I Hope You're Really Uncomfortable

Alanna Mitchell's Address to Convocation, Trinity College, University of Toronto, on May 20, 2012 on the occasion of being awarded an honorary doctorate. [see speech] Alanna Mitchell was presented for the Degree of Doctor of Sacred Letters, *honoris causa* by Phyllis Creighton [see presentation]

Chancellors, Acting Provost, Honorary Graduands, Graduating Class, Ladies and Gentlemen

I want to say first of all what an honour it is to be here in such august company. By that I mean the people who have spent years of their academic careers nurturing this astonishing college that I graduated from 30 years ago, and those who have worked so hard to earn their Masters of Divinity, their Masters of Theological Studies and a diploma in Theology.

I also mean my fellow honorees, Lieutenant Colonel Robert G. Dale and the Honorable Donna Jean Haley, who are with us, and Provost Emeritus William Thomas Delworth, who will watch this electronically later on. Congratulations to you all.

But I also want to salute Phyllis Creighton and Barbara Falby, the marvellous women who cooked up the crazy idea of asking Trinity to give me this honorary doctorate. I ran into the pair of them at a talk by the great NASA climate scientist Jim Hansen about 18 months ago and Phyllis chucked me on the arm and told me something quite fun might happen soon and she looked like a little girl who had just opened the biggest Christmas present ever.

And a month or so later I opened the letter from Provost Orchard, marked CONFIDENTIAL both outside and in, and read – It said in his handwriting: "Dear Alanna (if I may)…" -- that this was in the offing and would I be willing to accept?? So the tears came unbidden and here we all are this evening.

I never imagined anything like this might happen when I arrived here as an 18-year-old with a whole year of credits under my belt from the University of Regina, where my dad was a professor.

I'll confess right now that I didn't even know what Trinity College was. I had simply applied to the smallest college at U of T because I thought it would be less intimidating for a Prairie girl.

Wrong. I had absolutely no idea what I was getting into.

I didn't know it was a bastion of the Canadian AND Church of England establishment where people had to wear black academic gowns and say grace in Latin -- Latin! – to get served dinner in residence. I mean, my name is Aileen Alanna and my mother, Constance Aileen, who's in the audience, named me after an **Irish**ballad for a reason.

Shortly after I arrived, the dean of women, Dean Rawlinson, invited me to a sherry party in her rooms, gowns obligatory. She sidled up to me – kindly – at one point, holding her sherry glass with three fingers, and noted that I was one of the few new girls ever to come from Saskatchewan. Had I ever before, she murmured, lived in a, erm, a CITY?

A couple of years ago I watched the comic Tina Fey accept the Mark Twain prize for American humor. She remembered going for an interview 15 years ago to be staff writer on the television show Saturday Night Live, the job that changed her life. She figured she had a great chance because the show was looking to diversify its talent. Only in comedy, she joked, is hiring an obedient white girl from the suburbs considered to be diversification.

When I showed up at St. Hilda's 33 years ago, I had the same nagging suspicion: that only in Canada's Oxbridge academic establishment could accepting a compliant middle-class white girl from Regina represent daring.

Maybe I was wrong about that, but I always felt like an outsider here.

And I'm incredibly grateful for that. Trinity changed me forever in ways I think no other university could have. Trinity helped me see for the first time the culturally unseeable things in our society. The things perhaps that we're not meant to see. It changed my lens. I could never go back. And I never did.

Perhaps that was because I was uncomfortable here. I'm a great believer in discomfort. I remember the panic of realizing, one night in my room at St. Hilda's, that the class structure I had vaguely understood as a pampered professor's daughter in Regina was different here in Toronto. I wasn't so near the top.

Perhaps nowhere near the top anymore, and that realization gave me the great gift of being able to reexamine other structures in society, to discern context. And then to catch my first glimpse of who I really was and what mattered to me.

The gift has infused my work.

Sometimes it showed up in small ways. Like my secret campaign to get a few Western Canadian words past the proofreaders at the Globe and Mail during my 14 years there. It never worked. They changed coulee to ditch, half-ton truck to pickup, huck to chuck. I did, however, once get the phrase *mirabile dictu* from my beloved Aeneid into the paper. I guess Virgil passed.

