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2 October 2018

Human Rights Commissioner Edward Santow
Human Rights and Technology Project
Australian Human Rights Commission
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By email: tech@humanrights.gov.au

Dear Commissioner Santow,

Submission to the Human Rights and Technology Issues Paper

Executive summary

In this submission we present an overview of human rights, health technologies and access to justice. We make the following recommendations and observations:

- 1. Regulation should support co-design and consultation in the development and deployment of health technologies.** This is particularly necessary where technology is being developed for the purpose of assisting groups with particular needs, such as the elderly or persons with disabilities: human rights principles of dignity and autonomy demand that these people are supported to participate in decisions around how technology is to be designed and delivered.
- 2. There are a number of potential benefits of new health technologies, including the economic benefits of transitioning to automation in the health and aged-care sectors, and addressing the very troubling instances of abuse by care-givers. However, these benefits must not be pursued in a way which allows individual care-recipients to be treated as objects: they must at all times be treated with dignity and respect for autonomy, including their right to choose the level and form of care they wish to receive.**
- 3. There are also potential benefits for AI's use in the justice system, but again these benefits must be tempered by an appreciation of the importance of enabling public, transparent hearings and decision-making and respecting the dignity of persons in allowing their voices to be heard within the system.**
- 4. New health technologies, particularly AI, should be used to support individuals' decision-making to the greatest extent possible, and should not be used as a form of substituted decision-making where independent or supported decision-making is a possibility.**

Appropriate processes must be in place to assess individuals' decision-making capacity. The use of AI to support decision-making also needs to be transparent and modifiable, so that the individual's choice remains paramount wherever possible.

5. **Consideration should especially be given to how health and disability technologies can be used to perpetrate physical, psychological, financial and other forms of abuse.** This includes the potential for technology to facilitate elder abuse, finance or romance scams, or domestic violence. More work is required to identify ways to mitigate such risks.
6. Assistive technologies have potential to help meet demand for health services in remote and regional areas, assist with diagnoses, monitor ongoing conditions and support administering of medication and other therapies. However, these technologies **must be delivered in an accessible and affordable manner**, so that all Australians, particularly those in regional, rural and remote areas, are able to benefit from them. Consideration must also be given to the risk that technological innovation will replace more conventional care or make that care more expensive.
7. Some initiatives in the justice space may create efficiencies and remove potential for human biases. However, the risk is that these **biases may be imported into the algorithms used to make decisions in the criminal justice, administration and social security contexts more generally**. Also if the efficiencies mean that the person's individual circumstances are unable to be considered, this both **undermines their justice related rights and their dignity**.
8. **Privacy laws in Australia should be harmonised and developed to address gaps, ambiguities and inconsistencies.** Further work is required to consider what privacy means in a world of AI, and to address the wide-ranging ways in which new health and assistive technologies and justice related initiatives might impinge on individuals' privacy.
9. **Further consideration is required of the privacy concerns associated with assistive technology.** Technologies may gather and share data in order to enhance personalisation of services. However, this process may produce new forms of health information which require protection, including from misuse by other non-health agents. Transparency about the nature of information being captured, how it is stored and who may have access to it, is essential to ensuring an appropriate balance between privacy and the legitimate benefits of assistive technology.
10. **Information about when and how algorithms are used in AI-informed decision-making must be made public.** For example, where AI is used within the justice system or in decisions relating to the availability of social services this must be transparent, and the law must provide avenues for people to challenge these decisions. Necessary support must also be provided to enable them to do this.
11. **Australia should adopt a Bill of Rights**, or at least legislation which adequately protects economic, social and cultural rights, including the right to the highest attainable standard of health.

12. Further work should be undertaken to **articulate the requirements of specific human rights** in the context of new technologies, including the duties and standards which are to apply to businesses and other private entities. This must also address issues relating to the overseas development of technology and its implementation in Australia.

Background

Four of the authors come from the Australian Centre for Health Law Research (ACHLR). ACHLR is a specialist research Centre within the Queensland University of Technology's Faculty of Law. ACHLR undertakes empirical, theoretical and doctrinal research into complex problems and emerging challenges in the field of health law, ethics, technology, governance and public policy. We have research strengths in the area of the governance and regulation of health care, particularly end of life and ageing, and a commitment to pursue transdisciplinary research into real world problems and the opportunities of evolving digital technologies.

The fifth author is a member of QUT's International Law and Global Governance Research Program (ILGG) and co-chair of the ILGG's Human Rights and Regulation research stream. The ILGG group has a particular research strength in applying human rights-based approaches to emerging global issues including new technologies, the ageing population, climate change and environmental degradation.

We commend the Human Rights Commission for undertaking this Project, which we hope will result in better clarifying the challenges and opportunities for technological innovation in a human rights context and developing options for future regulation.

1. INTRODUCTION

New technologies have the potential both to enhance and compromise the enjoyment of a wide range of human rights. These rights are articulated in a number of international instruments, and are underpinned by fundamental principles of respect for the dignity, autonomy and equality of all individuals. The discussion below draws on the rights as articulated and interpreted within the international human rights framework as the basis for its analysis. Australia has signed and ratified all of the major human rights treaties,¹ so it is appropriate to turn to these for definitions of particular rights and to ascertain the content of Australia's obligations. The discussion also considers the requirements of fundamental principles of dignity, autonomy and equality, and argues that a human rights-based approach to regulating health technologies demands that at all times technology must be pursued in a way which respects these principles and supports the full enjoyment of human rights by all people.

This submission focuses on technologies used to improve and/or support human health and to facilitate access to justice. It begins by addressing the requirements of dignity, autonomy and equality

¹ *International Covenant on Economic, Social and Cultural Rights 1966* (ICESCR); *International Covenant on Civil and Political Rights 1966* (ICCPR); *Convention on the Rights of Persons with Disabilities 2006* (CRPD); *Convention on the Rights of the Child 1989* (CRC); *Convention on the Elimination of All Forms of Discrimination Against Women 1979* (CEDAW); *Convention on the Elimination of All Forms of Racial Discrimination 1965* (CERD); *Convention Against Torture 1984* (CAT).

in relation to technology generally, before considering the implications which technology may have for specific human rights. As part of this analysis it comments on a number of specific technologies to illustrate the range of human rights concerns which may arise [CQ1]. It then considers the human rights implications of two broad types of health focused technologies, namely assistive technology and artificial intelligence (AI). The discussion of assistive technology focusses in particular on the human rights of older persons [CQ2], and the analysis of AI identifies a number of concerns relating to AI-informed decision-making in the delivery of health services [CQ5]. The submission identifies a number of gaps in the current Australian legal framework [CQ3] and in the final section it presents several suggestions for how the Australian government might approach law, regulation and policy in this area to ensure the development and deployment of new technology proceeds in a way which respects and promotes human rights [CQ4, CQ6, CQ7].

