



the nathaniel report **71**

A Publication of
THE NATHANIEL CENTRE FOR BIOETHICS

in this issue

Editorial: Everything is Connected

John Kleinsman

Laudate Deum – A Plea to “All People of Good Will on the Climate Crisis”

John Kleinsman

Fronting Up to the Damage We Do to Earth

Neil Darragh

Understanding the (Forever?) Impact of Microplastics and Nano-Plastics

Staff of the Nathaniel Centre

On the Potential for Change in Aotearoa’s Genetic Modification Laws Under the New National-Led Government

Adam R. H. Stevens

Makarena Dudley: Bringing Te Ao Māori to Dementia

Siena Yates

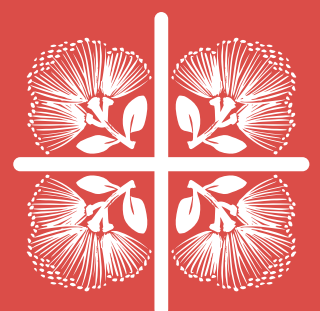
Understanding and Rejecting Ableism and Disablism

Dr Martin Sullivan in conversation with Hilary and Serena Stace.

Opinion: A Case for Drug Law Reform in Aotearoa

John Kleinsman

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.

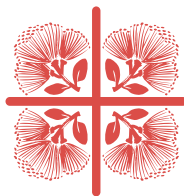
For The Nathaniel Centre, the context of bioethics is pastoral, because the ethical issues arising in healthcare and the life sciences reflect the realities of people's lives.

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, *Everything is Connected*, **John Kleinsman** reflects on the paradigm of a "spirituality of global solidarity" and an "open theology" in response to the many crises that we face in the world today and asks the questions "what does this look like" and "how will it be nurtured?"

In *Laudate Deum – A Plea to "All People of Good Will on the Climate Crisis"*, **John Kleinsman** delves into the Pope's most recent Apostolic Exhortation, his follow up the 2015 Encyclical, *Laudato Si'*. In extremely confronting and undiluted language, Pope Francis delivers a clarion wake-up call – a plea – to take seriously the existential nature of the climate crisis within which we are all now enmeshed.

Following on from this, in our second article *Fronting Up to the Damage We Do to Earth*, **Neil Darragh** explores the moral mandate given to Christians to treat all created beings – including the beings and processes of Earth – as worthy of appreciation and respect.

In *Understanding the (Forever?) Impact of Microplastics and Nano-Plastics*, **Staff of the Nathaniel Centre** outline the now ubiquitous presence of tiny plastic particles throughout Earth's ecosystems, including within the bodies of organisms, and summarise what is known so far about the effects of this.

Next, in *On the Potential for Change in Aotearoa's Genetic Modification Laws Under the New National-Led Government*, **Adam Stevens** summarises Aotearoa New Zealand's current laws and draws attention to the fact that these will soon be put forward for scrutiny and review by the incoming coalition government.

In our fifth article, *Makarena Dudley: Bringing Te Ao Māori to Dementia*, **Siena Yates** reflects on a wairua and strength-based way of understanding mate wareware, exploring how an approach grounded in te ao Māori can enable whānau to move beyond a medical deficit-based approach to life and towards one that understands mate wareware as a spiritual journey, where a person is in a tapu space between this world and the next.

In *Understanding and Rejecting Ableism and Disablism*, **Dr Martin Sullivan** in conversation with **Hilary and Serena Stace** untangles what ableism and disablism mean, and draws attention to how the beliefs and behaviours underpinning each can be discerned and challenged.

In our final article, *Opinion: A Case for Drug Law Reform in Aotearoa*, **John Kleinsman** outlines the need to update current laws concerning drugs and draws attention to the substantial damage that is currently done because of how we, as a society, currently understand and respond to drugs.

We hope that you find something to stimulate in this Issue.

Find us on 

Everything is Connected

In his recent Apostolic Exhortation on the climate crisis, *Laudate Deum*, Pope Francis notes that “the Covid-19 pandemic brought out the close relation of human life with that of other living beings and with the natural environment ... [thereby confirming] that what happens in one part of the world has repercussions on the entire planet.” This insight leads the Pope to a conviction that he acknowledges he repeats over and over again: “Everything is connected”. (*Laudato Deum*, n. 19)

In his 2015 Encyclical on Care for our Common Home, *Laudato Si'*, Pope Francis traces the interconnectedness of life to the interconnectedness of the divine persons of the Trinity:

The divine Persons are subsistent relations¹, and the world, created according to the divine model, is a web of relationships. Creatures tend towards God, and in turn it is proper to every living being to tend towards other things, so that throughout the universe we can find any number of constant and secretly interwoven relationships. This leads us not only to marvel at the manifold connections existing among creatures, but also to discover a key to our own fulfilment. The human person grows more, matures more and is sanctified more to the extent that he or she enters into relationships, going out from themselves to live in communion with God, with others and with all creatures. In this way, they make their own that trinitarian dynamism which God imprinted in them when they were created. Everything is interconnected, and this invites us to develop a spirituality of that global solidarity which flows from the mystery of the Trinity. (n. 240)

So, a “spirituality of global solidarity” becomes the paradigm for evaluating the way we humans are living and being in the world.

What does a spirituality of global solidarity look like and how is it nurtured? It will flow from an “open theology” that is oriented to salvation for both people and creation within a synodal, missionary and open Church. As Pope Francis recently wrote in *Ad Theologiam Promovendam*, a short apostolic letter in which he offers revised statutes for the Pontifical Academy of Theology:

Theological reflection is therefore called to a turning point, to a paradigm shift, to a 'courageous cultural revolution' that commits it, in the first place, to being a fundamentally contextual theology, capable of reading and interpreting the Gospel in the conditions in which men and women live daily, in different geographical, social and cultural environments, and having as its archetype the Incarnation of the eternal Logos, his entry into the culture, the vision of the world, the religious tradition of a people.

Theologian Sr. Geraldina Céspedes Ulloa picks up on the theme of an open theology that reflects the conditions in which we are living daily.²

Faith has to lead us to be better human beings, in solidarity with those who suffer and with the earth ... I try to do a theology that inserts the Gospel in the people's realities

and culture — a theology that listens to humanity's cries. I live a theology that does not ignore the tremendous socio-environmental imbalance, nor does it ignore the crises within the church itself.

In a similar vein, Cardinal Cupich has recently called for Cardinal Bernardin's *Consistent Ethic of Life* to be retrieved,³ 40 years on from Bernardin's Fordham address in which he famously linked the issues of abortion and nuclear deterrence. Reading that 1983 address reveals that a key motivation for Cardinal Bernardin's commitment to shaping a position of *linkage among the life issues* was his deep desire to develop “a significant defense of life in a comprehensive and consistent manner.”

Perhaps Cardinal Cupich has been reading the NZ Bishops' latest teaching document, *Te Kahu o te Ora – a Consistent Ethic of Life*, a recently published revised version of a 1997 document based on Cardinal Bernardin's *Consistent Ethic of Life*. In that document we read that “the ‘right to life’, properly understood, includes the right to flourish and develop according to our fullest potential. Anything that undermines the flourishing of God's creation constitutes a tear in the seamless garment of life.” The bishops also note:

... the concept of the consistent ethic of life can act as a counter to the culture of domination (between humankind and by humankind over God's creation) that is all too readily evident. Just as a kahu embraces all that is good and wholesome, so too the consistent ethic of life forms a canopy of non-violent moral teachings embracing the connections between all parts of God's creation ... If practised, this ethic can help us to maintain, and where necessary restore, harmony and right relationships within humankind and between humankind and the rest of God's creation.

At a time in our human history where the intensity of violence between humans is all too evident and the violence we humans are wreaking on our planet is reaching crisis proportions, the notion of a “spirituality of global solidarity” has never been more urgent. To quote again from Cardinal Cupich: “All threats to human dignity are intertwined, not simply by logical consistency, but by reality itself, as diverse threats to life tend to reinforce one another.”

Indeed, “everything is connected” and it is time we started thinking, praying and acting as such.

