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For the first time since cities were built and founded, the great agricultural tracts produce no grain, the inundated tracts produce no fish, the irrigated orchards produce neither syrup nor wine, the gathered clouds did not rain, the mazgurum did not grow.
At that time, one shekel's worth of oil was only one half-court, one shekel's worth of grain was only one half-court.
These sold at such prices in the market of all the cities, he who slept on the roof died on the roof, he who slept in the house had no burial, people were flailing at themselves from hunger.
A cad, instead of its sweet flowing water, there flowed bitter water.
Whoever said, I will dwell in that, for I'm not a good dwelling place.
Whoever said, I will lie down in a cad, I'm not a good kneeping place.
That was terrifying, Dominic.
That's a chilling reading.
There's a chilling word, chillingly delivered, I think it's fair to say.
Very chillingly delivered.
I know that you think about the curse of a cad most days, don't you?
I do.
Something that really plays on your mind.
I do.
Would you like to share your nightmare with the listeners?
The curse of a cad is composed around 2,250 BC and it has been reduced as an example of the theme of today's episode, which, Dominic, is climate apocalypse.
Cheery.
Cheery for a...
Yeah.
Well, because I wanted to call it climate change and you insisted on calling it climate apocalypse.
Yeah.
So that's what we're going to do.
I have the instinct, Tom, of a top newspaper editor.
I think it's fair to say.
I know you do.
So the question is, though, is that what you've so terrifyingly and sonorously read out?
Is it a record of climate change, of climate apocalypse, or is it something more ambivalent, more complicated?
And as it happens, we have the absolute perfect person on hand to answer that question for us.
And that is none other than Peter Frankapan, who is professor of global history at Oxford University, international man of mystery, a man who never knowingly wears a shirt without

unbuttoning it to his navel, and he is the author of a new book that's just come out, The Earth Transformed, which, Peter, you're naturally a very modest man, I know. You must feel very embarrassed by how well it's been reviewed, the kind of the splash it's made.
I'm still in shock listening to Dominic's fine performance and training the boards. I mean, I was going to say how great it is to come onto your history podcast, but I think you're in the wrong career, Dominic, that's Royal Shakespeare Company calls.
You're not the first to say that, Peter, and you won't be the last.
Let's be frank.
A lot of listeners will know that I was cruelly denied.
You probably don't know this, Peter, unless you followed my career as closely as you should have done.
But I was cruelly denied the role of Paddington, which was given to Ben Wishaw instead, because I'd worked with the director.
The station or the bed?
Not the station.
I could pay the station if there was an anthropomorphic railway station, but we're going off-piste already, Tom.
You warned this would happen.
Yes.
Yes.
Peter, your book, The Earth Transformed, is basically a history about how climate has influenced the history of humanity right the way up to the present.
Because Dominic has insisted on calling this climate apocalypse, we thought we would begin with that, which is a very early example from the beginnings of urban civilization.
Akkad is often adduced as the first example of an empire.
What are the complexities in deciding whether that is a record of climate change?
Well, never trust a historian, that's the first problem.
When people write things down about dying on roofs and starvation and hunger, tabloid editors of the past were equally as ferocious and committed as they are today.
So I think never let the facts get in the way of a good story.
So I think quite often with history, and you hear about devastation, collapse, famines, droughts, you have to be extremely cautious about taking what you're reading with a pinch of salt.
And in fact, in this particular case, what makes it so helpful to us is that we don't have to rely on historians to check what's going on, because we can look at a whole bunch of new types of sciences to be able to measure everything ranging from levels in ice cores to be able to tell what's happening to carbon dioxide levels, through to fossilized pollen in the case of the curse of Akkad, or around about 2,250 BC, so four and a half thousand years ago.
You can see changes to the records in Oman, in southwestern Iran.
You can see there's a dramatic series of changes that have happened to the natural environment.
Now, that doesn't necessarily mean that human beings start to collapse, but it means that the conditions around us change.

And my book is not just about climate, it's about the natural world as a whole.
And I think all of us realize that the natural world is always changing, not just because the sun shines brighter or the rains don't come, but also because the ways in which those landscapes are transformed, I mean, obviously, most obviously by human beings, but we're not the only species on this earth that's changed the way in which land gets used.
Other big mammals in particular are huge disturbers of vegetation, and all sorts of different animals, including very, very small ones that we don't pay any attention to and get very badly treated by people who complain about the natural world and are worried about climate change.
We tend to over-prioritize big animals, and the little ones like termites and mosquitoes, moths, things like that.
They are hugely important in our ecosystems too.
So in this particular case, we can see that there is a moment of stress, what climatic stress, most times when that happens, most times when you have hot summers, problems don't come.
And in the case of Naram Singh, the grandson of the great Sargon of Akkad, who is the kind of great Donald Trump of the Mesopotamian world, although there is clearly a series of shocks that go through the system, in fact, what happens is that Naram Singh uses that as an opportunity to consolidate and centralize power, which is what good rulers do.
And as you've covered so well in many of your other episodes, never let a good crisis go to waste.
So a lot depends on what it is you're looking for, and there's the historian, the lightness of touch of using these new data materials that we have as a way of adding texture rather than trying to sort of upend the apple cart.
And the volume and the range and accuracy of these materials is incredibly profound and also enormously exciting.
And so these are new developments?
Yeah.
I mean, they've been two or three decades in the coming, but I mean, now the thing that's moving by far the fastest in my world as a historian, our world as historians, you know, every now and again, somebody finds a text that they haven't seen before, every now and again, you know, you get an Indiana Jones type discovery that is amazing CIA declassification of satellite photos over Afghanistan and the former Soviet Union that allow us, particularly when it has been dry these last couple of summers extra dry to spot things from the air that we didn't know where their caravans arise and structures, canals, things like that.
But in the world of historical discoveries, works on genomics, works on help us with migrations, works on, you know, ice cores, tree rings, fossilized pollens, all the kind of biological sciences.
But specifically on ACAD on this question about ACAD, you know, is this so it's kind of very Daily Mail property prices falling, all that kind of stuff, but don't want to pause the face.
You know, there's obviously, there's drama inherent in making things sound as bad as possible.

