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THE NATHANIEL CENTRE FOR BIOETHICS

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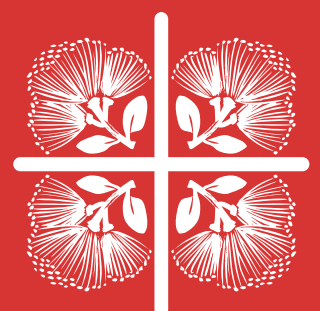
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TE KUPENGA
NATHANIEL
CENTRE FOR
BIOETHICS



The Nathaniel Centre for Bioethics was established in 1999 as an agency of the New Zealand Catholic Bishops' Conference. In 2020, the Centre was formally affiliated with Te Kupenga – The Catholic Leadership Institute.

The key functions of The Nathaniel Centre include:

- developing educational opportunities in bioethics
- acting as an advisory and resource centre for individuals, and professional, educational and community groups
- carrying out research into bioethical issues, and promoting the study and practical resolution of ethical, social, cultural and legal challenges arising out of clinical practice and scientific research
- carrying out research and action to support the Church's pastoral response to bioethical issues taking into account the needs of different cultures and groups in society

Our Philosophy

Rapid advances in science have moral, ethical, and spiritual implications at an individual and societal level. While Catholic bioethics deals with the same realities as secular bioethics we are committed to bringing the light of the Gospel and the wisdom from the Church's moral tradition to the various issues under discussion.

Reason and faith do not exist in isolation; they guide our individual and collective search for truth and they complement each other when they meet in genuine service of those who suffer. In the words of Pope Benedict XVI: "Only in charity, illumined by the light of reason and faith is it possible to pursue development goals that possess a more humane and humanising value." In this way the work of bioethics appears as a practical expression of the reverence we have for the gift of life.

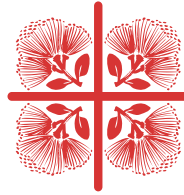
For The Nathaniel Centre, the context of bioethics is pastoral, because the ethical issues arising in healthcare and the life sciences reflect the realities of people's lives.

Faith and reason are like two wings on which the human spirit rises to the contemplation of truth...

POPE JOHN PAUL II

... faith consolidates, integrates and illuminates the heritage of truth acquired by human reason.

POPE BENEDICT XVI



IN THIS ISSUE...

In his editorial, *Participatory Leadership*, **John Kleinsman** reflects on Pope Francis' analysis of the dangers that arise when the "technocratic paradigm" and the "economic paradigm" merge, creating an alliance able only to respond to its immediate interests, at the expense of the common good. He argues the importance of robust public consultation in order to create policy and laws that serve the needs of all.

In *Opinion: Govt Right to Consider GM Changes – But It's too Risky to Rush It*, **John Kleinsman and Graham O'Brien** argue that reform of New Zealand's genetic modification laws must be driven by a concern for the wellbeing and flourishing of both people and the environment, and that achieving such an outcome will require evaluation of GM from cultural, ethical and spiritual perspectives.

Following on from this, in *Pending Review of Genetic Modification Laws in Aotearoa New Zealand*, **The Nathaniel Centre for Bioethics, The InterChurch Bioethics Council, Ngā Karaitiana Kimi Matū – NZ Christians in Science, and The Christian Medical Fellowship of New Zealand** responded in an open letter to the Government's plans to liberalise genetic engineering laws. In it, the authors sought reassurances from the Government that there will be appropriate public consultation.

In *Genetic Modification and Regulation in Aotearoa New Zealand*, **Staff of the Nathaniel Centre** offer an overview of what genetic modification is, the law which regulates it and some of the issues that have been raised with regards to it.

Next, in *Reuse or Refuse: Confused? New Universal Standards for Plastic Recycling in Aotearoa New Zealand*, **Alfred Tong** outlines the new standardised plastic recycling guidelines introduced at the beginning of February and explores the relationship between recycling and the common good.

In *The Sharp End*, **Sophie Olszowski** reflects on the possibility of euthanasia becoming legal in the UK and in doing so, offers a reminder about what is at stake in the passing of such laws. The article is timely for Aotearoa given the review of the End of Life Choice Act 2019 which will be happening in November.

In our final article, *Artificial Intelligence and Peace*, **Staff of the Nathaniel Centre** offer a precis of Pope Francis' Message of Peace 2024, which this year explored the connection between peace and artificial intelligence. Pope Francis' message is offered in the hope that developments in AI will ultimately serve the cause of human fraternity and peace.

We hope that you find something of interest in this Issue.

Find us on 

Participatory Leadership: Showing “concern for all and without prejudice towards coming generations”

In his 2015 encyclical *Laudato si'* (LS), Pope Francis speaks of the importance of “leadership capable of striking out on new paths and meeting the needs of the present *with concern for all and without prejudice towards coming generations*” (n.53, emphasis added).

Underpinning his comments is a deep uneasiness (articulated by many) regarding the dysfunctional alliance of two inter-related paradigms – the ‘technocratic paradigm’ (which sees all problems as resolvable by technical means) with the ‘economic paradigm’. What they have in common is an overly reductionist, instrumental view of the world which, in Pope Francis’ words, rests on a “confrontational” relationship between human beings and material objects; acting as if there is an infinite supply of the earth’s goods while accepting the idea of infinite or unlimited growth (LS, 106) and privileging the criterion of efficiency over other values (LS, 54).

Pope Francis spoke critically of these paradigms early on in his pontificate in a 2014 address to the European Parliament. There he described them in terms of a disordered relationship that humankind has with whatever in creation is ‘other’: “We see technical and economic questions dominating political debate, to the detriment of genuine concern for human beings.”

As an antidote, Pope Francis argues that the “establishment of a legal framework which can set clear boundaries and ensure the protection of ecosystems has become indispensable; otherwise, the new power structures based on the techno-economic paradigm may overwhelm not only our politics but also freedom and justice” (LS, 53), “[creating] a framework which ends up conditioning lifestyles and shaping social possibilities along the lines dictated by [the] interests of certain powerful groups” (LS, 83). He continues, noting how, in such a framework, “economic interests easily end up trumping the common good” (LS, 54).

Drawing on the 2007 *Aparecida Document* (produced after the 5th General Conference of the Bishops of Latin America and the Caribbean) Pope Francis concludes that, in decisions related to the well-being of the environment:

... ‘the interests of economic groups which irrationally demolish sources of life *should not prevail* in dealing with natural resources’. The alliance between the economy and technology ends up sidelining anything unrelated to its immediate interests. Consequently the most one can expect is superficial rhetoric ... and perfunctory expressions of concern for the environment, whereas any genuine attempt by groups within society to introduce change is viewed as *a nuisance based on romantic illusions or an obstacle to be circumvented* (LS, n. 54 – emphasis added).

With one Government Minister’s dismissive reference to conservationists as “green politburo banshees” still ringing in my ears, and another Minister decrying the presence of students at a recent “School Strike 4 Climate” march, I argue that Pope

Francis’ words are highly relevant for Aotearoa at this time. Why? I perceive a genuine risk that the clarion call to ‘get our country back on track’ is happening through political processes that ultimately fail to ensure “concern for all”, including, and especially, “coming generations”.

That risk is reflected, firstly, in recent moves to rush through legislation ‘under urgency’. Secondly, there is much concern that the *Fast-track Approvals Bill*, in its proposed form, will give unprecedented powers to a small number of Ministers to make significant decisions while cancelling many of the present democratic checks and balances that exist, including robust consultation with relevant experts.

While some of the current regulatory approval processes around infrastructure and business are unnecessarily cumbersome and bureaucratic, to the detriment of the common good, the right of the public and relevant sectors to be fully consulted lies at the heart of any healthy democracy as well as being critical for political accountability.