2. FUNDAMENTAL HUMAN RIGHTS PRINCIPLES: DIGNITY, AUTONOMY AND EQUALITY

The fundamental principles underpinning all human rights are respect for the dignity, autonomy and equality of every individual. These principles ought to guide the design, development and implementation of new technologies, helping to embed a human rights-based approach to technology regulation. In some areas technology promises to enhance dignity and autonomy, for instance where assistive technology or robotics help to empower older persons or persons with disabilities or health conditions to be more independent and participate in a wider range of activities.²

However, respect for dignity and autonomy demands respect for individual preferences, and requires that meaningful, informed consent be obtained as much as possible before any technological intervention is employed. Autonomy also includes the right to refuse support, or to opt out at a later stage. Importantly, autonomy demands that technology not be used as a form of substituted decision-making where independent or supported decision-making is a viable possibility. As the United Nations' Independent Expert for the Human Rights of Older Persons has explained in relation to older persons' human rights, the end point of technology must always be enhancing support and care in ways which respect autonomy and dignity; we cannot set the advancement of technology as an end for its own sake.³

Recognition of the equality of all individuals is at the core of human rights: if human rights are considered to flow from our inherent human dignity then it follows that all individuals are equally entitled to those rights. The corollary of this is that human rights must be afforded without discrimination as to race, religion, sex, gender, age, ability, nationality, political opinion or any other relevant ground. In the context of technology, discrimination must be combatted both in the design phase (where the risk of building in biases must be avoided) and the implementation phase (where steps must be taken to ensure that technological advancements are affordable and accessible for all,

² The potential risks and benefits of assistive technology will be discussed in more detail in section 4 below.

³ Rosa Kronfeld-Matte, *Report of the Independent Expert on the Enjoyment of All Human Rights by Older Persons*, UN Doc A/HRC/36/48 (21 July 2017) 9.

and that transition to technologies does not further marginalize already disadvantaged groups).

The following discussion identifies and expands on a number of specific issues relating to dignity, autonomy and equality in relation to technology.

2.1 Human dignity

Human dignity is regarded as the foundation of human rights. The concept suggests that an innate dignity rests with every person because of their status as a human being and the inherent meaning associated with that status. Respect for human dignity requires a person to be provided with an environment that enables self-respect and the respect of others. It also requires that people be treated as an end in and of themselves and never as a means to some end. Human dignity is not attached to a person's ability to exercise autonomy, nor their age, race, ethnicity, sexuality or gender, but rests with their status as a human being. This concept has been a cornerstone for international human rights instruments. For example, the term "dignity" appears five times in the *Universal Declaration of Human Rights* (UDHR). The preamble begins by stating that: "recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world ... Whereas the peoples of the United Nations have in the Charter reaffirmed their faith in fundamental human rights, in the dignity and worth of the human person and in the equal rights of men and women and have determined to promote social progress and better standards of life in larger freedoms..." Article 1 affirms that all human beings are born free and equal in dignity and rights. The Preambles of the *International Covenant on Civil and Political Rights* (ICCPR) and the *International Covenant on Economic, Social and Cultural Rights* (ICESCR) affirm that human rights derive from the inherent dignity of the human person: "The States Parties to the present Covenant, considering that, in accordance with the principle proclaimed in the Charter of the United Nations, recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world, recognizing that these rights derive from the inherent dignity of the human person ...". The UNESCO *Universal Declaration on Bioethics and Human Rights* sets out principles that should apply in the development of medical, biological, and associated technologies relevant to human health, and echoes many of the human rights recognised in instruments such as the UDHR, the ICESCR and the *Convention on the rights of Persons with Disabilities* (CRPD). For example, art 10 affirms the fundamental equality of all human beings in dignity and rights is to be respected so that they are treated justly and equitably.

One danger is that people are used to further the development of new technologies, raising the risk that technology may be designed or used in such a way as to undermine the dignity of human beings. The Commonwealth Government's recent decision to ask the Governor General to establish a Royal Commission into the aged care sector⁴ was triggered, in part, because of concerns about whether the human dignity of those who live in aged care is being respected by human carers. Some might argue

⁴ Prime Minister of Australia, Minister for Health, Minister for Senior Australians and Aged Care, Media Release, 'Royal Commission into Aged Care Quality and Safety' (Media Release, 16 September 2018) <<https://www.pm.gov.au/media/royal-commission-aged-care-quality-and-safety>>.

that robotic care attendants might remedy this lack of dignity as they could be programmed not to abuse people, physically, verbally, or sexually. However, there are also concerns that dignity may be negatively impacted in other ways through isolating the person, treating people as objects to be moved and thus denying them dignity, or through the inability of robots to show true empathy and compassion.⁵ In the justice context, the right to be heard and to ‘have your day in court’ speaks to the dignity of having your case considered by other humans who are involved in a judicial process. In this sense, ‘to be heard’ implies to be heard by a human and not by an abstraction. This sense of de-personalisation and objectification may apply even more so to social security services that are automated in that people may feel that they are a number and that their specific circumstances have not been and are not able to be considered and/or heard. In short, they may perceive that they are treated as an object and not an end in and of themselves thus undermining their dignity. We can already see reports of this in relation to the roll out of the automated debt recovery system.⁶

2.2 Autonomy in decision-making

Respect for individual autonomy requires that, where possible, a person be given an opportunity to participate in decision-making which has potential to impact on their other human rights. This principle is supported by the rights to freedom of expression and to receive information⁷ which ensure that adequate information be provided to allow decisions to be made transparently and on an informed basis. It also depends on being able to appropriately assess an individual’s capacity to make decisions for themselves, and having appropriate measures in place for supported (as opposed to substituted) decision-making wherever the former is possible.⁸

The CRPD requires that governments guarantee respect for the ‘will and preferences’ of persons with disability in matters relating to legal capacity⁹ and in participation in public and political life.¹⁰ The concept of ‘nothing about us without us’ was a watchword for disability advocacy groups throughout the drafting and adoption of the CPRD and captures the fundamental importance of consultation and participation in decision-making, both at the individual level and with respect to policy and political decisions.¹¹

A key consideration relating to autonomy in decision-making is the need to balance autonomy against the protection of other human rights in situations where the individual may be at risk of harm. Wherever possible a person should be free to make decisions for themselves, for instance about whether or not to utilise assistive technologies, but there may be circumstances where the need to protect a person from harm outweighs their individual freedom to decide. To ensure that this balance

⁵ Amanda Sharkey, ‘Robots and human dignity: a consideration of the effects of robot care on the dignity of older people’ (2014) 16(1) *Ethics and Information Technology* 63.

⁶ Australian Council of Social Services, ‘Information on Centrelink’s Automated Debt Recovery Program’ (21 September 2018)

<<https://www.acoss.org.au/information-on-centrelinks-automated-debt-recovery-program/>>.

⁷ ICCPR art 19.2.

⁸ CRPD art 12.

⁹ Ibid.

¹⁰ Ibid art 29.

¹¹ Chao Zhang, ‘“Nothing about Us without Us”: The Emerging Disability Movement and Advocacy in China’ (2017) 32(7) *Disability & Society* 1096.

is struck appropriately it is essential to have suitable assessment measures which can determine both the level of risk and the individual's decision-making capacity.