It sells the equivalent of newspapers, whatever they had in ACAD.
Tablets.
Tablets, yes.
But to what extent does the description of it, can we test from new scientific developments, how accurate those descriptions are?
Yeah, in this particular case, four and a half thousand years ago, we would ideally have a greater set of written records to be able to explain what exactly is going on.
I mean, there are a set of obvious things that one would look for when you have climate stress or food shortages, whether it's climate or otherwise, you know, and that would be normally be, as we all know today, inflation, cosy lives, cost of living crises.
This happened, you know, millennia ago.
Can we read it in the scientific record?
Is there other ways of kind of stress testing, how accurate these descriptions are?
Is this what's happened over the past three decades?
Yes.
I mean, in the case of Sargon of ACAD, going back four and a thousand years, quite close to the beginning of when writing systems have come into play, it's a kind of totemic boundary point to 2,200, because in fact, there are lots of things that are happening in other parts of the world at about the same time.
So as a kind of curse of ACAD, because we've got this text that Dominic read out so poetically, that is a kind of lightning rod to draw attention to the Sargon of ACAD.
But I mean, I think what historians tend to do when they run with these ideas about collapses, they tend to focus on people at the top.
So if you have a civilizational collapse or societal problems, that's bad if you're an elite member of the elite, but it's maybe not so bad if you're not one of the priests, one of the rulers.
So in the case of the curse of ACAD, there's a whole system of global changes that's now named by scientists, the Megalayan period or the breakpoint, because the sheer volume of climatic data from that period is so voluminous.
In terms of pinpointing individual cases like Sargon of ACAD, we want to have more written materials.
And we shouldn't forget that 1,000 years before Sargon, we've got almost nothing to go with at all, but that record starts to warm up and get much more plentiful as we reach other periods.
So we have to do a bit of, I wouldn't say creative thinking, but a bit of plotting, what does this look like compared to other similar kinds of cases?
And like I already said, Narum Sin, who is the subject of these terrible, it's not a curse, but of the crises, is able to consolidate his position and build an empire afterwards.
So whatever the challenge that he goes through, it's obviously not totally cataclysmic because he's able to reboot, but that's good for him.
It's maybe not so good if you're a coerced labourer, it's not so good if you're a slave, not so good if you are someone who hasn't made it through your rooftop séance where you starve to death.
But life does go on in history.

Just on the using this as a sort of metaphor for the bigger story, would it be fair to say that people have always been haunted by this idea of climate apocalypse, or are we back projecting and that these are just sort of ordinary mundane anxieties about the harvest or about, you know, invasion or fire and flood or whatever?
Or do you think there is something deeper that's always lurked in the background?
There's definitely something deeper.
Go to the story of the creation.
I mean, that is a book of Genesis chapter one, book one.
It's all about how the ideal scenario has been created on earth in the case of the Judaic, Christian and Islamic faiths for the benefit of humans.
And if you transgress and you anger God, you're punished ecologically and environmentally.
I mean, if you're booted out of the Garden of Eden for not obeying orders, you are forced to grow crops in dusty conditions and to face hardship.
So I think in the Western Abrahamic traditions, or the Abrahamic traditions, I think that idea about anxiety is extremely close.
And of course, Noah and the floods, which we see in the Sumerian flood story we see in the in the Atrahasis in other Mesopotamian texts, obviously leaves a huge imprint on the anxieties of people around what happens if climate conditions shift or deliver unexpected shocks.
And the reason those are written down is to communicate the anxieties to future generations.
I mean, that's what historians do.
Otherwise, otherwise, you just chat about it.
You don't bother committing it to cuneiform tablets, pens and paper.
In other types of traditions in the Indic world, instead of the Sanskrit texts, too, the ideas of the gods, like in ancient Greece, are busy having rivals with each other and choosing which humans to be benign to, again, dating back 4,000 years or so, does speak to the idea that the heavens are seen as a gateway towards punishment and reward for good behavior and the worry that if you exceed your ecological footprints, you're going to face cataclysms.
So I think that the idea of apocalypse closely links towards exhaustion of resources, climatic stress through floods and through drought are extremely run extremely deep into our sort of psyches and our historical records.
Yeah.
And Peter, just to follow up on this question of your book is subtitled an untold history, just how new these perspectives are.
The reason that it's untold is because the scientific evidence wasn't available now.
Just looking at a couple of very famous examples of how historians have interpreted the interaction of climate with history.
So the 6th century, which AD, which has appeared that you particularly familiar with.
Love the 6th century.
It's often said that this is a period where there's massive cooling, has massive knock-on effects on the Persian Empire, on the Byzantine Empire, and the emergence of Islam, all kinds of things like that.
And then the other one is what's called the Little Ice Age, and particularly focused

