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## Moral Worth and Inviolability of Unborn Children

Following the recent public debate on the abortion drug RU 486, this article explains the moral worth of unborn children and why they are worthy of protection. It follows my earlier article supporting a **vibrant culture of prenatal life**.<sup>1</sup>

### The Gospel of Luke

The Bible has been a powerful influence in fashioning respect for the unborn child in Western literature and legislation.<sup>2</sup> It is worth adding the implications of what we read in St. Luke's Gospel: 'Now it happened that as soon as Elizabeth heard Mary's greeting, the child leapt in her womb'...[and Elizabeth said]: 'Look, the moment your greeting reached my ears, the child in my womb leapt for joy.'<sup>3</sup> Luke is indicating that it was through the joyful and prophetic leaping of John the Baptist, Elizabeth's unborn child of six months, that she came to receive the revelation of Mary as the mother of the Messiah: 'the greeting itself and not some special message contained in it is the occasion of a revelation to Elizabeth through the action of John the Baptist.'<sup>4</sup> The reference to John the Baptist takes for granted a miraculous personal communication was involved between the unborn children in this encounter.

### Contemporary Secular Concepts of the Human Person

Since the time of the English philosopher John Locke (d. 1704) a shift began away from the Biblical perspective on the personal dignity of the human individual. Locke held that while a human being's identity is determined by biological criteria, a person must be able to exercise rational faculties and acts:

We must consider what *person* stands for; - which I think is a thinking intelligent being, that has reason and reflection, and can consider itself as itself, the same thinking thing, in different times and places; ... It is a forensic term, appropriating actions and their merit; and so belongs only to intelligent agents, capable of a law, and happiness, and misery.<sup>5</sup>

Professor Peter Singer agrees with Locke and others and popularised his concept of the person for ethical decision making at the beginning and end of human life. For

Singer a human person is understood 'in the sense of a rational and self-conscious being' who has interests and thereby excludes members of the species *Homo sapiens* who lack these characteristics.<sup>6</sup> Consistently he holds that 'we accord the life of a fetus no greater value than the life of a non human animal at a similar level of rationality, self-consciousness, awareness, capacity to feel, etc. Since no fetus is a person, no fetus has the same claim to life as a person.'<sup>7</sup>

Michael Lockwood's concept of person is similar and only applies to children after birth:

'When I came into existence is a matter of how far back the relevant neurophysiological continuity can be traced. Presumably, then, my life began somewhere between conception and birth.'<sup>8</sup> Lockwood admits in theory an immaterial soul could supply the required substratum to explain a person's enduring identity, but finding no empirical evidence for it, he favours the human brain as a materialistic substratum instead.<sup>9</sup>

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## Response to secular concepts of the human person

The claim that unborn children are not persons lacks a sense of realism and suggests that the underlying empiricist philosophical assumptions of this position are flawed, especially when two-thirds of unborn children born prematurely at 24 weeks gestation survive.<sup>10</sup> This restricted meaning of a person needs to be critically examined in the light of its serious implications for their right to life. The views of secular philosophers may be consistent with their presuppositions but this does not discount the validity of the traditional view that unborn children are natural, if not legal, persons.

I will argue that it suffices to be a subject of a rational nature to be a person, and that a spiritual soul is required to render human nature rational. I argue that because the unborn child is a living being with a rational human nature, we must conclude that a spiritual soul is created in the embryo as each human being begins.

### Human subject with a rational nature is a person

Secular philosophers are right on many aspects of the human person viewed *subjectively*. There is no doubt that great importance should be given to the interests of persons, their legitimate use of autonomy and the free exercise of reasonable choices in society. But can their narrow criterion for being a person be rationally justified? Many people differ significantly with secular philosophers on what is required to constitute a human person. It is necessary to ask why it is that only human beings who are rationally self-conscious have interests and are deemed to be persons.

Reflection on the human person from an objective approach complements one from a subjective approach.<sup>11</sup> These two perspectives are not mutually exclusive. Rationally self-conscious acts, desires and choices to pursue interests do not exist in themselves. They are expressions of the human individual who is their subject. Their existence is made possible by the intrinsic capacity of the human subject's rational nature. We know we are the subject of awareness of our rational self-conscious acts of love, play, prayer or anger.

Indeed, we are not able to have awareness of the self as a substantial subject except by being aware of other things or objects of thought. This means we have a natural capacity to have acts of knowledge of objects as well as self-consciousness. This implies we have a rational or intellectual nature that enables us at the same time to be aware of the self as subject of acts of knowledge of things, objects of thought and events in our environment. This natural dynamism spans the mental and bodily dimensions of our rationally self-conscious acts.