The ability to participate in decision-making which affects individuals and groups has particular implications for new technologies which employ AI to inform decision-making. These technologies can include those used in fields relating to access to social services and public funding and approval of development applications;¹² technologies that may be used to assist people to make decisions, especially when they need support; and technologies that inform diagnosis and treatment. Such technologies need to be designed and implemented in a way which gives affected persons an opportunity to participate in decision-making as much as possible. The trend towards an ageing population has witnessed growing numbers of people experiencing dementia, cognitive decline and non-communicable diseases. Consequently, issues relating to decision-making capacity will be of increasing importance, in particular questions regarding capacity to consent to the use of assistive technologies in people with cognitive impairment, or decisions regarding their use being included in, for example, advance care planning.¹³

2.3 Equality and freedom from discrimination

By their definition, human rights are universal and apply to all people equally. International human rights law requires that all rights be protected and fulfilled for all people, without discrimination on grounds of race, religion, nationality, sex, gender, age, ability, political opinion or any other ground.¹⁴ At a fundamental level then, any technology which might have a discriminatory effect would be contrary to human rights. Governments are obliged to prevent discrimination and provide a remedy where it occurs.¹⁵ The UNESCO *Universal Declaration on Bioethics and Human Rights* also prohibits in art 11 discrimination and stigmatization on any grounds, in violation of human dignity, human rights and fundamental freedoms.

Risks of discriminatory consequences have already been identified with AI-informed decision-making systems, where there is evidence that some AI might reproduce and amplify human biases. Where biased datasets or algorithms are employed (either intentionally or unintentionally) in contexts where decisions have potentially significant impacts on people's lives, such as judicial decisions or medical diagnoses, there is potential for more widespread consequential impacts on human rights. To be consistent with principles of equality and non-discrimination, AI needs to be inclusive of all people and reflect diversity of culture, religion, race, gender, sexuality, age, ability and other status.¹⁶ Assumptions made about preferences, opinions or customs can perpetuate existing inequalities.

Discrimination may also arise in the deployment of new technologies. Decisions to switch to a new technology might inadvertently marginalise certain groups. For example, electronic publishing has

¹² The human rights implications of AI will be discussed in more detail in section 5 below.

¹³ Belinda Bennett, Fiona McDonald, Elizabeth Beattie, Terry Carney, Ian Freckelton, Ben White and Lindy Willmott, '[Assistive technologies for people with dementia: Ethical considerations](#)' (2017) 95 *Bulletin of the World Health Organisation* 749.

¹⁴ ICCPR art 2.1; ICESCR art 2.2.

¹⁵ ICCPR art 26.

¹⁶ Rosa Kronfeld-Matte, above n 3, 12.

improved access to written materials greatly for most readers, but not for those with print disabilities.¹⁷ Lack of access to published works impedes the right to take part in cultural life and enjoy the benefits of scientific progress and its applications.¹⁸ Australia has an obligation under the CRPD to ensure intellectual property rights, recognised in copyright law, 'do not constitute an unreasonable or discriminatory barrier to access by persons with disabilities to cultural materials'.¹⁹ New technologies need to be accessible, acceptable, appropriate and affordable to ensure that they are available to all and do not exacerbate existing gaps or create new inequalities.

This is a major issue across a range of technologies and a range of human rights. While new technologies promise significant advances in a range of fields, it is imperative that we are able to provide universal access to those technologies in order to avoid perpetuating existing discrimination and marginalisation. The interdependent and mutually supportive nature of human rights means that when it occurs, discrimination can have a multifaceted impact on a wide range of human rights. There can be significant overlap between groups who experience discrimination, and intersectionality can operate to exacerbate discrimination or reinforce barriers to inclusivity.²⁰ This can also mean that strategies designed to address issues for a particular group may have limited success if they are not attuned to the problems facing other, intersecting groups.

Related to the principle of non-discrimination is the right of all people to equality before the law and to have access to justice.²¹ Access to justice encompasses a broad range of issues including the capacity to understand the law, the ability obtain legal advice and representation, and to use public legal institutions such as courts.²² There are some well recognised underlying problems with accessing justice in Australia including availability of services in rural areas.²³ Technology has potential to enhance access to justice, for instance by facilitating remotely-accessible legal advice or increasing efficiency of procedures and case management.

There is potential for technology to interfere with equality before the law and equal access to justice, however. Where technology is being employed in relation to legal processes or decision-making then any potential for discrimination will directly implicate the right to equality before the law. For example, predictive policing tools, automated decision-making about access to social security or other social supports such as housing, availability of bail or parole in criminal proceedings, sentencing, create the risk that some individuals or groups will be treated unequally.

¹⁷ Matthew Rimmer, 'Copyright and the Digital Economy: Disability Rights' (Submission to the ALRC, 2012) <<https://eprints.qut.edu.au/86879/>>.

¹⁸ ICESCR art 15.

¹⁹ CRPD art 30(3).

²⁰ Kimberlé Crenshaw, 'Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics' (1989) 1 *University of Chicago Legal Forum* 137; Columbia Law School, Kimberlé Crenshaw on Intersectionality, More than Two Decades Later (8 June 2017) <https://www.law.columbia.edu/news/2017/06/kimberle-crenshaw-intersectionality>.

²¹ ICCPR arts 2, 26.

²² Simon Rice, 'Access to a Lawyer in Rural Australia – Thoughts on the Evidence We Need' (2011) 16(1) *Deakin Law Review* 13, 13; Kelly Purser, Tina Cockburn, Cassandra Cross, and Helene Jacmon '[Alleged financial abuse of those under an enduring power of attorney: An exploratory study](#)' (2018) 48(4) *The British Journal of Social Work* 887.

²³ Wayne Martin, 'Access to Justice' (2014) 16 *University of Notre Dame Australia Law Review* 1, 1.

There is also a risk that technology may aggravate existing issues with respect to access to justice and non-discrimination. Aboriginal and Torres Strait Islander people, particularly young people, are hugely overrepresented in the criminal justice system.²⁴ There is a real concern that automation of decision-making in criminal justice processes will entrench discrimination against Aboriginal and Torres Strait Islander people.

Also related to the principle of non-discrimination is the right of all peoples to the highest attainable standard of health (discussed below) and, as a consequence, access to health services. There are barriers to certain groups accessing health services in Australia, such as rural and remote Australians, Aboriginal and/or Torres Strait Islanders, migrant and refugee communities and so on. Technology is increasingly being used to try and address geographical barriers to access through the use of eHealth and robotic surgery, but relies on individuals or communities having access to good infrastructure to support the use of such technology, which may not be currently available.

3. SPECIFIC HUMAN RIGHTS IMPLICATIONS FOR TECHNOLOGY

3.1 Human rights in judicial proceedings

As noted above in relation to equality before the law, in situations where technology is employed in the justice system a number of other specific rights are potentially implicated. These include the right to a fair trial, which encompasses the presumption of innocence and a number of other due process rights.²⁵

The right to a fair trial requires that: “In the determination of any criminal charge against him, or of his rights and obligations in a suit at law, everyone shall be entitled to a fair and public hearing by a competent, independent and impartial tribunal established by law.”²⁶ Further, “any judgement rendered in a criminal case or in a suit at law shall be made public except where the interest of juvenile persons otherwise requires or the proceedings concern matrimonial disputes or the guardianship of children.”²⁷ These requirements impose a number of conditions on the use of technology, particularly for AI-informed decision-making, which has potential to be utilised in relation to decisions about fitness to stand trial, bail, committal proceedings, sentencing, and probation. At a minimum, human rights demand that decision-making be transparent, including providing information about the data and algorithms which provide the basis for the decision (see section 5 below). The requirement for a ‘public hearing by a competent, independent and impartial tribunal’ may be incompatible with automated decision-making as this is not public in the same way, and perhaps should limit the use of technology to decisions regarding more procedural matters.