on the 17th century, the idea that there is actually a global ice age, a global cooling.
Yeah.
We've talked about that a lot in this book, Gaston.
Yeah.
The sort of 30 years war, the English Civil Wars, all that stuff.
But also in China, the collapse of the imperial structures in China and in America, in Africa.
These two examples, are we able now, as historians, as scientists, to stress-test just what the nature of the interaction of climate is with empires, with frameworks of authority, better than we were, say, 10 years ago, 20 years ago?
Okay.
So the 6th century, the thing that is most important is not to get hung up on climate on its own.
Right?
So climate is an important factor, and it's interesting because of the temperature drops.
By far, the more important thing is that climate shifts triggered by a series of volcanic eruptions in the 530s and early 540s.
Because you love a volcanic eruption, don't you?
You love a volcanic eruption.
They're going off-ways throughout your book.
They do go off.
They do go off.
Well, you know...
Kind of every other page, a volcano is...
We'll come back to volcanoes.
Those volcanic eruptions in the 6th century, by far the most dramatic thing they do, is not just impacting atmospheric conditions and reduce crop grain periods, which they clearly do, and impact belief systems, because lots of people are concerned about punishment from the divine, et cetera, et cetera.
The thing that's by far the most important is they change pathogen behavior.
And the pathogen behavior in this particular case is making plague more virulent and allows the justinianic plague to take hold and to decimate...
I mean, it's part of a very frosty conversation between different groups of historians, but clearly it's a massive population loss in Europe.
And in that sense, what volcanoes often do is not just that they inject masses of dust into the atmosphere and make it slightly harder to grow things.
It's quite often they trigger medical and disease environments to change.
And two good examples that parallel what happens in the 6th century is the eruption of Santorini around 1600 BC, where, apart from the tsunami it generates that knocks over Crete, the fact that it's a huge detonation, it triggers, again, in this particular case, the virulence of the variolevirus, which your listeners will know is what lies behind smallpox.
And smallpox in the last couple of hundred years before its eradication probably killed about 300 million people just in the 19th and most of the 18th, 19th, 20th centuries alone.
So those kinds of things are much more important than a growing season.

Likewise, Mount Tambora that, again, that generated the year without the summer and obviously is linked through to...
So that's 1816.
1815, the trigger, but the summer of 1816, which you can fold into the Peterloo Massacre, you can link through to...
Frankenstein.
Well, Frankenstein, it's a whole palette that you can open up.
But one of the things it does that has more, well, doesn't have to be either or, but creates a general impact as it changes the marine biology of the Bay of Bengal that unlocks and makes cholera take over.
And the cholera that then devastates Bengal spreads and you can trace it through the Middle East, through into Russia, into Europe.
And so these kinds of things are just all about the natural environment and about how they shift us around rather than just around climatic conditions.
But I think we don't necessarily always overlook those.
But quite often historians, as you know, from your podcast and from your own wonderful work, we tend to specialize in single periods or single regions.
And it's the tying together bigger canvases in detail that I think is that the bit that's untold, it's plotting it all out on some kind of big, big canvas to take a look at.
But so in both these cases, the Delisage and with the Justinianic plagues of the sixth century, I think a lot requires the deafness of the nuance of being able to layer in this new evidence that we have, but to do it in a way that is asking questions in the case of the Justinianic plague, for example, because we have these new technologies available, there's a group that's worked on a site called Edix Hill in Cambridgeshire, that you'll note on from your books very well that the Justinianic plague arrives in Pelusium at the mouth of the Red Sea, of the gateway to Egypt, and then is supposed to spread across the Mediterranean that way.
That's how the historians write about it at the time.
And you can start to see the deaths being written about in a kind of sequence.
The Edix Hill data shows that there's evidence of plague about four or five years before that episode in North Egypt.
So plague is endemic, or it's existing, and not just in England, but in rural England.
And so that completely transforms how we should think about how people are travelling, how things have been moved around, what it is that unlocks pestilence and pathogens to make them more virulent.
But quite often, emerging infectious diseases are very closely linked to relatively small climatic shifts.
So these things, I think, need to be taken in the round.
So just come back to the little ice age, because we've talked about this in previous episodes of this podcast.
So for those people who don't know, this is this idea.
It's captured brilliantly by Geoffrey Parker in his book, Global Crisis, this 7,000 page book, which covers, I mean, it's a brilliant example of global history.
And it's talking about famines in China.