John Kleinsman is director of the Nathaniel Centre for Bioethics

- 1 The concept of a “subsistent relationship” comes from Philosophy. It is here being used by Pope Francis to make the point that the relationship between the three persons of the Trinity is a ‘necessary’ one that goes to the core of their identity.
- 2 González, L. D. (2023) Q&A with Sr. Geraldina Céspedes Ulloa, living a theology that listens to humanity's cries. Global Sisters Report.
- 3 Cupich, B. J. (2023). Cardinal Cupich on retrieving the *Consistent Ethic of Life*. America.

Laudate Deum – A Plea to “All People of Good Will on the Climate Crisis”

John Kleinsman

On the 4th of October 2023, the feast of St Francis of Assisi, Pope Francis released *Laudate Deum*, a follow-up document (Apostolic Exhortation) to his 2015 Encyclical, *Laudato Si’*.

Much has been written about this Exhortation. American writer Michael Wright fears that “In US, ‘Laudate Deum’ won’t make it into many homilies or prompt any marches,” a function of under-prioritising care for creation for many years. (Wright, 2023) ‘Will that also be the case in Aotearoa parishes and schools?’ I wonder.

The title is itself revealing. The Exhortation is addressed to all people of good will, not just Catholics. In other words, the Pope is speaking first and foremost as a concerned global citizen.

The document is accessible and easy enough to read, but it’s definitely not an easy read. In fact, it’s extremely confronting. *Laudate Deum* delivers a clarion wake-up call and Pope Francis does not mince his words. “Some effects of the climate crisis are already irreversible, at least for several hundred years” and there are so “many signs that the other creatures of this world have stopped being our companions along the way and have become instead our victims (n. 15) ... we have not realised that ... we have turned into highly dangerous beings, capable of threatening the lives of many beings and our own survival”. (n. 28)

The title is itself revealing. The Exhortation is addressed to all people of good will, not just Catholics. In other words, the Pope is speaking first and foremost as a concerned global citizen.

This doesn’t mean that he is not speaking as the leader of a major world religion whose perspective is informed by the Catholic faith tradition. For Catholics, the Pope’s words are a sharp reminder that our faith makes demands on the *entirety* of our lives. A robust and mature faith does not allow us to ignore what is happening with the climate and environment because caring for our common home is not some optional add-on for Christian disciples.

...“the crisis [is] a symptom of a deeper human and spiritual crisis based on humankind’s fractured relationship with God’s creation, with each other and ultimately with God;” (NZ Catholic Bishops, 2023)

In a move that is consistent with this stance, Pope Francis has revealed he will be personally attending the upcoming UN Dubai climate summit (COP28), a first for any Pope. Interestingly, his decision to attend takes place against the backdrop of highly critical comments in *Laudate Deum* about the failures of global climate conferences to date. Thus, in paragraph 52 he writes: “... the accords have been poorly implemented, due

to lack of suitable mechanisms for oversight, periodic review and penalties in cases of noncompliance. The principles which they proclaimed still await an efficient and flexible means of practical implementation”. We must “move beyond the mentality of appearing to be concerned but not having the courage needed to produce substantial changes.” (n. 56). Pope Francis rightly identifies that “international negotiations cannot make significant progress due to positions taken by countries which place their national interests above the global common good.” (n. 52)

In other words, we must adopt a global ethical position rather than one based primarily on local or nationalist interests.

Pope Francis is equally critical of those who “seek only a technical remedy to each environmental problem”, (P. 57) something he describes in terms of a “mindset of pasting and papering over cracks, while beneath the surface there is a continuing deterioration to which we continue to contribute”. The Pope adds: “To suppose that all problems in the future will be able to be solved by new technical interventions is a form of homicidal pragmatism, like pushing a snowball down a hill.” Why? Because, as the Bishops of Aotearoa noted in their recent teaching document, *Te Kahu o te Ora – A Consistent Ethic of Life*, “the crisis [is] a symptom of a deeper human and spiritual crisis based on humankind’s fractured relationship with God’s creation, with each other and ultimately with God”. (NZ Catholic Bishops, 2023)

In addition, the Pope calls out all those people who are still climate doubters or deniers (nn. 11, 14) or, if not deniers, promoters of what he calls an “irresponsible derision that would present this issue as something purely ecological, “green”, “romantic”; an approach that means the issue is “frequently subject to ridicule by economic interests.” (n. 58). The Pope notes that these are attitudes he continually encounters “even within the Catholic Church”. (n. 14). For him, there is no room any more for climate deniers because “It is no longer possible to doubt the human – ‘anthropic’ – origin of climate change.” (n. 11) The “unusual rapidity of these dangerous [climate] changes is ... unchecked human intervention on nature in the past two centuries”. (n. 14)

Commenting on this while reflecting on *Laudate Deum*, Michael Wright (2023) acknowledges the difficulty for many in changing their views about the climate crisis:

Conservative media’s disinformation campaigns about climate change have been effective at sowing doubt ... There is a cognitive dissonance associated with admitting that climate change is a serious problem after years of believing it is a hoax, a normal earth cycle or just a low-priority issue. Devout members of any institution who have believed something for a long time can be psychologically blind to failures or misleading from their institutions or

leaders. This includes information about climate change: its existence, causes, environmental harm, economic impact and existential threat to life.

At the same time, the Pope is critical of those who, while recognising the true seriousness of the issue, promote an approach that relies on a “denial of the human being”, (n. 27) by which he means a denial of the proper identity and dignity of the human person. Theologically speaking, Pope Francis’ position on this is a great example of the *via media* – literally ‘the way between’ that avoids two extreme positions. Importantly, his stance rejects the concept of ‘human exceptionalism’ which lies at the heart of the problematical anthropocentrism which has led us to the situation in which we currently find ourselves; a situation largely based on our slavish embrace of the “technocratic paradigm” (nn. 20-23) which isolates us from the world and deceives us (n. 66), leading to a denial of our shared creaturehood while seeing the world as an object of exploitation and nature as a mere setting (n. 25).

The Exhortation emphasises that the way forward is not a blind acceptance and continuation of the idea of infinite or unlimited growth, which the Pope notes still proves so attractive to economists, financiers and experts in technology.

In Pope Francis’ mind “the Judaeo-Christian vision defends the unique and central value of the human being [but only] amid the marvellous concert of all God’s creatures ... [recognising] ... that human life is incomprehensible and unsustainable without other creatures”. (n. 67)

Three insights from *Laudate Deum* are particularly poignant for those of us living in Aotearoa New Zealand:

1. The Exhortation emphasises that the way forward is not a blind acceptance and continuation of the idea of infinite or unlimited growth, which the Pope notes still proves so attractive to economists, financiers and experts in technology. (n. 20) This idea, unfortunately, features all too often in the rhetoric and arguments of our New Zealand politicians and others, including those who are industry leaders.
2. If an important part of the problem is overcoming the technocratic paradigm which shapes us to look at the world from without and prevents us from recognising that we are part of nature, (nn. 25-26), then, Pope Francis writes, it is to the “indigenous cultures” that we should look for a healthy ecology. (n. 27) Or, as Pope Francis writes in *Laudato Si’*: “... a greater sense of responsibility, a strong sense of community, a readiness to protect others, a spirit of creativity and a deep love for the land ... [are] values [that] are deeply rooted in indigenous peoples” (n. 179) who offer alternatives to “the irresponsible lifestyle connected with the Western model”. (n. 72). *Laudate Deum* enjoins us to listen more carefully to, and learn from, the original inhabitants of our country, Māori. This should help us think differently and positively about the notion of ‘co-governance’, a concept that is all too quickly derided by so many people. In addition, we in Aotearoa New Zealand can benefit from the perspectives

of other cultures who have migrated here especially the peoples of the Pacific whose homelands are amongst the most vulnerable to rising sea levels.

3. Many people, including New Zealand politicians, have commented on the fact that, because of our size and population, our contribution to the overall global emissions is miniscule – a fact that is often promoted as a reason to keep on with ‘business as usual’. While in real terms that may be the case, it is morally weak, if not immoral, to use that fact as a reason for us to ignore the climate crisis. What the world needs more than ever now is courageous, moral leadership, the sort of leadership Aotearoa New Zealand showed in our recent past with respect to nuclear disarmament. Recalling the Pope’s argument that the most effective solutions will come, “above all from major political decisions on the national and international level” (n. 69) focuses us on the importance of attitudinal, social and cultural conversion. If there can be “no lasting changes without cultural changes, without a maturing of lifestyles and convictions within societies,” (n. 70) this means that our ‘tiny’ country can make a *significant* difference on the global stage.