We may conclude that the rational self-conscious nature of a human subject suffices to constitute every such individual as a person. Jenny Teichman understood this very well when she said: 'In ordinary life *person* and *human being* refer to the same things. For this reason the *ordinary* sense of the word *person* does not, indeed cannot, detach moral import from the concept of the human.'<sup>12</sup> Again she says: 'Human beings are paradigm persons. ... for many centuries now it has been the case that 'a person' signifies a natural person, i.e. a human being, in all human discourse'<sup>13</sup>

### Immaterial soul

Our conscious acts are not merely acts of the brain, as though it was the organ for thinking as the eye is the organ for seeing. Though a functioning brain is needed to think, it is not itself conscious. The intellect together with the senses and the brain enable us to think.<sup>14</sup> Human knowledge goes well beyond animal knowledge which is limited to a perceptual field or imaginary images within space-time limits. A cow sees the green grass through sense knowledge. A human individual likewise sees the green grass but also knows the truth 'that the grass is green'. As St Thomas Aquinas says this could not be known unless the intellect knows its own self, 'to whose nature it belongs to be conformed to things. Consequently, it is because the intellect reflects upon itself that it knows truth.'<sup>15</sup> We understand and make predications about abstract truths with certainty, e.g. 'the square root of 49 is 7'. This predication is made by our intellect, not by a sense organ. We know this objective truth and we are also aware that we are the subject of this knowledge.

This kind of awareness implies a turning back on itself, similar to total self-presence that transcends the capacity of material senses and requires an intellect of an *immaterial* or *spiritual* nature. Each part of a body is only present where it is, and not elsewhere. So for a human subject to know that he or she knows the truth, an immaterial soul is needed for the total self presence manifested in the self-awareness involved in this sort of intellectual knowledge of truth.<sup>16</sup>

Aristotle (d. 322 BCE) likewise knew that intellectual knowledge of truth was beyond the capacity of a body 'for no bodily activity has any connection with the activity of reason.'<sup>17</sup> Aristotle and Aquinas rightly understood that intellectual acts and reasoning require an immaterial soul to perform what a bodily organ alone cannot do. Traditionally it has been said that this type of knowledge is made possible by a human spiritual soul or life-principle which actuates matter into an organised living body. Each one of us experiences this unity: it shows that the soul must be one with the body to constitute one living human person.<sup>18</sup>

It seems clear that there is no rational necessity to restrict

the concept of person to those who are actually able to exercise intellectually self-conscious acts. We may well ask what is it that enables a child to first express intellectually self-conscious acts, desires or statements? This would not be possible unless a rational human nature was already present to enable self-conscious acts of the intellect to be exercised. All things considered, it seems that a human person may be defined as 'a living individual with a rational [intellectual] human nature'.<sup>19</sup>

## Unborn children as persons

As I have previously suggested, it is unrealistic to require unborn children to be able to perform acts that adults easily perform: 'We usually talk and relate to persons who already are capable of exercising their rational powers and moral capacities but this should not mislead us into denying the status of a person to a human fetus and infant who have not yet sufficiently developed to be able to exercise rational self-conscious acts or enjoy personal relationships.'<sup>20</sup>

There is no real debate that unborn children are members of the species *Homo sapiens*. It seems to me they should be classed as persons because they are human individuals who through development and growth alone usher in the onset of the actual use of their inborn natural capacity to perform intellectual acts. Time alone is needed for the requisite brain development to occur before these acts can be expressed. Human nature enables unborn children to develop to the stage where, without ceasing to be the same living human individuals, they can exercise intellectually self-conscious, free and moral acts. They are persons with potential, not potential persons because they already have a rational nature from their beginning as human individuals.<sup>21</sup> As Beckwith says: 'One can only develop certain functions because of the sort of being one is.'<sup>22</sup>

Since an immaterial soul could not be derived from matter, it would need to be created when the individual is formed to constitute a human person.<sup>23</sup> It would then be philosophically credible to hold the human person begins once an individual with a rational human nature is formed.

## Conclusion

The antithetical views on the moral value of the unborn child are due to two fundamentally different philosophies: one that admits the existence and meaningfulness of non-material reality and the other that practically denies both.

Empirical theories of knowledge are sufficient for ordinary experience and scientific research, but they are inadequate for considering realities that transcend the range of matter and material energy, such as God, creation and the immaterial soul. Simply because our knowledge be-

gins with sense knowledge there is no rational justification to limit human knowledge to the empirical domain. For the human intellect 'reality as such' cannot be reduced to 'empirical reality'. To do so is to disregard how we successfully engage in meaningful discourse about realities that transcend experience.<sup>24</sup> The traditional view that every unborn child is a person stands.

The moral worth and dignity of the unborn child varies according to peoples' fundamental religious and/or personal beliefs on what constitutes a human person. At the same time it also depends in practice on the value people, especially pregnant women, attribute to the unborn child. Wanted unborn children are usually cherished: but, sadly, unwanted unborn children, especially those affected by a disability, are far too often aborted.