It's talking about the religious wars in Europe, the sort of the witch craze, the enormous political turbulence, all of this sort of stuff.
And it's linked to the idea that there is a temperature drop of one to two percent or something like that.
But am I right in thinking that you think that is oversold and that the idea that this is all because of climate change and because of a temperature drop is too, well, I don't want to say too simplistic.
Well, it is too simplistic.
That is your case, isn't it?
No.
I mean, from all the things that all my flaws, I try not to be a drive by assassin of other people's works.
I mean, I think Geoffrey Parker, it's a fantastic book and a huge kudos to raise the subject single-handedly about ideas around things like the little ice age.
I think that the problem is going granular, is it exactly when does this period start?
What triggers it?
And the 17th century makes sense to all of us historians because we like the idea of round numbers like 1600 and 1700.
And that may or may not be a reflection of periodization.
So lots of people argue about what exactly that date range is for the little ice age.
Should we start it in 1450, should it start in 1600 and so on.
So some of it depends on what it is you want to look at and also I've been around the block enough time to know sometimes what you put on the cover of a book is about getting people to engage with this content.
No, surely not.
It should be a little bit more generous about what the aims are.
The thing that's interesting about Parker's book, which he flags rather than I do, is that this crisis that you mentioned, Dominic, where we have the 30 Years War in Europe, death on a profound scale, dislocations all over the world, there are places that are immune from those kinds of problems.
And in particular, Japan and the Dutch Republic don't seem to go through those kinds of gate posts of crisis.
And that will presumably speak to not about the fact that the climate is slightly different.
It speaks to the resilience of the political structures that allow people to navigate crisis.
And I think that's more interesting.
I mean, as it happens in the course of the late 1580s, 1590s onwards, you have a series of very significant forms favorite again and mine volcanic eruptions that do produce very dramatic localized problems, particularly in the Americas.
You know, there's one eruption in 1596 in Hunyaputina in South America that is enormous in its scale.
And these do produce challenges.
And you know, historians, as we all know, lots of the times challenges are navigated.
But if you are at that time fighting wars of religion, if you have military expenditure that's soaking up resources, if you have a court, let's say in China, under the Ming

dynasty that is too busy with its paying money on its eunuchs and its harems and poorly managed, then you find you run into problems.
But it doesn't always have to happen that way.
So just before we come on to the huge climate apocalypse, i.e. what we're living now, just to row back and say that climate change is not necessarily bad, is it?
Because essentially human history happens because we're not living in a nice age.
Would that be an exaggeration?
Well, climate change definitely isn't bad.
So the emergence from an ice age is what enables us to make a podcast, because otherwise there wouldn't be any history for us to talk about.
Climate change, that just means things move around and I mean, history has all changed.
So climate is one thing that changes.
There are lots of things that change.
I don't think that's either good or bad.
Clearly, there are better winners and losers.
I think global warming is a slightly different phenomenon to climate change.
I think resource depletion is obviously another challenge.
But global warming, I mean, we were in an ice age and then we emerged into what is called the Holocene, the period in which we're now living, the geological period of time, and had the planet not warmed to that extent, it's unlikely that we would have had agriculture, urban societies, whatever.
Well, for 99.99% of the world's history, our species wouldn't have survived in the carbon dioxide envelope that it existed in.
So we're great beneficiaries of all the serendipitous changes going back four and a half billion years.
Without the five great mass extinctions of the past, we wouldn't be here.
We're at the long end of a sequence that dates back billions of years.
So I think that that should give us a little bit of humility around how narrow our window might be on this planet because, as you know, with your dinosaurs and other interests in the past, Tom, you can be the apex predator for as long as you like for millions of years, in fact.
And I dare say your T-Rexes and beloved predators will survive much, much longer than our species will do, where we're literally a blink in the eye.
I mean, our written record, going back to about 3,000 or 4,000 BC, let's call it, it's about 5,000 years.
In terms of the world's history, that's 0.001%.
So that means, yes, is it bad?
It's probably bad if you are poor.
It's probably bad if you are exposed to the tropics and to very substantial temperature rises, which look likely.
It's bad if you are, as a government report has produced today, around flooding and coastal flooding of the British Isles, where we have all of our power reactors on the coasts.
That probably raises questions about how can you navigate problems, but that doesn't mean you fail.

It just means recognizing that you're probably in for a slightly bumpy bit of fast bowling.
And you can handle, again, as you know, Tom, from your distinguished cricketing career, you can handle youthful, young bowlers throwing, I was going to say young boys, but throwing balls at you faster than you can go, and you can hit them for six, as the world knows when that echoed the explosion of Tambora.
To be clear, Tom Six was against a child.
I just won that absolutely on record.
That's why it's the pizza.
It's the shot that went around the world.
I wasn't there, so I can't, I've only seen the photos, but no, I think that it's how do you handle the challenges coming towards you?
And right now, our problem is it's a multiple set of combinations.
Okay, Peter, hold on, hold on.
We'll come to the problems that we're facing now a bit later.
I just want to stick now to the idea that global, not just climate change, but global warming can be potentially a positive.
And that the fact that the ice age ended was a kind of broad positive, I would say.
I mean, that seems to be the implication of your book.
But also that there have been, so you, the Roman warm period, what's the Roman warm period pizza?
It does sound like, I'd quite like a Roman warm period where we're getting snow in form.
I mean, it sounds great, doesn't it?
I mean, who wouldn't enjoy a Roman warm period or indeed a medieval climate anomaly?
I'd prefer the Roman warm period.
No question.
No question.
All the Romans get into it under their duvets.
What is it?
What period are we talking about?
So almost exactly the moment where Augustus, Octavius as he was, knocked over Egypt for the next 250 years, it just so happens that climate conditions globally are very stable.
We're absent of the big volcanic eruptions.
There's no sort of major solar activities that are unusual and there are no anomalies.
And so it means that the Romans are very lucky in the world that they're building outwards that there's predictable levels of supply available.
And that is on its own, not enough to explain the success of the Roman Empire, but it's an important factor.
And you know, one of the things I write about in the book is thinking around the things that I'm interested in Rome is not just the great emperors and the political acts, it's as Rome starts to grow as a city, how do you feed a city like that?
How do you actually get grain from A to B?
Right.
So you need warm conditions that are able, stable conditions that can...
But it's not just the climate.