²⁴ See, for example, Monica La Macchia, *An Introduction to Over-representation of Aboriginal and Torres Strait Islander people in the Criminal Justice System* (17 October 2016) Australian Policy Online <apo.org.au/system/files/68258/apo-nid68258-24221.pdf>; Australian Law Reform Commission, *Pathways to Justice – Inquiry into the Incarceration Rate of Aboriginal and Torres Strait Islander Peoples* (ALRC Report 133) (December 2017); Law Council of Australia, *The Justice Project: Final Report* (2018) 24; Human Rights Law Centre and Change the Record Coalition, *Over-looked and overrepresented: the crisis of Aboriginal and Torres Strait Islander women’s growing over-imprisonment* (May 2017).

²⁵ ICCPR art 14.

²⁶ Ibid art 14.1.

²⁷ Ibid art 14.1.

Human rights law also guarantees the right to liberty and security of the person, including freedom from arbitrary arrest and detention.²⁸ This right is threatened where technologies employed in law enforcement are prone to profiling or other discriminatory actions (see discussion on AI in section 5 below).

3.2 The right to privacy

Much has been written about the various privacy concerns related to new technologies, particularly where technologies make use of widespread surveillance and personal data, and where that information is stored and made available for various purposes. For example, the increased availability and affordability of drone technology, including those with attached cameras, creates new opportunities for invasion of privacy.²⁹ There is a wide range of ways in which new technologies might impinge upon the right to privacy, which is guaranteed under international human rights law.³⁰

One issue in relation to the right to privacy is the question of who has access to data and what they are using it for. Recent concerns raised in relation to the MyHealth records system indicate the problem that a centralised database of personal information may be utilised for other purposes, such as law enforcement or monitoring of social security recipients.³¹ Where there is potential for such data to lead to positive outcomes for the protection of human rights, for example by assisting in the investigation and prosecution of serious criminal offences, making it available to other agencies creates the risk of misuse. In this sense privacy is closely related to informational self-determination.³² This is the right of each individual to decide for themselves what information is disclosed and under what circumstances. It includes the right to be forgotten from digital systems, to have control over one's digital 'legacy' after death, and to rectify records in the case of error.

Under Australian law, health information is generally regarded as deserving of special protection due to its greater sensitivity, and new forms of health information emerge as a by-product of the evolution of health technology. For example, genetic privacy has been a subject of law reform discussion in Australia for at least 20 years.³³ As medical technology advances, the clinical and research uses of next-generation sequencing and genomic technologies brings a renewed focus to issues of privacy.³⁴

Technologies may gather and share data in order to enhance their effectiveness, and this process can lead to greater personalisation of services. For instance, assistive technologies and robotics have great

²⁸ Ibid art 9.

²⁹ Des Butler, 'The Dawn of the Age of the Drones: An Australian Privacy Law Perspective' (2014) 37(2) *UNSW Law Journal* 434.

³⁰ *ICCPR* art 17.

³¹ Paul Karp and Christopher Knaus, 'GPs and social service providers demand My Health Record protections', *The Guardian* (online), 27 July 2018 <<https://www.theguardian.com/australia-news/2018/jul/27/gps-and-social-service-providers-demand-my-health-record-protections>>.

³² Rosa Kronfeld-Matte, above n 3, 11.

³³ See for example Margaret Otlowski and Dianne Nicol, 'The Regulatory Framework for Protection of Genetic Privacy in Australia' in Terry Sheung-hung Kaan, Calvin Wai-loon Ho (eds), *Genetic Privacy: An Evaluation of the Ethical and Legal Landscape* (World Scientific Publishing Company, 2013) 283-321; Australian Law Reform Commission, *Essentially Yours*, Report No 96 (2003); Australian Law Reform Commission, *For Your Information: Australian Privacy Law and Practice*, Report No 108 (2008).

³⁴ Margaret Otlowski and Lisa Eckstein, 'Genetic Privacy' in Ian Freckelton and Kerry Petersen (eds), *Tensions and Trauma in Health Law* (Federation Press, 2017) 283-296.

potential to provide support and care for older persons or persons with disability.³⁵ Monitoring technologies may facilitate greater independence of movement for people with physical or cognitive impairment, removing the requirement for them to be supervised or accompanied by another person.³⁶ Sensors or other smart technology could monitor behaviour and health, reduce hazards in the home and support safe and independent mobility, including through the use of driverless cars. Robots may assist with daily tasks and provide companionship, allowing people to remain independently in their own homes for longer. Machine learning or AI might help people to communicate their preferences and develop more personalised support services. The possibilities and risks associated with assistive technology will be discussed in more detail in section 4 below.

The tensions between privacy and security are also well illustrated in the case of assistive technologies used in the provision of care for dementia patients. Technologies that may be supportive, providing greater independence and a higher standard of living, may also compromise rights to: privacy when data is recorded, transmitted and stored elsewhere; and freedom of movement. Similarly, technology that records people in aged care, also creates such tensions. All of these technologies involve the gathering, analysis and storage of data, as well as potentially sharing that data across systems. The right to privacy and informational self-determination demand that individuals can understand what data is being gathered, how it is being stored and shared, and what it is being used for. It also requires that that data only be used for purpose for which consent has been obtained. Fear of surveillance can also have a limiting effect on other rights, such as freedom of expression and opinion³⁷ and freedom of movement.³⁸

Human rights law allows for the right to privacy to be limited in certain circumstances, provided that this is done through a legal process and for a legitimate purpose (for instance where it is necessary to protect the rights of others or to ensure public safety). The challenge is to strike the right balance between privacy and these other legitimate interests. It can be difficult to judge whether an appropriate balance has been struck where information about the uses of surveillance and data is obscure.

In order to comply with the right to privacy, governments must ensure transparency about what data is being collected, from whom, for what purpose, and for whose use. Appropriate regulation is required to guarantee that the right to privacy is not infringed except in justified circumstances, and that any use of information complies with other human rights including the right to equality before the law, the presumption of innocence and other due process rights.

Respect for reputation is also protected within the right to privacy.³⁹ This right is at risk where new technologies are involved in decision-making with potentially long-term impacts for their reputation or standing in the community. Again, decisions made in the context of the criminal law are of concern here, as they can be potentially very damaging for a person's reputation if made incorrectly. Damage can also be caused where decisions are made in relation to social security entitlements and financial services (eg credit ratings).

³⁵ Belinda Bennett et al, above n 12.

³⁶ Ibid.

³⁷ ICCPR art 19.

³⁸ Ibid art 11; Rosa Kronfeld-Matte, above n 3, 11.

³⁹ ICCPR art 17.1.

3.3 The right to the highest attainable standard of health.

The right to the highest attainable standard of health includes both physical and mental health.⁴⁰ It also includes the right to a standard of living adequate for health, including food, clothing, housing and medical care and necessary social services.⁴¹ The right to health is indivisible from other human rights, such that ‘achieving the right to health is both central to, and dependent upon, the realisation of other human rights, to food, housing, work, education, information, and participation.’⁴² This right is to be realised progressively, according to a country’s available resources, but at all times it must be pursued in a non-discriminatory fashion.⁴³

The right to health under the UDHR art 25 and ICESCR art 12 places obligations on states to respect, protect, and fulfil the right to health. It therefore includes both negative and positive obligations, comprising both access to the necessities of life, and a more context-dependent right to the progressive realisation of health-improving measures depending on what is feasible in a given country. In a wealthy country such as Australia, this arguably includes an obligation on the state to develop and provide access to health-improving technologies.