To fail to act in ways that will bring about the environmental change we need means we continue to be part of the indifference shown by so many people, including Catholics, towards the reality “that so many species are disappearing, and that the climate crisis endangers the life of many other beings,” (n. 63) including our own species.

The world sings of an infinite Love: how can we fail to care for it?

I hope and pray that the messages of *Laudate Si’* and *Laudate Deum* will make it into the homilies of Catholic Parishes and inspire marches. More than that, however, I hope and pray that Pope Francis’ messages will make it into the speeches of politicians and the policies of the incoming 54th New Zealand Parliament. More than ever, this is the time for multiparty political discourse and consensus for positive action through courageous legislation and regulation.

Pope Francis talks about having “an eye to the children who will pay for the harm done by [our] actions” or lack of them. (n. 33). I think about my four mokopuna, all under 3 years of age and I wonder what the world will be like for them and others of their generation. But I also know it is no longer enough to wonder – we all need to act with an urgency underpinned by a well-developed sense of mysticism and transcendence and love for the dignity of all God’s creation.

To give the last word to Pope Francis: “If the universe unfolds in God, who fills it completely... there is a mystical meaning to be found in a leaf, in a mountain trail, in a dewdrop, in a poor person’s face. The world sings of an infinite Love: how can we fail to care for it?” (n. 65)

Dr John Kleinsman is director of the Nathaniel Centre for Bioethics

Fronting Up to the Damage We Do to Earth

Neil Darragh

For some years now, many local churches have inserted a four-week “Season of Creation” into their annual liturgical cycle. This has helped refocus church-going Christians on the basic Christian belief in God as Creator – Creator not just of humans but of everything. It seems obvious; yet it’s a moral minefield. Inherent in this belief in a Creator God is the moral mandate to treat all created beings (for us this means, in effect, the beings and processes of Earth) as worthy of appreciation and respect.

This mandate requires us to maintain careful limits on when and how much we use other beings for human benefit. We will, almost certainly, continue to ‘use’ other Earth beings for our own well-being, especially for food and shelter. But given this, can we still hope that our fundamental attitude might be one of appreciation and respect?

From Using to Appreciating

Over the last 100 years or so, scientific measurement has brought us face-to-face with the destructive effects of human behaviour in the planet Earth. Our simple naïveté about the ‘goodness’ of industrial development has largely disappeared. An awareness of the delicacy and complexity of our relationships to the other creatures of Earth is now widespread. Few of us still assume that ‘progress’ (‘you can’t fight progress’) is always approved by God and the angels.

Many Christian Churches, such as those belonging to Eco Church NZ (www.ecochurch.org.nz) and organisations like A Rocha (www.arocha.org.nz) have recently moved beyond a largely personal spirituality (‘me and God’ or ‘me and the Church’) towards a spirituality committed to reducing destructive human behaviour in the Earth.

Even relatively painless liturgical changes, such as Prayers of Intercession concerned with the environment, and homilies which interpret the Christian Scriptures for an ecologically alert congregation, help to move us on to a more Earth-focused spirituality. A great deal of Christian education, especially in schools, has also, perhaps even more rapidly, changed from an emphasis on personal spirituality and Church-belonging to an emphasis on the wholeness (an “integral ecology” in Pope Francis’s terms) of human beings and the larger Earth.

Yet one thing that has not happened, as far as I am aware, is a reinterpretation of the Christian understanding of ‘sin’ and its close companion, ‘guilt’. These are the underside of Christian spirituality and may reveal more of what we really are than do our aspirations to beauty, wonder and wholeness.

Guilt as Stimulus for Change

Many (most) Christian educators and thinkers seem to be avoiding talk about ‘guilt’ and ‘sin’ as too negative. Yet the ecologists and environmentalists among us are actively, and with increasing effectiveness, provoking feelings of guilt in us.

The intention here is to confront people, organisations and

governments with messages that say: ‘You shouldn’t be doing this. This is wrong.’

While accepting the accusation and the guilt, we need nevertheless to distance ourselves from that ‘disabling guilt’ which leaves us helpless and hopeless. Psychologists and therapists often need to deal with this kind of disabling guilt. Yet there is a need, too, to rescue the concept of ‘guilt’ from its sometimes-disabling effects. Guilt can be a positive stimulus for change, an awareness that there is something in my life that I should change.

‘Sin-Talk’ as a Resource

Over the centuries, a Christian spirituality which practises some regular form of examination of conscience is simultaneously uncovering the width and depth of “sin”. This is the underbelly of our spirituality which anchors us within the real world.

Some sins are more destructive than others; some are more trivial than others and need to be treated so. Some just aren’t sins at all but leftovers from childhood or parental safeguarding. Some of this sin-talk has been damaging and left people immobilized in guilt. A lot of this is being re-evaluated and re-sorted nowadays.

Some areas of spirituality and moral action have been barely talked about at all. One of these neglected areas, it seems to me, is that of identifying and dealing with our sinful relationships with Earth.

We may prefer to talk about ‘wrongdoing’ or ‘making bad choices’ instead of ‘sins’. Any of these probably works in some circumstances, but ‘sin-talk’ is older, more sophisticated and better mapped, I think, so there is some value in retaining it.

Sin is about doing harm. Even if we would rather avoid ‘sin-talk’ altogether, it is clear nevertheless that many human beings (not all) are doing a great deal of harm to Earth. Where these sinful Earth relationships have been recognised, there have already been moves, individually and collectively, towards less destructive, more integrated relationships.

Canadian environmental lawyer David R Boyd has named some of the successes over recent decades in pushing back the damage: endangered species preserved, thousands of new parks, the salvation of the ozone layer, the exponential growth of renewable energy; the race to be the greenest city in the world; remarkable strides in cleaning up the air and water; the banning of dozens of the world’s most toxic chemicals; and some movement towards a circular economy where waste is a thing of the past.

Actions, Attitudes, Collusions and Omissions

In spite of some successes, our respect for Earth still seems to stand alongside or in addition to our normal everyday spirituality and morality. It seems unlikely that we can reverse our still widespread destructive behaviour unless we can bring our

Continues on page 12

Understanding the (Forever?) Impact of Microplastics and Nano-Plastics

Staff of the Nathaniel Centre

Plastic products can take between twenty and five hundred years to decompose and, even then, plastic never fully disappears – it just gets smaller and smaller¹.

What are microplastics and nano-plastics?

The tiny particles that plastic disintegrates into are called microplastics and nano-plastics. Microplastics are generally less than five millimeters in diameter, whilst nano-plastics are less than 0.01 millimeters in diameter^{2,3,4,5,6,7,8}. Nano-plastics cannot be seen with the naked eye.

When abraded and fatigued through everyday use, and when exposed to sunlight and the elements, all plastic products eventually break down into microplastics and nano-plastics. These particles have made their way into Earth's air, soil, and water and, from here, they have entered into Earth's atmospheric cycles, hydrologic cycles, and food webs. Particles that enter into the hydrological cycle are known as "wet plastics", whilst particles that enter into the atmosphere are known as "dry plastics"⁹. Once within these cycles, in a movement that is known as "plastic spiralling", the particles are set to travel around and through Earth *in perpetuum*, continually transported from one place to the next^{10,11,12,13,14}.

...200,000 tons of microplastics and nano-plastics are estimated to be produced from roads alone, as a result of shedding from vehicle parts and tyres.

It is estimated that some of the oldest particles that are currently spiralling may have been doing so for a century, since the creation of the first plastics in 1907^{15,16}.

Where do they come from?

