inevitable friction between different communities that want to get faculty positions and support and so forth. That's quite normal. Maybe it's been a little more intense in recent years out of frustration. I'm groping towards an answer. I'll try and be honest about this, although it might get me in trouble. I think the main reason that things have slowed down in terms of progress in fundamental physics is simply that we were so successful in bringing things together in the seventies and eighties in fundamental interactions and fundamental cosmology. And it's really been hard to get beyond that. We kind of swept the field as far as experimental data. We explained it all. If your standards are low enough, in a broad-grained way, we certainly can't calculate the details of every reaction any more than you can in chemistry. But we understand the principles pretty securely. It's been very difficult to do any better. That's what people have found. So, in a sense, that's glorious. That's not a failure. But it's unfortunate if what you want to do is to keep improving or expanding our fundamental principles. That was once the central activity of physics. All through the twentieth century until maybe the very last parts, the search for new fundamental principles, and the search for improving our understanding of the physical world, was the same search. When people discovered the principles of quantum mechanics, it opened up the description of materials, chemistry, all the innovations of lasers and microelectronics, semiconductor technology, all that stuff came in a very, very tangible way through profound curiosity and understanding about how atoms work and how matter works and the breakthroughs in the quantum theory. There were still questions about how atomic nuclei work. How the stars get lit up, things like this – where the energy comes from, and then where the universe came from, the Big Bang. Those questions were known. Then that information about the world that experimenters and observers had gathered got used and put together into a nice package.

That's been hard to improve. It doesn't mean it can't improve. There are certainly loose ends. There's the so-called 'dark matter' problem. There's tension between certain aspects of our understanding of gravity and our understanding of quantum mechanics. But to a first approximation, the empirical drive, let alone the technological drive that powered fundamental physics through the twentieth century has dissipated because we've understood the data. We're left with aesthetic desires, and that's very debatable, and people try different things. None of them have really worked in anything like the kind of depth and power of what we did in the seventies and eighties. I'm sounding like an old man, and I guess I'm getting there. But in those days, we were giants, we saw it all, and it's much harder.

I think physics, in many ways, is more exciting than ever. Let's go back to that piano analogy, which I really like. Learning the fundamental principles is like learning a piano has notes and you can play them. And there are a certain number of notes, and eventually you played all the notes. You know how it works. But that's not the end of the story. That's when it gets really interesting. Now you can put the notes together and play chords, and make patterns, and do fantastic things. And that's an ongoing creative activity. Knowing the fundamentals, you can build beautiful objects and quantum computers and instruments of different kinds and expand our perception and maybe get at questions like how mind emerges from matter and make useful devices.

The nature of the fruitful questions changes because of what you've learned. So, I think that insisting the only interesting, or the most interesting, or the most profound, part of physics, is improving the most basic laws, was an easier case to make when there were more loose ends. When that enterprise was thriving. Now, I think there's competition from other fields. But also, within physics, there's a thriving enterprise of using the theory in creative ways. We know that its potential is nowhere near being exhausted. We now understand how

matter works, so we have no excuse for not replacing chemists with computers, and taking design of materials to new levels, new forms of engineering. All kinds of things you can imagine doing that are really exciting. The quest for improving the fundamentals has to compete with those other possibilities for the minds of young people and for resources.

JW: I wonder how that's flowed through to technological progress over the last few decades. Recently, Nicholas Bloom, and some other economists wrote a paper called *Are Ideas Getting Harder To Find?*. It's a pretty disturbing paper, but they present a stylised equation: economic growth equals research productivity multiplied by the number of researchers. They present a swath of evidence showing that research effort is rising, at the same time as research productivity is falling. One of the main examples they pick comes from Moore's law and they show that the number of researchers required today to achieve the famous doubling of computer chip density is more than eighteen times larger than the number required in the early 1970s. So, we are on this treadmill, running faster and faster and faster, but we're not necessarily covering the same ground.

FW: Moore's law has an extraordinarily high standard. It's a miracle, really, that it has been maintained for so long. Exponential growth usually hasn't driven on for very long, for very good reasons. It's hard to keep going. There is the famous story of the person and the one grain of rice and then two grains of rice and the king is eventually bankrupted and kills the guy who got this prize. It's not unrelated to the phenomenon that we've just been discussing: There is a sort of heroic period, when you discover vast new territories and it only takes a few people to do that. Then if you want to exploit it, the low-hanging fruit gets picked right away. Then there's higher fruit, and it takes more effort, and in absolute terms, it doesn't seem as impressive, but it's more systematic and it takes more people. But, how should I say, nobody promised you a rose garden. You've got to take it as it comes. Columbus discovered a new world, and that was vast, that was one guy. So yes, he was enormously productive, but you can't keep doing that. So, I don't find it counter-intuitive or disturbing at all, that it gets harder because it was easy at first.

JW: Well, it is disturbing in terms of its social ramifications.

FW: Well, it can be. That's a different issue. I don't want to abuse my authority, such as it is, by pronouncing on it, but I do think you're onto something, if this is where you're going, which I sense it is. Already in the 1930s, Lord Keynes, the great economist, wrote a paper called *Economic Possibilities for our Grandchildren*, where he talked about the level of productivity that was in sight, that could be achieved in the near future. And then said that our grandchildren will have the capability of working fewer hours and living well, and everybody could be in the Bloomsbury Group, so to speak. That everyone could live comfortably, wouldn't have to worry, and could devote themselves to art or whatever. I do think that's a bit much because it was not taking into account the vast populations outside the first world, to oversimplify, but I don't think it's wrong in spirit. I think our control of nature, our industrial processes, and so forth, could support a very comfortable life for a lot of people, as opposed to a kind of grotesquely rich life for a few people, and hard work and impoverishment for many others to support that. So, yes. But that's not a problem of physics. That's a problem of morality and politics and things like that.

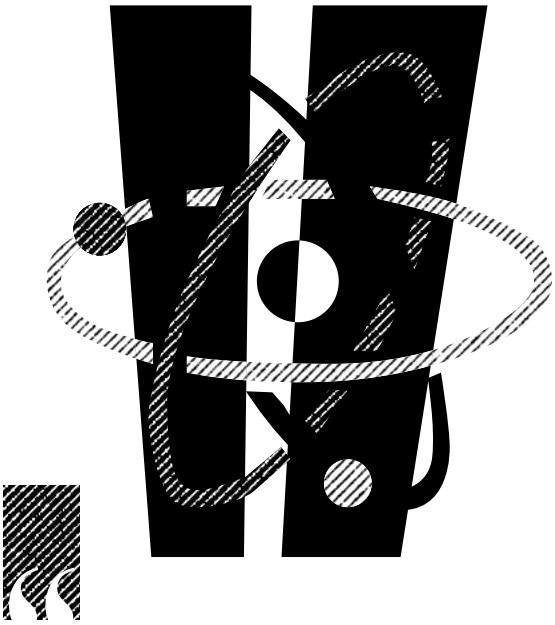
JW: I think you're right. The big thing Keynes missed in *Economic Possibilities for our Grandchildren*, was the huge rise in inequality. Which of course is something that he couldn't or could not easily, have predicted. So, if many of the low-hanging fruits have been picked, I'd like to ask you about how we can find new orchards? I guess there are a couple of ways of approaching that question. One is to talk about broad approaches and the other is to talk about particular areas, or fields, of physics. To begin with the broad approaches, three people who authored the major equations of the last century – Einstein, Dirac and Yang – all used beauty as their compass. I'm curious to hear from you as to whether you think that's just random, or if there's something to it? Why should the laws of nature care about what we think is beautiful? And what does beauty mean and why can't the fundamentals be ugly?

FW: I think the fundamentals, as far as we understand them, are very beautiful. But they have a very particular kind of beauty that

overlaps, but is not the same thing as, our concept of beauty more generally. For instance, one of the major themes of art history is the beauty of landscapes, the beauty of sexual attraction, attractive bodies. Those things aren't really represented in the fundamental laws. But one powerful theme of a lot of art, especially decorative art, when you look at the things people use to decorate their houses with, and so forth, is symmetry. That you have patterns that are very regular, and people like that. It goes across many cultures, across many times. You see that maybe in the highest form in things like cathedrals or mosques, where you have these fantastic decorations of high symmetry. And it turns out that the fundamental laws of nature are characterised by tremendous amounts of symmetry. They're not symmetries of objects, but symmetries of concepts and equations. That is, you can change the equations in many, many ways, and yet they have the same content. So, it's the same thing as a symmetric object: you can change its position and it still remains the same object. You rotate a circle, it's still a circle, even though every point moves. So, the laws have that character. I have a theory of evolution about that. The laws are what they are, so that's not negotiable. The question is why we find them beautiful. I think it's because when we learn about the world and have to interpret our sensory experiences, it's a big challenge to take our raw experience and turn it into a model of the world.

We have to use the way the world works, as part of the rules of thumb. It's how you go from these impressions on our retinas, which are two-dimensional and all mixed up, to a three-dimensional world that we walk around in. You have to use properties of the world, which you learn partly because they're in our hardware, but also partly because, as a baby, you experience these things and have to organise it. And in organising it, it's very, very useful to use this property of symmetry, because the laws are symmetric and patterns do tend to continue in the natural world. And if you have a blind spot, you fill it in by saying that it's more or less the same as what there was elsewhere. So, it's very, very useful.

I think doing this learning task, of coming to terms with how the world actually works, has been useful for evolution. I realise I'm speaking



... it turns out that the fundamental laws of nature are characterised by tremendous amounts of symmetry. They're not symmetries of objects, but symmetries of concepts and equations.

in a way that biologists wouldn't approve of. Evolution encourages us to like symmetry because it's a useful thing to learn. So, the idea that we would love to come back to symmetric objects and interact with them, which is an operational definition of what beautiful is, for a human experience, is something that evolution encourages. I don't think it's entirely a miracle. I think you can have the beginning of an explanation. Now, of course, the depth of symmetry in physical law and its particular aspects that are abstract and require a lot of imagination to even get to, is way beyond decorative art. But I think that's the way it works. To me at least, that's a nice story of how it works. I mean, the laws are what they are. One more aspect of this is that if they weren't simple and regular and beautiful, we would never have found them. And that, in particular, applies to quantum chromodynamics, our theory of the strong force – we would never have found those equations, except that they're very special equations that have enormous amounts of symmetry.

JW: I guess evolution might have prepared us to savour symmetry, but we're also lucky that symmetry runs deep down into the microcosmos.

FW: Yes – we're lucky. That's right. It's a wonderful world and we didn't deserve it, but there it is. We're part of it, and I guess that's the thing. We learn to love it because we're part of it and have to learn how to get around in it.

JW: Thinking about different fields or subject matter areas in physics. If we do reach a cul-de-sac at the Large Hadron Collider (LHC) and don't find any new particles, what's the next most promising thing we should be doing?