As Pope St John Paul II wrote in *Centesimus annus* (1991): “The Church values the democratic system inasmuch as it ensures the participation of citizens in making political choices [and] guarantees to the governed the possibility both of electing and holding accountable those who govern” (n. 46).

Pope Francis’ insistence that meeting the needs of the present must not be prejudicial for coming generations means that youth and young adults must be actively included in the democratic participation of citizens in political decision-making. Reflecting on why this is not the case now, many rush to blame the lack of young people’s involvement on their indifference. This is unjust in the light of evidence that the current mechanisms for ensuring the public’s voices are heard are not set up to enable meaningful youth and young adults’ engagement.

As Efeso Collins noted in his (February 2024) maiden speech at Parliament: “Give [our young people] the tools, the resources, and the means to make a meaningful contribution to the world, and they will.”

Protecting our democracy means that our political processes must retain the checks and balances provided by robust consultation. What some may label as ‘costly inconvenience’ or ‘inefficiency’ must be carefully distinguished from the price of maintaining a democracy based on participatory leadership.

If we are to show genuine concern for all rather than favouring the special techno-economic interests of certain powerful groups, and if we are to make decisions that are not prejudicial for the coming generations, then we must be prepared to call out the techno-economic paradigm when we see it.

Dr John Kleinsman is kaitohu/director of the Nathaniel Centre for Bioethics

Govt Right to Consider GM Law Change – But It's too Risky to Rush It

John Kleinsman & Graham O'Brien

Audrey Hepburn is attributed as saying: "Nothing is impossible – the word itself says 'I'm possible'."

Advancements in genetic modification (GM) in recent decades have taken us across frontiers that we previously thought impossible.

Other exciting breakthroughs in biotechnology which use GM are undoubtedly around the corner – and some of these could, quite feasibly, come out of New Zealand.

Our Minister for Science, Innovation and Technology, Hon Judith Collins, accentuated these possibilities in a recent article, describing the potential benefits of GM as "enormous".

We do not disagree.

The modern science of GM – the controlled manipulation of genes – traces back to the 1850s, to an Austrian-Czech-German biologist and Augustinian monk, Gregor (Johann) Mendel, who experimented with crossbreeding pea plants.

Mendel was the first to establish the existence of genes and recognise their role in determining the traits of an organism. The practice of GM goes back millennia, in the form of farmers crossbreeding plants and animals to produce more desirable variants.

While there is a continuity with traditional crossbreeding, contemporary GM differs in that it enables researchers to alter genetic material in a way that would not occur naturally.

GM might involve introducing genes from outside the species barriers set up by nature (transgenics), or use precise gene editing from an organism's own genes, or from the same species (cisgenesis).

Transgenesis is a very common form of GM and is responsible for the development of many safe GMO drugs, such as insulin. Undoubtedly, New Zealanders are already benefiting from these innovations on many fronts.

The question for us in New Zealand, then, is not whether we will continue to reap the benefits of GM developments in the areas of health, food, agriculture, pest control, environment and the like.

The question is to what extent are we willing to relax our current regulations to make it easier to conduct GM research in Aotearoa. At the moment, such research is restricted to tight laboratory conditions.

Minister Collins rightly talks about introducing an effective regulator, along with "the right settings for researchers and organisations", that "will ensure strong protections for human health and the environment".

She also promises extensive consultation on new legislation.

Given the emotions surrounding this issue, this is vital –

especially in a post-COVID world, where mistrust in science is heightened and misinformation is all too readily shared, and often indistinguishable from accurate information.

However, consultation is meaningless if the public are not first informed and educated. And this need for public education is all the more important given the many ways in which biotechnology and medical science have evolved in recent years.

A key recommendation of the Royal Commission on GM was the formation of a bioethics advisory body that would both educate and consult. As a result, *Toi te Taiao: the Bioethics Council* was established in 2002, receiving awards for its robust and innovative approach to public education and consultation.

Critically, it was also independent of the government.

But *Toi te Taiao* was inexplicably axed in 2009, and it concerns us greatly that there is no longer an effective, independent mechanism by which education and consultation around biotechnology can happen.

Robust evaluation of GM research requires a variety of perspectives – cultural, ethical and spiritual – as well as consideration of the economic or scientific possibilities. The need to take account of the cultural, ethical and spiritual dimensions is embodied in the current HSNO Act.

At the same time, our identity as New Zealanders requires taking account of the principles of the Treaty of Waitangi.

While we anticipate the possibility of GM research providing further significant benefits, the reality of significant risks remains.

Reform of our GM regulatory environment must not be driven by a fear of lagging behind, nor a fear of lost economic opportunities, as described by Minister Collins, but, above all, by a concern for the wellbeing and flourishing of our people as well as our environment.

We are stewards of a world which we must not regard solely as a resource for human exploitation.

'Clean and green' need not mean 'no' to more GM research. But, while the current regulatory environment may well now be unnecessarily restrictive, we must continue to proceed with caution.

Much more is at stake than economic gains and scientific kudos.

Dr John Kleinsman is Kaitohu of the Nathaniel Centre for Bioethics. The Very Rev Graham O'Brien is Dean of Nelson's Christ Church Cathedral and a member of the InterChurch Bioethics Council.

An earlier version of this piece featured on The Post digital news platform – March 29, 2024: www.thepost.co.nz/nz-news/350228591/case-caution-liberalising-genetic-modification-laws

Pending Review of Genetic Modification Laws in Aotearoa NZ

Responding to stated commitments to “liberalise genetic engineering laws” within the Coalition Agreements between National and both of its Coalition partners, four Christian organisations with an interest and expertise in the area wrote to the Prime Minister in January 2024. The letter, which seeks to secure reassurances from the Government that there will be appropriate public consultation, is printed below.

31 January 2024

Right Hon Christopher Luxon
Prime Minister
sonya.ford@parliament.govt.nz

Dear Prime Minister,

Open Letter re Review of laws and regulations governing genetic modification in Aotearoa New Zealand

We, the undersigned, are writing to you on behalf of the following organisations:

- **The InterChurch Bioethics Council**
- **Te Kupenga – The Nathaniel Centre for Bioethics**
- **Ngā Karaitiana Kimi Matū – NZ Christians in Science**
- **The Christian Medical Fellowship of New Zealand**

Each organisation has a professional interest in the areas of bioethics, biotechnology and/or medicine.

We note that within the Coalition Agreements between the New Zealand National Party and both New Zealand First and ACT it states, among other things, that the Parties will “liberalise genetic engineering laws”.

We recognise and agree:

- That it is timely for a review of our laws and regulations governing genetic modification.
- That the impacts (benefits and risks) of genetic modification will cut across numerous sectors including health and medicine, human reproduction, environmental management, food and nutrition, agricultural and aquacultural innovation, science, pest control and manufacturing.

Because of the complexities associated with genetic modification, we strongly believe that there must be broad public consultation before any changes to our laws and regulatory approaches are made.

We do not have a fixed position regarding the outcomes of any review of the practice of genetic modification in Aotearoa New Zealand other than to urge that it be done in a robust, fair and transparent way by an Advisory Body that:

- Is established outside of the parliamentary process and has demonstrable independence from political and other vested interests in the outcome of the review.
- Will consider the cultural, ethical, spiritual and social policy implications of genetic modification alongside the scientific, environmental, economic and other practical aspects (as currently stated in the HSNO Act, Section 68).
- Is comprised of suitably qualified persons who bring scientific, ethical, cultural, legal and spiritual expertise.
- Prepares and provides quality and accessible information and education to all stakeholders, including the general public, through multiple approaches and platforms.