Microplastics and nano-plastics can form from any product that is made of plastic or that contains plastic, and they can potentially be generated from any activity that involves plastic. The list is long and diverse. Plastic is ubiquitous: it features in nearly every industry and product in some form or other, whether as an integral part of the product or as packaging¹⁷. Clothing, shoes, car tyres and car parts, cosmetics, carpets, building materials, external linings of ships and planes, children's products, crates, packaging, medical supplies, cigarette filters, electrical products, paints, and commercial fishing nets are just some of the products that are known to produce microplastics and nano-plastics^{18,19,20,21,22,23}. For example, 200,000 tons of microplastics and nano-plastics are estimated to be produced from roads alone, as a result of shedding from vehicle parts and tyres^{24,25,26}.

The process of plastic recycling has itself been found to be a significant source of microplastics and nano-plastics, formed as a byproduct of both mechanical and chemical reprocessing

of plastics. Some state-of-the-art mechanical plastic recycling plants are producing between 1,366 to 2,993 tons of particles a year, releasing up to 75 billion particles into the ecosystem in each cubic metre of their wastewater²⁷. Older, less sophisticated plastic recycling plants are estimated to produce more²⁸.

What are they made of?

In the early decades of the 20th century, the petroleum and chemical industries formed alliances in companies such as Dow Chemicals, ExxonMobil, DuPont and BASF in order to make use of the waste material that was generated from processing crude oil and natural gas²⁹. These companies are still the major producers of the raw materials that are used to produce plastics today³⁰.

There are thousands of different types of plastic, involving an estimated 13,000 different chemical ingredients, each with its own particular production method^{31,32,33}. Different ingredients and production methods give different plastics their specific characteristics; strength, density, texture, composition, flexibility, rigidity, and melting points³⁴. It is difficult to find out the exact composition of a plastic product, as its ingredients will not often be listed³⁵.

Six common kinds of plastic are:

1. **polyethylene terephthalate** (PET or PETE), a lightweight, strong plastic that is impermeable to gases and is often used in food packaging, polyester clothing, and rope;
2. **high-density polyethylene** (HDPE), a strong, opaque plastic that is resistant to moisture and chemicals that is often used to make containers for food, drinks, toiletries, and chemicals, as well as for pipes, building materials, toys, and furniture;
3. **polyvinyl chloride** (PVC or vinyl), a hard, rigid plastic that is resistant to chemicals, weathering, and penetration by germs that is used in construction, windows, as sheaths for wires and cables, to make credit cards, toys, containers, and medical applications;
4. **low-density polyethylene** (LDPE), a more flexible version of high-density polyethylene that is used in cling-film, toothpaste tubes, sandwich bags, bubble wrap, plastic bags, beverage cups, and furniture;
5. **polypropylene** (PP), a heat-resistant plastic that is flexible enough to allow for bending but that retains its shape and strength for a long time that is used for hot food packaging, straws, bottle caps, medicine bottles, disposable diapers, thermal vests, and car parts;
6. **polystyrene** (PS or Styrofoam), a rigid, insulating plastic that is used in food packaging, disposable cups and bowls, product packaging, bike helmets, construction, electronics, and car parts^{36,37,38,39}.

To date, polyethylene, polypropylene, and polystyrene have all been found in microplastic and nano-plastic particles^{40 41 42 43 44 45}
46 47 48 49 50 51 52 53

Where have microplastics and nano-plastics been found?

In ecosystems

Microplastics have been found in many places across Earth, including in freshly fallen snow in Antarctica and the Alps; in Arctic ice cores; in freshly fallen rain in the UK; in clouds above mountain ranges in Japan and China; in remote parts of the Atlantic Ocean and Indian Ocean; at the bottom of the Mediterranean Sea, the North Sea, the Barents Sea, and the Pacific Ocean; along coastlines in Spain, the USA, and Australia; in rivers, lakes, and lochs across the UK, the European continent, Australia, China, the USA, and Canada; in soil from China, remote locations in the USA, and from the top of the Pyrenees mountain range; at the top of Mount Everest; in underground caves and in drinking water aquifers in the UK and the USA; on remote islands such as the Galápagos; in air samples taken from various locations, both urban and remote, around the world^{54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73}.

Research suggests that the presence of particles inside people is unrelated to the plastic products that individuals encounter in their everyday lives. In other words, it is the ubiquitous presence of microplastics and nano-plastics in the environment that makes human exposure and ingestion of the particles inevitable.

Inside humans

Microplastics have been found in human blood; in human placentas on both the maternal and fetal side; in the lower lung region of patients; in babies' feces; in adults' feces; in liver, spleen, and kidney tissues; in breast milk^{74 75 76 77 78 79 80 81 82 83}. Research suggests that the presence of particles inside people is unrelated to the plastic products that individuals encounter in their everyday lives. In other words, it is the ubiquitous presence of microplastics and nano-plastics in the environment that makes human exposure and ingestion of the particles inevitable⁸⁴.

Inside animals, plants, and algae

Research has identified that at least 1,500 wild species have ingested microplastics, and likely also ingest nano-plastics, in addition to ingestion by domesticated animals. To date, microplastics have been found inside pregnant rats, including in the organs of their fetuses; in the blood and tissues of pigs and cows; inside one in four of every fish in Aotearoa New Zealand's ocean waters; inside the tissues and guts of multiple species of fish and shellfish across Earth; in fish larvae; in zooplankton; in seaweed; in marine birds; in the guts and tissues of marine animals such as blue whales, porpoises, dolphins, grey seals, pygmy sperm whales, and turtles; in flying insects; in creatures that live at the bottom of seas and oceans, such as sea squirts, sponges, corals, and bristle worms^{85 86 87 88 89 90 91 92 93 94 95 96 97}.

As with research focusing on humans, the findings to date also suggest the ubiquitous presence of microplastics within living organisms as well as the environments with which they are co-extensive⁹⁸. For example, microplastics ingested by filter-feeding whales were contained within the zooplankton organisms that the whales were feeding on, as well as in the water that was ingested by them.

Inside food and drink

Research indicates that humans may be consuming up to 50,000 particles of microplastics a year⁹⁹. To date, microplastics have been found inside fish and other seafood bound for human consumption; within the flesh of fruit and vegetables such as carrots, lettuces, and wheat plants; inside tea; in salt; in seaweed; in honey; in sugar; in beer; in soft drinks; in water; in milk^{100 101 102 103 104}. Research has also found microplastics present in the food of domesticated animals¹⁰⁵. Once again, research suggests the ubiquitous presence of microplastics. For example, research into bottled water suggests that the presence of microplastics in the water was unrelated to the plastic containers *per se* – i.e., that the particles were already present in the water itself¹⁰⁶.

In each of the above areas, research is ongoing. Techniques to precisely identify the presence and movement of nano-plastics in and around Earth and within the bodies of organisms is still in its infancy because of the microscopic size of the particles. However, based on modelling and what is already known, it is hypothesised that nano-plastics are more prevalent than microplastics.

What are the effects of microplastics and nano-plastics once they are in the ecosystem and inside organisms?

This is a fledgling area of research and there is currently an absence of detailed, nuanced knowledge about the effects of microplastics and nano-plastics inside organisms and within ecosystems. We do not yet fully understand the effect plastics have on Earth, and what future effect they may have on Earth as they age during the coming centuries. However, enough is known about plastics in general to be concerned about the effects of these particles on Earth's wellbeing and on human, animal, plant, and ecosystem wellbeing^{107 108 109}.

One serious concern is that many microplastics and nano-plastics contain chemicals linked to cancers, hormonal disruptions, and reproductive disruption¹¹⁰. Polyvinyl chloride (PVC or vinyl), for example, is known to leach toxins such as lead, dioxins, mercury, cadmium, phthalates, and vinyl chloride. Polystyrene (PS or Styrofoam) is known to leach styrene, a substance which functions as a neurotoxin in animals. Polyethylene terephthalate (PET) contains antimony trioxide, an ingredient considered to be a carcinogen. Plastic ingredients such as perfluoroalkyl and polyfluoroalkyl substances (known as PFASs) are associated with a range of cancers, low birth weights, and endocrine disruption^{111 112 113 114 115}.

As such, plastics are not considered to be inert materials. As well as leaching substances, plastics can absorb chemicals over time. Whilst some plastics may be stable during the early

stages of their existence and use under certain conditions, this does not mean that they will remain so over time when placed in other conditions¹¹⁶. For example, aged plastics that have been more weathered through exposure to UV in the atmosphere have been found to contain more lead, mercury and oxygen compared to pristine, non-weathered plastics¹¹⁷.