FW: Axions. There's a great problem in dark matter – what the dark matter is. That's a very concrete challenge. We've understood ordinary matter profoundly, and yet now the cosmologists have found that that is only a small contribution to the universe by mass. It's only about 5 per cent, and then there's dark matter. And then there's a weight of empty space itself, so-called dark energy. Dark matter looks very much like it should be some kind of new particle. We have ideas about what that particle might be. There's a great opportunity there to make a fantastic synthesis, a fantastic culmination, leading to a very surprising and dramatic consequence, that there's this new kind of matter that's so much of the universe, and this was so important in how it evolved. So, one challenge is that: identifying it. We can use our laws to make guesses about what that stuff might be. I'm very fond of this particular guess called axions, with which I've been involved in developing for many years. And these guesses come with equations, and the equations allow you to have strategies for how you can test whether these hypotheses about the world are, in fact, correct. So, I think that's the part of fundamental physics that seems by far the most likely to break through in a big way in a reasonable human timescale.

Accelerators? Well, the LHC seemed to be a great opportunity to find new particles, new phenomena, and we did get the Higgs particle out of it, but not the more ambitious ideas about supersymmetry that I certainly was hoping for. Maybe the energy is just not high enough. But in any case, the LHC was a big, expensive project. And just as a practical matter, I think it's difficult to motivate potential investors, both of time and money, to build a successor without a clear indication that something good would come out of it. Does that answer your question?

JW: Yes, it does.

FW: It was a very broad question. I don't think I've answered all aspects. Meanwhile, there are great things that don't involve fundamentals in the same sense. That is, don't involve finding new laws or phenomena that you couldn't derive from our present knowledge. But our present knowledge is also a secure base for addressing questions like how mind emerges from matter. Can we build new kinds of minds, quantum computers that have powerful new capabilities? Can we make new kinds of instruments? Can we move to sustainable industrial processes with a sustainable supply of energy that's large and doesn't poison the earth? Can we design new drugs from first principles, and new catalysts and things from our knowledge of quantum mechanics, rather than having to do experiments in smelly laboratories? Can we build self-reproducing machines? New kinds of engineering that biology uses, but human engineering hasn't been able to really duplicate. There's no excuse. We know how matter works, we should be able to do all these things.

JW: I guess that connects to yet another way we could think about the question of finding new orchards, and that is that we need new technologies to be the enabling factor for new discoveries. In much the same way that, for example, computers enabled our understanding of confinement in quantum chromodynamics.

FW: Yes, that's right. I mean, there are new ways of understanding the world with the help of our Silicon friends, and maybe other kinds of friends in the future. So, I like to say that great answers lead to great questions, lead to even greater questions. So, we've answered some questions. I mean, you can always pose these questions: how does mind emerge from matter? What was the early universe like? But to really pose them sharply, in meaningful ways, you have to know what you're talking about and have the appropriate tools to address them. And I think it's only now that we really do have that.

JW: I have some final questions about how you think and how you work, because I like trying, in my own modest way, to learn from really impressive people. The first question is, I understand that you've been teaching yourself machine learning recently, and I'd love to know how?

FW: Yes, well, I've been interested in it for a long time, at an interested amateur level, or maybe a beginning graduate student in the subject. But now I'm getting much more serious and acquiring the tools. I'm not sure what I'm going to do with them, if anything. It's actually quite charming that in that community, the tools are so widely available. It's very well documented. You can get these tools online. Things like TensorFlow and PyTorch, they're out there. The barriers to entry are much lower than people might think. It's a new style of interacting with computers and programming that, in many ways, is more human and more user-friendly than traditional instructional programming, where you write 'do this, do that', in a simplified language. It's different. It's more giving examples, and more like how you would teach a child. It's fun. It's a place, going back to our earlier metaphors, where I'm convinced that not all the low-hanging fruit has been identified, much less plucked.

JW: So how does Frank Wilczek teach himself machine learning? Do you have a systematic approach to self-directed learning and what sort of books or sources are you consulting?

> I read all kinds of things. I've even been trying to read more fiction recently. I read things that I stumble into. I look at a lot of books and read a few pages. And if I find myself resonating with them, then I go further.

FW: Well, I could tell you the particular books. I have a pile. But it's the same way as I learned physics or anything else. I talk to people who have more knowledge. In this case, I've listened to a couple of online courses and I look at books. I see which books are good, and then those books I go into deeper. It's not arcane, it's a very straightforward process of just latching onto things. What's helpful to me though, is that having done this kind of thing before, I feel I have a good instinct for finding things that are not properly understood. I have a lot of confidence and experience that I can find weak points and go for those.

JW: Can you share the titles of a couple of books?

FW: One thing I've really enjoyed, from previous adventures in machine learning, is this book by David MacKay called *Information Theory, Inference and Learning Algorithms*. That's something that I read several years ago. I'm

now rereading it to make sure I understand all the details. That's a good book, but it doesn't go into the latest developments. Then there's *Deep Learning* by Goodfellow, Bengio and Courville. Then there are these kinds of notes called *Reinforcement Learning: An Introduction*. This must be the world's longest introduction, by Sutton and Barto. Those are the actual books I've been looking at, but there are also lots of online resources.

JW: Great. Thanks. You've said that your operating function is think, play, repeat. Can you describe what that looks like in practice?

FW: It doesn't look like anything dramatic. It looks like me typing at my computer and surfing the internet, or calculating and interacting. I do a lot of work with Mathematica, this computer program that I've learned to be pretty fluent with. I'm not so fluent yet with Python and all its tools, but I'm getting there. So that's part of it. The other part of it is talking to people. I do Skype calls with former students, with collaborators. A lot of conferences are archived now, so I can look at those. Nowadays, there is so much information it's kind of overwhelming. So, I consult people who I trust to maintain quality control. That's actually the hardest part. You can easily waste a lot of time by not doing that.

JW: What sort of books do you read that aren't about physics?

FW: I read all kinds of things. I've even been trying to read more fiction recently. I read things that I stumble into. I look at a lot of books and read a few pages. And if I find myself resonating with them, then I go further. There are some books I keep coming back to. Bertrand Russell – I keep coming back to *A History of Western Philosophy* and some of his other writings. I'm a great admirer of Olaf Stapledon, the pioneering science fiction writer. H.G. Wells. But also classics like Shakespeare, Melville, I like *Moby Dick*, and I just read *Crime and Punishment* again, I guess I had maybe seen it in high school or something. But I made a big discovery there, which is a discovery of necessity, but turned out to be really important in enjoying these things – that I should only try to read maybe a chapter a day of something like that, because then I enjoy it. If I try to do a lot, then I think I really should be doing something else. That's one thing. The other thing is, these rich texts, they take a while to absorb, to come to terms with the characters and the situations and imagine it. So, trying to read too fast, at least for me, I lose it if I don't have time to interact with it.

JW: How do you think about balancing humility and self-respect?

FW: I don't think much about it, except that it's something that happens. There are plenty of occasions for humility as you think about the universe. Also at a less exalted level, if you try to do hard problems, as I often do, I fail a lot. If I wanted a lesson in humility, I can go back and look at the Principia, Newton's work. There are levels of human achievement that are just awesome. And it's a lesson in humility that I haven't done that.

Self-respect? Well, I get a lot of positive feedback. Also, I think it goes back to my early school years and ever since, I've gotten a lot of feedback, positive feedback, so self-respect comes naturally. My ego is very secure. But also learning, and this really came especially out of writing *Fundamentals* and thinking about just what an extraordinary thing it is to be a thinking human being – that such a thing can emerge from matter, and how much has to go into it. Billions of years to evolve in this organised complexity, and it's just awesome. And to think that that's me or that's us – it's not all humility. We should have self-respect too, because we're remarkable creations.

JW: Frank Wilczek, I have thoroughly enjoyed our conversation. Thank you so much for joining me.

FW: Thanks. It was fun. Yeah. It's a lot of fun.

The Jolly Swagman
Episode #118

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SCALING EMPATHY WALLS

THE IMPORTANCE OF DEEP STORY

ARLIE HOCHSCHILD
ON
THE JOLLY SWAGMAN (2020)

Interview by Joe Walker

Joe Walker: Arlie Hochschild is the preeminent sociologist of her generation, and is widely regarded as one of the most influential sociologists of the twentieth and twenty-first centuries.

Now a professor emerita of sociology at the University of California Berkeley, Arlie founded the field of emotional sociology. Her work focuses on the powerful role that emotion plays in social and political life. In 2011, alarmed by America's growing polarisation, Arlie decided that she needed to break out of her liberal elite bubble in Berkeley and find an equal and opposite bubble. She travelled to Louisiana in the Deep South where she spent the next five years meeting, befriending and, ultimately, coming to understand Tea Party supporters. These experiences and interviews became the basis of her book, *Strangers in Their Own Land: Anger and Mourning On The American Right*, which was published just before the 2016 election. *Strangers* was a finalist for the National Book Award and is a must-read. Many on the right say that you need to read J.D. Vance's *Hillbilly Elegy* to understand the rise of Trump. I humbly submit that you should read both Vance and Hochschild.

This conversation was recorded on Sunday the 22nd November, 2020. We discuss her journey to the Deep South, what she learned, and how to make sense of America's alarming divisions and the crisis that led to Trump. A crisis that the left can no longer afford to ignore.

JW: Arlie, I really admire you and I think your insights are so important. I'd like to begin by talking about you. Your father was a foreign service officer, which meant you spent much of your early years living around the world. Can you tell me about that experience and any particular memories that jut out?

Arlie Hochschild: Yes. I remember at age 12 being plucked out of what seemed to me at the time a normal girlhood in the suburbs of Washington DC. We were assigned to Tel Aviv, Israel, and it was the middle of the khamsin. It's very, very hot. I didn't speak the language. I didn't know anyone. My parents put me in a Scottish Presbyterian boarding school, which was the only school in the country that spoke English. My classmates came from every country in the world. I stood out as having funny Oxford shoes and American dress. I was a head taller than everybody. It was a very long school day. An hour and a half of play, Hebrew in the playground. I was so unhappy, so displaced, just like a plant pulled up. I just felt odd and

friendless. I remember coming back to my mother. She said, 'Well, how was school today, dear?' In this chipper voice. I was just wordless, just weeping. It was awful. Very strict Scottish teachers, forbidding.

She then said, 'Well, dear, I'm really sorry. But if it doesn't work out after three weeks, we'll send you back to Grandma and Grandpa.' And then I thought, oh God. I've got to adjust to this thing. It was both the most painful and the best thing that ever happened. I think it's very important for me to have been the oddball, to have not fit in. Two years later when we went back to the US, I didn't fit in there either. I wasn't American anymore. So, it was the experience of developing a third eye, the eye of the stranger. When you kind of relax into it, it's the best thing in the world, because then you're looking at the world with a detached ego. You're not on the line, you're just watching from the top of the wall, and it's really interesting what's going on down there in life. When I meet other sociologists or other writers, I see the same things happened to them in different ways. This was just the way that it happened to me.

JW: In your first year at graduate school in sociology at UC Berkeley, you picked up a copy of C. Wright Mills' 1937 collection of essays, *Power, Politics and People*. How did you find this book? How did it influence you?

AH: I found it at a bookstore and I took it home and just read the first few pages. I thought, he's speaking in plain English, he's speaking with quiet political passion, this guy cares about the world. He isn't just studying it. He isn't stuck at the top of the wall just detached and watching. He wants to make it a better world. I just loved it. I just thought, let me read everything he's written and see who else he has read and been influenced by, to see if they influence me in the same way. He was engaged, so that the things he trained his curiosity on mattered. I thought, okay, this is the kind of person I'd like to grow up to be. I didn't find that in the sociology department at UC Berkeley at the time. There were very many other expectations, and certainly for a woman.