You need to have those bars of caracalla.
You need to bring trees from a long, long way away.
And what are the logistics of doing those kinds of things?
Yeah, sure.
I understand that, Peter, but we're focusing on climate in this episode.
Oh, yes.
Sorry, yes.
Rather than trees.
Rather than my book.
Okay.
Okay.
I'm here to serve.
Yes.
I got you.
Yes.
I got you.
So just sticking to the climate.
Oh, the climate stuff.
Yeah.
So the salient thing about the Roman warm period is that it is also stable, say, in China.
Correct.
But that is kind of interesting, because it suggests that there is a kind of global...
I mean, can we say the same about what's happening in Central America as well, can't we?
That these are conditions that prevail around the globe.
Would that be right?
So what we call the Roman warm period could also be the hand warm period or...
Broadly, globally, this is a stable period.
But there are pockets of change that are not...
Things don't just work as a kind of everybody's happy and temperatures just stay stable.
But in terms of the variation, it's relatively modest.
And where that starts to change in the middle of the third century, in the 230s, 240s onwards, you then see a series of high levels of returns of those kind of unstable conditions.
And then you have a period where you have 25 Roman emperors on the throne in a 40-year period.
You have 65 would-be emperors trying to take power.
And those dislocations correlate quite closely with disruption.
And the problem is, again, it's not that because it rained a lot or there was volcanic eruptions or you couldn't grow so much crops.
It's that small chinks in the wall can bring the whole thing tumbling down.
So small individual problems can magnify.
So one bat in Wuhan and the whole world shuts down and 10 million people die.
And that process of understanding those fragilities of interconnectivities are important.
It's the same thing along the Silk Roads.

It's the same thing in Mesoamerica when a single point fails for whatever reason, because of disease, because of corrupt leadership, because of a random enemy that pops up and knocks you over.
And then the whole house of cards comes tumbling down quite quickly.
Okay.
And so that goes back to what we restored at the beginning, how difficult it is to identify climate change specifically as an agent of change and transformation.
Yeah.
So that's a problem if you're making a podcast, but it's not a problem if you're writing a book that isn't saying that.
All right.
We should take a break at this moment and Peter can go away to consider his behaviour, Tom.
And the listeners can return to find him a chastened and let's hope a better man.
We'll be back in a second.
On a cad's chariot roads grew nothing but the wailing plant.
Moreover, on its canal boat, towpaths and landings, no human being walks because of the wild goats, vermin, snakes and mountain scorpions.
The plains where grew the heart soothing plants grew nothing but the reed of tears.
Terrifying.
So, Tom, that is terrifying.
That's again, more of the curse of a cad, which was slightly debunked, I'm sorry to say, in the first half of that episode by Peter Frankaban, a very distinguished guest who Tom is desperately trying to control as though on a leash or something.
It doesn't normally do with our guests.
This is some internal cricket team politics.
I don't understand.
No, it's not.
No, it's rather like with Willie, Dalrymple.
Yeah.
I don't understand, rushing off and attacking deer in region's part.
But I don't think he is being very, very fentin-like, actually.
I think you're being a bit harsh on him.
Peter, let's take the story towards our present moment.
So the Industrial Revolution, beginning as everybody knows in Shropshire, does that mark a definitive new chapter, indeed, a new book in this story because of the massive impact of man-made climate change, not just locally, but globally.
Is that fair to say?
Yes.
I think that the injection of fossil fuels into our atmosphere as a result of the Industrial Revolution and particularly the combustion engine clearly generates lots of benefits and lots of wins.
The energy revolution is an important one that redistributes global powers as well and rights.

