

Clouds of Witness

Professor Michael Northcott

The beautiful island of Tasmania off the coast of Australia is home to the last great eucalyptus rainforest on earth. The trees reach 90 metres into the air and are 20 metres in girth. The rich moist forest floor and the tree canopy is home to thousands of species of insects, birds and small mammals and to numerous kinds of mosses lichen and tree ferns, some of which, like *Diksonia Antarctica*, the Tasmanian tree fern, are unique to this island. A large and powerful company called *Gunns* has been clear felling this beautiful forest for decades. In the next few years the company plans to work its way through much of the rest of the island, in the teeth of much local opposition, but with the support of both the government of John Howard and the opposition Labour party. So powerful is this company that it has persuaded politicians of all stripes to support it. And homes and businesses of vocal opponents of the logging have been burned to the ground in Tasmania. The story is told in a passionate article in *The Telegraph Magazine* this weekend by Australian novelist Richard Flanagan. The timber of this wondrous island is being turned by *Gunns* into wood chip and wood pulp while the remaining forest – once the big trees have been harvested – is burned to the ground with napalm and then replanted with a monocrop of eucalyptus trees. Around the tree nurseries the company plants blue carrots in the ground which are treated with a lethal toxin so that any small mammals that survive the burning of the forest are killed to prevent them eating the young trees.

It is hard to believe in this day and age the extent of the corporately sponsored ecological destruction that Flanagan describes. We imagine in these days of corporate responsibility and socially responsible capitalism that such businesses are doomed dinosaurs from another age of capitalism. But these dinosaurs survive on every continent and they are systematically ripping their way through every last natural resource that governments will permit them to lay their hands on, and many others that are officially protected. In Southeast Asia where I lived for many years palm oil companies are similarly burning and logging their way through rainforests, killing wondrous animals like Orangutans as they go, and spreading their palm oil monocrops right across the region and in many cases bribing local officials, and even attracting public subsidies, as they rip their way through the glorious heritage of some of the oldest rainforest on earth. Millions of hectares of Borneo have been burned in

the last ten years to make way for palms whose oil is in thousands of foods, detergents and cosmetics in Western supermarkets, and is now being turned into bio diesel to displace a percentage of the fossils which fuel European car engines, and so assuage Europe's ecological conscience. So extensive is the burning that the whole region is often shrouded in smog in July and August. The quantity of carbon dioxide released by the burning in 1997 – 8 was so great that it precipitated an economic collapse across the whole region from Thailand to Indonesia.

The damage being done in Malaysia was brought home to me personally on a journey I made as field education director of the seminary with two of my students from Sarawak who took me and my family on a boat trip up the great Rajang river from Sibu to the heart of what was then known as the Fifth Division. We met a 'flying doctor' who told us she was taking medicines in helicopter trips to outlying areas where she was finding that the nomadic Penans were suffering from malnutrition. All their traditional food sources had been devastated by the loggers. With the trees mostly clear cut over vast swathes all the wild animals had died, while the fish in the rivers had also died from lack of oxygen as there was so much silt in the rivers as the rain ran off the bare sandy tropical earth that nothing could survive. The area is one of the most fertile on earth – you could plant a papaya seed in the ground and within a few months you would be harvesting fruits – but greed and the quest for corporate profits had reduced nature's abundant larder to a desert. But this was all craftily hidden from us since on the river, and in the riverside long houses we had visited, the loggers had left a 50 metre band of trees so tourists and visitors could not see the damage being done to the interior.

The rate of destruction of tropical rainforest in Southeast Asia, and in Amazonia, is responsible for an unprecedented loss of biodiversity on earth in the last fifty years which biologists are calling the sixth great extinction in the history of the planet.¹ The burning of the forests is also the cause of significant growth in greenhouse gas emissions into the atmosphere which are warming the global climate; around 20 per cent of global emissions in the late 1990s originated in forest fires in

¹ Richard E. Leakey, *The Sixth Extinction: Patterns of Life and the Future of Humankind* (NY: Doubleday, 1995). And on species loss in Southeast Asia see Navjot S. Sodhi and Barry W. Brook, *Southeast Asian Biodiversity in Crisis* (Cambridge: Cambridge University Press, 2006).