But I stuck with him, and also with Erving Goffman, who also influenced me a great deal. He was also engaged in a critique of the society that he observed, but it wasn't a political critique, it was a cultural critique. He looked at all the indignities that go on, for example, in a mental hospital, or for people who have some kind of stigma. I loved his identification with the underdog and how much he could see that was hurtful that went on. Kind of a micro-political lens on the world. I just felt invited into a way of using my curiosity for a larger moral purpose from those two.

JW: You're so curious and so observant. You seem cut out to be a sociologist. Was it an easy career decision for you?

AH: Oh, very easy. Our son once said, 'Mum, I can't think of anything else that fits you that well or that you would do.' I remember graduating from college. I went to Swarthmore College in Pennsylvania. It's a Quaker school. Very academically rigorous. But there was a kind of a spirit of, well, it's not enough to be smart. You really should figure out why you're doing what you're doing and see if you can leave the world a better place than you found it. I'm not a Quaker myself, but that spirit rubbed off very much. When I graduated, I felt maybe I could be a social welfare worker, maybe I could work in the Peace Corps, but maybe sociology. I love art too. When I was 16, I thought I would go into agriculture. I bounced around a little more than it shows.

JW: *Strangers in Their Own Land* – when did you decide you needed to write this book? Take me back to that moment and what your thought process was?

AH: I was sitting in my office on the fourth floor of Barrows Hall in Berkeley, California where I had long taught sociology. It was 2011. I was reading the paper and reading article after article about the rise of the Tea Party, which at the time was a very powerful and rapidly growing movement in the US that basically turned its fire on the federal government itself – that there should be a giant cutdown of the federal government. That it had too many welfare programs. Let's get rid of social security. Let's get rid of food stamps. Let's get rid of head-start programs in schools. One thing after the other, and I was just appalled. I thought, oh my goodness, so many books I've written in the last chapter call for the government to bring about childcare, state-of-the-art childcare or parental leave, neither of which we have in this country at the federal level to this day.

But I thought, okay, most children grow up in

homes where all the adults work. If that's true, let's get really serious about freeing some more worker time to be home with kids for a period of time, or let's get fantastic childcare. I was really focused on that issue, but saw the government as playing one important role at being a solution. I'd written a number of books, *The Second Shift*, *The Time Bind*, *Global Woman*, all of which ended with a call for government activism. And so, here was a movement trying to shoot all that down where the government wasn't a solution, it was a problem. I thought, man, I'm going to go through this life and disappear from it without any solution that I've been calling for. What is this movement? Who are they? How could this make sense to them? How different are they from me? So, because I was used to living in foreign lands, I thought well, where are they?

I was born in the North, and the Tea Party was strongest in the South. I thought, okay, South. Where in the South? Well, how about the super South? That would be either Louisiana or Mississippi. I chose Louisiana because I knew one person there. So that was what got me going, and then I made the leap to go to where the Tea Party was the strongest. One survey actually found that half of Louisiana citizens agreed with the tenets of the Tea Party. So, I thought, okay, I'm in the right place. Let me settle in, see what I can find out.

JW: Why is the Tea Party strongest in the South? Why do whites in the Dixie states tend to be freedom-loving, government minimalists?

AH: Well, that is a question that before it got clearer, got more and more confusing for me, because I came to realise that that was part of a red state paradox, which applies across the whole country. Why is it that it's the poorest states – the states with the most disrupted families, highest divorce rate, most single mums, the lowest achievement scores from schools, worst health, worst healthcare, lowest life expectancy, most pollution, all those problems – that also receive more money from the federal government in aide than they give to it in tax dollars, and revile the federal government. That is the red state paradox. If you've got these problems, wouldn't you welcome help with them? Louisiana turned out to be an exaggerated version of this red state paradox. It was the second-poorest state in the whole country. Forty per cent of the state budget came from the federal government. It had all those troubling rates: among the highest pollution in the country, and a life expectancy five years shorter than that in Connecticut, for example. So, the question just got deeper before I could make my way to an answer.

And then I got my way to the answer by asking people. Who are the people I asked? Well, I joined the Republican Women of Southwest Louisiana. I asked if I could come. To everyone I just said, 'Look, I'm the oddball. I come from out of state. I'm not a member of the Tea Party. I come from very progressive town and state, Berkeley, California. But I'm really worried about the divide in the country, at which point they would shake their heads. Yeah, they were worried too. 'And I'd like to come to know you.' They would say, 'Yes, well people like you don't understand us. You look down on us. You think we're ignorant and racist and redneck.' I said, 'Well, help set the record straight. That's why I'm here. I want to really get it from your point of view.' They were very helpful and took me around. I would ask, 'Where were you born? Could I see the hospital? Where did you go to school? Could I see what row you were in? Can we go to church together? Where are your kin buried?'

Then they would say, 'Well, come on fishing with me. Come meet my brother-in-law.' So it went for five years. Always, this question was in the back of my mind and I would ask them, 'How come you're so down on the government when it looks to me like you would want some help from the government?' They took that red state paradox and they said, 'Well, yeah.' They threw it away. They said, 'Well, we're embarrassed.' It wasn't even a joke. 'Oh, well, bottom again in education.' The Cajuns, that's a group of originally French Catholic, many of whom settled in Louisiana. Very conservative. They had a self-deprecating sense of humour. 'Oh, there we are bottom again. Second to the bottom', as if they could joke about it, it would be less painful. Anyway, they kind of threw that away and said, 'That's not really what's going on for us. We don't want more government help with our problems. We're here in the South and we don't like the finger-wagging North', which they saw the government as, 'Telling us once again how wrong we are.'

So, there was some hesitance, prejudice, bad experience that they associated with federal government as southerners. But I don't think that was it. Certainly, Donald Trump is a northerner. They were later, everyone I interviewed, to embrace Donald Trump. So there was the prejudice against the North and then there was a sense that states and governments don't do what we pay them to do. It was a great deal of cynicism about that. I came to understand why. Louisiana – it's an oil state, it's a bought state. In fact, the big CEOs of the petrol chemical industries do buy or are themselves the legislators in Baton Rouge, Louisiana. They very much shape the government. For example, the Louisiana Department of Environmental Quality that's supposed to keep the citizens safe from dioxins and other contaminants in public waters, don't keep the citizens safe. As one person said, 'Oh, they give out permits to pollute like candy.' So people felt cynical and thought of the federal government as just a bigger, badder version of state government. They had a real point there, I felt.

But then, beyond that, there was a third and final peel-the-onion kind of explanation for the red state paradox, I felt, that you'd have to put in the form of a deep story. Now, what's a deep story?

JW: I'm going to stop you there, Arlie. I want to come to this notion of a deep story, but I just wanted to take a step back and kind of pick apart a few aspects of your journey into the Deep South first. That five years you spent there from 2011 to 2016, I assume that wasn't a continuous five years, and you were still based in Berkeley but making periodic trips down to the South?

AH: Yes. About twenty trips. Some of them I took a nephew with me, I took my son with me twice, took my husband. So these were actually family journeys. After the book came out, I went back, gave the book out, put on dinner for the people that had helped me, and some I dedicated the book too. And then they started to visit me at Berkeley, so we got a little corridor going. It's still going.

JW: That's nice.

To prepare for your journey, very interestingly, you reread Ayn Rand's *Atlas Shrugged*. Why was that?

AH: Well, I didn't know who I was going to find and what was meaningful for them. Let me just say that my method was to take off my own moral and political alarm system, and to try and really climb into the sensibility of people that I knew I would differ from. I knew I would differ from Ayn Rand, that this was the kind of self that seemed to elbow others aside and give such a primacy to one's own will. I couldn't relate to that so I thought, well let's give it a go. So it was a way of preparing myself, to unwrap myself from the speeches I gave about more help for childcare, for parental leave, all the policies I'd been pushing and say, what if we all are on our own? You've just got to do it yourself. The worst thing is to be lazy and unaggressive, unassertive, that Jesus was a wimp. How would it feel to feel so afraid of what one took to be weakness? I just tried to melt into that, so that I could not miss what I was hearing.

JW: The other puzzling thing about the Tea Party's embrace of Ayn Rand is that it doesn't seem to square with the Tea Party's predominate Christianity. Obviously, Rand was an atheist, and the book is about rugged individualism and is often caricatured as being that way. Can I suggest a resolution to this paradox? My friend, or pen pal, David Sloan Wilson, who's an evolutionary biologist, was analysing fundamentalist religious texts a number of years ago and he was trying to categorise different words that refer to either altruism or selfishness. He divided the words up along two dimensions. One dimension was whether something was harmful or beneficial to others, and the other dimension was whether something was harmful or beneficial to one's self. So, then there were four different categories.

Something could be win-win, in which it benefits you and others. Something could be lose-lose, in which it is detrimental to you and others. Something could be win-lose, in which it benefits you at the expense of others. Something could be lose-win, in which you sacrifice something for the benefit of others. Curiously, what he found was that most of the language or almost all of the language in these fundamentalist religious texts relating to selfishness and altruism fell into the win-win category or the lose-lose category. And then he was analysing Ayn Rand and found the

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same thing. All the language about morality in Ayn Rand's texts is either win-win or lose-lose. I think in her philosophical contribution, *The Virtue of Selfishness*, Rand herself states explicitly that there are no conflicts of interest among rational men.

Why this was so interesting was that what they had in common was this obliviousness to trade-offs and everything could be distilled into these acts, which were either great for everyone or wrong for everyone. Life was about this linear march towards glory and away from ruin. I'm not sure if that resolves the paradox, but it's certainly worth considering. I found that very interesting.

AH: It is very interesting. The surprise was when I put down my Ayn Rand and got on the airplane and got to know people in southern Louisiana, they were anything but selfish. They were enormously kind and did things that were not in their own self-interest on a routine basis. These were stayers, people who lived now as adults not far from where they had been born and where they would die. Most of them were church-goers and they had a strong community. For example, I would go and visit one friend – I heard a rattle in the back of the car, she picked me up, and said, 'Oh, those are some pecans that I've picked for a friend who's laid up and not able to, so I'm going to bring them to her.' And then we stopped and she said, 'Oh, in the back of the car, here are some styrofoam plates and cups – I'm doing a fundraiser for our boys in Afghanistan. These are 17-year-old American soldiers, never been away from home. I have some one-touch pillows that we're sending to Afghanistan.'

What are they? Well, when the boy lays his head on the pillow, he knows God is protecting him. This doesn't fit Ayn Rand as I understood her, Miss Selfish, me, me, me. No, these people were very generous. I once had a conversation – this is another part of my method to ask them to help me think out the question so I'm not just asking them what's true for them. I'm asking them, 'Well, help me understand this.' At one point, I said to this very woman, 'Look, I think you empathise with other people as much as I do. I think you're a kind person, but I think we have different empathy maps. That is, I think you empathise with people who are of the same group and the same religion and the same

But the right-wing deep story, as I came to think of it, is that you're waiting in line, a long line that hasn't moved in decades. Your feet are forwards, it's like a pilgrimage. The top of the mountain is the American dream. You're facing it, you feel you've worked hard, you played by the rules.

locale. You're very kind to them. Same racial group. But I think my kindness, no more than yours, is more spread out. It's more according to need as I see it. I don't have to know the person that I'm trying to help.'