The sections below summarise what is known so far about the effects of microplastics and nano-plastics from initial research:

Research focusing on humans

Research suggests that microplastics can latch on to the outer membranes of red blood cells, potentially limiting their ability to transport oxygen; that chronic exposure to high levels of airborne microplastics can cause respiratory disease; that microplastics can cause damage to human cells, including causing allergic reactions and cell death; that microplastics are present in cancerous lung cell specimens; that people with inflammatory bowel disease have up to 50% more microplastics in their faeces, suggesting a connection but not necessarily a causal link between IBS and microplastics^{118 119 120 121 122 123 124}. Working in plastic recycling has also been found to be a toxic activity for people¹²⁵.

Research focusing on animals and plants

Research suggests that concentrated doses of microplastics can affect the reproduction of laboratory mice and marine animals and the survival of their young; that microplastics may be linked to inflammation and cancers in animals, and that they cause metabolic issues and cell death in animals; that microplastics can affect the physiology of the small intestine in birds, thereby disrupting nutrient absorption and exacerbating organ stress; that microplastics may affect the behaviours of marine creatures, which in turn may affect their reproduction and survival rates with potentially negative knock-on effects for the survival of other inter-connected organisms; that microplastics cause damage to populations of soil-dwelling microarthropods and nematodes, organisms that play an essential role in creating and sustaining healthy soils^{126 127 128 129 130 131 132 133 134 135 136}.

Research focusing on ecosystems

There are concerns that microplastics and nano-plastics could provide vectors for the accumulation of toxic chemicals such as polychlorinated biphenyls; that they could become vectors for viruses and bacteria, thereby creating new niches in ecosystems that could affect / cause the spread of disease; that the pollutants, viruses and bacteria carried by microplastics may be released inside the guts of the organisms that consume them; that microplastics may be implicated in the bleaching of coral reefs; that there may be a link between the presence of microplastics and disease rates in coral reefs^{137 138 139 140 141 142}.

Further research needs to be carried out to discern in more detail: the movement of microplastics and nano-plastics through ecosystems and within the bodies of organisms over time; the effects of the particles in the whole range of Earth's ecosystems; the effect the particles may have over the coming centuries, and whether this effect may shift and change with

time; what concentrations of microplastics and nano-plastics we and other organisms are being exposed to; what levels of exposure are harmful; how the synthetic particles interact with organic material; whether particles affect certain bodily organs more than others; whether particles are passing through the blood-brain barrier; whether the particles interact with other pollutants and substances; whether there is a difference in potential health impacts of microplastics versus nanoplastics; whether different plastics have different effects; whether the effects of exposure vary at different life stages for humans and for other organisms (including in-vitro)^{143 144 145 146 147 148 149 150 151 152 153 154}.

How big is the problem?

It is estimated that approximately 335 million tons of new plastic are produced each year, and that 8 million tons currently end up in the oceans. Currently, it is estimated that there are between 12 and 170 trillion tons of plastic particles in the oceans^{155 156 157}. If this estimate is correct, it means there are more plastic particles in the ocean than individual zooplankton organisms, one of the most abundant species on the planet^{158 159}. Other calculations suggest that the total mass of plastic produced to date exceeds the overall mass of both land and marine animals¹⁶⁰. Once microplastics and nano-plastics are in the ecosystem they cannot really be removed^{161 162 163 164 165 166 167 173 174 175 176}. Plastic production is projected to double by 2040, and plastic waste is projected to triple by 2060, with approximately half of this ending in landfill and less than a fifth recycled^{168 169 170 171 172}.

Conclusion

Current research findings point to the ubiquitous presence of microplastics and nano-plastics in Earth's ecosystems; everywhere they have been looked for, the particles have been found¹⁷⁷. Microplastics, and probably also nano-plastics, are now likely to have permeated every aspect of the food web¹⁷⁸.

There are growing calls from researchers, agencies, and organisations to shift the global focus from the notion of managing plastic by recycling it to cutting off microplastics and nanoplastics at their source – i.e. drastically curbing the production of new plastics, whilst also developing effective ways to regulate and manage the plastics that have already been created for the entirety of their existence, along with the 13,000 chemicals that are involved in making them¹⁷⁹.

This response needs to encompass the large timescales – the hundreds of years – that are involved in the life-spans of plastics and their chemical constituents; a response that will require “cradle-to-infinity” thinking rather than “cradle-to-grave” thinking, given that the “forever nature” of plastics means that the problems they cause do not end at their disposal – whether by burying, burning, or reprocessing – because once in the ecosystem, plastics are almost impossible to remove^{180 181}.

Endnotes and references are available on request.

On the Potential for Change in Aotearoa's Genetic Modification Laws Under the New National-Led Government

Adam R. H. Stevens

In their 2023 general-election campaign, the incoming National Party government promised to “end the effective ban on GE [gene editing] and GM [genetic modification] in New Zealand”.¹

Considered a form of biotechnology, ‘genetic modification’ broadly refers to any scientific method for altering the genetic make-up of an organism; i.e. that conducted in a laboratory, as opposed to selective breeding. The most common applications for GM are in scientific research, medicine, and agriculture. GM is adopted widely in the world, but much less so in Aotearoa. For example, GM food is not grown in New Zealand.

Presently, GM regulation in NZ is based on the 1996 ‘Hazardous Substances and New Organisms’ (HSNO) Act, which was most recently amended in 2003.² In essence, the law allows for genetic research to take place in a controlled laboratory, but it has a strict permission procedure for any ‘field’ research; that is, where there is potential for NZ’s ecosystem to be exposed to the GM organism.

The National Party is proposing to reduce, but not remove, regulation of GM in Aotearoa. As noted by the Royal Society Te Apārangi Gene Editing Panel in 2019, the science and application of GM has advanced significantly since the 2003 amendments of the HSNO Act, and “[GM] advances in the future will continue to open doors to a much wider range of potential applications, from addressing genetic diseases in humans to managing the environment, and accelerating conventional plant and animal breeding programmes.”³ Indeed, several other countries in recent years have reviewed their GM laws along similar lines. The National Party points to Australia’s 2016-reviewed regulatory model as one that New Zealand could base its changes on.

Among the cited examples the incoming government makes for an ease of GM regulation being beneficial to Aotearoa is that it can help reduce agricultural greenhouse gas emissions, which are responsible for half the country’s carbon footprint.⁴ National specifically refers to the government-funded company AgResearch’s testing of GM ryegrass, which has been promised to reduce the methane emissions and nitrogen excretion of livestock. This cannot be field-tested in New Zealand under current law, but it is being tested in the United States.

Claims and counterclaims about the potential benefits of GM need to be carefully examined. GM ryegrass, for example, will not be a silver bullet for reducing New Zealand’s greenhouse gas emissions. In their 2018 report to the Biological Emissions Reference Group (a collaboration between New Zealand’s agriculturists and the government), the Interim Climate Change Committee state several times that the effects of GM ryegrass on livestock emissions are “highly speculative”.⁵ While the authors account for a 15% reduction in methane emissions produced for a fixed mass of crop consumed by livestock in their modelling, they caution that this is an optimistic upper limit. Moreover, this year, an attempt to field-test GM ryegrass in Australia was withdrawn.⁶

Whether or not red tape on GM research and application is dispensed in practice in Aotearoa, the Royal Society notes the importance that nomenclature surrounding GM be made uniform across New Zealand law, international law, and in the laboratory; presently, it is not. On this basis, GM regulation in Aotearoa needs to be altered at some level. To quote the Royal Society with reference to modern GM-related technology: “Without regulatory reassessment, New Zealand risks being unprepared for both the new technologies’ benefits, and the risks and challenges they bring.”

There are unique cultural challenges associated with GM laws in Aotearoa. New Zealanders are attached to the country’s ‘green’, natural image. The absence of GM food and nuclear energy in the country contribute to this image. This image is also important internationally, helping to drive tourism, one of the largest contributors – alongside agriculture, which also benefits from this image – to New Zealand’s economy.