There are lots of ways in which one could look at this in a positive way, but there are ecological and environmental consequences for that that I think are really quite tricky and complicated.
But the challenge wasn't in 1700.
It's been in much more recent times.
So for example, about 85% of the fossil fuel has been burnt since the end of the Second World War by humans and about 50% since I did my A-levels in 1989.
So it's the scale of change in the last three or four decades that's been very most dramatic.
But again, if one looks at the natural environment and the transformations too, the ways in which we have globalized partly the result of the Colombian exchange, partly as a result of empire, partly as a result of the world tying together and trying to find the best prices and the best goods and shipping them and the new technologies that have allowed people to communicate like us quicker, cheaper, better than ever before, has downsides too.
And I think it's not again, it's not on either or.
It's that they both come hand in hand, and one of those problems is about the velocity of consumption patterns that means that we can exploit the natural environment faster than it can replenish.
And again, that is partly a result of improvements in communications, transport, travel, sciences, technologies.
And that leaves us in a world where things don't necessarily have to be precarious, but the challenge is if you're living like back in Akkad, if you're living on the edge of your environmental envelope, it doesn't take a lot to tip you over to not be able to feed everybody.
It doesn't take a lot to tip you over to create proper problems that could then ignite social and political unrest.
But most of the time, that doesn't happen.
Most of the time, in the last 30, 40 years, apart from a few obvious hotspots, we've tended to get on quite well.
I think that now the thing I'm as worried about about global warming is that we look like we're living in a world of quite deep fragmentation anyway.
And here in Europe, and with Helen Thompson, for example, my colleague at Cambridge, who's written so well about this.
Being on the show.
Yeah.
Being on the show.
That's right.
Energy inefficiency in Europe and the lack of planning into clean and green technologies isn't just about the environment.
It means that we are in-hoc to what Putin's whims might be or whims in the Middle East and those who produce the energies that we have.
And the problem is adaptation.
So again, the warming problem could be solved on its own.
But when you have supply shocks, cost of living, inflationary crises, if governments don't solve those problems, then there is a sort of set of predictable gateways that you run

through that we can recognise from history, but it's very hard to guess which ones might come first.
So going all the way back to a CAD, you have people feeling that the heavens are out of joint, that a realm that had previously been stable and prosperous is now faced with massive shocks, and this is, as we've been exploring, a kind of recurrent anxiety that the heavens are sitting in judgment on us.
Is what we are facing now, I mean, is that just another kind of example of that anxiety, one that we will move on from, or is this qualitatively more perilous?
Are we properly facing apocalypse?
Well, you know, Paul earlier wrote a book called Population Bomb in the 1960s that said, you know, we're already way beyond our abilities to feed people and we're looking at tens of millions of starvation deaths in the next decade, and that proved to be totally wrong.
So lots of people have warned about the doom and gloom, so you know, I don't particularly want to add my name to the list of people who are wrong about things.
But I think I would defer to my friends and colleagues who work in biological sciences around biodiversity loss.
So if we forget about humans and our problems for a moment, it's the collapse of amphibian species, of birds, of the changes to the mammalian world and of plant life that are not uniform. You know, there are winners and losers in those equations.
But clearly we're going through a process that some of my very distinguished colleagues call already we're going through a six mass extinction.
And the difference about this one compared to previous five is that it's much already much faster than those dramatic ones of comets hitting, the asteroids hitting Chishiklub in Mexico and volcanic eruptions that played out over the course of thousands of years.
But the rate of change, I think, of biodiversity loss and the pollinators and so on does reach what again are being referred to in the sciences as cascade events where you have a whole series of things that keep getting worse and worse.
It's not just is it going to be 40 degrees this summer, we'll be able to play cricket and so on, which, you know, I don't say that to be flippant, but you can go through these gateways of Antarctic ice melt and of sea level rises that don't happen over the course of a year or two, but they do over the course of a decade or two.
And you can't plan fast enough to be thinking about what those might be to both mitigate and also to be aware of what some of the worst scenarios are.
So for example, the head of Lloyd's insurance, one of the biggest insurers in the world, has been saying in the last couple of months that essentially Florida is uninsurable now from a commercial point of view because of the sea level rises, the tornado seasons, the level of damage that had been done in the last few years, the premiums are too high.
And I think that that should make wherever you sit in the world, sit up and think we are living in a world that is changing really dramatically fast environmentally as well as all the political stuff that we see that has its own existential challenges.
But you quote a senior investment banker last summer who said, who cares if Miami is six meters underwater in 10 years, in 100 years, what happens to the planet in year seven is actually irrelevant to our loan book.
And I think he was saying that slightly tongue-in-cheek, wasn't he?

But it does express an attitude that perhaps ties into very ancient ideas that greed and heedlessness will be punished by the gods.
Well, I've got a report, I've got a report commissioned by Bafta in my book around uses of words on TV.
But they measured the number of times that the words global warming and climate change have been mentioned in the last two years on TV and radio.
And I think climate change, if I'm right, mentioned about 3,000 times, the word dog is mentioned 110,000 times, cheese about 130,000 times, that would tell me that the way in which we were informed when I was growing up, when we were growing up, we were much more closely connected to acid rain and to Chernobyl and these kind of challenges.
But I think that the level of preparation is out of sync with the level of discourse around what we're facing.
And our next generations have got a real challenge coming towards them.
And I think one of the things that's quite worrying about this is that when you see young people and the students who come through my university who are carrying quite high levels of debt, unless they're from high-income families, I'm probably unlikely to be able to afford to get with the property ladder for a while.
Job ladder looks extremely precarious.
They've seen the shenanigans going on in the world of politics for years now, whatever your political persuasions, not just in the UK, in fact.
And that lack of confidence in democratic abilities to solve problems combined with climate has produced some real worries.
I mean, there's some work commissioned just at the end of last, in the 2022, that says that 60% of people under the age of 45 in liberal democracies don't believe that regular elections are an essential part of a functioning democracy and would pick a strong man who can solve problems, that's the phrase used, strong man who can solve problems rather than looking to solve things through democracies.
And for my generation, our generation-
Peter, your moment has come.
My moment's here.
I come.
Strive to the middle and hit a double hundred.
Now, I think that those do start to unweave a set of problems that do have echoes back to Naram sin.
And there are winners in those equations.
Naram sin was able to take advantage of the so-called curse to make himself even stronger than he had been before.
And inequalities tend to sharpen and get more divisive.
Societies tend to become more unequal, more top-heavy.
And Peter, is there another historical angle to this, which is that one of the things that makes the challenge hard to confront is that it's become entangled with the legacy of history in a different way, which is the legacy of empire and a sense that there needs to be a kind of rebalancing.
So you can argue that an awful, one great obstacle to resolving this sort of climate