She said, 'Oh no, that's not true.' She was a member of the Pentecostal Church and she took me to her church. 'Look right there on the corkboard. Look at all the African children in their Sunday best. There are Pentecostals, right there in Nigeria.' I said to her, 'Right, but aren't they on the corkboard there in your church, there in Lake Charles, Louisiana because you want them to be Pentecostals like you?' She said, 'Well, you got me there.' She was wonderful. I just loved talking with her. Anyway, all the questions sprawl out from your philosopher friend's four boxes: plus, plus, minus, minus ... I can come to grips with it better by thinking about the rules one's ideology puts forward that lead you to empathise and care about another person. These were very caring people, but they were following very different empathy rules.

JW: Let's come to the notion of a deep story. What is a deep story?

AH: It is the feeling that you have about a salient situation, that's really upfront and central. You take facts out of the deep story. You take moral presets out of the deep story. It's just the distillation feeling you have about a salient situation that can be told as in a dream, through metaphor. I should say, we all have deep stories. But the right-wing deep story, as I came to think of it, is that you're waiting in line, a long line that hasn't moved in decades. Your feet are forwards, it's like a pilgrimage. The top of the mountain is the American dream. You're facing it, you feel you've worked hard, you played by the rules. You don't begrudge anyone. You just want to move forwards to that prize. Then, in another moment, in the right-wing deep stories, you see line cutters, people cutting ahead of you, unfairly as you understand, through affirmative action. That would be African-Americans who finally were being given access to jobs that had always been reserved for whites, and women who were finally given access to jobs that had always been reserved for men.

And then there are public sector workers working to save the animals, environmentalists. People would say to me, 'Oh, these environmentalists, they worship animals more

than people.' They thought of them as literally animists. In another moment of the right-wing deep story, there is a leader, President Barack Obama, who seems to be waving to the line cutters. Oh, he's a line cutter too. People would then say, 'How did Barack Obama's mother – she was a single mum – afford a very expensive education at Columbia or Harvard? Something rigged. Something fishy.' Line cutting. And then in another moment of the right-wing deep story, there's someone ahead of you in line who comes from a coastal city, is highly educated and they turn around and they look at you and say, 'You ill-educated, stupid, backward, prejudiced, homophobic, sexist, fat Louisianan. You redneck.' And then that's the snap, the insult to that, the sting. The liberal elite disparaging you – the hard-working pipe fitter in a petro-chemical company.

That makes the line waiter feel like a stranger in his own land and unrepresented by the government. And then in the last moment of the right-wing deep story, Donald Trump comes along and says, 'Oh, you are a stranger in your own land, but come with me. I will give you your land back and get rid of the line cutters, get rid of environmentalists and get rid of equity goals, and bring you back to the 1950s so you can be as safe as white middle-class men.' I then took this deep story and went back to the people I'd come to know and said, 'Look, I've got this story. What do you think? I'll just tell you.' Some people said, 'I live your story.' I said, 'That's your narrative. It describes life every day.' And some said, 'No, you've got it wrong. You forgot that the people waiting in line are paying taxes for the people that are cutting in line, especially the immigrants and undocumented workers and refugees. We're paying for them.'

And then some people said, 'Yes, actually only I end your story differently. We just secede. We get our own government.' Again, this is the South. That's the deep story that is theirs. Since the election, there have been new chapters added to that story. But, in essence, I think that was the cultural picture underlying the red state paradox. Underneath it, I came to realise that the people I had come to know over those five years were what I would call the 'elite of the left-behind'. They were not the abject poor. They were those who found themselves in a declining sector. Globalisation had created winners and losers. This was the losing sector. But they had done actually pretty well within that losing sector. That's who they were. They were looking anxiously at a story of what they felt to be demographic loss, cultural loss, economic loss, religious loss. They felt smaller and dwarfed in every one of those ways. And so, they were eager for someone who promised to lead them to the promised land. That would be Donald Trump.

JW: In talking about the deep story on the right, I think it's careful not to suggest that it's all somehow kind of fictional or not valid. I'm by no means suggesting that that's what you think. But I do want to pause and take stock of the situation among the white American working class and take their concerns very seriously. Because from my perspective as a foreigner looking in and reading some of the literature, it seems not so much that these people have been waiting on the outskirts of hope for the American dream as much as they have just been languishing in purgatory. You are, I'm sure, familiar with the great work done by the Princeton Economists, the Nobel Laureate, Angus Deaton and his wife, Anne Case, who've discovered the deaths of despair. At this point now, 150,000 people in the white working class, people without college degrees, are dying deaths of despair every year. Deaths of despair refers to suicide, drug overdose and diseases related to the over-consumption of alcohol, so deaths of a spiritual crisis.

Somewhere around the year 2000, white Americans between 45 and 54 found that their average life expectancy was no longer increasing. In fact, it was actually declining. That's a pattern seen almost nowhere else on the earth. Now at this point, conditional on education, white misery is greater than black misery, which is consistent with a lot of Robert Putnam's work as well. That education has become a bigger variable than race. So you have these deaths of despair, you have mortality rates increasing. You have the fact that for unskilled and manufacturing workers, real wages have been stagnating and declining since the 1970s. The problem with that, it's not so much or not only money, but it's the dignity and the structure and the culture and ritual that comes with holding a job. As well, particularly for men, if you don't have a job, you're not good

marriage material. If you don't have a stable and consistent family, that's also a huge loss of dignity. That is sort of what generates these deaths of despair, which echoes, as you know, Emile Durkheim's account of suicide, which is that suicide happens when a society fails to provide some of its members with a framework within which they can live dignified and meaningful lives.

So we have this real crisis among the white working class, and then the liberal elite who really broke their end of the deal when they argued for globalisation, turn around and look at these people and point their fingers and say, 'You racist, you sexist, you homophobe.' At that point, it's just like, no, fuck you.

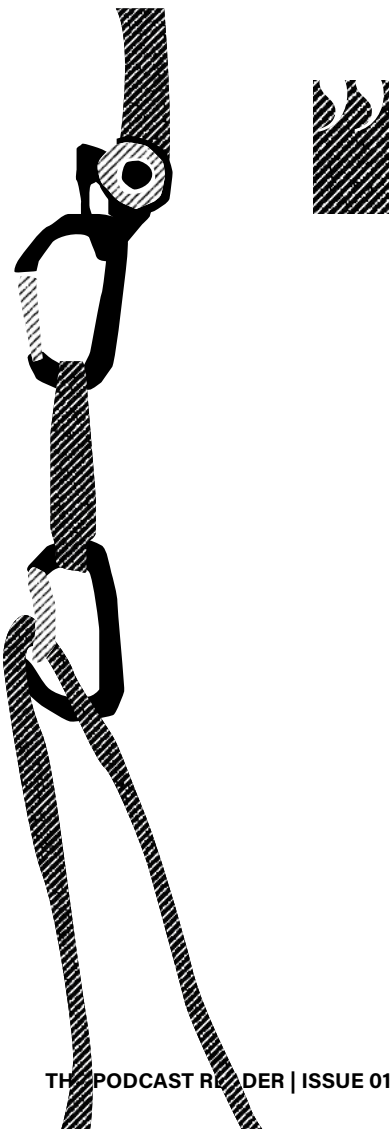
AH: That's right, that's right.

JW: Donald Trump, he was a wrecking ball, but he was their wrecking ball. This was a mutiny by people who'd been abandoned.

AH: Yes. I think what you say is really on the money. That from the early 1970s, the blue-collar class has been on the skids and that these deaths of despair are the human cost of that. I've done a book review in the *New York Times* of that book – I think it's a fantastic book. Here's the thing. There are real problems. The Democratic Party did not address the problems of the losers of globalisation from the 1970s on. That's on the Dems now. At the same time, one is wrong to blame blacks for this or women. Actually, the proportion of blacks in colleges, in the top, let's say, 500 colleges, has not increased in the last thirty years. Actually, family wealth has declined because blacks put their money into housing. In 2008, the housing market crashed. That hit blacks a lot harder than it hit whites. So, wrong to blame this on blacks. Right to look at offshoring and automation. Right to look at the new education divide.

But here's the paradox. If you look at what Donald Trump has done in three and a half years, has he helped the blue-collar man who is in the crisis you've just described? No, he has not. Has coal come back? No. Has large-scale industry come back? No. Has diversification of new kinds of things ... no more than under Obama. With education, is he helping blue-collar men get those BAs? Not at all. He cut the Department of Education by 10 per cent. He's abolished Pew grants to students, which are specifically designed for blue-collar students.

> '... if Donald Trump is closing the door to education, we need to open that door, open it wide, open it with emotional brilliance and invitation so that they can climb that wall into the kinds of jobs and dignity they need and deserve.'



He's actually building a wall where it shouldn't be, between trapped blue-collar men and the solutions they so much seek. It's a giant paradox that, while culturally he's captured their story, economically, he's making it worse. Their water isn't any cleaner, the schools aren't any better and jobs aren't any closer. What they do have is somebody to blame: immigrants, blacks and women.

JW: I think it's unethical at the level of the individual to blame immigrants, blacks and women. But if I was putting on my policy maker hat, I would be a bit realistic about it and just say, well, this kind of zero-sum and negative-sum thinking, while it's wrong, it emerges in a context of stagnation where the overall pie is no longer growing for a certain portion of society. So people are starting to fight over the scraps. I would focus much more on how do we increase real wages for this portion of society.

AH: I think that's right. But I would do it in two kinds of ways. One, I would alter gender culture and realise that a lot of the declining jobs have been 'guy' jobs: blue-collar jobs, dangerous jobs in steel, heavy industry. The kinds of jobs you find in Detroit, Cincinnati, that now have gone to Chinese blue-collar workers or Mexican blue-collar workers, or to robots. What jobs are growing tend to be 'women's' jobs. Maybe we need to alter the conception of being a librarian, being a nurse, being a medical administrator. Just yesterday I was looking at the statistics of the proportion of men in getting degrees in those three things: library science, medical administration and nursing – shockingly, in the US from the 1990s to today, the proportion of men getting those degrees has gone down. It hasn't even just stayed steady. So, what's going on with that? Why isn't that opening up? Are women not letting them in? Has it gotten defined as a woman's thing when we know perfectly well that jobs get feminised and masculinised all the time?

Meanwhile, women are making a beeline for men's jobs, which of course pay more. The proportion of women doctors has gone from 5 per cent to 51 per cent since 1990. Same with law. So, I think we have to look at that and open out a lot of jobs. For example, I'm doing field work now in Appalachia, which is the heartland of this deaths of despair you mentioned. A lot of guys are working in alcohol recovery programs. Extraordinary work that they are doing that is hugely satisfying to them, and they're doing brilliantly. There are jobs that we need to open out, not just look at the old economy. Donald Trump is having us look backwards. We need to look forwards to the new kinds of jobs that are needed and for which there is training.