On a more serious level, this new lens has led me for more than a decade to look at what scientists are finding out about our species' effects on our planet's life support systems, and to be able to see how those findings are different from the comfortable, convenient blindness that many people would prefer. It led me to think about the planet in geological time – so, over the sedate span of hundreds of millions of years – rather than in the human construct of time that sometimes seems to be contained in a single person's lifetime or a generation or the term of a government, or the 24-hour news cycle, or, I sometimes think, in the twinkling of an eye it takes to tweet 140 characters.

A few years ago, for reasons that now make me question my judgement, I was at the bottom of the ocean in a tiny submersible, not tethered to the ship that had hucked us off the side, but 3,000 feet down on battery power looking at part of the planet no one had ever seen until then, knowing that a single pinprick breach in the hull would kill me instantly.

And maybe because I was so very, very far out of my comfort zone, my focus on deep geological time shifted too. An epiphany, I think you'd call it. Instead of following a linear path, time became primeval, rhythmic. Not progress but pattern.

Not the three dimensions – length, breadth and width – marching along the sequential fourth dimension of time but rather all existing in another dimension altogether, past, present and future all at the same time. Aboriginal Australian cosmology calls this the Dreamtime and we crudely translate it into the idea of “anywhen.” It’s incredibly hard to explain intelligently.

But it matters. Because to me the anywhen contains both the fastness of knowledge and the passion of hope. Let me explain. What happened in the past is incontrovertible. You can’t quarrel with it. We have a record of it. And although that record is concealed in the folds of the Earth, we can find it and read it. But if we know what happened in the past, we can predict what will happen in the future if the circumstances are similar. And if we can predict, then we can forestall. This is the rapture of possibility, unleashed by hope.

I’m telling you all this because my read of today’s situation is that we are in desperate need of forestalling and I believe that you – all of you assembled here – can help. More than that, I believe that as Canada’s theologians, as our conscience and our moral compass, you have a duty to help.

What needs help? Nothing less than the life support systems of the planet. Through our actions, we’re impairing the planet’s ability to support the life that’s here now. That last bit is important. Life will continue on the planet regardless of what we do, regardless of how badly we damage the life support systems, but it won’t be the great dance of life we see now.

There’s a lot at stake. You, here in this room, probably know all about this already, but please indulge me as I remind you of a few of the facts.

For the past 250 years or so, we humans have been digging up fossils from deep in the earth and burning them to get the energy to run our economy. And when we burn these fossils – we call them fuels – the carbon that was part of their bodies millions of years ago when they were living plants and animals gets put into today’s atmosphere, adding to the concentration of carbon dioxide in the air. So today, there’s 40 per cent more carbon dioxide in the atmosphere than there was before we started burning coal, oil and gas. In just a quarter of a millennium, we’ve made the atmosphere more carbon-filled than it’s been in tens of millions of years. Tens of millions.

All that carbon is holding heat against the body of the planet. And that’s altering patterns of weather, temperature, even seasons in ways that are making it hard to predict when to plant crops in some parts of the world. It’s leading to floods, droughts, bigger hurricanes, forest fires, bug infestations, diseases moving to feast on new human populations. Your basic mayhem. And the more carbon dioxide we put into the atmosphere, the more mayhem we’ll have.

We all know about all this.

The part most of us don’t know about is what all that carbon dioxide is doing to the global ocean. For one thing, it’s making the ocean more acidic. Today, the ocean is 30 per cent more acidic than it was before we started burning fossils, more acidic than it’s been in 55 million years. That’s because carbon dioxide from the atmosphere binds chemically with water to produce carbonic acid. And that chemical change in the ocean is making it hard for creatures to build shells, bones, teeth, keep their internal chemistry balanced. Already, we’re seeing sea snails with brittle, pitted shells.

And that’s not all. The high-carbon world we’ve created is making the ocean warm and causing it to lose some of its dissolved oxygen. Great swathes of it are dead zones now, with so little oxygen that creatures that can’t flee fall to the bottom and die. Right across the planet, marine creatures are

racing to get away from higher water temperatures if they can. One of the most haunting stories I heard while I researched my book Seasick was in Australia where masses of eggs of endangered sea turtles cooked in the hot, wet sand before they could hatch.