The preservation of our environment and native species takes even greater precedence with the understanding that they are taonga. These considerations and the principles of Te Tiriti o Waitangi are crucial to the context of GM law change in Aotearoa. Public consultation is therefore critical, as noted in the Royal Society’s review.

Where public consultation is needed, so too is public education to enable informed input.

The details of any policy change the incoming government may implement are yet to be announced. Likewise, it remains unclear what the tangible benefits to their high-level, pre-election GM policy would be. What is clear, however, is that, with National and their soon-to-be coalition partner ACT on the same page about GM policy, and with advisory bodies like the Royal Society advising that some form of update to Aotearoa’s 20-year-old GM law is in order, this is a topic that New Zealanders will need to engage with in the next three years (and into the future).

Dr Adam Stevens (PhD) is an astrophysicist, a climate-change communicator, and a steering member of the charity organisation ‘Astronomers for Planet Earth’.

Endnotes

- 1 https://assets.nationbuilder.com/nationalparty/pages/17969/attachments/original/1686430379/Biotech_Policy.pdf
- 2 For a summary, see <https://environment.govt.nz/assets/Publications/Files/genetic-modification-nz-approach.pdf>
- 3 <https://www.royalsociety.org.nz/assets/Uploads/Gene-Editing-Legal-and-regulatory-implications-DIGITAL.pdf>
- 4 <https://www.mpi.govt.nz/funding-rural-support/environment-and-natural-resources/centre-for-climate-action-on-agricultural-emissions>
- 5 <https://www.mpi.govt.nz/dmsdocument/32128/direct>
- 6 <https://www.newsroom.co.nz/grass-isnt-greener-for-gm-trial-in-australia>

Makarena Dudley: Bringing Te Ao Māori to Dementia

Siena Yates

Our strength as Māori lies in the healing aspects of our culture.

We've found in our research that many of our whānau don't necessarily see mate wareware, or dementia, as a bad thing. Rather, it can be seen as a spiritual journey, where a person is in a tapu space between this world and the next.

For example, certain types of dementia can create hallucinations and delusional behaviour. But for some of our kaumātua, who acknowledge communication with tūpuna on the other side, these things aren't negative symptoms. They're seen as part of the journey to join their tūpuna.

This is a wairua way of thinking, rather than a medical deficit-based approach. It takes a more positive view than just "this is a horrible disease to have."

That's not to discount the fact that mate wareware can be an awful thing for many whānau to deal with. But we try to come from a strength-based place in our work to help them.

I've been doing this mahi for about 10 years now. My background is in clinical neuropsychology which I did for about 20 years. This field of mate wareware really appealed to me because, well, who doesn't want to work with, and for, our kaumātua? They're such a taonga.

It's also an area of Māori health that's under-researched and under-resourced, with very few Māori practitioners, so I knew there was a big gap that needed filling.

I got into it after I met Professor Ngaire Kerse at a conference. She's an international expert in bicultural ageing – and she told me about LiLACS (Life and Living in Advanced Age), which was a major study on octogenarians in New Zealand. It found that Māori were being misdiagnosed because the commonly used tests for dementia are standardised and based on a western population.

The kaumātua were being asked the wrong questions. There was no cultural context, no mātauranga Māori, no relevance to the kaumātua being tested.

Countless kaumātua have told me that what they wanted more than anything from their clinician was to be asked about their wairua, how they were spiritually, because that was the most important aspect of their health. But, of course, they never get asked those sorts of questions.

This had been happening for years and years in Aotearoa New Zealand.

If we look at mate wareware from a Māori perspective, we know our beliefs and values can protect us and provide a different way of being. Listening to our kaumātua, I realised there are methods of healing, management and treatment that we could bring in from te ao Māori.

So we've been working on a diagnostic tool for mate wareware for Māori. It's called the MANA tool – the Māori Assessment of Neuropsychological Abilities tool. And it's about to be rolled out to primary healthcare providers and hospitals around the

country.

We've included the usual, standard cognitive and functional assessments, but we've developed it within a Māori context. It asks our kaumātua questions about their self-identity, how they perceive themselves, their relationships with mokopuna, whether they're able to manaaki people like they used to, and the places that are important to them. That is, it includes a wairua component.

Something that we've found, which Māori should be so proud of, is that many aspects of our culture provide proven protective factors against mate wareware.

During our research, we interviewed at least 400 kaumātua about their experiences of mate wareware. Out of that kōrero came a list of things that helped kaumātua with mate wareware. Like being active on the marae, and hearing and reciting karakia and waiata.

All those things link back to the protective factors that have been identified in the western world. If you're on the marae, you're being social, you're communicating, you're talking, you're listening. There are lots of things going on in your brain. For instance, saying a karakia triggers and activates neurons in the brain that may not normally be activated if you aren't using the reo. It's the same with singing waiata.

These things in themselves aren't necessarily going to stop you from getting mate wareware but collectively they can help to minimise the onset or slow down progress.

The marae is also important because we know that people with mate wareware like to be in an environment that's familiar to them. They're able to function better because it's a place where they feel safe and where they feel aroha.

I can't even tell you the number of stories I heard about kaumātua and kuia who were known to have mate wareware but when they came to the marae it was like it just disappeared.

Whānau would say things like: "Oh, we didn't have to worry about Aunty Dolly for that period of time because she was just like normal, and she was able to do everything she normally would."

There were also stories of people who started speaking the reo even though they hadn't spoken it for most of their lives. It may have been suppressed since they were five, if they'd been punished for it, but the reo, as their first language, was still there. It doesn't go away. It just lies dormant.

That's a wonderful wairua experience that can happen to our kaumātua, but what's also happening is that, as the disease progresses, the pathways that generate new memories die off first and the pathways that access old, long-term memory become more active. So, they can access those long-term memories of the reo, which is pretty spectacular.

The reo is another huge strength of ours. Being bilingual, or multilingual, is certainly a protective factor against mate

wareware because when you're using another language, you're activating more pathways in the brain.

This is really exciting news because we know that these kinds of protective factors, together with a healthy lifestyle, can delay or prevent the onset of mate wareware by up to 40 percent, which is huge.

This is the sort of information we need to get out to whānau. A lot of our health and wellbeing lies in having a positive connection with our culture.

It's so empowering for Māori that there are things that we can do to help ourselves without relying on a purely western approach. Because, let's face it, western science and medicine haven't always helped our people.

We've also recently launched a form of cognitive stimulation therapy that comes out of te ao Māori, called Haumanu Whakaohoho Whakaaro Māori. It includes the protocols and tikanga that we observe in Māoridom.

For example, there's a session on food. We ask the kaumātua to bring in some traditional kai like mutton bird or kānga pirau (rotten corn) for a shared kai. And those tastes and smells will trigger memories from their childhood.

Another session is on sounds. We get Māori musical instruments, native manu sounds, karanga recordings – and they'll also help to trigger memories. We look for activities that primarily stem from te ao Māori.

We also use things that come from te ao Pākehā because a lot of our kaumātua are very familiar with the western world as well. But it must be relevant and of interest to them.

We've run two pilot groups in Whakatāne and Ōpōtiki and it's been very exciting. There's been excellent anecdotal feedback from whānau about the improvements that they've seen in their loved ones.

There's a huge amount of interest in this kaupapa. When we did our initial interviews for the research, we hoped to kōrero with about 20 kaumātua at each marae. But we'd often get triple that.

Continued from page 6

Earth spirituality into the central core of our morality. There are often 'no-go' areas, or 'too-hard' areas in our day-to-day self-assessment where we just don't notice the failures. For many of us, our Earth relationships are one of these moral vacuum areas.

We can begin to uncover some of this when we note that sins, traditionally, are not simply actions, they may also be attitudes, collusions and omissions.

As well as destructive actions, our sins may also be attitudes (not just single actions) which lie behind and result in an array of repeated wrong actions.

There are also sins which are collusions with unjust and destructive structures. We probably did not cause these and didn't deliberately decide to do anything evil. We have just gone along with the way the world is.

People not only really wanted to talk, but they wanted to listen too. There's not a lot of information out there about mate wareware, and we realised that some of our kaumātua and kuia are frightened by this condition because they just didn't know much about it.