- Takes account of the views of all stakeholders through a process of broad consultation that allows sufficient time for the education to be effective and the consultation to be meaningful.
- Reports back to Parliament with its recommendations.
- Is cognisant of our country’s responsibilities under the Treaty of Waitangi.

We think that a failure to undertake adequate education and consultation will inevitably lead to a heavily polarised debate, something that we believe is in the government and country’s interest to avoid.

We recall that, in the past, consultation around sensitive and complex biotechnological questions was undertaken by Toi te Taiao: The Bioethics Council and, preceding that, The Independent Biotechnology Advisory Council. We are disadvantaged as a country that an equivalent body no longer exists. However, there are established procedures and learnings from the education and consultation processes undertaken by both of these bodies, as well as other bodies such as ACART, that will be able to inform and shape any review of the current approach to genetic modification.

We will gladly discuss this matter face-to-face with you should this be helpful.

Kind regards

Rev David Bush,
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Dr Joy McIntosh
Co-Chair, InterChurch Bioethics Council
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Copies to:

- Rt Hon Winston Peters – Deputy PM and Leader, New Zealand First Party
- Hon David Seymour – Leader, Act Party

Genetic Modification and Regulation in Aotearoa New Zealand

Staff of the Nathaniel Centre

Introduction

Humans have altered the genomes of other organisms for thousands of years by selectively breeding traits in animals, plants, fungi and bacteria for continuation. In doing so, we have shaped both the organisms themselves and their evolutionary trajectories while they, in turn, have contributed towards our survival, proliferation and flourishing.

Historically, our interventions were not able to change the 'type' of organisms; human intervention operated within the bounds of natural growth, breeding and propagation cycles – the 'moving equilibrium of life' – and the bounds of earth-time within which these cycles have formed. However, developments in the last few decades in biotechnology have changed this dynamic. Now, technology enables us to directly intervene in, and alter, the actual genetic material contained within an organism's cells. Whereas in the past, we could only work indirectly with an organism's genome in its natural setting, we can now work with isolated DNA material in laboratory settings.

As a result, our recent technological developments allow us to exercise a potentially different kind of influence over the lives and evolutionary trajectories of other organisms, and the natural world at large, when compared to the kind of influence we have had in the past.

What is genetic modification?

Genetic modification is a type of biotechnology. Biotechnology involves artificially manipulating plants, animals, fungi, bacteria and viruses to create novel variations and, potentially, novel organisms, in order to produce new products, materials and services for human use. It is also used to generate new knowledge which may, or may not, contribute towards further insights and inventions.

'Genetic modification', 'genetic engineering' and 'gene editing' refer to the various laboratory-based technological processes by which an organism's genetic material, its DNA and RNA, is altered. Whilst the terms tend to be interchangeable in popular discourse, they have different technical meanings. *Gene editing* refers to the alteration of genetic material within a genome itself by deleting and/or re-arranging sections of it. *Genetic modification* and *genetic engineering* refer to the process of adding new sections of foreign genetic material into a genome, whether by adding in artificially manufactured material or organically-sourced material.

Two key types of genetic modification are 'gene silencing' (also known as 'RNA interference' or 'RNAi', or, sometimes, 'protein silencing') and 'gene drives'. *Gene silencing* involves manipulating an organism's RNA in order to prevent the synthesis of a protein or proteins that would otherwise produce a particular trait in the organism. *Gene drives* involve manipulating an organism's DNA in order to alter its traits.

Changes to DNA, such as those instigated via gene drive interventions, are understood to have a high likelihood of permanently changing an organism's genotype and those changes being passed on to its offspring.

The consequences of making changes to RNA, such as those instigated via RNA interference interventions are less well understood. The working consensus at present is that these changes are unlikely to produce permanent changes in an organism's genome and are, therefore, unlikely to be passed on to its offspring. However, this conclusion is a source of debate within some areas of scientific literature and research.

What is CRISPR?

'Clustered regularly interspaced short palindromic repeats' (CRISPR) located on DNA were first observed and described in 1987 in the DNA of *Escherichia coli* bacteria. At the time, the origin or purpose of these regularly spaced repeat sequences in the DNA were not understood, and they were viewed as a naturally occurring phenomenon rather than a 'technology'. Through the late 80s and 90s, the observed regularly spaced clustered palindromic repeats of the phosphate bases on DNA were referred to by a number of terms. It was not until the early 2000's that the term CRISPR first appeared in literature.

Used with respect to the genetic modification technology that we associate with the term now, CRISPR refers to CRISPER-Cas 9, where Cas is an abbreviation of 'CRISPR associated' and refers to the gene that codes for the Cas 9 protein, an enzyme that is capable of cutting strands of DNA and commonly described as acting like a pair of molecular scissors.

CRISPR-Cas 9 as a genome editing tool/technology has been devised over the last two decades. There are numerous Cas systems.

As such, CRISPR itself is a tool and it has multiple applications besides genetic work; whilst it can be used in gene drive interventions, not all gene drives are CRISPR-based. The two should not be conflated.

What is genetic modification used for?

Genetic modification is used in many areas, including agriculture, livestock farming, optimising livestock health, pest control, environmental management, waste management, pharmaceutical production, human health and medical research, and cosmetics.

Activities are diverse and have included, for example, altering bacteria to produce human hormones for therapeutic purposes; speeding up the maturation of crops and farmed animals, both land- and marine-based; increasing the resistance of crops and farmed animals to disease and environmental stressors; improving nutrient levels in foods; producing bioplastic

products; altering bacteria to enable them to degrade oil slicks and other waste; altering soil micro-organisms with the aim of improving soil quality.

Worldwide, the biotechnology industry generates an annual revenue of hundreds of billions of dollars. When it intersects with big business in this way, biotechnology and genetic modification are both implicated in the controversial practice of bioprospecting. Bioprospecting is the search for, and the extraction and examination of, any form of biological material, whether in-situ or ex-situ, for the purpose of determining its potential to yield a commercial product and generate profits.

How is genetic modification regulated in Aotearoa New Zealand?

The HSNO Act

Genetic modification is tightly regulated under the Hazardous Substances and New Organisms Act 1996, also known as the HSNO Act.

The Act is administered by the Ministry for the Environment, and it is implemented and enforced by the Environmental Protection Agency (EPA). The EPA is advised by Ngā Kaihautū Tikanga Taiao, the statutory, independent Māori advisory committee that is tasked with ensuring that Māori perspectives and interests are taken into account by the EPA.

The overarching purpose of the Act is the protection of the environment, and the health and safety of people and communities from the adverse effects of hazardous substances and new organisms. All decisions made by the EPA must be consistent with this purpose. Any person or organisation wishing to import, develop, field-test or release a genetically modified organism into the environment require the EPA's approval.

The Act requires that the EPA recognises and provides for 1) the safe-guarding of the life-supporting capacity of air, water, soil, and ecosystems and 2) the maintenance and enhancement of the capacity of people and communities to provide for their own economic, social and cultural wellbeing, and for the reasonably foreseeable needs of future generations.

In this task, the EPA must take into account: 1) the sustainability of all native and valued introduced flora and fauna; 2) the intrinsic value of ecosystems; 3) public health; 4) the relationship of Māori and their culture and traditions with their ancestral lands, waters, sites, wāhi tapu, valued flora and fauna, and other taonga; 5) the economic and related benefits and costs of using a particular hazardous substance or new organism; and 6) our international obligations.

There is no statutory guidance as to the relative weight that should be given to each of these aspects; weighting is for the EPA to determine.