As a fundamental principle, ‘technologies should be introduced in ways that are supportive of and respect the rights of vulnerable members of the community.’⁴⁴ Unequal access to new forms of health technology is likely to occur unless effort is directed towards ensuring equity. Australia has positive obligations under the CRPD to ensure that human rights are protected by developing and providing access to assistive technologies.⁴⁵ For example, Art 5(3) regarding reasonable accommodations for people with disabilities ‘imposes an obligation on States Parties to provide positive support.’⁴⁶

New technologies, particularly medical and assistive technologies,⁴⁷ promise a wide range of health benefits. They have potential to help meet demand for health services in remote and regional areas, assist with diagnoses, monitor ongoing conditions and support administering of medication and other therapies. However, risks arise where such technologies are not delivered in an accessible and affordable manner, or where technological innovations replace more conventional care or make that care more expensive. This is of particular concern for people living in regional, rural and remote areas, where health services and internet access may already be less reliable than in metropolitan areas.

There are also potential health implications of other, non-medical, technologies. For example, AI-informed decision-making has been linked to negative mental health impacts where automated

⁴⁰ Ibid art 12.

⁴¹ UDHR art 25.

⁴² WHO, *Human Rights and Health* (29 December 2017) <http://www.who.int/en/news-room/fact-sheets/detail/human-rights-and-health>; Office of the United Nations High Commissioner for Human Rights, *The Right to Health* (Fact Sheet No 31) 6 <https://www.ohchr.org/Documents/Publications/Factsheet31.pdf>; Vienna Declaration and Programme of Action (A/CONF.157/23), adopted by the World Conference on Human Rights, held in Vienna, 14–25 June 1993.

⁴³ ICCPR art 2.

⁴⁴ Belinda Bennett et al, above n 12.

⁴⁵ Ibid.

⁴⁶ Ibid.

⁴⁷ The potential risks and benefits of assistive technologies will be explored in more detail in section 4 below.

communications are sent to a person in a way which causes stress or anxiety (eg in the form of a debt notice or demand for payment). There is also potential for negative mental health outcomes to flow from the use of assistive technologies if these result in individuals experiencing neglect or isolation. The implications of this for older persons will be explored in more detail in section 4.2 below.

The manufacture, distribution and disposal of technology produce a range of environmental consequences which have the potential to interfere with the right to health. The right to health is understood to include not only the provision of healthcare, but also the underlying determinants of health, including environmental conditions.⁴⁸ As a result, where technology threatens negative environmental impacts there is potential for the right to health to be similarly affected.

For instance, the disposal and recycling of e-waste has been identified to threaten both the environment and human health. E-waste is defined to include a broad range of electronic devices, including household appliances, computers and personal electronic devices.⁴⁹ The disposal of these items in landfill or through incineration can cause heavy metal contamination of air, land and water. Recycling of e-waste also presents a range of health risks, as various processes employed to extract recyclable components (including burning and submersing in acid) can also result in exposure to heavy metals, with potential to affect food chains and drinking water.⁵⁰ While most recycling of e-waste occurs in countries other than Australia, the disposal of this waste in Australia is still of concern, and the broader human rights implications of our consumption of technology ought still to be considered.

Greenhouse gas emissions from the manufacture, transportation and operation of technology contribute to climate change, which has a wide range of identified health risks. The anticipated health impacts of climate change include increased rates of diarrhea, cardiorespiratory and infectious diseases, increased food insecurity and malnutrition, and the spread of water- and vector-borne diseases into new areas.⁵¹ These effects will have a disproportionately serious impact on already at-risk groups including Indigenous peoples, the elderly, children and people with disabilities. The former Special Rapporteur on the right to health has warned that climate change will place severe additional stress on health systems worldwide and that 'failure of the international community to confront the health threats posed by global warming will endanger the lives of millions of people'.⁵² While a transition to renewable energy and 'greener' technology has the potential to mitigate these negative environmental and health impacts, an increased take-up of technology without adequate regard to

⁴⁸ Committee on Economic, Social and Cultural Rights, *General Comment 14: The Right to the Highest Attainable Standard of Health (Art 12)* (11 August 2000); ICESCR art 12; CRC art 24.

⁴⁹ Rolf Widmer et al, 'Global Perspectives on E-Waste' (2005) 25(5) *Environmental Impact Assessment Review* 436.

⁵⁰ Brett H Robinson, 'E-Waste: An Assessment of Global Production and Environmental Impacts' (2009) 408(2) *Science of The Total Environment* 183; Anna OW Leung et al, 'Heavy Metals Concentrations of Surface Dust from E-Waste Recycling and Its Human Health Implications in Southeast China' (2008) 42(7) *Environmental Science & Technology* 2674.

⁵¹ Kirk Smith and Alistair Woodward, 'Human Health: Impacts, Adaptation, and Co-Benefits' (Intergovernmental Panel on Climate Change, 2014).

⁵² P Hunt, *Right of everyone to the enjoyment of the highest attainable standard of physical and mental health*. Report of the Special Rapporteur on the Right to Health. UN Doc A/62/214 (8 August 2007) 102; P Hunt and R Khosla R, 'Climate Change and the Right to the Highest Attainable Standard of Health' in S Humphreys (ed) *Human Rights & Climate Change* (2010, Cambridge University Press) 238; Bridget Lewis, *Environmental Human Rights and Climate Change: Current Status and Future Prospects* (Springer, 2018).

the associated carbon footprint will contribute to further interference with human rights, both in Australia and overseas.

3.4 The right to physical security

In some cases new technologies might facilitate physical abuse and violence, which violates the right to liberty and security of person recognised in the ICCPR.⁵³ For instance, technologies which are able to indicate the location of an individual might be used by an offender to locate a victim of domestic violence or to undertake surveillance on that person. Conversely, these technologies may also keep people safer when used to monitor violent offenders. They can also be used as a mechanism to monitor those whose physical security is at risk from wandering and getting lost, but this also raises privacy concerns. The potential for technology to facilitate elder abuse will be discussed in more detail in section 4.2 below.

4. ASSISTIVE TECHNOLOGIES

One of the types of technology with the greatest potential to enhance the enjoyment of human rights is assistive technology. Assistive technologies include assistive devices and related services, ranging from basic and well-known aids such as walking canes to newer and emerging technologies such as ‘memory and communication aids, safety devices, GPS tracking, companion robots, and technology for so-called smart homes’.⁵⁴ Their purpose is ‘to maintain or improve an individual’s functioning and independence, to facilitate participation, and enhancement of overall well-being and quality of life’.⁵⁵ To optimise the benefits of this technology it is essential that it is developed and implemented in a way which is consistent with human rights. In particular, such technology needs to be accessible and affordable to all, and it must be deployed in a way which respects individuals’ preferences and decision-making autonomy to the greatest possible extent.

The discussion below considers a number of human rights issues relating to assistive technology, with a particular focus on the human rights of older persons.

4.1 Specific issues with assistive technologies

- When technologies work well they can offer excellent opportunities for participation and inclusion. However, when they are deficient or malfunction they can create even greater problems - eg when people are replaced by an automated system and something goes wrong, a person with a disability may be unable to receive assistance.
- For people with dementia, assistive technologies may prolong independent living and improve quality of life, which supports the right to the highest attainable standard of health. Technologies such as communication aids, tracking, and smart-home technology may provide an alternative to traditional restrictive practices. However, their use raises a potential threat

⁵³ ICCPR art 9.