I had a very sad story that one man told me. He came from a very blue-collar background. He's from eastern Kentucky. He's a recovering alcoholic, now got his BA. But he tells the story of his first year trying to get a degree. His mother and father had told him, 'Stop talking. Don't talk at the dinner table.' In the car, 'Don't talk in the car.' He wasn't used to expressing himself. Brilliant guy. Every Sunday, I Zoom with him. But he got to this junior college, he went and sat in this chemistry class. There were no advisors. He didn't expect there to be advisors, and there were none. There were no sections where he could talk to a teaching assistant. The professor had no office hours. He flunked out in the first semester and took it as a personal flaw on his part. 'Oh, I was too stupid.' No, it was the school that flunked. Why wasn't there someone to greet him, someone to show him the ropes and invite him in, tell him all the different occupations there are?

So, I think if Donald Trump is closing the door to education, we need to open that door, open it wide, open it with emotional brilliance and invitation so that they can climb that wall into the kinds of jobs and dignity they need and deserve.

JW: As you were putting the finishing touches on *Strangers*, Donald Trump was striding onto the stage. I'd like to spend a little bit of time talking about Trump. With apologies to anyone in the audience who's a Trump supporter, I consider Trump a man who is uniquely and comprehensively unfit for the office of the President of the United States of America. But against that context, there was a way in which he was a more effective orator than Barack Obama, if you define oratory more broadly than just the use of fancy soaring rhetoric. I think he was more effective in three ways. The first was he was a master at seeding memes and frames and narratives, like the kind of epithets that he would apply to people, very devastatingly. Pocahontas, Crazy Bernie, Low Energy Jeb, Crooked Hilary, the fake news. And then just

repeat them until they sunk into the public consciousness. These were all very devastating critiques.

Secondly, I think he was very good at drawing the crowd's attention to itself. At rallies, he would always say, 'Look how big this crowd is today, folks', which shows he understands the power of social proof. But finally, and most importantly, he really connects with certain segments of America at an emotional level. Almost every rally of his I've watched, at some point he does his own two minutes of hype where he points to the fake news media at the back and calls them out like, 'Look at them there, the fake news.' And everyone boos. It really creates what Durkheim called the collective effervescence. But there's another thing that he does in terms of connecting with people at an emotional level and that is he explodes a set of what you call 'feeling rules'. Just tell me about that.

AH: He appeals to the people that I've been coming to know both in the South and now in Appalachia. He has two appeals. On the one hand, he's aspirational. He's a billionaire. For all these people stuck in line, wouldn't it be great to move ahead in line, get to the top of the mountain? In addition – here's the paradox – he presents himself as suffering, presents himself as struggling against the Democratic Party, against the mainstream media, against foreign countries, against the deep state, against potential conspiracies. He's struggling. He's suffering. He's saying to people, 'Oh, I'm suffering for you. Can't you relate to me? I'm suffering. So yes, I'm privileged. Yes, I'm successful. But oh, how I'm facing adversity.'

People relate to him both ways – as a success story and as a long-suffering person. Actually, the more the left pokes at Donald Trump, the more his base say, 'Oh, there they go again making it hard for our defender, our guy.' So the feeling rules that I think he's promoting are 'Identify with me, and come into the dark hole in which I live and in which there are many enemies, and you're either friend or enemy.' He is a deeply polarising figure. He's saying to you, if you don't vote for him, you are his enemy. If you work for him, he'll fire you if you don't obey his will. During the pandemic, he criticised Democratic states and not Republican states. When California had a big fire, 'Oh, well that's just a Democratic state so I'm not sure they

'He is a deeply polarising figure. He's saying to you, if you don't vote for him, you are his enemy. If you work for him, he'll fire you if you don't obey his will.'

really deserve federal aid.' He's politicising so many things. The feeling rule is: you do that too, deepen the divide. It's, we're in war so you have to choose. So I think this is very unfortunate and we need to do everything at every level of government – national, state and community level. I'd love to see high school exchange programs. We need to undo that and heal this nation. De-Trump it.

JW: There is one remaining puzzle: if most of the liberal elite failed to understand the emotional needs of the white working class, and indeed it took you five years and 4,690 pages of transcripts to gain a good understanding of the deep story on the right, then how did a real estate magnate from New York City who I'm told doesn't even read, grok the deep story so easily?

AH: I think he relates to it because he had a very harsh father. This is speculation on my part. I think he probably wasn't a good student. I think the written word, dyslexia or something, was trouble for him. He was sent off to boarding school young. So, I think he struggled with shame and with discouragement, and came out the fighter. People can relate to that. I think he comes by it honestly. He knows about struggle.

And it's good that he knows about struggle. We should all know about struggle. We all have had our struggles. It's good that it's helped him relate to people who have had different kinds of struggles than he, but his solutions, both emotional and structural, are more of a problem than an answer.

JW: Trump won about 10.1 million more votes in 2020 than he did in 2016. What does that tell you about the country today?

AH: It means that there was mobilisation of votes on both sides because the whole country has now become hypervigilant about our political fate. It's hard to know what period of history to compare it to. I would say the 1920s, 19 to 21 under Woodrow Wilson. There was this kind of ferment and anti-immigrant feeling, race riots, riots against immigrants. I think it's not the first time that we've been in this much trouble. I would think of the 1960s as a time when there was also a lot of turmoil. But everyone wanted to get to the polls to say what they thought the answer to the turmoil was. His base was mobilised but so too was the liberal progressive base. There were just more people voting.

JW: You talk about scaling empathy walls, and indeed that's what you did in that five-year period in which you spent time in the Deep South. How can we be more empathetic? And do we need a new word in the English language that captures this idea of spending time in another person's shoes?

AH: I like 'empathy wall' for a term. But we have to think of it both structurally and personally. That's how C. Wright Mills might have looked at it. Structurally, it used to be that the labour movement was the middle-man between the Democratic Party and the working class. But now there is almost no more labour movement – with offshoring in the 1970s, companies undercut the labour movement. It hasn't recovered from that. We used to have a compulsory draft, which put people from different regions and different social classes together to mix and match. We don't have that either. We need another structural mixer-matcher, and we need it fast. I was just talking to a member of a farming group that wants to get good healthy food to deserts in the city. This can be a way of bringing people together – rural people, who generally feel looked down on by city people, and the city people they supply. There are a lot of other ways too.

The last time, last year, that I went down to Louisiana, there was a young man from Yale who wanted to meet the people I'd come to know, and who later put together something called the American Exchange Project. It now has thirty different high schools, some in the North, some in the South, some on coasts, some inland. They meet on Google Chat. They form different groups. They make friends. They arrange three-week visits to each other in different regions. In fact, after Lake Charles, Louisiana, was hit by three tropical storms, one after another, a group of students in the North wanted to go down and help rebuild the town. That's the kind of thing we need to scale up onto a national level. We need to do that with universities and other places of work, and churches as well.

JW: Arlie Hochschild, thank you so much for joining me.

AH: My pleasure. Very nice to talk to you, Joe.

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ATWOOD: A HISTORY OF PLACE

AS CANADIAN AS POSSIBLE UNDER THE CIRCUMSTANCES

MARGARET ATWOOD
ON
CONVERSATIONS WITH TYLER (2019)

Interview by Tyler Cowen

Tyler Cowen: We're very honoured to have Margaret Atwood with us here tonight. Just to start with some basic questions about Canada, which you've written on for decades – what defines the Canadian sense of humour?
Margaret Atwood: Wow. What defines the Canadian sense of humour? I think it's a bit Scottish.
TC: How so?
MA: Well, it's kind of ironic. It depends on what part of Canada you're in. I think the further west you go, the less of a sense of humour they have. But that's just my own personal opinion. My family's from Nova Scotia, so that's as far east as you can get. And they go in for deadpan lying.
TC: In 1974, you wrote, 'The Canadian sense of humour was often obsessed with the issue of being provincial versus being cosmopolitan.' Do you think that's still true?
MA: It depends again. You know, Canada's really big. In fact, there's a song called 'Canada's Really Big'. You can find it on the internet. It's by a group called the Arrogant Worms. That kind of sums up Canada right there for you.

The burden of the song is that all of these other countries have got all of these other things, but what Canada has is, it's really big. Therefore, it's very hard to say what is particularly Canadian. It's a bit like the United States. Which part of the US is the US? What is the most US thing?
TC: Maybe it's Knoxville, Tennessee, right now. The Southeast. But it used to be Cleveland, Ohio.
MA: Did it?
TC: Centre of manufacturing.
MA: When was that?
TC: If you look at where the baseball teams are…
MA: Is that what it is? Well, we're not able to do that in Canada because we have one, yeah.
TC: Used to be two.
MA: Yeah, I know. Well, things come and go. We've got hockey, though. You can't take that away from … just a minute, now – you did!

So, what is the most Canadian thing about Canada? It's that when they ran a contest that went 'Finish this sentence. As American as apple pie. As Canadian as 'blank' … the winning answer was 'As Canadian as possible under the circumstances'.

I think Canada, these days, is when you think things are going to go pear-shaped in the States, Canada is a beckoning refuge, as it has been in the past. So, I just want you to know, if things go too pear-shaped here, we have a lovely church basement waiting for you, and a nice hot cup of tea.

TC: What is funny about Saskatchewan? Why do Canadians read so much poetry?

MA: Where are you getting these funny questions?

Saskatchewan isn't very funny. And Canadians used to read a lot of poetry because we didn't have a viable novel-publishing business, or a film industry, or a music industry. But we've got all of those things now. So, they're reading less poetry.

TC: In 1972, in your famous book, *Survival*, you wrote, 'The Canadian way of death is death by accident.' Is this still true?

MA: In fiction or in real life?

TC: In real life.

MA: I think it's more likely to be true in Canada than it is in the States, where the US way of life is by gun violence. Whereas we tend to go for falling into the lake.

TC: Is survival still the central theme of Canadian literature?

MA: I think it's the central theme of the entire planet. I think we were just a bit ahead of our time. So yeah, if you want to know about it – which increasingly you will need to – come to us.

TC: If we look back to the nineteenth century, the US has Melville and Poe and Hawthorne. The Canadian tradition seems to be slower to develop. Why is that?

MA: That's because Canada was slower to develop. So, what you have in Canadian history is in 1760, Quebec falls. There it is, right there. And if that had not happened, there wouldn't have been an American Revolution.

But Canada took quite a while to get a population that was far enough away from the frontier to bother itself with literature.

TC: Is it fair to say that Canada was founded in debt? It had high levels of debt. The provinces unified to pay their debts. They wanted to take out more debt, build more railways.

MA: Oh, so you're talking about 1867.

TC: Sure.

MA: Around that time, confederation happened, I think, for a couple of reasons, that being one of them. But the other one was, there was quite a lot of pressure from incoming people south of the border.

TC: Too many of us.

MA: They confederated partly just to keep from being annexed.

TC: You're active on Twitter. Is Twitter good for literacy, on average?

MA: Okay, on average, you have to be able to read to do it.

TC: Quality of literacy.

MA: Oh, that's different. By literacy, I mean just the ability to read. All of these things where you have to read something then push a button, you actually have to be able to read to do that. So, people are working around it in all kinds of ways, such as YouTube. But you still have to be able to go to the website and push something.