Southeast Asia and Australia.² And just last week I heard John Howard, the Prime Minister of Australia, announce that unless the record ten year drought in Australia is broken in the next few weeks the country will have to turn off irrigation water to its agricultural heartland as otherwise there will not be enough water left for Australia's mostly urban residents to drink. Australia is facing an ecological melt down from global warming and yet it continues to be the heaviest emitter per head of greenhouse gases on the planet and it continues to burn its ancient forests. Tropical and subtropical forests in their natural state are rich and wondrous ecosystems which act like natural air conditioning. The microclimate of the forest draws moisture from the ocean and atmosphere and creates updrafts which form rain clouds and as the rain falls it is taken up by tree canopies, fallen leaves, mosses and tree roots and it seeps deep into the soil. When the trees are gone the rain at first continues to fall but when it does it falls on bare earth and washes it into streams and rivers. Eventually over time with more deforestation the rains began to dissipate, the clouds no longer form and the land becomes parched and eventually is at risk of turning into bare desert, something that is already happening in some tropical regions. And so not only does deforestation contribute to global climate change but also local drying and raised temperatures.

The scientific prediction of global warming goes back more than a century. Swedish scientist Svente Arhenius in 1896 theorised that the planet's protective layer of greenhouse gases would be changed by the quantity of carbon dioxide being emitted from the industrial use of fossil fuels and he believed – as we now know quite correctly- that these gases would likely reduce the emission of the heat of the sun off of the surface of the earth and back out into space. This balance of gases in the upper atmosphere is a precious invisible skein which is finely balanced to allow the light of the sun in while trapping enough of it to keep the temperature change relatively stable between day and night, and it is this stability that creates an atmosphere, and a planet, which is, so far as we know, the only planet in the universe capable of supporting warm blooded mammalian life, or indeed organic life of any kind. Arhenius was a prophet before his time and he lost his job for propounding what his peers thought was a wild theory. But some years later Robin Callender propounded the same theory

² Prabir K. Patra, Shamil Maksyutov et. al., 'Analysis of atmospheric CO₂ growth rates at Mauna Loa using CO₂ fluxes derived from an inverse model', *Tellus B* 57 (2005), 357–365.

to the Royal Society in London in the 1930s and was more widely believed. At the same time the residents of northern Canada were beginning to notice subtle changes in the pattern of ice and snow of the Canadian winter. Snow was disappearing earlier each year, winter ice was not so thick and there were newspaper reports that the climate did seem to be changing.

In 1972 the Club of Rome published their report *Limits to Growth* in which they suggested that there were limits to the upward growth path being followed by industrial economies and that eventually resource depletion would ensue. They also suggested that there was a significant limit to the amount of waste gases from fossil fuels which the earth system could absorb. But again they were ignored and between 1970 and 2007 a majority of the greenhouse gas emissions which have been emitted since the industrial revolution were emitted as the global economy has grown exponentially, spurred on by the abandonment of the gold standard in the United States and the consequent vast increase in the quantity of money in circulation in the global economy. However in 1988 the world's scientists gathered at a meeting in Berlin and announced to the world's governments that the earth system was in crisis and something needed to be done at a global level to prevent a runaway warming event. As a consequence the United Nations Framework Convention on Climate Change was established whose solemn covenant was to enable the nations of the world to work together to prevent the onset of 'dangerous climate change'. The UNFCCC established the Intergovernmental Panel on Climate Change whose fourth report is still being published and whose findings indicate that the earth is in dire trouble.

Perhaps the most worrying recent finding is that the earth's largest carbon sink – which is the ocean itself – is at risk of breaking down because of the quantity of carbon which is being dissolved in its waters. This is raising the pH level (**pH** is a measure of the acidity or alkalinity of a solution) of the ocean and making it more acidic and at a higher pH level shell fish will not be able to calcify their shells and so an essential part of the ocean food chain – and moreover the part which is crucially implicated in carbon absorption – will cease to function. Presently shell fish which form shells and sink to the bottom of the ocean take with them the carbon in their shells and so lock that carbon out of the earth system indefinitely. What we are presently doing of course is taking crushed sea shells from beneath the ocean and

earth surface, and which constitute fossil fuel, and releasing this locked carbon in the atmosphere.