Additional parts of the HSNO Act require that the EPA take Te Tiriti o Waitangi into account in their decision-making and activities.

As well as the cultural, economic and legal issues, decisions must have regard to ethical (for example the 'precautionary principle') and spiritual issues. The origin of this position is found in the Royal Commission on Genetic Modification which included a recommendation to extend the "Hazardous Substances and New

Organisms" legislation (HSNO, section 68) to include 'cultural, ethical and spiritual issues' as grounds for ministerial jurisdiction. This recommendation developed because concerns within these three areas 'underlay much of what [the Royal Commission] heard about genetic modification and biotechnology,' and was included in the 2003 "New Organisms and Other Matters Bill" (NOOM) which sought to redress deficiencies in the HSNO Act. As a result, the Minister for the Environment obtained "call-in powers" based on cultural, economic, environmental, *ethical*, health, international and *spiritual* concerns.

Applications to carry out genetic modification work

Applications to the EPA seeking permission to carry out genetic modification work are generally divided into two categories – 'low-risk genetic modification' and 'non-low-risk genetic modification'. *Low-risk genetic modification* refers to work where a modified organism will be contained within controlled laboratory conditions. *Non-low-risk genetic modifications* refers to work that will involve releasing a modified organism from containment – for example, for field-testing.

The HSNO Act contains a 'morality exclusion' clause that can be drawn upon by the EPA to decline applications involving human beings, human cells, and related processes. Such applications are stipulated by the EPA as being likely to invoke this clause.

The status of RNAi technology under the HSNO Act

Under the HSNO Act, RNA interference (gene-silencing) technology is not regarded as genetic modification. This is because RNA interference is not currently considered to be an intervention that produces a permanent change in an organism's genotype (although, as referred to above, this particular issue is a source of debate in some areas of scientific literature).

The Convention on Biological Diversity

In addition to the HSNO Act, since 1993, Aotearoa New Zealand has been a signatory to the 1992 Convention on Biological Diversity. This is an international framework concerned with the conservation and utilization of the world's genetic and biological resources. The objectives of the Convention are: 1) the conservation of biological diversity; 2) the sustainable use of its components; 3) the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including appropriate access to genetic resources and relevant technologies. Signatories are required to pursue these objectives in accordance with the provisions laid out in the Convention.

The Convention also requires that signatories shall respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biological diversity, and that they shall promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices.

Functionality of the HSNO Act

Te Aka Matua o te Ture, the New Zealand Law Commission, holds that good law benefits current and future generations, upholds the mana of all, and is clear, simple and accessible. It is not clear that the HSNO Act currently meets these criteria adequately.

Many commentators in the area of biotechnology, including the

Chief Science Advisor to the Prime Minister and Te Apārangi, The Royal Society of New Zealand, have observed that the HSNO Act is out-dated. There appears to be consensus across these parties that the Act is: 1) ill-equipped to deal with recent developments in biotechnology; 2) leading to confusion, anomalies and inefficiency in its current format; and 3) incomplete (for example, the Act only regulates in-vivo modifications resulting from procedures conducted internally to a living organism but offers no guidance in response to in-vitro modifications – those resulting from procedures conducted externally to a living organism).

The HSNO Act and the Te Tiriti o Waitangi

Numerous commentators have observed that the Act is not upholding Te Tiriti o Waitangi as well as it could. For example, the Waitangi Tribunal noted that Western scientific considerations take precedence over Māori values and Te Ao Māori perspectives, insights and knowledge, as opposed to the two being accorded equal status.

The Tribunal noted that the methodological order of the HSNO Act requires the EPA to start its assessments of applications for genetic modification from the position of scientific evidence, as opposed to a partnership position between Western science and Te Ao Māori. As a result of this, tikanga Māori, mātauranga Māori and whananga pono Māori are only required to be considered if the scientific evidence discerns, raises and can comprehend them – as opposed to each of these being relevant and necessary on their own terms.

This concern has been echoed by others, who note the difficulties of meaningfully engaging in a subject area that has been historically encapsulated within a Western ontology that places others, including Māori, outside of the frameworks it generates.

The HSNO Act and upholding the mana of others – humankind

It is not clear that the HSNO Act is upholding the mana of humankind as well as it could and specifically, the mana of those who are politically, socially and economically marginalised. At present, it is not clear how their interests, expertise and insights are reliably, efficaciously and meaningfully incorporated into the Act.

The importance of identifying, ameliorating and protecting against power imbalances in genetic modification has long been recognised and documented. It has been an area of active, global work for decades. For example, one of the key questions that emerged in the early 1990s during the drafting of the Convention of Biological Diversity was ‘How do we work ethically in a field and world that is riddled with long-standing power asymmetries, such as those that exist between technology-rich, diversity-poor countries and technology-poor, diversity-rich countries?’

Many commentators have highlighted the importance of centring marginalised groups in discussions and decisions regarding genetic modification, and biotechnology more generally. For people and communities who have been marginalised, concerns regarding genetic modification are often rooted in the expertise, insights and in-depth knowledges that have arisen as a result of living in a world sculpted by the dynamics of discrimination, oppression and exclusion.

By centring those who are marginalised, we enable ourselves as a society to more systematically examine a given proposal from all angles, and to more thoroughly discern the opportunities and risks that an activity may pose – that is, the local and global prejudices, biases, bigotries, inequities and injustices that could be ameliorated or exacerbated by way of it. To paraphrase the social commentator Max Rashbrooke, “there is a lens that we should put across every decision we make: what would this do for the most vulnerable?”

The HSNO Act and upholding the mana of others – non-humankind

Recent moves in Aotearoa New Zealand to grant legal personhood to rivers, mountains and land – as grounded in Crown law – and to recognise the legal personhood of whales – as grounded in tikanga Māori – have been lauded overseas as important developments in the ongoing work of responding to, managing and beginning to rectify the impact of humankind on the Earth and on other species.

These shifts reflect, in part at least, a wider underlying (re-) analysis and (re-)examination of the nature of our relationship with the Earth and with the other organisms who live here, in a context of climate crisis, ecological distress, and species-loss. It is as yet unclear what impact these developments may have on other aspects of Crown law, such as the HSNO Act and its ability to uphold the mana of others – in this case, non-humankind others. These developments are potentially relevant given the animals, plants, fungi and bacteria that have been the focus of the work the Act regulates. Max Rashbrooke’s paraphrased observation – “there is a lens that we should put across every decision we make: what would this do for the most vulnerable?” – is just as relevant to non-humankind as it is to humankind.

Summary

In 2011, in Ko Aotearoa Tēnei, WAI 262, the Waitangi Tribunal remarked that our biotechnological developments reflect “the fact that humans have come to exercise control over the matrix of life itself. We now have powers that were once the exclusive preserve of the gods. Our technological developments must be matched by our moral and ethical capacity to make good decisions in deploying these technologies for ourselves and future generations” (p.95).

Our capacity in this regard will be nurtured and sustained by listening to and taking seriously – on their own terms and within their own worldviews – the insights, perspectives and expertise of all the stakeholders identified above. Our ability to make sound decisions will also require us to become more deeply attuned to the voices of beings other than humankind, and learn to interpret and understand – with ever-more nuance and subtly – what they may be telling us.

To draw on Job (12:7-10), “[...] ask the animals, and they will teach you, or the birds in the sky, and they will tell you; or speak to the earth, and it will teach you, or let the fish in the sea inform you”.

Bibliography and Resources

Available on request.

Reuse or Refuse: Confused? New Universal Standards for Plastic Recycling in Aotearoa NZ

Alfred Tong

Introductory Comments

In recent years, a general global awareness has developed regarding the finite nature of natural resources as well as our ability to permanently damage the natural environment through the improper use of the earth's resources.