TC: Is it making North Americans better writers?

MA: Oh, I wouldn't go that far at all. But it's made quite a few of them writers who probably weren't writing much before they had the social media option.

TC: You once wrote, 'Gardening is not a rational act.' Would you care to elaborate?

MA: I think you've slipped over into the silly side. Okay, it's not a rational act. Why did I say that? I don't know. When did I say that?

TC: I don't remember offhand.

MA: Well, you plant things, and you spend quite a lot of time doing it. I did have a very successful garden once, but that was because I had a lot of excellent rotted cow manure, which was close to hand. So, gardening is like anything else: if you want to succeed, read the instructions. You need sunlight, good soil and water.

TC: Now, as you know, you've written a work for the Future Library called *Scribbler Moon*, and it won't be read by anyone else until 2114. Correct?

MA: That's correct.

TC: How did you write differently for the far-off future?

MA: I'm not allowed to tell you what I wrote.
TC: No, you don't have to tell us what, but how did you approach the problem differently? Or did you just write what you would write for an audience today?
MA: No. No, I didn't. But I can't go into detail because when you sign up for this thing, one of the things you can't do is tell what you've written. The mandate was, 'Make an artefact out of words, of any length, any kind of artefact, as long as it's words, and two copies only. Give it to the Future Library of Norway. They'll save it up.'

They're going to accumulate these things for 100 years and, in 2114, they're going to open the hundred boxes. There's more pressure on people who put theirs in five years before that. No pressure on me. I'm not going to be there, unless something very strange happens. Then they're going to cut enough trees from the forest that will have grown, we think, to make the paper to print the Future Library of Norway anthology.

It's a beautiful project. It's very hopeful, and they're inviting writers from all around the world. I think they've had a Turkish one. They've had an Icelandic one and, in the case of smaller languages, they're putting a dictionary in the box, just in case.
TC: Doing it in reverse, let's say you were writing for readers from 1890. How would you think about writing for them?
MA: Impossible.
TC: Why?
MA: Well, because I don't live in 1890.
TC: But you've read plenty of Victorian fiction.
MA: I have, yes. But that's a different thing.
TC: Do you sometimes even think of yourself as a nineteenth-century novelist?
MA: Nooo.
TC: No?
MA: No. You can write historical fiction, but it's always going to be of the time in which you're writing it because you don't have a choice. Walter Scott's *Ivanhoe*, although it's about the Middle Ages, is a nineteenth-century novel.
TC: I'm a big fan of your novel, *Hag-Seed*, which I believe is your latest. A few questions about that and Shakespeare: How sympathetic is Shakespeare to Caliban in *The Tempest*?
MA: Shakespeare himself, when he was doing *The Tempest*, I think, saw Caliban as one of his comic figures. But, as always with Shakespeare, nothing is two-dimensional. So, *The Tempest* has undergone a number of different metamorphoses in performance since Shakespeare. We have *The Tempest*. Then we have Oliver Cromwell. The theatre gets shut down. The tradition is broken.

When the theatres come back, they can't actually remember how these things were done. So, in the eighteenth century, *The Tempest* was an opera, and they added some people. They added a person called Dorinda, who is Miranda's sister, so that they could have an ensemble group of singers, obviously. Then they added another guy so that Dorinda would have somebody to marry. Then they learned how to fly Ariel, and Ariel flew around.

Then when they tried to bring back the original *Tempest*, nobody liked it because they wanted the opera. They wanted Dorinda and the flying Ariel. In the nineteenth century, when Ariel was always played by a woman who flew around, Caliban became a romantic sort of Byronic hero, oddly enough. Because by that time, people had caught up with slavery in the US, and noble savages and other things like that that were of the nineteenth century.
TC: And he has real charisma.
MA: Well, it depends how he's played. It really depends, and I've seen, by this time, a lot of performances of *The Tempest*, including film ones. One by Julie Taymor, in which Prospero is Prospera (she's the duchess of Milan), has a pretty good Caliban.

But he has a lot of resonance. He's given the most poetic lines in the play. There's a big question about him, which is, what happens to him at the end? We're not told. It's another of these open questions. We just don't know.
TC: How sympathetic are you to Prospero? There's a line in *Hag-Seed*: 'He would seem to be the top jailer in this play.'
MA: Well, he is.
TC: Do you like him?
MA: Like or dislike, it kind of doesn't matter. I'm sympathetic to him in some ways. He says himself that he got himself into this. He was the duke. He didn't do his 'dukely' duties. He didn't behave in a duke-like way. He went off to study magic instead, and let his brother usurp the kingdom. By doing so, of course, he endangered his young child and ended up on this island.

If you want to know why he wants to get off of it, look at the menus, which I did. I did a little foodie piece for a food magazine on what they were actually eating. It's not fun.

TC: As Leggs suggests in *Hag-Seed*, is there any chance that Prospero is Caliban's dad?

MA: Think about it.

TC: Someone has to be, right?

MA: Somebody has to be his dad. So, if we're not accepting the devil as being the progenitor of Caliban, who is? I ask you. They're both in the magic business. Why would they have not met up at a convention? Sort of a one-night stand producing Caliban.

TC: Do you think Shakespeare believed in ghosts?

MA: Did Shakespeare believe in ghosts? We kind of don't care.

TC: Do you believe in ghosts?

MA: Okay, this is another question. I believe that people have the experience of ghosts. But that's different from saying that there are objectively ghosts that can be measured. A lot of people have ghost experiences. It's well-attested. But does that mean there is a thing out there? Again, it kind of doesn't matter. This is people's experience. So, in the world of Shakespeare, there are ghosts.

TC: And in the world of Margaret Atwood?

MA: Yeah, there are ghosts. People have experiences of ghosts.

TC: In the world of Tyler Cowen, I'm sorry to say, no ghosts.

MA: But I bet you know people who have.

TC: Absolutely.

MA: This is Virginia. It's full of them.

TC: *The Handmaid's Tale* – is it an accident that you started it in West Berlin in, I think, 1984?

MA: Wasn't that corny? It was very corny, but I couldn't avoid it. If I had been able to do it in some other year, I would have because, inevitably, this question comes up. But I just happened to be in West Berlin. I didn't go there on purpose to do that. But there I was, and how handy it was because the wall was all around. And being Canadian, I could go into places like East Germany and Czechoslovakia and Poland easier than German nationals could. So, I did.

TC: You had had a prior trip to Afghanistan. Did that influence the book at all?

MA: A bit, yeah. I was lucky enough to see Afghanistan six weeks before the present unpleasantness started. Six weeks before they assassinated Daoud. It always has been a crossroads, and it's always been desirable – by China, by Russia, and by anybody else in the vicinity because things went through it.

At the time we were there, there was a great big Chinese embassy. There was a great big USSR embassy. And there was a great big American embassy. Daoud was doing quite well by playing them off against each other and getting stuff out of them. They should have stuck with him. But it's been chaos ever since. I saw it at the last minute before a lot of things just got blown up.

TC: Did reading the Book of Genesis serve as an actual influence on *The Handmaid's Tale*? Or it's just a connection you noticed later?

MA: Oh, no, it's right there in the epigraph. So, the question to you is, if you're going to take the Bible literally, how literally would you like to take it?

TC: Is it the Jacob version of this story or the Abraham-Sarah-Hagar version of the story that grabbed you? Usually you mention the Jacob version of the story. Why?

MA: Because it's got more people in it.

TC: But the other version has a happy ending, right? You get Isaac, you get Ishmael. They each found tribes.

MA: Why would I write a book with a happy ending? It's not such a happy ending. It's a very ambivalent ending, I would say. Abraham is a very dicey character in the Bible. But there's a wonderful book called *God: A Biography*…

TC: The Jack Miles book?

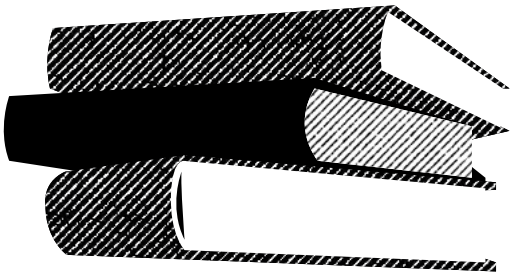
MA: Yes, it's a wonderful book. I love it. It's got the best exploration of the Book of Job that I've ever read. I think it's brilliant.

But remember where my roots are. I'm Canadian. We took the Bible in school. There wasn't any separation of church and state. Then I went to college and studied with Northrop Frye. Then I went to Harvard and studied with Perry Miller. And for all those people, you had to know the Bible.

It might also interest you to know that I won, from my Sunday school, the prize for the best temperance essay: 'Why you shouldn't drink.' Would you like to know why?

TC: Why? I think I know why. But please, tell us.

MA: It's a Canadian reason. If you drink and then go out into the cold, all of your blood is



‘Books are a very curious thing because they originate – if they’re not just formula books – in the gift sphere. Then they have to pass through the valley of the shadow of the commodity before they get back in the hands of somebody who loves them, at which point they turn back into a gift.’

going to be in your capillaries. You will freeze to death.

TC: That argument doesn’t work in Russia, somehow.

MA: There’s a very interesting little piece to that puzzle, which was that Peter the Great discovered that he could tax the consumption of alcohol. This is for economists. It’s in a book called *The History of Alcohol*. He discovered that he could tax it, and then he made it unpatriotic not to drink. He made it a crime to agitate against drinking because he was making so much money from it. Did you know that?

TC: No. What are the aspects of conservative religious communities that you admire?

MA: They’re very stable.

TC: Are they stable?

MA: Yes. It’s kind of a law of nature that nothing’s stable forever.

TC: Do you think Canada will ever become much more religious again?

MA: No.

TC: Or secularisation is a one-way street?

MA: I don’t know whether it’s a one-way street, but Canada is very big.

TC: It is and it isn’t though. There’s a certain concentration?

MA: It has a lot of different populations in it. When I published *The Handmaid’s Tale* in 1985, the British reviewed it by saying, ‘Jolly good yarn,’ because they’d had their religious civil war and they weren’t going to have another one. They’re having a different kind of civil war right now, but it’s not a religious one.

The Canadians said, in their nervous way, ‘Could it happen here?’ And the Americans said, ‘How long have we got?’ In fact, they spray-painted on the Venice Wall in California, ‘*The Handmaid’s Tale* is already here.’ And that was in 1985. So, Canada is just too diverse. There are too many different groups to provide the 35 per cent that you need to get a really good totalitarianism going.

TC: Someone argued that women are gaining cultural power all the time in virtually all countries. Even Ireland has legalised abortion. Is this fear a fear which belongs purely to the past?

MA: No.

TC: What’s the trend today that worries you, then, given what appear to be many trends in the opposite direction?

MA: Everything's joined at the hip, as you know, being an economist. My fear at the moment is essentially climate change driving droughts, floods, making places uninhabitable. When those things happen, you always get wars of one kind or another. And when you get wars, they're always bad for women. I'm not alone in having this particular fear.

The other thing that's going on – I don't know whether you caught it – but there was a big article on the aging of populations. When you get aging in populations, you're going to get a top-heavy population, not enough young people to support it, and a lot of pressure on younger women to have more children.