crisis is the fact there are lots and lots of people, hundreds of millions of people in China and India, who think the West is now being hypocritical.
They kicked us for years.
They had all the benefits of this.
And now they want to deny those benefits to us.
Doesn't the legacy of history, therefore, make it more difficult to resolve because of the experience of empire and the reaction against empire?
Well, look, I mean, you get into something you've covered and both have written about.
So I think that in that context, probably my own line would be, I mean, obviously that's a factor, empire in the past.
But it's also that over the last 30 years, factories across the rich world were devolved and parked in parts of the world where labor costs were much lower and environmental standards were much lower.
And so today, 496 of the world's 500 most polluted cities are in Asia.
And I think it stands to reason that we're the great beneficiaries, not because of what ancestors did 500 years ago and long British history, but the reason why flat screen TVs and laptops cost what they do and don't cost more is because they're not made in Stoke on Trent or they're not made in Cornwall, but they're made in Sichuan province.
And I think that it's not unreasonable to think that the people who have taken the environmental costs of the last 30 years in the most stressed, probably there should be some form of way in which we are able to recognize what those levels of commitment are.
So we in the West have done quite well in the last 30 years of reducing our emissions.
We've done quite well in recycling.
Lots we can do better, but we've had a head start and all of that.
And I think it's not that let's now wag our finger at India, China and everywhere else.
We're all in this together.
There are not that many themes in history that are truly global, but climate is obviously one of them.
So the challenge of being able to factor in what our contribution should be.
I mean, if you ask an economic historian like me, you'd say you've got to be prepared for higher costs, and that's the way to try to clean things up.
You've got to be willing to say, I will take a longer view, which means that I can't just have a pair of jeans that cost four quids, not just environmental conditions, but also the ESG, the kind of the social ways in which that has a cost.
But ethical buying and ethical investment is something that you can do if you're wealthy, but you can go hand in hand if you work out a corporate.
And probably in today's world, in my day job that's not rated a climate, it's that lack of dialogue that is brutal, I think, particularly with China.
But in other parts of the world too, partly because the political narrative of kicking the West or the West's sort of demanding submission and demanding support on things like Ukraine.
But Putin has exploited that extremely successfully in his speech he gave in the Kremlin a couple of weeks ago.
He said, look, the West has pumped in $150 billion into Ukraine, these are his numbers,

and has only put $60 billion into the developing world, so whose interests are really being protected.
And I think everybody around the world takes Putin with a bit of a pinch of salt.
But those words are very carefully chosen to the 85% of the world's population, don't live in Europe and the West.
Well, you have some stupefying statistics on the imbalance between wealthy nations, their contribution to climate change, and those who are not wealthy.
So you say that New York City uses more energy than all of sub-Saharan Africa put together, that the world's largest institutional user of petroleum and the single largest institutional producer of greenhouse gases in the world is the US Department of Defense.
And you were talking about cheap fashion, and you say that the fashion industry as a whole is estimate to contribute around 10% of global greenhouse gas emissions more than the aviation and shipping industries combined.
Well, making a pair of jeans takes 7,500 litres of water.
That's enough for a single human to drink water for seven years.
And it's partly a lack of education.
We don't really know that, never really think about that.
And I think what good history can do is to flag some of these things, where if you stop and get your underlining pen and think, I didn't quite understand that the fashion and textile industry is something that has a bigger imprint, or that some of the wins, in fact.
I mean, there's a study done by some very clever scholars that the contrails that are left by planes flying in the sky, that a very modest correction can reduce the environmental damage that is due by 80%, more or less cost neutral basis.
But it requires the modelling.
And also, I'm very excited to read that it's been shown that cattle can be trained to control their maturation reflex and use a latrine for urination with significant environmental and climactic benefits.
So that's an exciting...
Yeah, that's not my own research, but you know, thank God there are people trying to work out.
But again, we know that cattle and ruminants are a huge part of the problem in terms of methane production.
We obviously, the beef, beef is a massively heavy footprint in terms of its demands on soil and above us forest clearance.
So to try to find a way to reduce that would seem to me a very positive way of spending taxpayer money on research that might make a difference.
And so we can laugh at these kinds of discoveries, but I dare say that there are some people who would think that that's maybe better spent than looking at French Revolutionary Poetry through the lens of whatever you might be looking at French Revolutionary Poetry.
And you know, I think that the ways in which we do need to try to think quite creatively start with ideas that may seem slightly startling and slightly strange, but we do have quite a series of problems to solve and getting on with that would seem to be quite a good idea.