Many people are looking for simple, practical measures, at the individual and collective level, to mitigate the "harm we have inflicted on [our common home] by our irresponsible use and abuse of the goods with which God has endowed her," to quote Pope Francis in *Laudato si'* (n. 2).

From a Catholic perspective, managing our interaction with the environment, including our waste, goes to the heart of the Creation story in Genesis – to be 'fruitful and multiply', rather than short-changing the natural environment by taking 'forbidden fruit' (Genesis 1:28); to be a guardian (kaitiaki) and steward of Creation, which is an integral part of discipleship as captured by Jesus' stated desire for us to 'have life and have it to the full' (John 10:10).

The Catholic Social Teaching principles, in particular the 'common good' and 'the preferential option for the poor', underpin a Catholic-Christian approach to environmental discussions on the responsible use of natural resources¹. For example, throwing away a non-biodegradable plastic object can lead to its appearance in the aquatic environment, where sea birds have been caught and strangled by the object, or die of malnutrition after ingestion of the plastic material. More seriously, plastic residues lodging in the internal organs and gastrointestinal tracts of fish have now entered the food chain, ending up in our bodies and that of other creatures. At the same time, this is having a negative effect on the survival of fish stocks which, in turn, affects the survival and livelihoods of coastal communities, often in developing countries².

In addition, plastics which have been landfilled contribute to leachate that runs off from the landfill deposit after rain or ground water washes the rubbish plume, providing a further avenue for the additives and chemicals lodged inside the plastics to enter the natural environment³. Frequent washing of clothing made from polyesters and other synthetic fibres represents yet another way for microplastics to enter the earth's ecosystem⁴.

The function of plastics is to preserve the integrity of goods so they can be transported and marketed safely to the consumer public. This means they are resistant to breakdown or degradation in the environment⁵. Furthermore, the prevalent use of consumer products such as Teflon (TM) and other synthetic plastic-like substances (polymers) for their non-stick and hard-wearing properties has seen trace amounts of perfluorinated alkylated substances (PFAS) in water, soil, food and animal life, including the human body. The resilient

chemistry of these substances means that the human body is unable to break down the chemicals through the usual metabolic pathways effective with other environmental toxins.

There are genuine concerns about what the persistence of these chemicals means for the health of ecosystems constantly exposed to these chemicals over a lifetime. Some research has been undertaken to assess, for example, the impact of trace amounts of PFAS on human cardiovascular health⁶. A 2024 study published in the *New England Journal of Medicine* has shown that patients in whom micro- and nanoplastics were detected within the fatty material that clogs arteries were at higher risk for a primary end-point event (heart attack, stroke, or death from any cause) than those in whom these substances were not detected⁷.

While there is a popular view that the oceans are 'the final sink' for microplastics, it is now believed that the atmosphere provides an even faster transport pathway than oceanic currents (see <https://www.ciel.org/breathing-plastic-the-health-impacts-of-invisible-plastics-in-the-air/> – accessed 15 April 2024). It is estimated that humans can inhale from around 30,000⁸ to 22,000,000 units (several milligrams) of micro- and nanoplastics annually⁹.

Recycling of plastics in New Zealand

Prior to 1 February 2024, different regions around New Zealand had different guidelines for what could and could not be recycled. Now, new standardised recycling guidelines introduced on 1 February 2024, mean everyone in New Zealand must follow identical guidelines.

In response to this change, many councils have published an online searchable database of the types of items that can be placed into kerbside recycling. A typical, searchable online app can be found here: <https://wellington.govt.nz/rubbish-recycling-and-waste/sorting-rubbish-recycling/what-to-do-with-your-waste> (accessed 15 April 2024).

To minimise excluded items showing up in recycling, some city and district councils are considering carrying out audits on local residents to determine how compliant residents are with the new recycling guidelines.

It's a 'numbers' game for plastics!

According to the Ministry for the Environment – Manatū Mō Te Taiao, plastics numbered '1', '2' and '5' can be included in kerbside recycling (with lids removed).

That means plastics '3', '4', '6' and '7' must all go into ordinary rubbish destined for the landfill.

Plastic number '1' is known as polyethylene terephthalate (PET, or PETE) or, more commonly, simply 'polyester'. This material

is found in fizzy-drink bottles and similar hard plastics such as fruit and vegetable punnets, and plastic containers for condiments such as mayonnaise. It is a versatile and resilient plastic that has, over the years, also found its use in clothing, especially athleticwear and workwear ¹².

Life-cycle analyses suggest that the production of PET plastics in the commercial industries places an enormous burden on the environment. Copious amounts of carbon dioxide, methane and other greenhouse gases are emitted by PET production, the result of the high energy use associated with its manufacture. In addition, the raw ingredients necessary to create PET are derived from coal and gas, which promotes the continued use of unrenovable resources. Thus, the unregulated production of PET negatively contributes to the ongoing devastation of habitats while exacerbating climate change ¹³. Finding alternative options, however, is complex. If PET bottles were replaced by glass, some analyses show that it would consume more energy in the long run to transport the heavier glass bottles along supply chains, making kerb-side PET recycling an environmentally favourable option ¹⁴.

However, there are still many PET objects necessitating disposal, for example surplus clothing, that cannot enter the kerbside recycling bin, and this poses problems for the ordinary householder. The general consensus is that clothing can be returned to textile-collection businesses, such as the startup *Upparel* (<https://www.stuff.co.nz/life-style/homed/sustainable-living/131416654/major-nz-clothing-brand-launches-recycling-initiative--this-one-is-for-real> – accessed 15 April 2024). Staff then sort through the textiles, separating different materials from the damaged clothing and then upcycling or repurposing what is good, thereby creating a 'circular economy'. Unfortunately, such startups are currently few and far between. Therefore, consumer attitudes around buying and use are currently the best defence against the needless disposal of old and damaged PET clothing.

The difficulties of recycling clothing urge us all to examine our buying and spending habits; rather than hopping onto the fast-fashion train, do we really need something new, or will we suffice with second-hand?

Plastic number '2' is known as high-density polyethylene (HDPE) is a strong and versatile plastic suitable for many objects requiring resistance against temperature changes ranging from milk bottles to planters, waste bins and picnic tables. These plastics are easily recyclable and can be used indefinitely if kept clean and free of other chemicals and additives. Because of its resilience, efforts have already been

made to repurpose these materials into building materials, including concrete. However, like PET, HDPE is manufactured from petroleum and thus requires an enormous amount of water and electricity to create the raw plastic resin from its petroleum reactants ¹⁵.

Once again, this highlights the environmental benefits of recycling and reusing HDPE in consumer products and packaging so as to minimise the global production of new HDPE.

Plastic number '5', known as polypropylene (PP), is used in many food and medicine containers, pots, tubs and trays and other household items and electronics. Examples include single-use disposable cutlery, drinking straws and takeaway containers (now banned in New Zealand and replaced by paper/wood products – see <https://environment.govt.nz/publications/plastic-products-banned-from-july-2023/> – accessed 15 April 2024), ice cream containers and large yoghurt containers.

Paper and wood products from sustainable forestry are renewable resources and are environmentally more desirable than new or 'virgin' plastic materials, even if the latter is recyclable.

Other plastics and materials – size matters!

While lids and containers that are made from '1', '2' and '5' can theoretically be recycled based on their chemical make-up, they cannot be placed in the kerbside recycling because the small size of these items is not compatible with the machinery and processes available for sorting recycling materials. To get around this, there are provisions for these to be recycled at certain takeback recycling depots in NZ ready to deal with lids and tops made from these recyclable plastics.