TC: It's now the case, as you know, that in a city such as Toronto, more than half the population, I believe, is foreign-born.

MA: That's true.

TC: Does it feel to you that somehow Canada is gone? Or this is the new Canada?

MA: This is the new Canada. But it's the old Canada, too, because Canada's really big.

And it's always been very culturally diverse, if you go back and look at the history. Before Europeans, there were numerous different indigenous cultural groups in Canada. When we say 'a country', basically it's just lines somebody drew on a map. But to get the deep history of a place, you're looking at populations. Who was there? What were they like? What did they do? And what kind of language did they speak?

TC: But you've spoken out in favour of the cultural exception being part of the NAFTA treaty that protects Canadian cultural industries. Is it strange to think that having more than half the population being foreign-born is not a threat to Canadian culture, but that being able to buy a copy of the *New York Times* in Canada is a threat?

MA: Okay, by Canadian culture, all we mean is controlling the means of production. That's it. It's not saying things about content. It's about who gets to say what we're going to publish, etc.

TC: So, the worry is that Canadian newspapers would go away.

MA: They are going away. So are yours.

TC: That's true.

MA: Yeah, so the newspaper is a form, but book publishing actually is where we entered this story, and we entered it in the 1960s when there were very few publishing outlets for Canadian writers. People routinely told you, 'If you want to be a writer, leave the country.'

So, our generation did things like forming publishing companies and starting the writers' union, one of the activities of which was to stop the illegal import of overruns of our own books that were coming into the country and being sold as remainder copies. That kind of basic economic stuff was what we were interested in, not in controlling what people were saying.

TC: About thirty years ago, you were a major defender of Salman Rushdie and the whole fatwa affair. Do you think that today – thirty years later – Western governments would have spoken up as much as they did back then to defend Rushdie?

MA: Oh, who knows what they would do?

TC: But it's a very different world. How would it play out now?

MA: Well, I think people are just scared. We were in PEN at that time – PEN Canada – and my partner, Graham Gibson, was the head of it. He was the only person speaking out publicly, the only one. Governments, churches, unions, they were all saying to him privately, 'You're doing a great job.'

But they weren't saying anything because they were frightened. This was an unprecedented sort of thing. The Norwegian publisher got shot, the Japanese translator got shot and killed. I was down here running in and out of radio stations with people saying, 'There's your car.' But Seattle was good. Seattle kept its bookstore open.

TC: Do you think the Western commitment to free speech is waning?

MA: Yes.

TC: And why has that happened?

MA: Well, you know, people eat their own. I think there's a lot of conversations going on right now amongst people who have forgotten the 1940s. They've forgotten Hitler, they've forgotten Stalin, they've forgotten purges, they've forgotten censorship, they've forgotten book burnings, they've forgotten all those things. These kinds of shutting down of people are always done with great flags of virtue flying overhead.

But, of course, Stalin and Hitler did the same thing. Both of those societies were proposed as utopias. People were told by both of these outfits – including Mussolini will make it three

– that things were just going to get better for people under them. But first, we had to purify things by getting rid of degenerate art, getting rid of bad books and getting rid of people that weren't desirable. That whole kind of scenario – people have forgotten about it.

I recently read the book, I think it's called *Hitler and Hollywood*. There was an active group of Nazis in Hollywood, and they had a plan to kidnap twenty-three media moguls and hang them in a park. That was in the 1930s. We've forgotten all of that. We've forgotten what that kind of thing looks like. So, the message is, if you go in for censorship and shutting people down, the next person that's going to happen to will be you.

TC: Almost two years ago, you wrote that you were not, in every way, considered an entirely proper feminist.

MA: I'm not.

TC: What did you mean by that?

MA: I never have been.

TC: What's your greatest heresy?

MA: Oh, they're many. They're many and numerous. I don't know. If you look on the internet and put 'kinds of feminism', there are now about seventy-five different ones. So, if somebody asks you if you're a feminist, you really have to say – same as if they ask if you're a Christian – 'What kind?' Are we talking the pope? Are we talking Mormons? What is the category? So, similarly with feminist – what kind? Answer that, and I'll tell you if I am one.

TC: What was the very first business you ran?

MA: My very first business I ran, I think, was selling blueberries for five cents a pop, for a little container of them. It was quite stupid because I was seven and there were lots of blueberries that people could just go and pick. But, nonetheless, that was one of my first businesses.

But my first real business that we actually made a profit out of was in high school. For that business, I had a partner, and we ran kids' birthday parties. We didn't charge enough. We did everything. We did the welcoming, we did the present unwrapping, we did wiping the tears, we did the sandwiches and then we put on a puppet show.

The mums loved us because they were out in the kitchen drinking gin while we were doing all of this. We got so good at it, we got an agent. We were doing company Christmas parties with the puppet show.

TC: All of this in high school?

MA: Yeah.

TC: And your second business was what?

MA: My second business was a silkscreen poster business, which came just before offset printing and other forms of cheap reproduction. You know what silkscreens are?

TC: Sure.

MA: You have a big screen, and you squidge everything through it.

TC: Andy Warhol, yeah.

MA: Yeah, you have to do one colour at a time. I used to do that on the ping-pong table.

TC: Now, we're going to have the middle segment here. I'll toss out the names of some authors or books, and you tell us what makes them special to you. Or if you don't like them, that's fine.

MA: What if I like them but they're not particularly special? Is that a category?

TC: Lewis Hyde, *The Gift*.

MA: Oh, I love that book.

TC: Why?

MA: Because it's the only book I ever recommend to writing students, but it's not about how to write. It's about what are you doing? What is this writing? And what is art? He makes a distinction. You probably like this book, too, because it's got some economics in it.

TC: Money, reciprocal exchange.

MA: He makes a distinction between things that are gifts, which operate in a different way from things that are just commodities. Books are a very curious thing because they originate – if they're not just formula books – in the gift sphere. Then they have to pass through the valley of the shadow of the commodity before they get back in the hands of somebody who loves them, at which point they turn back into a gift.

It's very instructive for young artists of any kind to read this book because it gives them a fix on what they're doing. And also on their relationship to money, because if you live in a society where most things are judged by money, you can really struggle with being an artist and how your art gets evaluated and rewarded.

TC: H. G. Wells, Island of Doctor Moreau.

MA: Yes, well, I read all of Wells in high school because we had the collected volume, and it

was in the cellar where I did my homework. It was so tempting to read Wells instead of doing my homework, which of course I did.

TC: But some of it's terrible, right?

MA: Some of Wells is terrible, but Moreau is quite interesting as a book. He wrote his early works of genius in a very short period of time. He wrote *The Time Machine*, and then he wrote Moreau, and then he wrote *War of the Worlds* in a very compact period.

TC: Chinese science fiction – do you read it?

MA: No, not yet.

TC: The *Three-Body Problem* is wonderful.

MA: I read this huge volume of Chinese historical fantasy, which is, I think, *The Condor (Trilogy)* series, which is very intricate and has to do with Genghis Khan and the Han Dynasty and various things like that, with some magic as well, and a lot of martial arts.

TC: Young adult novels – do they have lasting aesthetic value? Or are they just fun?

MA: Oh, some do and some don't. It's like anything else. You've got good ones of any kind of book, and ones that are not so good, including literary fiction. Not all literary fiction is good just because it's literary fiction.

TC: The Charles Laughton movie *Night of the Hunter*.

MA: Love that.

TC: Why? It's not Canadian. It takes place in a small country.

MA: That doesn't matter. I'm very universal in my interests. I think I saw it when it first came out in the 1950s. It got overlooked. It didn't get accorded the attention that it should have because it came out in the same year as the *Blackboard Jungle*, and I think around the same time as an early Marlon Brando movie. There's a period of black and white film in the 1950s that's actually pretty interesting, and that movie is one of them. I would say it's Mitchum's best role.

TC: *Star Wars* – is it interesting?

MA: It is to me, but the early ones rather than the later kind of desperate spin-offs.

TC: Why is birding interesting?

MA: Let's talk about *The Wizard of Oz*.

TC: Sure. It's an economics movie. It's about bimetallism. The yellow brick road is about the gold standard. This is not commonly known, but it's true. It's a monetary allegory, the whole movie.

... any language is a different way of viewing the world. If you only have one way of viewing the world, if you only have one language, you're missing a lot of possible solutions and approaches that you otherwise would have.

MA: You think so?
TC: I know so.
MA: You know a lot of things. So, the Tin Woodman is what in it?
TC: He's one of the people in the bimetallist debates. But there was a *Journal of Political Economy* article going through all of the parallels.
MA: And Dorothy is what?
TC: I think just the innocent American crying for relief.
MA: Are you buying any of this? I'm not. And the tornado is?
TC: Maybe depression, deflation.
MA: And Toto is?
TC: That one I'm stumped on.
MA: The flying monkeys are?
TC: William Jennings Bryan?
MA: Okay. Well, here's the really interesting thing about *Wizard of Oz*: the male wizard is a fraud, and all of the other male characters are missing something.
TC: That's right.
MA: Yes. But the witches are real. Now, Tyler, I'm going to tell you a story. One October, my next-door neighbour – his name is Sam – came out of his house and he saw me sweeping my leaves with a broom. And Sam said to me, 'Margaret, you shouldn't let people see you doing that.' And I said, 'Sam, why ever not?' And he said, 'It's the broom.' And I said, 'What do you mean?' And he said, 'Don't you know that people call you the wicked witch of the annex?' And I said, 'Sam, fear inspires more respect than love.' And he said, 'Margaret, you're right.'
TC: What do you like to watch on YouTube?
MA: Well, there's been a little collection of *The Handmaid's Tale* artefacts, and one of them is a YouTube thing called 'They Finally Made The Handmaid's Tale for Men.' I recommend it. It's very funny.
TC: Why is there so little populism – if that's the right word – in Canada? It's sweeping many other nations, including Australia. But so far, not Canada very much.
MA: I think it's because of the Canadian sense of humour. We make fun of them. But our turn may come. We had a conservative government before you did.
TC: And you had a social credit movement in the 1930s.
MA: Yes, we had this guy called Wacky Bennett out in Vancouver.
TC: What would a Canadian populism look like? Would it be funny?
MA: This is our problem, you see. As I say, Canada's really big, and it's very diverse, so you can have a Quebec populism, and they have had quite a bit of that in the past. I don't know what a Newfoundland populism would look like. I'm not too sure. We sort of know what Alberta would look like, because they had that for a while. In Ontario, we've got this one that purports to be that right now, but he keeps running up against a wall because he does something that's not popular.
TC: What do you think of Canada's Truth and Reconciliation Commission?
MA: They're working hard.
TC: Are they succeeding?
MA: Well, there's a lot to reconcile. Just for people that don't know what that is, it's indigenous First Nations in Canada, as in this country, except because you've had a lot more massacres than we had, you had fewer people left to be reconciled with. So, reconciling incomers, which means everybody who isn't indigenous, with indigenous communities that have been badly treated in really recent memory.
TC: Should there be bilingual education for indigenous communities in Canada? Or should the goal be assimilation towards English or French?
MA: I would be for bilingual or trilingual.
TC: If possible.
MA: Absolutely. These are very interesting languages, and any language is a different way of viewing the world. If you only have one way of viewing the world, if you only have one language, you're missing a lot of possible solutions and approaches that you otherwise would have.
TC: Is there, at this point, a plausible scenario where Quebec leaves Canada?
MA: Not at the moment.
TC: But the future? Or do you think it's inevitable that there'll be greater integration, more immigrants in Quebec?
MA: I think things will stay kind of the way they are. But think about this very carefully, as people did when it was a distinct possibility. The people to the north of Quebec are not French-speaking Quebecers. They're indigenous people. And

they said – and that's where the hydroelectric power comes from, by the way – they said, 'If you separate from Canada, we're going to separate from you on the same grounds. Different language, older culture, etc.' And Quebec said, 'Oh, no, you're not.' And they said, 'Oh, yes, we are. And, by the way, we happen to have a treaty with Canada that says that if any foreign power invades us, they have to defend us.' So, if Quebec separates, north of Quebec separates from Quebec, Quebec invades them, Canada invades. You see what I mean?