⁵⁴ Belinda Bennett et al, above n 12, 749.

⁵⁵ Loïc Garçon et al, ‘Medical and Assistive Health Technology: Meeting the Needs of Aging Populations’ 56(S2) *The Gerontologist* S293, S295.

to the right to privacy and freedom of movement if the robot can constrain this.⁵⁶ As will be discussed in section 4.2, new technologies create potential for new forms of elder abuse, increasing the risks for older persons.

- As assistive technologies become more affordable and more widely available, we may see these technologies, in particular robots, replace health workers. This possibility is heightened considering the current concerns about abuse by those workers, particularly in residential care settings. This transition to technology-provided care may reduce the amount of human contact experienced by those who are being cared for and contribute to a person's isolation and vulnerability. Isolation causes a variety of negative side-effects that impact health and well-being.⁵⁷ It also impacts on dignity if a person feels that they are being treated as an object and not a person. Conversely, it may address some of the issues of abuse and neglect by human carers that are the focus of the aged care inquiry. However, care needs to be taken so that the use of these technologies does not instead become a tool for abuse of vulnerable people.
- The increased use of technology, especially robots, in health care may give rise to: perceptions by the person who is being cared for by these technologies that they are being objectified and losing control;⁵⁸ and perceptions in the community that the elderly and disabled are being warehoused and not valued. The expectation is that care will be provided with empathy, compassion and respect, and involve human contact. Robots may not be able to achieve all these ends (but some human care may be no better, as evidenced by media reports detailing abuse in aged care).⁵⁹

4.2 The human rights of older persons

A preliminary issue which must be acknowledged in relation to the rights of older persons is how this group should be defined. 'Older' generally refers to people aged sixty and over or sixty-five and older. For Indigenous Australians 'older' generally means people aged 50 and over. A further distinction ought to be made between 'old' and 'old old'.⁶⁰ This is in recognition of the fact that the risk of neurodegenerative conditions such as Alzheimer's disease is age dependent and often expressed for specific age cohorts.⁶¹ Further, the risks of elder abuse may escalate with increased frailty and/or increasing dependence.

Older persons have the second lowest level of digital inclusion in Australia.⁶² In a recent report to the Human Rights Council, the United Nations Independent Expert on the Human Rights of Older Persons

⁵⁶ Belinda Bennett et al, above n 12.

⁵⁷ A Batti and A. ul Haq. "The Pathophysiology of Perceived Social Isolation: Effects on Health and Mortality" 2017 9(1) *Cureus* e994.

⁵⁸ Amanda Sharkey, 'Granny and the robots: ethical issues in robot care for the elderly' (2012) 14 *Ethics and Information Technology* 27.

⁵⁹ Anne Connolly et al, 'This woman's treatment may be shocking, but it's not assault', *ABC News* (online), 24 September 2018, <<http://www.abc.net.au/news/2018-09-24/aged-care-nursing-home-hidden-camera-footage-assault-charges/10280944>>.

⁶⁰ Australian Law Reform Commission, *Elder Abuse*, Discussion Paper 83, (2016) 22.

⁶¹ For example, the risk for people over 80 years of age is substantially higher than it is for people over 60 years of age.

⁶² *Australian Digital Inclusion Index* <<https://digitalinclusionindex.org.au/>>.

identified a wide range of ways in which older persons' human rights might be impacted by technologies. Some of these have been noted above, but further specific concerns include:

- Ensuring that technology designed to facilitate independent living does not become a substitute for human support and care or lead to neglect, isolation, increased vulnerability or elder abuse. While technology offers great potential for assisting and supporting older persons, "care is not merely a form of service provision, it is both an attitude of concern for the individual and the actual activity of caregiving and, as such, it confers value on the care recipient."⁶³ If caregiving activities are provided via technology it can diminish the value of the individual, which is disrespectful of their dignity.
- Ensuring that technology is used to support (art 12 of the CRPD), not to substitute, decision-making by older persons in circumstances where it is appropriate to do so. One way of preventing this is to involve older persons in decisions about the design and implementation of technology in the first place. Beyond this, appropriate assessment measures are necessary in order to assess capacity and support older individuals to make decisions.
- Ensuring that the implementation and use of technologies meant to assist older people does not turn into a tool for elder abuse. Elder abuse can be defined as: "a single, or repeated act, or lack of appropriate action, occurring within any relationship where there is an expectation of trust which causes harm or distress to an older person."⁶⁴ The requirement for an expectation of trust is contentious however, as abuse can be perpetrated by strangers or where no relationship of trust is present.⁶⁵

Access to technologies can heighten the risk to vulnerable older people of financial abuse through romance or online financial scams, for example. A proposal by the Australian Law Reform Commission to create an online register of Enduring Power of Attorney and Guardianship instruments may have benefits in terms of enabling verification of delegated powers,⁶⁶ but may also have the undesired effect of exposing older people to abuse if, for example, family members become aware that the older person has an enduring power of attorney which appoints a different attorney. The family member may then pressure the older individual to appoint them. Further, the right to privacy (discussed above at section 3.2) should be respected unless there is a legitimate reason to make information about appointments public.

- Ensuring that use of technology does not result in further marginalisation or exclusion of older persons and/or perpetuate ageism or ageist attitudes. Some technologies can be useful in increasing interaction of older persons with their communities (eg through digital platforms, virtual communities, online shopping, accessing government and financial services).⁶⁷ Social

⁶³ Rosa Kronfeld-Matte, above n 3, 9.

⁶⁴ World Health Organisation, *The Toronto Declaration on the Global Prevention of Elder Abuse* (2002) <http://www.who.int/ageing/publications/toronto_declaration/en/>.

⁶⁵ Kelly Purser, Bridget Lewis, Kirsty Mackie and Karen Sullivan, *Submission no 298 to Australian Law Reform Commission Inquiry on Protecting the Rights of Older Australian from Abuse*, 27 February 2017, 2.

⁶⁶ Australian Law Reform Commission, *Elder Abuse—A National Legal Response*, Report No 131 (2017) recommendation 5.3 <<https://www.alrc.gov.au/publications/registration>>.

⁶⁷ Rosa Kronfeld-Matte, above n 3, 13.

robots might also provide companionship with positive health benefits. However, the use of technology in some settings (for instance the use of robots to perform caregiving and cleaning tasks in aged care) may reduce opportunities for human contact and dehumanise care services.⁶⁸ This may lead to loneliness, a loss of sense of identity and self-esteem, and other negative impacts on emotional and mental well-being as well as increased vulnerability. There is disagreement as to how well robots might be able to substitute for human company, but whatever the outcome of this debate the bottom line in terms of the rights of older persons is that their individual choices as to the role of robots in their lives must be respected.⁶⁹

Following on from this, recognising that the cohort of 'older people' is a diverse group and technological skills will vary widely among individuals. As a general rule, people who fall within the 'old old' definition are likely to be less comfortable with technology than younger individuals, although this is likely to change over time and we must be wary of assumptions made about older persons' capabilities or preferences.