Similarly, containers that are larger than 4 litres cannot go through the kerbside recycling sorting machinery.

Plastics '3', '4', '6' and '7' (Polyvinyl Chloride – PVC, Low-density polyethylene – LDPE, Polystyrene – PS and 7 – Mixed Plastics) currently have no place in kerbside recycling.

Clean polystyrene, which is commonly used as packaging material for shipping consumer goods, can be dropped off at some depots (<https://www.expol.co.nz/recycling-programmes/> – accessed 15 April 2024).

LDPE, one of three types of 'soft plastics', is still commonly used in the form of single-use plastic bags for pre-packaged fresh fruit and vegetables; these have not been phased out as the packaging is required to maintain freshness of the produce and extend shelf life. Other examples of LDPE include the

The problem with face masks: health protection in tension with environmental protection

The Covid-19 pandemic has led to the wide-spread use of face masks as an effective disease prevention strategy.

Paradoxically, the ubiquitous presence of face masks 'on demand' has meant that they are often left behind at public venues or 'dropped' on the streets, ending up in waterways or other natural ecosystems while becoming a vehicle for spreading disease¹⁰.

Face masks are generally made with a myriad of materials; the predominant polypropylene used is often combined with other plastics such as polyesters, polyethylene, polyurethane or polyacrylonitrile, as well as natural fibres such as cotton¹¹. This plethora of materials poses significant challenges for an environmentally friendly way of disposing of used face masks. Incineration, a strategy often used to manage health waste is a problem due to the release of toxic gases into the environment.

bags used for packaging frozen consumer goods and plastic wrapping around boxed goods. Various schemes exist in NZ for the domestic householder to prevent these plastics going to the landfill; some supermarkets and other retailers allow LDPE to be dropped off and it is also possible to post clean, dry used LDPE through to a recycling centre (<https://environment.govt.nz/what-you-can-do/campaigns/recycle/recycle-item/> – accessed 15 April 2024).

One possible alternative to the use of LDPE plastics, especially from the supermarket, is to promote community initiatives to growing fresh produce. The promotion of community gardens, especially around schools in New Zealand, is developing a 'garden to plate' awareness for young people, ensuring that the next generation understand the salient importance of healthy food for their taha hinengaro (mental and psychological wellbeing) as well as their kaitiakitanga of the environment.

Until industries adopt the use of alternative plastics such as '1', '2' and '5' in the place of non-recyclable plastics, we, consumers, can actively refrain from buying products which contain large amounts of the non-recyclable plastics.

Recycling of natural materials

Natural materials, such as paper and cardboard (e.g. pizza boxes) are recyclable providing they are free and clean of any food scraps. However, additives such as wax on tetra-paks (e.g. paper, milk and juice cartons) prevent their placement in kerbside recycling bins.

Other inorganic materials, such as aluminium fizzy drink cans, and glass, can be placed in kerbside recycling compatible with local council recycling capabilities. However, the usual size restrictions apply for the sorting machinery. A practical way to ensure that the whole tin can is recyclable is to not separate the lid from the body of the can whilst using an opener to access the contents. Aluminium trays, which cannot be added to kerbside recycling, can be dropped off at waste metal collectors and certain drop-off centres.

Summary

The aim of this article is to provide a basic analysis of what can or cannot be recycled in Aotearoa NZ following the recent standardising of kerbside collections. Advances in sorting processes and developments in technology to manage household wastes and repurpose them will hopefully mean that the scope of recycling will be broadened to include materials that currently cannot be recycled.

In the whole framework of ecological sustainability, one of the challenges for bioethics is to identify and promote ways in which the 'cry of the Earth and the cry of the Poor' can be constantly heard and responded to¹⁶. This framework, which is rooted in Catholic Social Teaching, ultimately requires political systemic changes that we must all advocate for. At the same time, it requires a level of individual engagement and responsibility which starts with our awareness of the current best practices for managing domestic waste materials.

Minimising the unnecessary use and disposal of plastics and reducing consumption of plastic-based products such as new clothing is a key goal. If there are plastics we cannot avoid

using, our focus should first be on ensuring they enter a 'circular economy' and, secondly, on developing well-established practices for recycling.

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In November 2024, the **End of Life Choice Act 2019** will have been in force for three years. The Act stipulates that the Ministry of Health must, within three years after the commencement of this Act, review its operation and consider whether any amendments or other enactments are necessary or desirable.

While the official feedback from the Ministry has been that the Act is largely working well, various lobbyists believe it to be too restrictive and are pushing for a more permissive law including allowing: children to access euthanasia; doctors to raise the topic with their patients; euthanasia for people who are unable to consent to their death; and euthanasia for non-terminal conditions.

With the forthcoming review in mind, it is timely to be reminded about what is at stake. The following article, while written from a United Kingdom perspective (where euthanasia is not legal), provides a good summary of the key issues associated with legalising assisted dying.

The Sharp End

Sophie Olszowski

Twenty-six years ago, I held my mother's hand as she died in a Marie Curie hospice. Three years ago, my husband Simon died in a hospice, calmly, somehow, after eight months of Covid-exacerbated trauma: a cancer diagnosis, multiple treatment complications and a stroke.

Both these beloved people received the holistic care envisioned by Cicely Saunders, the founder of the modern hospice movement. "You matter to the last moment of your life," she said, "and we will do all we can, not only to help you die peacefully, but also to live until you die." Rooted in her unique experience as nurse, medical social worker and doctor, Saunders developed the idea of "total pain", encompassing physical, psychological, social and spiritual dimensions. Now working to ensure greater access to palliative care (recognised by the World Health Organisation as a human right, yet available to only about 14 per cent of those who need it worldwide), I am struck by how uncomfortably her vision sits alongside calls to legalise assisted dying, whereby doctors prescribe or administer lethal drugs.

A bill to legalise assisted dying in the UK was defeated in parliament in 2015, but the campaign for a new vote has been gathering support. Legislation is making its way through the parliaments of Scotland, Jersey and the Isle of Man. Last week, the health and social care select committee issued its report into assisted dying following a public consultation that attracted over 68,000 online responses and 380 written submissions. Labour leader Sir Keir Starmer and Prime Minister Rishi Sunak have both indicated that they would allow a parliamentary debate.

The "slippery slope" is often invoked: as Karel Gunning, a Dutch physician, said: "Once you accept killing as a solution for a single problem, you will find, tomorrow, hundreds of problems for which killing can be seen as a solution."

The chair of the select committee, Steve Brine MP, observed that "the inquiry on assisted dying and assisted suicide raised the most complex issues that we as a committee have faced, with strong feelings and opinions in the evidence we heard". If

you express disquiet about the proposed legislation, you are likely, as I found recently, to provoke fury. My friend raged at the "arrogance, pushed by the religious" to deny him the freedom to choose when and how he died.

I understand the tension and depth of feeling. Simon trusted me absolutely to look after him. What would I have done if he had wanted to die sooner? What if, as Saunders' critics say, he was not being helped to live until he died, but forced to? Every eight days someone travels from Britain to Dignitas in Switzerland to die. Proponents of a change in the law say it would bring peace of mind. Canada legalised Medical Assistance in Dying (Maid) in 2016. Dr Stefanie Green, president of the Canadian Association of Maid Assessors and Providers, says: "Almost every single time I deem a patient eligible, that patient stops worrying about how they're going to die and starts wondering how they're going to live ... It is objectively therapeutic to give someone the option."