Generally, Pākehā tend to avoid talking about dementia. And I think the difference with Māori is that we've been through so much in our history that this is just another hurdle to deal with.

Māori are used to adversity, and we take it in our stride. That's what I've seen with our kaumātua. They're like: "Okay, what's this? What's the latest? Tell us about it and how we manage it and what the whānau need to know."

That last bit is especially important because we know that Māori generally prefer to keep someone with mate wareware at home to look after them for as long as possible. That's why we don't have a lot of Māori in aged residential care.

It's an instinctive thing for them to want to stay at home in a familiar environment. Keeping our kaumātua at home is another part of caring for their wairua.

Dr Makarena Dudley (Te Rarawa, Te Aupōuri, Ngāti Kahu) is a clinical neuropsychologist who has spent the past 10 years focusing on dementia in kaumātua Māori. Her team has developed the ao Māori focused MANA testing tool for diagnosing, and cognitive stimulation therapy (CST) for helping manage mate wareware. The MANA tool is due to launch later this year, while the CST workshop and manual are accessible now. For more information, you can contact her at m.dudley@auckland.ac.nz.

As told to Siena Yates, made possible by the Public Interest Journalism Fund.

This article first appeared in E-Tangata. Reprinted with permission. The original article can be accessed here: <https://bit.ly/Bringing-te-Ao-Maori-to-Dementia>.

And then there are sins of omission. There is evil that we are caught up in not by positive choice but just by allowing them to continue without protest.

Perhaps it is because many of the destructive relations with Earth are cases of collusion or omission that we fail to see them or take them seriously – and to recognise them as sins.

Rev Dr Neil Darragh is the parish priest of Devonport, Auckland, and a theologian and writer.

Originally published in Tui Motu InterIslands Magazine. Issue 285 September 2020: 4-5

Reprinted with permission.

Understanding and Rejecting Ableism and Disablism

Dr Martin Sullivan (PhD), in conversation with Hilary and Serena Stace.

Ableism and disablism are terms which are now in frequent use. What do they mean, what is the difference, and how can the beliefs and behaviours underpinning them be challenged? We asked long-time disability activist and retired Massey University academic, Dr Martin Sullivan (QSO), to explain.

What do these terms mean?

Ableism is discrimination in favour of the able-bodied and able-minded, whereas disablism is the negative discrimination against impaired people. Ableism/ableist thoughts drive disablism actions; as soon as anyone's actions become inscribed, centred, or focused on the impaired body, they become disabling and disablism.

What is the difference between these terms?

Ableism is the superstructure or ideology of able-bodied privilege – the theory behind such privilege. Disablism refers to the practical actions and thoughts that follow from ableism – the actual discrimination of disabled people. Both can be the result of conscious or unconscious bias.

Can you give examples of both?

When a baby is born without impairments people say, 'Oh aren't they lovely, they are all whole and complete'. That sort of sentiment is just laden with ableist assumptions. Ableism 'valorises' the body beautiful in the true sense of that word – artificially raising the value of something. Not thinking about access when planning a public building is ableism. Actually building it without access is disablism.

When did you first hear these terms?

Mike Oliver and other UK disability rights authors in the 1980s and 90s first used the word disablism. They were interested in talking about and naming the bias caused by material structures which led to discrimination against disabled people. UK disability activists called themselves materialists – looking at the material world beyond thought processes. These days, this is usually named ableism. This can all be rather confusing.

The first New Zealand Disability Strategy in 2001 talked about barrier removal as a socio-political action that is the responsibility for all of us to do. Is that ableism or disablism?

Barrier removal is neither ableism nor disablism. Barrier removal in this context is socio-political action because it is focused on the emancipation of disabled people and takes the form of correction to the built and ideological environments which discriminate against or exclude impaired people. Looked at like this, it is an expression of social justice.

So it's a response to oppression?

Yes, disabled people not being able to do things practically in the world because of material and ideological barriers is oppression. Able-bodied people can never truly understand what it is like to be disabled. The most that able-bodied people can have is vicarious experience. No matter how close you are to someone, you can never claim lived experience of being disabled. People discover how disablism and disabling the world can be only when they are impaired and the material reality sets in; the brutal awareness that they, their body, doesn't work so well primarily because of the socially created structures which discriminate negatively towards them.

What is the full extent of ableism?

Everyone is subjected to the oppressive influences of ableism because it is all about an idealised, unobtainable body and mind. Health and other professionals are affected too because they are working from models of the able-bodied and able-minded. That is why some people ask, 'What's wrong with you?' Disabled people can also be ableist in their attitudes and assumptions about people with other impairments. Disability is diverse.

How can people have conversations about, and challenge, ableism and disablism?

Most people do not go around thinking 'What is it like to be disabled?' You can call out unconscious bias by saying 'I feel that is disablism' and explain why. For example, if someone says that they don't need lifts in a public building because it costs too much, ask 'What's going to happen for disabled people, how will they use the building?' and explain the advantages of universal design.

Can you recommend something for those who want to read more about ableism and disablism?

Henrietta Bollinger, *Articulations*, Wellington, Tender Press, 2023. This lovely little volume of short reflections and essays neatly describes the ableism and disablism that Wellington writer, Etta, has experienced. She challenges the assumption that a disability story starts with a diagnosis ('What's wrong with you?') and that other people are entitled to information about your impairment. Although Etta reflects on her hospital experiences of being treated as infantile and without agency while having to tell her story over and over to professionals and clinicians, her diagnosis itself is redacted. Her life is shaped by her experience of being a twin, being queer, being disabled and much intersectionality. The book is available in various accessible formats.

Hilary Stace (PhD) and Serena Stace are disability rights allies and family members of disabled people.

A Case for Drug Law Reform in Aotearoa

John Kleinsman

In a recent article, Dr Rose Crossin and Professor Joe Boden argue strongly and convincingly that it is time to “overhaul New Zealand’s outdated and harmful drug laws in favour of a health-based, Te Tiriti aligned approach that not only reduces harm but saves tax money and police time.” (Crossin, R. Boden, J., 2023)

A useful definition of drug ‘harm’ is offered by Crossin, Cleland and Boden (2023): (Crossin R, Cleland L, Wilkins C, et al., 2023)

Harms can be categorised as those that impact on individuals who use a drug, and those which impact upon others, such as families, communities or broader society. There is a complex interrelationship between harms; for example, drug-related convictions and other related harms tend to further disadvantage vulnerable individuals and communities, and the illegality of some drugs can add to any harms accruing from merely using the drug.

What evidence is there that our current laws are not working well? Taking the example of cannabis, there is research clearly showing that “an arrest/conviction for a cannabis related offence does not reduce the use of cannabis, with up to 95% either increasing their use or continuing with the same level of cannabis use following arrest.” (Fergusson, D M. Swain-Campbell, N R. Horwood, L J., 2003)

In addition, as Crossin and Boden point out:

Drug harm is being created and increased by our drug laws. A person charged with drug possession can lose their job, be isolated from their family and friends, be stigmatised and shamed. In short, they lose the things needed to live a meaningful and happy life, and stigma creates a barrier to seeking help. This creates a cycle of harm that impacts a person, their family, their community. (Crossin, R. Boden, J., 2023)

Crossin and Boden’s concerns echo that of others such as Lynne Bowyer and Deborah Stevens:

A drug conviction has serious repercussions for a person’s future possibilities; it narrows life opportunities, making it more difficult to get employment, to travel and to move into more life-affirming and sustainable social spaces. Further, if imprisoned, individuals are exposed to more ‘hardened’ criminals and little is done to address the impetus for drug use. Such negative repercussions have been noted by the Law Commission, who state that individuals who receive criminal convictions as a result of their possession or use often experience levels of harm quite disproportionate to their offending. Extending beyond the individuals involved, the harms from a punitive approach to drug use also become woven into families and communities, becoming entrenched with each generation, all of which further alienates those concerned. Statistics show that many of those convicted on charges relating to cannabis

possession and use are young people from already marginalised groups. (Bowyer, L. Stevens, D., 2019)

In short, “a significant proportion of harm of some substances is caused by the legal status of the drug, rather than from the drug itself.” (Vincent, 2023)

Catholic ethicist Dan Fleming, who is Group Manager of Ethics and Formation, St Vincent’s Health Australia, recently shared a story relayed to him by one of the addiction medicine specialists from St Vincent’s Healthcare Group, Australia. (Fleming, 2023)

A young man from a non-English speaking background struggles with anxiety.