- Ensuring accessibility of technology in a non-discriminatory fashion. As noted in the Issues Paper, older Australians are more likely to experience barriers to accessing online services, including government services. They are also more likely to be subjected to higher levels of monitoring of their health data, exposing them to a greater risk of misuse of their data. Issues around affordability and accessibility of technology might exacerbate existing inequalities, for example for people living in rural, regional and remote areas or people on lower-incomes. Respect for human rights requires that technologies are accessible and affordable for all.

5. ARTIFICIAL INTELLIGENCE

As the discussion paper observes, the use of artificial intelligence and big data is an emerging area that will require careful analysis to ensure human rights protections. There is no universal definition of AI. The Nuffield Council on Bioethics states that it "broadly refers to computing technologies that resemble processes associated with human intelligence, such as reasoning, learning and adaptation, sensory understanding, and interaction."⁷⁰ AI is being developed or used for a range of purposes in health care, including diagnosis and detection of disease, management of chronic conditions, delivery of health services, drug discovery, and in health research. In the context of justice systems, it is being developed or used in some parts of the world for predictive policing, determination of bail, probation or sentencing, and determinations about access to social security or social supports.

There are potential advantages from a human rights perspective about the use of AI in both contexts. In terms of justice, the technology has the potential to address inconsistencies within decision-making practices across different legal contexts. In respect of health care, the technology may also be able to contribute to greater consistency in clinical contexts around diagnosis and treatment, earlier detection of epidemics, drug reactions, early detection of deterioration, personalised care and home care, amongst many other possibilities.

⁶⁸ Ibid 14.

⁶⁹ Ibid 10.

⁷⁰ Nuffield Council on Bioethics, *Artificial intelligence (AI) in healthcare and research* (2018) <<http://nuffieldbioethics.org/wp-content/uploads/Artificial-Intelligence-AI-in-healthcare-and-research.pdf>>.

A key issue in both contexts is that there is a significant potential for bias to be built into the algorithms (a set of instructions for the computer model that informs its decisions or recommendations). The House of Lords Select Committee on AI found that these biases can reflect the beliefs and prejudices of AI developers, which are otherwise prohibited by human rights law.⁷¹ In the health context, there is much evidence to suggest that doctors and other health professionals are less likely to offer some types of treatment to some groups. For example, in South Australia Aboriginal and/or Torres Strait Islanders have a 40% lower rate of angiography and percutaneous coronary interventions than other Australians.⁷² Recent research has indicated that Aboriginal and/or Torres Strait Islanders who are undergoing dialysis are substantially less likely than non-Indigenous Australians to be placed on the transplantation waiting list.⁷³ There is significant evidence of this also from the United States.⁷⁴ If these existing biases are incorporated into AIs then unequal treatment will be perpetuated.

Algorithms are also data driven. In the criminal justice context, risk assessment tools generally rely on historical, actuarial data about the behaviour of people or classes of people or people within geographical areas. In the case of risk assessment tools, the model produces a forecast of the probability that an individual or people within a certain area or group will engage in some particular behaviour. This can be problematic if the data that informed the model is flawed. It can be flawed through historical events, such as policing patterns. These can be discriminatory or simply the result of reinforcement patterns where an area is heavily policed leading to more arrests, resulting in increased police presence.

AIs developed in one country may not comply with the legal, ethical, social, economic and other norms of another country. A clinical trial of IBM's Watson Oncology, an AI for use in cancer diagnosis, was reportedly halted in some research sites outside the United States as doctors felt that the model reflected an American-specific approach that did not reflect best practice in their country.⁷⁵

In the health context, health research has traditionally under-represented some groups in clinical trials and medical and health research more generally, including historically women, but more recently minority ethnic populations. It is established that drugs can work differently between genders, between age groups and between ethnic groups. People with rare diseases are also under-represented in medical research. If the data informing the algorithms only represents the outcomes of one patient group then the others can be harmed through not accessing the best treatment and accessing treatment that may harm them and they may not be able to equally access the benefits of AI. This impacts on the full enjoyment of the right to health and the right to be treated equally.

⁷¹ House of Lords Select Committee on Artificial Intelligence (2018) *AI in the UK: ready, willing and able?*.

⁷² Rosanna Tavella et al, 'Disparities in acute in-hospital cardiovascular care for Aboriginal and non-Aboriginal South Australians' (2016) 205(5) *Medical Journal of Australia* 222.

⁷³ Namrata Khanal, Paul D Lawton, Alan Cass and Stephen P McDonald, 'Disparity of Access to Kidney Transplantation by Indigenous and Non-Indigenous Australians' (2008) 209(6) *Medical Journal of Australia* 261.

⁷⁴ H Jack Geiger, 'Racial and Ethnic Disparities in Diagnosis and Treatment: A Review of the Evidence and a Consideration of Causes' in Brian D Smedley, Adrienne Y Stith, and Alan R Nelson (eds) *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care* (Institute of Medicine (US) Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care, 2003).

⁷⁵ STAT (5 September 2017) *IBM pitched its Watson supercomputer as a revolution in cancer care. It's nowhere close.*

Another issue in this context is: what if the algorithm is wrong? In a health context this could mean that a person does not receive the treatment that they should receive or potentially receives treatment they should not have received which causes them harm, but also links to their need to have access to the algorithm to assess how it works. This gives rise to issues relating to the best way to allocate risk of harm and compensate those who are injured. However, even if access is enabled this analysis is likely to be prohibitively expensive for people and may impact on their ability to access justice. In the justice context, a wrong algorithm could see people unjustly denied bail or other adverse outcomes.

6. GAPS IN THE EXISTING LEGAL FRAMEWORK

As the previous discussion highlights, there are many ways in which the design and implementation of technology can impact both positively and negatively on human rights. As has been argued, a human rights-based approach to technology law and regulation is required in order to ensure that the human rights benefits of technology can be enjoyed while avoiding the human rights risks.

None of our human rights laws deal with technology specifically. This is not necessarily a problem if we have a robust framework protecting human rights which is able to encompass all emerging technologies. However, the current framework of human rights law is fragmented and weak, creating a risk that human rights will be violated. Further, there are some technology-related human rights obligations which would benefit from clarification. Discussion below highlights some of the gaps in Australian and international law.

6.1 Lack of a Bill of Rights

The lack of a Bill of Rights is the fundamental shortcoming when discussing any human rights issues in Australia. Without a Bill of Rights, Parliament is free to enact legislation which would violate the fundamental rights of Australian citizens; such legislation would not be considered invalid or unconstitutional. The human rights legislation which is in place in Australia is inadequate to guarantee fulfilment of the full range of human rights to which all Australians are entitled in all circumstances. The *Australian Human Rights Commission Act 1986* (Cth) and related legislation⁷⁶ apply only in limited contexts, protect only a limited range of human rights, and provide very limited remedies.

6.2 Inadequate protection of economic, social and cultural rights

The *International Covenant on Economic, Social and Cultural Rights* is not incorporated into the AHRCA. This means that issues relating to education, culture, healthcare fall outside the framework of human rights protections in Australia.⁷⁷ As noted above, new technology poses threats to several

⁷⁶ Age Discrimination Act 2004 (Cth), *Disability Discrimination Act 1992* (Cth), *Racial Discrimination Act 1975* (Cth), *Sex Discrimination Act 1984* (Cth).