Opponents of assisted dying fear that elderly and vulnerable people could feel under pressure; and while these may feel to us today like other people, there but for the grace of time and luck go us all. Many doctors feel that to prescribe lethal drugs would cross a medical rubicon. The "slippery slope" is often invoked: as Karel Gunning, a Dutch physician, said: "Once you accept killing as a solution for a single problem, you will find, tomorrow, hundreds of problems for which killing can be seen as a solution."

I worry that the subject stirs our fears of death and dying, so seldom discussed, so deeply that we risk skating over its complexity. When parliament launched its consultation, the campaign group Dignity in Dying told its supporters that "opponents will turn out in force to flood this survey with their anti-choice ideology. We have to make sure that the results reflect the overwhelming majority across the UK who support assisted dying, not a scaremongering minority ... Please," the group urged, "take five minutes to respond to the consultation demonstrating your support today."

"Anti-choice ideology." "Scaremongering minority." These phrases struck ice into my heart. "Five minutes"? Surely, we need a proper debate, with mutual listening and openminded compassion. The select committee's report concluded with a

call to take stock and learn from the experience of countries where assisted dying is legal: “The fact that people with very different overall views on AD/AS draw on international examples to support their arguments shows the complexity of the issue, but it is possible to look at what is happening elsewhere and to use it to learn more about this difficult and sensitive subject.”

Dignity in Dying responded by declaring that “maintaining the status quo in the face of so much obvious, devastating harm – while assisted dying laws continue to work safely overseas – is the most dangerous decision that Westminster could make.”

While I am, of course, moved by several high-profile recent calls to allow a responsible adult to be free to choose to be helped to die, I am more persuaded by those who work daily with patients receiving end of life care, who fear change. A 2019 Royal College of Physicians survey found only 4.8 per cent of palliative medicine specialists would be willing to participate in assisted dying.

One of the strongest themes that emerges from the parliamentary report is the risk that vulnerable people might fall prey to pressure to end their lives “from fear or concern of being a ‘burden’ on family, friends, or society, especially in the context of limited healthcare and social resources”. There are stark examples of disabled people being coerced into euthanasia, or feeling they had no option. In the Netherlands, people chose to end their lives because they felt unable to live with a learning disability or autism, many citing loneliness as causing unbearable suffering. Toronto psychiatrist Madeline Li says: “Making death too ready a solution disadvantages the most vulnerable people, and actually lets society off the hook ... I don’t think death should be society’s solution for its own failures.”

The *Guardian* columnist Frances Ryan echoes this. “It is hard to trust the state to help marginalised people to die when they fail to support them to live,” she writes, citing “do not resuscitate” orders given without their consent to people with learning disabilities during the pandemic, and the fact that women with learning disabilities die 18 years younger than non-disabled women, often avoidably, due to unequal healthcare. As she concludes: “It is easy to dismiss the dangers of a ‘slippery slope’ when it is not you who is at risk of falling down it.”

Baroness Ilora Finlay of Llandaff, a professor of palliative medicine, says: “We should not forget that laws are more than just regulatory instruments. They also send powerful social messages. An assisted dying law sends the subliminal message, however unintended by legislators, that if we are terminally ill taking our own lives is something we should consider.”

These sentiments crystallise my strong disquiet that the “rightness” of assisted dying is rooted in a belief that it will always be chosen following careful thought with loving support. The Anglican priest Giles Fraser wrote an open letter to his mother calling assisted dying “a Pandora’s box of nastiness”. He told her: “We have a loving family and if I ever helped you to go to Dignitas, it would be because I thought it might be the most loving thing for a son to do. But not all families are like this. And looking at the astronomical price of care homes, there will be some who will think it would be better to spend the price of Granny’s end-of-life care on their children, for instance.

Or worse, a new car.” There are more families where material concerns or the “bother” of a dying relative trump loving care than we like to admit. Can any dying person be truly immune to feeling under pressure, especially when loved ones might desperately need any wealth they may leave behind?

And what of the pressure on governments, struggling to make ends meet? A report in the *Canadian Medical Association Journal* in 2017 calculated savings of up to \$136.8 million from the introduction of Maid. “The take-away point is that there may be some upfront costs associated with offering medical assisted dying to Canadians, but there may also be a reduction in spending elsewhere in the system”.

Terminal illness brings symptoms, from physical to spiritual, that can be almost impossible to control. In prohibiting assisted dying, are we making some ghastly deaths the price we pay to protect wider society?

But what of those with truly loving families who beg for release? How can it be justified to deny them the right to assisted dying? Through my professional work with people suffering from motor neurone disease, and my personal experience of the loss of those dearest to me, I’ve seen the relentless oneway street of terminal decline. I have often been asked why dying friends and family should unnecessarily have to endure distressing final days. Baroness Meacher, who proposed the Assisted Dying Bill in 2021, spoke of “suffering that even the best palliative care cannot alleviate”. Terminal illness brings symptoms, from physical to spiritual, that can be almost impossible to control. In prohibiting assisted dying, are we making some ghastly deaths the price we pay to protect wider society?

A palliative care doctor told me: “I do not believe you have to suffer to die.” His words echo Balfour Mount, Canada’s palliative care “founding father”, who confronts a dishonesty which, if addressed, might draw opposing sides closer. Mount explains: “Medical aid in dying is what I have been doing for 50 years. This [Maid] bill is not really talking about medical aid in dying, it is not talking about ending the suffering but ending the sufferer.” He describes how palliative sedation can bring “complete comfort using individually optimized doses of medication ... the goal is, as in all palliative care, optimal quality of life. It has been used when there is existential anguish in the presence of life-limiting disease”.

Mount admits that the best palliative care might sometimes seem to hasten death. So aren’t we already close, covertly, to assisted dying? Palliative care consultant Victoria Wheatley denies this. Writing in the *British Medical Journal* in 2005 she commented: “Careful and appropriate titration of analgesics is not only the most effective way of achieving pain control, but will actually reduce the incidence of unwanted side effects (including hastening death). Every patient will have a last dose of analgesia in the same way that they will have a last cup of tea. This does not mean that the analgesics (or the tea) shortened their life, merely that they were dying already.”

Writing this on the third anniversary of Simon’s death, I reflect on his final week in the hospice, receiving medication through

a syringe driver and oxygen through a nasal tube. I was by his side, and was cared for with the same gentle grace as he was. He mostly slept, his children visited and, in a rather extraordinary display of independence and legacy, despite almost total debilitation, he scrawled a note when they left: "Lovely seeing you, hope you are safely home." I have it here. We wheeled his bed outside so he could feel the sun on his face, achievable because someone designed a building that made this feasible and a garden that made it desirable. And for his last breakfast he indicated that he wanted, somewhat surprisingly, whisky, which was provided without delay or fuss. Should we have had the option of ending it sooner? On balance, when a healthcare system will inevitably be looking for savings, when I reach the end of my life, unsure what joy or surprise my last days hold, I'd want to know those responsible for my care had a closer eye on the sunny garden than the lethal syringe.

The medicine dispensed by those working in palliative care is profoundly complex and technical and demands extraordinary compassion. I now volunteer with the spiritual care team at the hospice where Simon died. The morning meetings, at which each patient, and their loved ones, are discussed in detail by the entire team, are beyond moving. While the hospice offers care to people thought to be in the last year of life, more often than not they come in briefly, and go home. I recently supported a woman admitted for symptom control, who left transformed, able to eat, sleep and smile.

Do we risk introducing assisted dying because the gap between the availability of palliative care and the need for it is so huge that we can't figure out how to make living well until we die a reality for all?

Such care reduces unnecessary hospital admissions, which makes economic as well as medical and moral sense. But there is huge inequality of access. It is already unavailable to many, and it is estimated that UK need will increase by 42 per cent by 2040. If assisted dying were to be legalised, we face the grim prospect that it would be disproportionately used to end the lives of those whom society already abandons and neglects.