However despite the prognostications of a possible apocalypse in the near future of the planet, the intergovernmental negotiations around greenhouse gas reduction – known as the Conference of the Parties to the UNFCCC – have been systematically corrupted by business interest and the United States. When the Europeans entered into these negotiations their original target for green house gas (ghg) reductions was 20% on 1990 levels by 2012. Under tremendous pressure from the United States, Australia and the oil producing countries, this was reduced to an average of 5%. And to make matters worse the United States also persuaded the COP that the Kyoto Process ought to go down the road of carbon trading. Now before the Kyoto Protocol was signed most economists who had worked on the problem believed that the most efficient way to reduce carbon emissions was to price them through taxation. This is because countries already have taxation systems and therefore this approach did not require the establishment of new bureaucracies or new markets and regulatory mechanisms. Instead the taxation burden would be shifted from enterprise, income, imagination, jobs, labour and profit to carbon. This would produce incentives right through national and ultimately the global economy to find new low carbon ways of doing business, and of growing food and making things and moving them around. However in the 1980s American businesses had grown tired of the regulations imposed on them under environmental laws such as the Clean Air Act and the Clean Water Act and had begun to work on a new way of trading in pollution in an effort to undermine the regulatory approach. The idea was that companies would trade permits in pollutants such as the mercury emitted by coal fired power stations and these permits could be bought and sold by companies who either need to pollute or choose to pollute less. The aim essentially was to turn pollution into a tradable commodity.

Now this new approach has actually done nothing to reduce particulate pollution in the United States which has been increasing in recent years. It has however given the Bush administration an excuse to undermine and even abandon key elements of the environmental regulation agreements put in place in the 1970s. Now the Americans said they would withdraw from the Kyoto Protocol negotiations if they protocol did not inaugurate a global system of pollution permit trading analogous to its new domestic pollution market. And as a consequence a completely

new system of carbon trading was inaugurated under Kyoto which allows companies to claim that a new eucalyptus forest – such as the ones being planted by Gunns in Tasmania – is a carbon sink which can be offset against carbon emissions elsewhere in the world, even although such a plantation may replace an old growth forest which was a much greater carbon store. All kinds of such trades are now permitted under carbon trading and in Europe the market was inaugurated with a vast handout by governments of permits to pollute to private energy companies. Here in the UK 500 millions pounds worth of such permits were handed out gratis to oil companies including Shell, BP, and EssoMobil. So many permits were given away that far from incentivising carbon reduction it actually had the opposite effect and companies were actually penalised if they reduced ghgs. As a result the cost in the new market of a tonne of carbon presently stands at a derisory 69 cents.

The corruption of the Kyoto Protocol by American and corporate influence is an example in macrocosm of what is happening in Tasmania. Corporations use their buying power and lobbying influence to buy and bully politicians into deferring real regulatory mechanisms and real reductions in carbon into the future on the argument that jobs, profits, taxes and so on will all suffer.

The kind of economics these kinds of games manifest are a terrible reflection of what happens when the self-interested conception of economic action first put forward by Edinburgh economist and moral philosopher Adam Smith takes over from a societal and governmental commitment to the common good. When Smith envisaged butchers, bakers and candlestick-makers working in their own interests to make the best products they could and so advancing the wealth of the whole community he did not have in mind a global economy dominated by corporate goliaths who produce in one country – and pollute and toxify its soils and rivers and atmosphere – and sell in another one thousands of miles away, while doing all they can along the remote supply chain to hide profit and reduce their tax liabilities to national governments. This kind of anarcho-capitalism is now in conflict with the common good of every nation. Far from advancing the wealth of nations it is allowing a few nations – and a few cities like London, New York and Tokyo – to amass vast stores of monetary wealth while leaving behind wrecked ecosystems, impoverished peoples and ultimately putting at risk the earth system itself.

At this point I turn to the three h's as a way of describing more theologically the situation in which we find ourselves – holism, humility and holiness (with thanks to Sir John Houghton who first taught me them)