For such a potentially bleak subject, you're quite optimistic, aren't you?
Because on this podcast, I've...
Long time listeners will know that the Sambrook rule of history is you should eat your neighbours before they eat you, but you definitely don't take that view, do you?
You're very mis-world, you know, let's all be great pals, we're all friends, you know, lovers in the air.
I'm going to print that out, mis-world, yeah, okay.
But you are quite optimistic, aren't you?
You do think we have the capacity to overcome these challenges.
I mean, you talk a lot about the resilience.
You emphasise the resilience of states.
You mentioned the Dutch Republic and Japan during the 17th century, you know, even Akkad.
There is a kind of... do you think that resilience will be there in the next few centuries?
Well, like I said, I think that the world keeps on spinning.
If you're going to bet against that, then, you know, then I suggest the Roman war period and getting your duvet and finding a nice quiet burrow to bury yourself in is not a bad idea.
I think betting against human ingenuity is really bleak, you know, thinking that we are going through a point where we might all be out of all existence and live in a kind of post-apocalyptic world sooner than later.
You know, I think the existential side of that is so profound that I think it is also dangerous to predict the doom and gloom.
I mean, as it happens, those who've done that before me have all got it wrong.
So, you know, if you're going to bet against the house, you might as well think that there are ways in which we might nudge things forward and improve things.
And for all of the terrible horrors of history that you've covered in your podcast, you know, from the Holocaust, through the Second World War, through the trenches of the First World War, through the 17th century, through Justinianic plague, black death, you know, the world, even with 50% population losses in some of these cases in the 13th, 14th century, for example, you know, there are ways in which things get moving again.
So I think we have to assume that there are ways in which we can prepare and mitigate.
But again, what I think good policy should be doing is understanding first of what the problems really are.
And it's not just that it's going to rain a bit too much, it's not going to rain at all, or it's going to snow this weekend.
It's what does that actually mean for us all?
And how do we have the resilience for starting in our individual countries to have the kind of basic things that anybody should want, which is food supply, energy, and resistance to disease environments?
And those three big things, I think, are ones we should take the lessons in the last two or three years quite carefully, because there are no tomatoes on the shelves, we've got no energy sufficiency because of Putin, and we've just been locked down for two years.
So if you were to mark current governments all around the world on these three big things that I'd want to be looking at, it's hard to find someone who's done well.

And that's the worry, the investability of leaderships and visions around the world.
More historians needed.
Seize your chance.
They're waiting for you, Tom.
Take power.
And Dominic, it's the both of you who are, you know, I do think, I mean, I know you told me off for saying thank you for having me on.
I do think that these kinds of podcasts are so vital in opening up the walls of history beyond historians and those who are interested in history generally to much, much wider audiences.
And I can't tell you how, I mean, this is what you do all the time, so you don't think about it like this.
But putting history in the center of people's drive to work or way home or whatever it is, and trying to connect the relevance of history into contemporary themes, it's not easy to do.
But, you know, it's hugely important and the fact that you've done so, it's an amazing job in the last two or three years.
People like me and other historians, but also people who are listening to this will spark off ideas.
I mean, I'm a very boring academic.
My job is to inspire the next generation of students, but having a platform or coming on something like this to be able to reach people who I'd never be able to reach otherwise, you know, hopefully sets chain reactions for other people who are much cleverer than me to start solving problems.
Well, bless you, Peter.
Oh, Peter.
We love to end the podcast by talking about our own podcast and the role that we are playing in combat and climate change, but Peter, you're obviously being insanely overmodest because you are absolutely, you know, you're out there firstly with Silk Roads, your international bestseller.
And now with the earth transformed and untold history, although of course you have actually told it now because that's what the book is all about.
So thank you very, very much.
It's a great book.
A sobering but not entirely depressing book.
So thank you very much for coming on, Peter.
We will be back next time with another apocalyptic story.
Won't we?
Of course.
Do you want to give people a little sense?
Do you want to ask Peter his view?
So Peter, we're actually, we tried to think of the one historian who might eclipse you in terms of international reputation and reach.
And Tom, do you want to tell Peter who it is that we're comparing him with?
Is it Dominic Sandbrook and Tom Oliver?

No, no.
And you very notably, you left him out of your book.
It's Graham Hancock whose perspective on the destruction of Atlantis, you have failed to mention it.
Is he coming on the podcast live?
No, he's not.
No, he's not.
He's not.
But we will be back next week with two specials on Atlantis.
Where does the myth come from?
What's it all about?
Was there really an alien civilization destroyed by climate change?
And Peter will update you on the fruits of that.
So you might want to tune in.
We don't want to know your opinion.
You'll have to wait until next week to find out.
But you can revise your book if you feel that you need to, having listened to it.
Anyway, Peter, thanks so much for coming on Earth Transformed and Untold History by Peter Frankopan.
Thank you all for listening.
Bye-bye.
Bye-bye.
Oh, thanks for having me, guys.
Goodbye.
Thanks for listening to The Rest is History.
For bonus episodes, early access, ad-free listening, and access to our chat community, please sign up at restishistorypod.com.
And until next time, thanks for watching.