I fear I will alienate people I respect by questioning assisted dying. My mother worked with Baroness Meacher to improve life for people with mental illness; my former colleague, the general practitioner and writer Ann McPherson, founded Healthcare Professionals for Assisted Dying. I understand, and once shared, their position. But what a difference could be made by such might of intellect, compassion and influence being channeled into ensuring we all have access to good quality palliative care rather than into promoting legislation that will inevitably put some at risk of feeling under pressure to die.

The select committee's report recommends that the government "ensures universal coverage of palliative and end-of-life services, including hospice care at home, and more specialists in palliative care and end-of-life pain relief" and urges it to support any hospices which require funding assistance. Do we risk introducing assisted dying because the gap between the availability of palliative care and the need for it is so huge that we can't figure out how to make living well until we die a reality for all?

The dilemma has long been recognised. In 1959, Cicely Saunders wrote to Leonard Colebrook, president of the London Euthanasia Society: "I do feel strongly that yours is not the answer. We can relieve suffering if we will put our minds and hearts to it. It is just because so few people do, that pathetic cases exist." A year later Colebrook visited St Joseph's Hospice in east London and was shown round by Dr Saunders. He wrote afterwards: "If everybody could have this sort of care I could disband the Society."

How chilling if the unnecessary suffering of those who are at the end of life is to be the basis on which we allow euthanasia. Irene Higginson, professor of Palliative Care and Policy at King's College London, says: "I wish there was as much attention paid to people who don't have proper access to palliative care as there has been to the assisted dying debate."

She's right: we need to address assisted dying by tackling end-of-life care. The shortage of and inequality of access to places where excellent medicine and the deepest kindness converge should not lead us to argue that, if someone is dying in pain, we must kill them. We must instead find ways to give them, in the widest sense, better pain-killers.

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Artificial Intelligence and Peace

Message of His Holiness Pope Francis for the 57th World Day of Peace
1 January 2024

In 1968 Pope Paul VI issued a Message of Peace for January 1st, which he then declared to be the “The Day of Peace.” He and every Pope since have continued the practice, publishing a message that picks up on a relevant aspect of the “signs of the times”. Below, staff of the Nathaniel Centre offer a precis of the 2024 message which focuses on Artificial Intelligence. The full text can be accessed at: <https://www.vatican.va/content/francesco/en/messages/peace/documents/20231208-messaggio-57giornatamondiale-pace2024.html>

Pope Francis writes in the hope that his reflections will ensure that developments in artificial intelligence will ultimately serve the cause of human fraternity and peace.

His starting point is that “We cannot presume ... its development will make a beneficial contribution to the future of humanity and to peace ... That positive outcome will only be achieved if we show ourselves capable of acting responsibly and respect such fundamental human values as ‘inclusion, transparency, security, equity, privacy and reliability’.” For “the impact of any artificial intelligence device ... depends not only on its technical design, but also on the aims and interests of its owners and developers, and on the situations in which it will be employed.”

What can only be described as an “immense expansion of technology thus needs to be accompanied by an appropriate formation in responsibility for its future development.”

Perhaps thinking ahead to the recently released declaration on the dignity of the human person, *Dignitas Infinita*, Pope Francis reminds that it is the “inherent dignity of each human being and the fraternity that binds us together as members of the one human family [that] must undergird the development of new technologies and serve as indisputable criteria for evaluating them before they are employed.”

For this to happen, there “is a need to strengthen or, if necessary, to establish bodies charged with examining the ethical issues arising in this field and protecting the rights of those who employ forms of artificial intelligence or are affected by them.” There is an important global dimension to this, alongside the responsibility of sovereign states.

Most importantly, in “the quest for normative models that can provide ethical guidance to developers of digital technologies, it is indispensable to identify the human values that should undergird the efforts of societies to formulate, adopt and enforce much-needed regulatory frameworks.” The work of drafting and implementing ethical guidelines around artificial intelligence must not prescind from the consideration of deeper issues regarding the meaning of human existence, the protection of fundamental human rights and the pursuit of justice and peace.

A clear understanding of the essence of being human must include an awareness of a “sense of limit.”

“Human beings are, by definition, mortal; by proposing to overcome every limit through technology, in an obsessive desire to control everything, we risk losing control over ourselves; in

the quest for an absolute freedom, we risk falling into the spiral of a ‘technological dictatorship’. Recognizing and accepting our limits as creatures is an indispensable condition for reaching, or better, welcoming fulfilment as a gift. In the ideological context of a technocratic paradigm inspired by a Promethean presumption of self-sufficiency, inequalities could grow out of proportion, knowledge and wealth accumulate in the hands of a few, and grave risks ensue for democratic societies and peaceful coexistence.”

For this reason, and acutely aware that one of the immense risks of AI is that its power ends up in the hands of a few, the Pope emphasises that “in debates about the regulation of artificial intelligence, the voices of all stakeholders should be taken into account, including the poor, the powerless and others who often go unheard in global decision-making processes.”

The message specifically highlights various risks: the spread of disinformation; the use of AI to undermine democracy through the manipulation of elections; the rise of a surveillance society; digital exclusion; algorithms which distort because they replicate the prejudices of the environments where they originate (impacting on such things as equitable health care, mortgage approval, suitability for a job and even the possibility of recidivism of previously convicted persons); a lessened ability to perceive and take responsibility for the devastation of wars when decisions are made remotely leading to a detached approach to the immense tragedy of war.

There is a particular risk that the criteria behind certain decisions will become less clear even as they are made by individuals “possessed of their own universe of values,” potentially concealing responsibility for those decisions and thereby allowing the “producers” to evade the obligations of justice to act for the benefit of the community.

At the same time, the message notes the positive potential of AI to: promote integral human development and bring about greater fraternity; create innovations in agriculture, education and culture; multiply the possibilities of communication; promote critical thinking; and perform certain tasks with greater efficiency.

AI thus offers both opportunities and grave risks. Algorithms must not be allowed to set aside the essential human values of compassion, mercy and forgiveness, or to eliminate the possibility of individuals changing and leaving their past behind.

“In the end, the way we use it to include the least of our brothers and sisters ... will be the true measure of our humanity.”



The Nathaniel Centre for Bioethics

THE STORY BEHIND THE NAME

The red flowers of the Pohutukawa appear in December each year. At Cape Reinga on the northern tip of New Zealand there is a lone Pohutukawa, thought to be 800 years old. In Māori tradition the spirits of the dying travel to Cape Reinga where they slip down the roots of the sacred Pohutukawa into the sea, to journey back to their origin in Hawaiki.

Nathaniel Knoef was born on 12 December 1998, as the Pohutukawa flowers were beginning to appear. He died on 2 February 1999 as the same flowers faded, giving way to the seed from which new Pohutukawa would grow. At his birth Nathaniel was diagnosed with incurable health problems and in the few weeks of his life his parents faced many ethical issues associated with his care. Their story clearly highlighted the need ordinary people have for access to support in dealing with the growing number of ethical issues which surround the gift of life.

The naming of New Zealand's national Catholic Bioethics Centre in honour of Nathaniel is a sign of the Centre's commitment to those who are most vulnerable in the complex ethical situations which develop in their lives.

Thanks

The staff of the Nathaniel Centre for Bioethics wish to thank all their benefactors whose support has been instrumental in the establishment and continued work of the Centre. The Nathaniel Centre for Bioethics is supported by the New Zealand Catholic Bishops' Conference and also relies upon fees for its services, and individual donations for its continued operation and growth.

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