Futures

The last parliament

A debatable prospect. **By Stephen Battersby**



"I'm glad the bilberries are growing again."

"Uh, OK. Well, I guess that's great news. So that incredibly urgent thing, the reason you absolutely needed me to drop everything and fly out here, was to give me an update on the shrubbery of Iceland?"

"No, there is something else. Something important."

"Go ahead."

"In a minute. I also wanted you to see this place. We're standing on the mid-ocean ridge, at one of the few spots where it rises above the water. This is where two continental plates meet. And it happens that one of the earliest human parliaments met here, thirteen hundred years ago. Give or take a year."

"Ah right. So here we are again, humans meeting on this conjunction of the rocks, to speak of grave matters."

"That's the idea."

"Representatives of two mighty hemispheres. You, the emissary of the hundreds strewn across Africa and Eurasia. I, a scion of the New World, whose human multitude currently numbers 76. Nice work. You have made a very neat little recirculation of history. So what's the big news?"

"I don't really want to say."

"OK then, bye! Lovely to see you as always."

"The vacuum has decayed. A phase change is coming our way."

"I suppose that's not good."

"There is a wavefront moving towards us at the speed of light. Behind it, physics is completely different. Our kind of matter won't exist any more. No elements. Not even quarks and leptons. Definitely no stars or planets or people. The change is going to sweep across the whole Universe."

"Oh. I see. No, I don't see. I'm not sure I can really …"

"… process that? It is a lot to take in."

"Do you have any advice?"

"There was once a theory that, with this kind of thing, you go through seven stages. The first one is denial."

"I can do denial. You tell me that this thing is moving towards us at the speed of light. Then how could we get any warning? No signal could outrun it."

"The minds calculated where and when it must have started. They knew the vacuum was in a metastable state, with a very small probability of tunnelling into something more stable."

"Stable sounds nice."

"A few decades ago, they worked out that the probability isn't always small. It's higher in the space around a rapidly rotating black hole, and there's some weird nonlinear dependence on scale. Then they discovered that two supermassive black holes in Corona Borealis are about to collide. 'About' from our perspective, of course. The result will be an even bigger black hole, above a critical threshold. It will break the vacuum."

"How long have we got?"

"Three days. Three and a bit. Just over 76 hours."

"Oh."

"I'm sorry."

"How come they chose you to tell about this?"

"They said that deciding whether to tell anyone at all was harder than calculating the probability of vacuum decay. Quantitative moral philosophy is not a well developed field, even for them. In the end, a slim majority opted to give the news to one person, chosen at random, and let them decide whether to pass it on. I got lucky."

"Is there any hope?"

"I asked them whether their calculations might be wrong, and whether they could find a way to survive, and whether they'd be able to take us along with them if so."

"And they replied?"

"Almost certainly not, almost certainly not, certainly."

"Mixed news. Did they actually give you any numbers?"

"Some. Probability of being wrong is less than three in a million. Probability of being able to work out how to survive – some way to preserve the memories and function of a community of hyperintelligent minds in the new physical regime of entirely different fundamental particles that are unlikely to form any kind of stable matter – within the next three days …"

"76 hours."

"… less than one in a trillion."

"But they could be wrong about their chances of being wrong?"

"I suppose."

"So, what do we do now?"

"I'm going to pick bilberries."

"While I have to decide whether to tell the rest of the Western Hemisphere."

"There is one more thing to consider. A way out, of sorts."

"What?"

"We could give up our cranky analogue lifestyles. Join the others."

"Upload our consciousnesses …"

"I still hate the idea. I'm not convinced that it would really be me. But in theory we could speed up our perceptions. Live out a hundred or a thousand years before the wave gets here."

"A hundred or a thousand years, always knowing that the end is coming."

"Not so different from ordinary life, then."

"Pretty different. We just know that we are going to die. This will be the end of everything."

"There are other universes. There's bound to be life somewhere."

"And yet that doesn't reassure me. Hey, is this just a scam to mop up the last real humans?"

"Real? Mind your language. "

"Sorry."

"I can't imagine why the minds would resent our existence. We don't use any resources they need."

"They don't like bilberries?"

"Just think about it."

"My first thought is that every hour I spend thinking, I could be denying everyone in my family a decade of life. If that is life."

"Yes, it's tricky. I don't know what to do. I wanted to talk it over with you first."

"Then I guess you have the floor."

Stephen Battersby is a science writer and editor based in the River Thames.

THE STORY BEHIND THE STORY

Stephen Battersby reveals the inspiration behind *The last parliament*.



In 2008, I joined three scientific friends in Iceland, a halfway station between our homes in Europe and America. We spent a few hours at Thingvellir, the original meeting point of the world's oldest existing parliament. It is on the boundary of two continental plates, where North America and Eurasia are drifting apart, creating a particularly lovely landscape of crags and streams, the land covered in thick, comfortable moss. We drank some wine and ate wild bilberries and talked a lot. How that mutated into this story of a rather less cheery transatlantic chat isn't entirely clear, but it seemed apt to set the last act of humanity there: a meeting of old and new worlds at the end of the world.

On an arguably happier note, the quantum cosmology side of the story is almost certainly nonsense. The vacuum could indeed decay and cruelly transform the Universe, but there's no reason to think it would be connected with anything predictable such as black-hole collisions. We would have no warning.