So all that extra ancient carbon in the atmosphere is making the vast global ocean warmer, more acidic and less apt to have oxygen.

So what? Well the big shocker is that we humans are dependent on the chemical and biological functions of the ocean for our own survival. I know it seems impossible. But it's true. One of the great marine biologists I spent time with researching my latest book explained that if everything that breathes air were to die tomorrow, everything that lives in the ocean would be fine. Better. But if everything in the ocean were to die, we would die too.

I've been looking at the Permian extinction recently. It's called the Great Dying because it's the biggest mass extinction in the paleontological record – 95 per cent of species died off in a geological heartbeat 252 million years ago. Why? It had to do with high concentrations of carbon dioxide spewed into the atmosphere from the volcanoes that made the Siberian Traps. That carbon dioxide made the ocean acidic, warmer and created large areas of the ocean that didn't have enough oxygen to support life.

Today, we're putting carbon dioxide into the atmosphere about 10 times as fast as those ancient volcanoes.

So where do you come in? Well, there's the long view. We humans are so voraciously burning fossils that we're setting the stage for another mass extinction. Only the sixth in the whole history of life on the planet. We are as dangerous to life as the asteroid that killed off the dinosaurs, as the most dangerous volcanoes that have ever existed. And we could prevent this. We know exactly what to do. We just can't agree on how or when.

Is there an ethical element to this? You could talk about the millions of species we're putting at risk. That magical symphony of life that has evolved over three and a half billion years, the birthright of the planet.

But I know that some people aren't moved by thoughts of other species vanishing from the book of life. I've talked to some people who think that when other species die off, it means we humans are winning.

So let's talk about humans.

We've all been hearing about the terrible drought and famine in the Horn of Africa – Kenya, Ethiopia, Somalia. Tens of thousands dead. A million in refugee camps. 10 million desperate for help. $2.4 billion committed in humanitarian aid so far.

Why is east Africa having a drought? Not enough rain. Why are the rains forgetting to come? Well, that has to do with changes in the sea-surface temperature patterns of the Atlantic Ocean and steady warming in the Indian Ocean.

Why is the Indian Ocean warming up? All that carbon in the atmosphere. It means that the atmosphere is more greedy for moisture and it keeps it there rather than raining down on African crops. Not only that, but atmospheric circulation patterns are also shifting as a result, meaning that

when it rains, it doesn't rain in the same place. This is not a natural disaster. It is human-caused and it was preventable.

This phenomenon of the thirsty atmosphere – and therefore the parched land – is expected to spread in the next few decades. One climate model I looked at recently said that by the middle of this century – when the carbon load in the atmosphere will be about double what it was before we started burning fossils – we'll have severe drought over, get this, most of Africa, southern Europe, the Middle East, Australia, southeast Asia and most of the Americas except the north.

I guess all those thousands of humans who live on the prime agricultural lands of the Arctic and Antarctica will be fine. Wet, but fine. The other billions, not so much.

The astonishing thing is that we know how to prevent this. Scientists and policy people all over the world have come up with good ways to switch our energy from fossils to non-carbon sources and actually draw carbon out of the atmosphere. I was reading a big Canadian government report the other day on our potential here for using geothermal energy – the heat that seeps to just below the Earth's surface from further down – to make electricity.

It turns out we have the capacity to generate a million times more electricity from geothermal than we use now, for relatively cheap, compared to the billions of dollars we spend every year subsidizing the oil and gas industry. How much geothermal electricity are we generating? None. Instead, we're punching holes into the hot subsurface to pull out more fossils that will put more carbon into the atmosphere and ocean.

I think the technical definition here is spinning gold into straw.

Is this an ethical issue? Is this YOUR issue?

Maybe 33 years ago when I arrived at Trinity, I was just masquerading as compliant. Because I tell you now, I hope I have made you incredibly uncomfortable with all this knowledge. I also hope you can find the anywhen in all those facts, that you can see a pattern. That you can reach deep inside yourselves to find hope – to choose hope – and then turn it alchemically into action.

I devoutly wish that you're so uncomfortable, so jubilant at finding your own way to hope that you stay awake all night tonight, of all nights, figuring out what you, personally, can do to turn us back from the brink.

Because, God knows, if you can't, who can? Thank you.

Alanna Mitchell www.alannamitchell.com