⁷⁷ The *Human Rights Act 2004* (ACT) protects the right to education in s27A, and the cultural rights of minorities are protected in both the ACT legislation and the *Charter of Human Rights and Responsibilities Act 2006* (Vic) but otherwise economic, social and cultural rights are not specifically protected in Australian human rights legislation.

human rights, including the right to the highest attainable standard of health. In order to ensure that this right is adequately protected, it is essential to expand Australia's domestic human rights framework to include economic, social and cultural rights.

6.3 Application of human rights duties to businesses and other private actors

Ordinarily, the principal duty bearers under human rights law are the States who have undertaken to uphold obligations under the relevant treaties. Yet much of the design, development and deployment of new technologies is conducted by private actors, often multinational companies, raising a question of whether those entities might be bound by human rights obligations.

The tripartite duties to respect, protect and fulfil human rights⁷⁸ include the duty to protect, an obligation to take steps to regulate the conduct of private actors to ensure that they do not interfere with human rights. This means that Australia is obliged to ensure that its law properly regulate the innovation and implementation of new technologies to protect human rights.

In part this is achieved through Australia's anti-discrimination law, which requires that businesses refrain from discrimination in a limited range of situations. For example, the *Disability Discrimination Act 1992* (Cth) prohibits discrimination in employment, education, accommodation and provision of goods, services and facilities. It also requires businesses to make reasonable adjustments so that a person with disability can access goods, services or facilities. However, where the actions of businesses have human rights impacts that fall outside the scope of discrimination Australian law is currently inadequate to address those breaches.

There is currently no international law which would impose obligations directly on businesses to respect and protect human rights. The *Guiding Principles on Business and Human Rights* are designed to promote greater respect for human rights within the private sector, and propose three broad rules:

1. governments must protect human rights from interference by business;
2. businesses have a responsibility to respect human rights;
3. remedies must be available for breaches of human rights.

These principles are not legally binding, though they have gained traction in recent years and a draft treaty on Business and Human Rights has recently been adopted by the Human Rights Council.

Given that so much of the innovation of new technologies is conducted by businesses this is a gap in both the international and Australian human rights frameworks. Australia should support the adoption of the new treaty and act quickly to ratify it and implement its terms within domestic legislation.

6.4 Jurisdictional issues

In cases where technology is being developed internationally there may be difficulty enforcing human rights obligations against designers/developers. Australia's legislation would have limited scope

⁷⁸ see Australian Human Rights Commission, 'Human Rights and Technology Issues Paper' (July 2018) 14 <<https://www.humanrights.gov.au/sites/default/files/document/publication/AHRC-Human-Rights-Tech-IP.pdf>>.

outside Australia. International human rights law typically only imposes obligations on governments with respect to their own citizens and those under their jurisdiction/control - so it is difficult for an Australian citizen to pursue a human rights complaint against a company/government located overseas.

7. RECOMMENDATIONS

Technology is/ought to be neutral, but it is designed, programmed and operated by humans and this creates the potential for negative human rights impacts. The discussion above has identified a number of concerns relating to two key human rights issues: the right to the highest attainable standard of health, and access to justice. While new technologies offer potential for great benefits, particularly in the form of assistive technologies and increased accessibility and connectedness, these benefits must not be pursued at the expense of fundamental human rights.

As noted, the gravity of the risk presented by new technology depends on the sphere in which technology is deployed, the purpose to which it is directed and the particular needs and vulnerabilities of the individuals concerned. As new technologies evolve, so too will new human rights issues emerge. Fortunately, human rights laws can provide the sort of broad, principled framework which is adaptable to new technologies as they emerge.

As an overarching recommendation then, **human rights principles must be embedded into the regulation of any and all technology**, and such regulation must be **flexible enough to enable adaptability to emerging threats**. At all times, our approach to new technology must be consistent with the **fundamental principles of respect for human dignity, autonomy and equality**.

A number of more specific recommendations are also suggested.

- 13. Regulation should support co-design and consultation in the development and deployment of health technologies.** This is particularly necessary where technology is being developed for the purpose of assisting groups with particular needs, such as the elderly or persons with disabilities: human rights principles of dignity and autonomy demand that these people are supported to participate in decisions around how technology is to be designed and delivered.
- 14.** There are a number of potential benefits of new health technologies, including the economic benefits of transitioning to automation in the health and aged-care sectors, and addressing the very troubling instances of abuse by care-givers. However, these benefits must not be pursued in a way which allows individual care-recipients to be treated as objects: **they must at all times be treated with dignity and respect for autonomy, including their right to choose the level and form of care they wish to receive.**
- 15.** There are also potential benefits for AI's use in the justice system, but again these benefits must be tempered by an appreciation of the importance of enabling **public, transparent hearings and decision-making** and **respecting the dignity of persons in allowing their voices to be heard within the system.**

16. New health technologies, particularly AI, should be used to support individuals' decision-making to the greatest extent possible, and **should not be used as a form of substituted decision-making where independent or supported decision-making is a possibility**. Appropriate processes must be in place to assess individuals' decision-making capacity. The use of AI to support decision-making also needs to be transparent and modifiable, so that the individual's choice remains paramount wherever possible.
17. **Consideration should especially be given to how health and disability technologies can be used to perpetrate physical, psychological, financial and other forms of abuse**. This includes the potential for technology to facilitate elder abuse, finance or romance scams, or domestic violence. More work is required to identify ways to mitigate such risks.
18. Assistive technologies have potential to help meet demand for health services in remote and regional areas, assist with diagnoses, monitor ongoing conditions and support administering of medication and other therapies. However, these technologies **must be delivered in an accessible and affordable manner**, so that all Australians, particularly those in regional, rural and remote areas, are able to benefit from them. Consideration must also be given to the risk that technological innovation will replace more conventional care or make that care more expensive.
19. Some initiatives in the justice space may create efficiencies and remove potential for human biases. However, the risk is that these **biases may be imported into the algorithms used to make decisions in the criminal justice, administration and social security contexts more generally**. Also if the efficiencies mean that the person's individual circumstances are unable to be considered, this both **undermines their justice related rights and their dignity**.
20. **Privacy laws in Australia should be harmonised and developed to address gaps, ambiguities and inconsistencies**. Further work is required to consider what privacy means in a world of AI, and to address the wide-ranging ways in which new health and assistive technologies and justice related initiatives might impinge on individuals' privacy.
21. **Further consideration is required of the privacy concerns associated with assistive technology**. Technologies may gather and share data in order to enhance personalisation of services. However, this process may produce new forms of health information which require protection, including from misuse by other non-health agents. Transparency about the nature of information being captured, how it is stored and who may have access to it, is essential to ensuring an appropriate balance between privacy and the legitimate benefits of assistive technology.
22. **Information about when and how algorithms are used in AI-informed decision-making must be made public**. For example, where AI is used within the justice system or in decisions relating to the availability of social services this must be transparent, and the law must provide avenues for people to challenge these decisions. Necessary support must also be provided to enable them to do this.

- 23. **Australia should adopt a Bill of Rights**, or at least legislation which adequately protects economic, social and cultural rights, including the right to the highest attainable standard of health.

- 24. Further work should be undertaken to **articulate the requirements of specific human rights** in the context of new technologies, including the duties and standards which are to apply to businesses and other private entities. This must also address issues relating to the overseas development of technology and its implementation in Australia.

Thank you for the opportunity to contribute to this Project. We would be pleased to assist the Commission further if additional information is required.

Yours sincerely

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