TC: Sure.

MA: Okay, so the other one was, Quebec separates and makes a military alliance with France, a nuclear power. How happy would the US be about that?

TC: Not entirely.

MA: I would think not, and maybe that's why they had plans for invasion of Canada at that time, should Quebec separate.

TC: If you were to recommend to an American a Canada trip that he or she maybe hadn't already done, something underappreciated, what would it be?

MA: Something they hadn't already done? You mean not Toronto, or Montreal or Vancouver? Well, there's nothing like the Canadian Arctic.

TC: And what should people do there?

MA: It will completely change your view of the planet. You should go with a group called Adventure Canada, which is small, so you're not going to be on a huge, enormous cruise ship. In fact, it won't be called a cruise at all because it cannot be guaranteed that you're actually going to go where they say you might. You can get beset by the ice.

TC: Is there Twitter up there?

MA: No, not much. If you're in a community, there is, but a lot of it, of course … as I say, Canada's really big, and there's a lot of geology. A lot.

TC: Earlier in your career, why did you quit philosophy?

MA: I quit philosophy because it was the age of logical positivism, and that wasn't the part that I was interested in. I was interested in ethics and aesthetics, which had been relegated to the subbasement at that time. They've since been disinterred, but at that time they were quite sneered upon. I did not want to end up in logical positivism in my fourth year of philosophy.

TC: And quitting was the way to get out of it.

MA: I didn't exactly quit. I moved over. I moved sideways into honours English, but I kept philosophy as a major.

TC: For a while, you had a faculty post at the University of Alberta. If you had somehow stayed there, in that counterfactual, how would your writing have evolved differently?

MA: Well, my more interesting one was at the University of British Columbia, Alberta. I was just a part-timer. It was quite small. I was teaching grammar to engineering students at 8.30 in the morning in a Quonset Hut left over from the Second World War. That was fun.

TC: Was it good for your writing?

MA: It was good for their writing. But it was good because what I did was, I had them read Franz Kafka's *Parables and Paradoxes* and then write their own parables. Franz Kafka's *Parables* are sort of problems. They're like engineering problems. So, they had a good time doing that, and anyway, none of us were awake at that time of the day in any case.

TC: Do you write every day?

MA: No.

TC: How do you decide on a given day whether or not you write?

MA: Depends on what I'm doing.

TC: Travel aside.

MA: No, no. If I'm in the middle of a project, I work at it every day. But if I'm in between things, then, of course, I don't.

TC: What's your best work habit, in your opinion?

MA: I have no good work habits.

TC: Well, there's evidence to the contrary on this table, right [points to books on bookshelf]?

MA: Yeah, but those were not produced by good work habits. I tried to have good work habits once, but it was a terrible, terrible failure. I tried to be organised and methodical, but that didn't work.

TC: What's your most unusual work habit?

MA: Well, it depends who's calling you unusual, doesn't it? I don't have any fetishes, sad to say. I don't have some mythic fountain pen or something … I don't have a cork-lined room. I don't have to have fifteen … Who was it that drank thirty cups of tea? I don't know how they could have done that. I think it was [Samuel] Johnson. He must have been absolutely mummified inside. Balzac – how much coffee

did he drink? I think he must have been insane. Anyway, no, I don't have any really terrible work habits, except possibly caffeine.

TC: You've written a great number of book reviews, more than most writers. Why has that been the case?

MA: Well, it's this thing of coming from this small country where you kind of had to do stuff yourself. Writers were in the habit of writing reviews of books because other people weren't doing it.

I see it sort of like giving blood. You don't like it, and even though they give you a cookie and some orange juice, it's not fun. That's about all you get from writing book reviews, too. But you feel you have to contribute to the pool of book reviews, just as you have to contribute to the pool of blood because one day you may need some.

TC: You gave a very positive review to John Updike. Do you feel that work has held up? Or does it look different now, looking back?

MA: I would have to go back and look. It was *Witches of Eastwick* – that's what you're thinking of?

TC: Yes.

MA: Okay. The most noteworthy thing about doing that review is that I had this big fight with the *New York Times* about what sorts of words I could use.

TC: Which words were they banning?

MA: They were banning words having to do with urine because there is urine in that book. So, what were we to call it? We could not call it piss. We could not call it pee, or urine. They said, 'This is a family newspaper.'

TC: What was in their style guide? They have a style guide for everything.

MA: They didn't have anything in it. So, we ended up calling it bodily fluids, which was much worse in my opinion. It was what the witches were putting into their charms.

I was, at that time, living in a rectory in Norfolk, England, and there was no phone that I could phone out on. In order to phone out, I had to go outside the building into a phone booth – remember those? – that a farmer was using to store his potatoes. I had to climb over these potatoes and put enough money into the phone in order to make a phone call. Anyway, this is what life used to be like. You're too young to remember that.

'I see it sort of like giving blood. You don't like it, and even though they give you a cookie and some orange juice, it's not fun. That's about all you get from writing book reviews, too, by the way. But you feel you have to contribute to the pool of book reviews, just as you have to contribute to the pool of blood because one day you may need some.'

'... Canada was very low on the totem pole of what you took seriously as any sort of artistic thing. People really would say to me, 'Canadian literature – isn't that an oxymoron?'

TC: It seems you're publishing – or maybe writing – poetry somewhat less frequently than you used to.
MA: That's untrue.
TC: It's just being published at a different pace?
MA: I'm about to drop a great big sack full of poetry on a waiting world.
TC: Oh, great, wonderful. And when is that coming out?
MA: When I get it arranged.
TC: Tell us about your patent, the LongPen.
MA: Oh, it's not just one patent anymore, dear.
TC: How many?
MA: Oh, I've lost count.
TC: You've circled your patent with patents.
MA: It's families of patents.

A long, long time ago, before you were born, and before there were any smartphones or tablets or any of these things we now use, a FedEx messenger came to my door. He had a little 'doodad' and asked me to sign for my package. So, I signed for my package, and while I was signing, I thought, this signature is winging its way through the air and it's coming out somewhere else in the form of ink on paper.

This was not true, but I thought it was. And I thought, 'Why can't I use something like this for remote book signings?' Remember, this is so long ago, there weren't even any cameras in your laptop. In fact, there weren't any laptops.
TC: Yes.
MA: So, I said to somebody, 'Why can't we do a remote book signing?' They laughed at me because they were more technically knowledgeable than I was. Then I said, 'See if it exists.' They went off and looked. And they came back and said, 'It doesn't exist. The closest thing to it is remote surgery.' Which is quite a different thing because you don't want to sort of scribble on a body with a knife, unless you're in a Kafka story.

I said, 'Well, if it doesn't exist, why don't we invent it?' So, we invented it. It took four prototypes, one of which blew up and flew across the room. It was more difficult than we thought, but we did it. And we ended up signing books remotely because the idea was to do remote book signings for people who couldn't have real people because their publishers would never send them there.

We ended up doing that, but we didn't know how to scale it. So, then it segued into another area of life. It passed through the valley of the shadow of the digital. Maybe before three years ago, there was a period when people were saying, 'Everything's going to be digital, so why are you wasting your time doing this stupid thing?' And they said all books are going to be e-books. That's not true. It didn't turn out to be true.

And it turns out that not everything can be digital, and we now know why. Why is that? Because it's so screamingly hackable. The thing is that a lot of higher kinds of documents will not accept digital signatures, if you can't produce a pen-and-ink paper version.

We were the only people who, as it turned out, could do that. If you'd like to read more about that, you can go onto the internet and put in syngrafii.com and there's the whole story. So, the remote signing device that was originally intended for books moved over into business and the area of security and compliance.
TC: Women have faced many disadvantages in history, but it seems, in the written arts, they've managed to overcome those disadvantages much more easily than, say, in painting. Why do you think that is?
MA: You could do it anonymously, and you

could do it at home, and you could pretend to be somebody else, as a lot of women writers did.

In painting – and I think this is hilarious – they wouldn't let women into art schools because they might see naked women…

TC: When you were living in London – I think this is after Alberta – were you ever tempted just to stay there and be part of the London literary scene?

MA: No.

TC: Why not?

MA: Because I'm not British.

TC: But people often move countries.

MA: They do.

TC: It's probably easier to earn a living as a writer in London.

MA: No, I don't think so. I love going there and making fun of them. So, no. I have lots of fun, but living there would be a different type of thing. I remember when I first went there, Canada was very low on the totem pole of what you took seriously as any sort of artistic thing. People really would say to me, 'Canadian literature – isn't that an oxymoron?'

TC: And people there – they didn't know you were Margaret Atwood, right?

MA: Well, I wasn't Margaret Atwood yet. Yes, but I was a fly on the wall. Anyway, lots of fun. But no, I could never really be somebody else. I have given a couple of lecture series, mainly at Cambridge and Oxford, and I took care on those occasions to be as Canadian as I possibly could. There was no point trying to pretend to be British. They find you out immediately.

I have an agent who is actually Polish. She grew up under the Soviets in Poland, and her name is Karolina Sutton. She told me this, and I said, 'But, Karolina, you've got such an amazing British accent.' And she said, 'Oh, no, it's very fake.' She said, 'I learned it off the BBC.' She said, 'The British can tell immediately that I'm not British.'

TC: To what extent do you crave having some part of your life where people really do not know you're Margaret Atwood?

MA: Oh, that's easy to arrange.

TC: What do you do?

MA: I just go to some other country where they don't know I'm Margaret Atwood. Although, you never can tell when somebody's going to pop out of the woodwork. It's why I can't be an effective criminal anymore.

TC: Last question about your career. Overall, if you were to explain the enormous, prodigious output, which people are still reading – virtually all of it – some of it is here on these shelves, to what do you attribute that? Why are you one of the most productive writers?

MA: Because I needed to make a living out of it.

TC: But you're still writing, yes?

MA: There you go. I don't have a pension. I don't teach at a university. What can I say? I took some measures to avoid teaching at a university because I did teach at universities, but back in the grim old days when there were gender issues. (I don't like to say this, but there were.) Also, there were writer issues at universities in those days because they hadn't yet realised what a tremendous cash cow creative writing courses were. And if you actually were a writer and publishing things, they looked at you askance.

TC: Margaret Atwood, thank you very much.

Conversations with Tyler
Episode #65

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