Using cannabis helps him curb his emotional turmoil. He gets caught buying for personal use from someone he knows. He’s given a low-level drug dealing offence, and a criminal record. His family – good people – are thrown into turmoil. His mother is ashamed and in tears when she sees him. His father and brothers are angry.

They disown him. The community are destabilised, and the family becomes isolated.

The young man can’t get a job because of his record. All of this makes him more anxious.

More anxious. More drug use. He found his way to our addiction medicine service, and very slowly things began to turn around. But the starting point for providing our help to him is not where it could have been.

We were not caring for a man who needed help dealing with anxiety and who was desperate for some advice on how to manage that stress without drugs.

We were now caring for a young man cut off from family and friends, who was struggling to find a job because of his criminal record, and who was wrestling with his inner turmoil at his family’s anguish.

That’s a much harder place from which to begin a healing journey.

Fleming, commenting on the Australian context, which employs a similar approach to Aotearoa New Zealand, also concludes: “Rather than acting as a solution to a problem, our solidarity with those we serve has taught us that our current criminal justice framework for illicit drugs compounds problems, undermining human flourishing in an ongoing way, particularly for those who have a substance use disorder.”

Drawing on Martin Luther Jr’s commentary on the parable of the Good Samaritan, Fleming argues that “we ought to fuse concern for attending to a person’s immediate wounds and their long-term needs with offering our voice and expertise to bring about the reforms needed to prevent them from becoming wounded in the first place.” To paraphrase Fleming, it’s about using our

power to effect change, being committed to changing the road so it's not so dangerous anymore, while still caring for the one who is hurting.

Just three years ago, New Zealanders participated in a poorly thought-out referendum that asked people whether or not they would "support the proposed Cannabis Legalisation and Control Bill". The Bill was ultimately rejected by a small margin, leading various politicians, including the then Minister of Health Andrew Little (who readily agrees the current approach is causing harm) to suggest that there is now no social licence for drug law reform. (Radio New Zealand, 2022)

Commentators such as Crossin and Boden, who are specialists in the field, reject the idea that there is no licence for reform. In their words:

New Zealanders were asked a specific question about legalising cannabis ... We were not asked about whether we supported decriminalisation, or increased funding for harm reduction, or expanding programs like Te Ara Oranga that are proven to reduce drug harm without criminalisation. All of these actions must be taken, and we do not need another referendum to do so. (Crossin, R. Boden, J., 2023)

While a 2019 amendment allows the police to exercise discretion as to whether to prosecute anyone caught in possession of a controlled drug, leading some to describe the current state of affairs as approximating decriminalisation, there is plentiful evidence to show that it is not applied equitably: "Māori, those with a previous arrest record for non-cannabis related offences and those reporting involvement in violent/property offending were more likely to be arrested or convicted than other cohort members having the same level of cannabis use." (Fergusson, D M. Swain-Campbell, N R. Horwood, L J., 2003)

Examples of an alternative health-based approach are already in operation. Pat Snedden writes passionately about Aotearoa's three specialist Alcohol and Other Drug Treatment Courts located in Auckland and Hamilton.

The court is solutions focused and aims to 'break the cycle' by treating the causes of offending. It targets offenders who would otherwise be imprisoned, but whose offending is being fuelled by their unresolved 'high-needs' issues of addiction or dependency. They are also assessed as being 'high-risk' in terms of their non-compliance: in other words, past sentences and court orders made have not changed their situation. Consequently, they are on a treadmill of offending, typically being punished but then going on to reoffend. "As an alternative to prison, the court applies evidence-based best practices in a potentially transformative programme of case management, treatment, drug testing, monitoring and mentoring. (Snedden, 2023)

To conclude, in 2020, in the leadup to the Cannabis Referendum, the Nathaniel Centre wrote:

There are good arguments to be made that the current laws and regulations around the possession and use of recreational cannabis are not working well; that certain

groups of people are more disadvantaged by these laws than others, including the way the law is applied. Saying 'NO' to legalising recreational cannabis will still allow us the opportunity in the future to revisit our current laws, including the possibility of some form of decriminalisation.

That opportunity exists now. It needs to be taken up by our politicians using a cross-party approach. There is no shortage of quality information for them to consider. The argument for adopting a strong health-based approach and moving away from the current largely punitive approach is supported by a range of robust research. Without minimising the harm that can be caused directly by drugs, it is undeniable that a significant proportion of drug-related harm is caused by our current approach to regulating them.

Let's first agree that the current laws and approaches to drugs are not working and that they are disproportionately affecting some of our most vulnerable populations. Let's then agree to have a mature discussion about an alternative approach.

Decriminalisation offers an alternative path for reforming our drug laws; for moving from a criminal-based approach to a health-based one focused on the reality of people's lives and a desire for individual, whanau and social flourishing as well as greater social cohesion.

Whether or not there is a social licence for reform, it is about doing the right and the best thing, and that's what politicians are elected to do.

Furthermore, from a Christian-Catholic perspective, and in line with Pope Francis' recent update to the Statutes which shape the way we do theology, it's also an expression of "intellectual charity" which recognises and prioritises the questions and needs of those "on the existential peripheries".

Dr John Kleinsman (PhD) is director of the Nathaniel Centre for Bioethics.

Bibliography:

- Bowyer, L. Stevens, D. (2019, August). Going to pot? The Social Setting and Implications of Cannabis Law Reform. *The Nathaniel Report*(58), 11-15.
- Crossin R, Cleland L, Wilkins C, et al. (2023). The New Zealand drug harms ranking study: A multi-criteria decision analysis. *Journal of Psychopharmacology*, 37(9), 891-903.
- Crossin, R. Boden, J. (2023, May 3). An Aotearoa drug policy for the 21st Century. ideasroom. New Zealand. Retrieved October 18, 2023, from <https://www.newsroom.co.nz/ideasroom/an-aotearoa-drug-policy-for-the-21st-century>
- Fergusson, D M. Swain-Campbell, N R. Horwood, L J. (2003, May 1). Arrests and convictions for cannabis related offences in a New Zealand birth cohort. *Drug and Alcohol Dependence*.
- Fleming, D. (2023). Opening Remarks. Towards Health, Catholic Health Australia Conference 2023.
- Radio New Zealand, .. (2022, December 1). Drug laws 'certainly not ideal', admits Health Minister Andrew Little. Retrieved October 31, 2023, from <https://www.rnz.co.nz/news/national/479881/drug-laws-certainly-not-ideal-admits-health-minister-andrew-little>
- Snedden, P. (2023, September). Crime, Punishment and Politics. *Tui Motu*.
- Vincent, P. (2023, June 28). The most harmful legal and illegal drugs are revealed in groundbreaking new research - and the results will shock you. *Daily Mail Australia*. Retrieved October 31, 2023, from <https://www.dailymail.co.uk/news/article-12240599/Alcohol-harmful-meth-cigarettes-worse-heroin-says-NZ-research-vapes-cannabis-rated.html>



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.

We are grateful to the Bishops' Conference and all who support us through donations. We provide a receipt for all donations received. The receipt states the Charities Commission registration number.

Subscription

THE NATHANIEL REPORT is published three times each year. Subscription is NZ\$50 per annum within New Zealand. Australian and South Pacific subscribers (including air post) NZ\$57.50. Rest of the world (including air post) NZ\$59. To subscribe, please send the subscription form included with this issue of *The Nathaniel Report*.

If you wish to support the ongoing work of the Centre by making a donation or if your circumstances prevent you from helping us now, would you consider making a bequest to the Nathaniel Centre in your will? If you would like information on how to do this please contact:

Nathaniel Centre for Bioethics
PO Box 12243
Wellington 6144
NEW ZEALAND

Telephone: 64 4 4992251

Email: administrator@nathaniel.org.nz

Donations

Bank: BNZ

Name on account: Te Kupenga

Account number: 02-0506-0015015-00

www.nathaniel.org.nz

Find us on 