Holism

The model of human action that Adam Smith's economics committed us to is of autonomous individuals acting in their own interests and yet by the invisible hand of the market advancing the greater good. However the scientific narrative of global warming is teaching us that this description of human action is too individualistic. In reality we live in a holistic earth and all of our actions in emitting waste gases and polluting rivers or cutting forests are connected by the climate system and the carbon cycle. First described by James Lovelock in his Gaia hypothesis the carbon cycle reveals that all living things are implicated in maintaining the beneficent and stable climate which have made it possible for our forbears to plant crops and harvest them over generations and to pass on their stories and artefacts to future generations. The fact that we can gather here in this building of ancient stones assembled by people hundreds of years ago from rocks which were pushed up from the earth's crust through millennia of rapid climatic shifts from hot to cold is indicative of the stability of human settlement that climate stability has made possible in the last 10,000 years. And life has played a crucial role in maintaining the level of gases in the atmosphere which has created this stability. Algae and plankton in the ocean, green plants and even mammals themselves are all implicated in a carbon cycle which connects all our actions. And as human actions are now disrupting this beneficent arrangement we are finding that our decisions to drive large cars, to overheat our houses, to leave lights on and to take flights for our holidays and buy air flown and shipped produce from every corner of the globe are having impacts on African farmers whose lands, like Australia, are also drying out from the worst drought in living memory, and on Bangladeshi fisher-folk whose homes are threatened every year by strengthening storms, tidal surges and ultimately by sea level rise caused by global warming.

In the church we have a way of speaking about this kind of holistic connection of all of our actions, from the past into the present and the future. We call it the Communion of Saints, or, even more appropriately, we speak of the Cloud of Witnesses with whom our actions and lives are joined in the perspective of heaven. And as we remember the people who have gone before us in our liturgy and prayers

each Sunday we recall that our lives are joined with theirs in the life of the Spirit in which temporal and spatial boundaries are transcended and overcome. Global warming is teaching us that the human life on earth is really like this great Cloud of Witnesses. Our actions, our lives, are connected right around the earth by the clouds, and the climate system which drives their formation and dispersal. This means that we each of us have a responsibility to our global neighbours to change our lives. We are visiting real physical harms on present poor farmers and fisher-folk through our luxury emissions from cars and planes, houses and offices and air flown consumer goods. And we are visiting harms also on future generations in what is a deep intergenerational injustice. And there is a real urgency in this. We have already warmed the planet by 1 degree centigrade since the beginning of the industrial revolution. 1 degree of warming is already present in the delayed reaction of the earth system to the gases we have emitted in the last twenty or so years. And 1 degree of warming is potentially present in the gases we and other nations are planning to continue to emit in the next twenty years. That takes the earth to a 3 degree change in temperature in little more than a century, a rate of temperature change unprecedented in the earth's climate history according to the ice cores and tree rings studied by climatologists. There is no time to delay collective action. We either reduce our emissions from now on or we send the planet into overdrive. That is what we learn from the holistic way in which the earth system works.

Humility

So far the nations of the earth show little sign collectively of absorbing this lesson. When Tony Blair came back from a recent transatlantic holiday trip he was quizzed by journalists about his greenhouse gas emissions and he said don't be silly, we can't expect people to make sacrifices to resolve the problem. It is a problem of science and the scientists need to find ways to fix it. His answer reveals the key reason – other than corporate corruption and greed – why the nations of the world have not yet begun to reduce their greenhouse gas emissions. We have been trained by science and technology in the last three hundred years that knowledge – as Francis Bacon put it – is power. Science teaches us the laws of nature and once we understand them we can use them to manipulate and engineer the earth so that it meets our human needs more effectively. Bacon even suggested it would be redeemed by human success in transforming it in service to human progress. Science has trained us to

think that there is no limit to the human quest to order the earth after human design, so much so that we are now the dominant force of nature on this planet.

Our technology and our sheer numbers, as a species have made us more powerful even than the sun and the ocean in shaping the future of life on earth. But with that vastly increased power has not gone increased responsibility. Instead we continue to drill, drain and dredge, fish, forage and fly, hunt, mine and move around, as if there are no limits and there is no tomorrow. Science has made us lords of the earth, gods if you like. But what global warming is teaching us is that there are forces on earth that are still greater than us; that nature has ways of doing things that when we disrespect we do so at our peril. Nature does not waste. Everything in a traditional mixed forest is reused in a wondrous system of moisture and nutrient cycling which means that the apparently wasteful and chaotic environs of an old growth forest are far more productive than the seemingly orderly serried ranks of a plantation forest. In reality the plantation not only supports less species but it produces less pulp for the paper mill and lumber for the saw mill.

We need as the writer of the Book of Job suggested relearning humility in the face of the laws of nature. Who has measured the waters in the hollow of his hand or meted out the heavens by a span. Who created the tiger and the ostrich, the leviathan in the deep and the cheetah on the plain? The Creator made all these things and we with all our scientific knowledge can make none of them. But we have used that knowledge in the pursuit of techniques which have destroyed their habitats and threatened their extinction, and now threaten the earth system itself. At a 3 degree change in global temperatures scientists predict a mass extinction of around one third of all species on earth. Without humility we will not draw back from the idea that we can fix the problem with more science and technology. And this is why we so urgently need a spiritual as well as a scientific narrative of climate change. The scientific narrative – however scary it becomes - is not changing behaviour. We need to recover a sense of sacred respect for the origins of life in the original wisdom of the creator whose powers and ways are more mysterious than science has led us to believe. The physical world is not a machine following out an autonomous and random logic – life on earth is a miracle, a manifestation of the divine life. Messing with the earth system which sustains life not only manifests deep disrespect to life – it is the deepest blasphemy against the Creator. The Hebrew Prophets knew this long ago. Jeremiah suggests that the snow was vanishing from the heights of Lebanon

because of the greed of kings and empires in denuding them of cedars, while Isaiah suggests that the land of Israel lies polluted and is turning to desert because the people of Israel had neglected the eternal covenant which had bound them to treat it gently and live on it lightly. The cause according to the Prophets was idolatry – the people of Israel worshipped idols and so had enslaved their own people in the pursuit of power and wealth and the land itself mourned and pined away, longing for justice again to reign in the land.

Holiness

We are accustomed in these individualistic times to thinking of the pursuit of holiness in individual and pietistic terms. Cultivating holiness is about the pursuit of an inner state, a personal religious experience of the heart and mind. This conception of holiness also maps onto the conception of politics increasingly advanced in a global economy. Long remote supply chains, deregulation and privatisation of economic activity, all promote individualism and a loss of hope in collective action. But the people of God in the first century felt themselves to be a holy people who were set apart – called out – as the collective and communal *ecclesia* of God. And they called this *ecclesia* the body of Christ. This image of the body is an organic metaphor for the political life of the Church which trained the first Christians to understand that they were joined to one another in their shared quest for the new life inaugurated in the life, death and resurrection of Jesus Christ. This new life was focused on the common meals and shared worship of the early communities. And from their shared life they learned to care for the poor and orphans and widows. And they also learned that the Church was an inter-social political community. So when St Paul writes to the Christians at Corinth he tells them of the sufferings of the Christians in Judea in the famine which followed the Jewish revolt in AD 70. He asks them to give from their abundance to meet the needs of Christians in another province. Likewise through the World Council of Churches, and through organisations like Christian Aid and Tearfund, Christians have shared stories across cultures and continents of how the climate is already badly affecting the peoples of the South. And churches are already beginning to try to find ways to respond.

A church I visited in Basle a few years ago had installed solar panels on its roof to generate electricity and with the money they had saved in payments to their electricity supplier they were paying for the installation of solar equipment in villages

in Africa so that people in the South should have ways of lighting their homes and cooking their food which are cheap to run and more sustainable than the inefficient three stone fires and kerosene lamps they have long been using. Churches all over Britain are beginning to think about their use of energy as a matter of Christian witness, through the eco-congregation initiative and through denominational initiatives such as the Church of England's efforts to get all its churches and Dioceses to measure and then reduce their carbon footprint.

Being members of the body of Christ trains us that when we share in the life of a worshipping community we are made members one of another and of the global communion of saints. And we are united also in a shared love – a love for God as Creator and redeemer of this wondrous universe whose actions of creation and redemption in the sending of his Son – the original *logos* by whom the world was created – teach us that the life of God's own self is at risk in this creation in which we live. We are called by the new reality which is revealed in the resurrected body of Christ to seek to live in a new way of peace with one another in which old divisions between rich and poor, Jew and Gentile, women and men are set aside in the shared love of God and the shared pursuit of the way of the Kingdom. And this shared love also trains us to treat of the whole creation with new reverence and respect.

The Incarnational revelation of the life of the Trinity in its original relations of love and intercommunion teaches Christians a new respect for the relationships within creation which we know since Christ are indicative of the prior relationships of the Godhead. And the Cross of Christ also teaches us that the recovery of right relations between creatures and the Godhead since the Fall is no longer achieved through blood sacrifice. Instead the need for violent killing is at an end and a new peace has arrived in the Prince of Peace. And that peace in the lives of the saints spreads out from the church into relationships with all creation, as we see in the lives of the desert fathers who communed with wild animals, in the Syrian monks who guarded the last surviving stands of the cedars of Lebanon, in the study and work of the Benedictine monks from whose care and knowledge of creation we find the origins of new kinds of making in Western history, and the use of renewable technologies such as windmills and waterwheels.

The vindication of the creation in the Risen body of Christ means that Christians since the Resurrection are already living in a new world and in that world they are called to a new reverential use of the creatures that God has made. Our Celtic

Christian forbears in this ancient land of Scotland knew a good deal about this reverential use. In the prayers of the Carmina Gadelica collected by Alexander Carmichael in the nineteenth century, and passed down from generation to generation in the communities of the Western Isles, we read how the Celts used to lay the fire in the mornings in their croft with three pieces of peat and each piece of peat was laid in the name of each member of the divine Trinity. They understood that the fire which warmed their hearth and cooked their porridge was an analogy for the divine light which warmed the earth in the form of the sun, and the divine Spirit who warmed their hearts in their daily lives and in their worship. And in the heraldic shield of Old Aberdeen in this church today I found that you also have a reference to this way of thinking in the Trinitarian arrangement of three fishes superimposed on the cross.

We need in our own day to recover that kind of Celtic reverence for creatures and hence for the divine energy stored in the earth which is literally stored sunlight buried over millions of years and which we have irreverently put into the atmosphere in the last fifty years in such large amounts as to threaten the earth system itself. In the South aisle of the Cathedral you have that wonderful Celtic cross which is such a powerful symbol in our local traditions of the contiguity that the Celt saw between the divine light of God revealed in Jesus Christ and the divinely created orb of the sun in relation to which the earth is so beneficently placed as to be warmed and yet not burned up. Energy – both heat and light energy – is light, the stored light of God which has shone on this earth since the beginning of time by the divine will. The image of the Cross and the sun should train us to treat of that divine light with a new reverence and respect.

Some people say to me but where is the hope that things will change. Don't you find the fear of what will come debilitating. But I say in reply that no I think that climate change is the great moral challenge to this generation. We have had so much – so much more than any previous generation. Now we need to relearn the kinds of sacrificial living which our parents and grandparents knew and which got them through two World Wars and saved the world from fascism and Nazism. I think here it is worth recalling a fourth h for **hope**. We are misled by corporate advertising and the media into thinking that new cars, kitchens, foreign holidays and homes full of the latest gizmos, and offices with the latest computers will make us happy. But all the evidence is that we are less hopeful about the future than people were decades ago. And the reason is partly because we are less equal, our wealth has divided us and we

have less of a sense of social solidarity, and a shared purpose in society than people had in the War sixty years ago.

I think that a society which really radically reduces its energy use and becomes more dependent on the forces of the earth to meet its needs, which does not reap where it has not sown, and which does not consume what it has not produced, will also be a society in which social hope flourishes once again in place of the political passivity that infects us today. The daily denials and that sense of guilt we all feel when we go shopping for food and clothes made or grown in distant lands by people we do not know in conditions we would rather not think about will begin to dissipate when we recover a low energy economy which does not rely on exporting pollution – and jobs – to another country where children and soil and water can be enslaved to irresponsible production and cheap consumption.

A low carbon society will also be a society where people recover a stronger sense of place, and of the value of being in place, and caring for place. In such a society people will move around a bit more slowly, and thoughtfully; they will begin to recover time from the hectic politics and technologies of speed. And with ‘slow food’ and slower travel they will find that it is possible to eat and to move without sacrificing the future of the earth for present heedless consumption. There is hope. That is the message of our Resurrection faith. God will redeem creation. But God’s way of redemption is through the fragile and organic life of the body, in the kenotic setting aside of divine power in the sending of the Son of God, and in the gift of the Spirit who since the time of Christ is present among the people of God prompting and sustaining them as they seek to do justice and to love mercy and to walk humbly with their God.

This is the text of a lecture given by Professor Michael Northcott at St Machar's Cathedral Aberdeen on Sunday April 22nd. Professor Michael Northcott is a former USPG missionary and currently teaching at the New College Edinburgh.