## ENDNOTES

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# Drugs: Mode of Action, Prevalence and Reasons for Use

*The three most commonly used illicit drugs are, in descending order, cannabis, amphetamines and ecstasy. This article looks at how these drugs work, current rates of use, especially among the young, and harms associated with using such drugs.*

## Introduction

Over the last 40 years Australia's response to substance-related problems compared with most western nations has been very good. Since the 1960s concerns about problems of substance use have expanded from a focus on alcohol to include tobacco and a wide range of other licit as well as illicit psychoactive substances.<sup>1</sup> Nevertheless, as in many other countries, there has been an increase in illicit drug use.<sup>2</sup> And while many indicators of physical health have improved there has been an increase in psychosocial problems, including youth depression, suicide, psychoses and other drug-related problems.<sup>3</sup> Illicit drug use causes concern on several levels. Early use of psychoactive substances can be harmful to health in the short term—for example, through injuries sustained or inflicted while intoxicated—and can lead to lasting patterns of consumption that increase the risk of many chronic diseases and social problems.<sup>4</sup> Early use is rapidly increasing with 'over 20% of 16-17 year olds and over 30% of 18-19 year olds taking illicit drugs'<sup>5</sup> according to recent figures. Perhaps it is time to seriously promote broader thinking about the causes and necessary responses to drug problems in our society, particularly the role of the family, government and the cultural environment.<sup>6</sup>

## Cannabis

Cannabis is typically used experimentally or intermittently in adolescence and early adulthood, and is generally discontinued by the mid- to late 20s.<sup>7</sup> A current report found that approximately 40% of Australians aged 14 years and over have tried cannabis. Disturbingly, one in six (16.4%) of those used it on a daily basis, with availability being reported to be relatively easy. Cannabis had the highest personal approval of all illicit drugs (males: 27.4%, females: 19.0%),<sup>8</sup> and is by far the most widely consumed illicit drug in most western countries.<sup>9</sup> Survey data indicate that the lifetime prevalence of cannabis use in Australia, particularly among adolescents, has continued to increase through to the present day. It is usually smoked with the most commonly reported uses of cannabis being positive mood alteration (34%), relaxation (39%) and coping with negative affect (27%).<sup>10</sup>

## Cannabis-related harms

There is a spirited debate in Australia and elsewhere

about cannabis-related harm.<sup>11</sup> Proponents of its use argue that it is a natural, relatively harmless drug with many beneficial properties, its image tarnished by lies and myths.<sup>12</sup> Others claim that the harms of cannabis have been understated, and that it is a toxic drug that causes widespread problems.<sup>13</sup> Recent prospective studies in three countries have found relationships between the frequency of its use and the risk of developing psychotic symptoms. However, 'the absence of any change in the incidence of schizophrenia during the three decades in which cannabis use in Australia has increased makes it unlikely that cannabis use can produce psychoses that would not have occurred in its absence.'<sup>14</sup> Therefore it appears more likely that sustained cannabis use can either exacerbate or precipitate psychosis in predisposed individuals.

Cannabis is illegal in most jurisdictions in Australia, although the possession of small quantities has been decriminalised in some states and territories, and there are trials of a range of legal options for low range offences. Comparisons between so called decriminalised and prohibitionist states show decriminalisation has not led to higher rates of current cannabis use. Under prohibition, significant numbers of Western Australians have received a criminal record for no more serious offence than the possession of a small amount of cannabis for personal use. Recent research has shown that such a conviction can have a real and detrimental impact on people's lives, reinforces disrespect for the cannabis laws, but appears not to deter cannabis use among those so convicted.<sup>15</sup> Since 1985 Australia's official policy on cannabis and other drugs has been one of harm reduction.

## Amphetamines

Amphetamines have had an enduring history of military, occupational, subcultural, recreational and therapeutic use.<sup>16</sup> At the dawn of the twenty-first century, epidemics of illicit amphetamine use have recently commenced or worsened.<sup>17</sup> Globalization, expanding trade and business networks have driven an expansion of inexpensive, high purity and readily obtainable illicit amphetamine in Australia--indeed, internationally. Methamphetamine, the most potent amphetamine derivative, is the most commonly produced and consumed form of illicit amphetamine in Australia. It is available in pill form, capsules, powder, oily base and crystalline form (known as 'ice'). Depending on the formulation, the drug may be taken orally, intranasally, smoked or injected.

In Australia, methamphetamine is produced predominantly from diverted pharmaceutical supplies of pseudoephedrine, an ingredient in over the counter cold and flu tablets.<sup>18</sup> Easy access of this precursor, production skills and materials, fewer unstable by-products and smaller laboratories has increased the availability of methamphetamine and made control of supply increasingly difficult.<sup>19</sup> Amphetamine use induces a sense of well-being, energy, euphoria, confidence, alertness and sexual arousal. Therapeutically, amphetamine-based preparations have been used as appetite suppressants, decongestants, for treatment of attention deficit hyperactivity disorders and sleep disorders.

Australia has one of the highest per capita levels of non-prescription amphetamine use in the world.<sup>20</sup> Almost one in ten people surveyed nationally had used amphetamines illicitly at least once.<sup>21</sup> Based on aggregated data from 1985 to 1995 it was estimated that 26% of people who had lifetime experience of amphetamine used the drug once a month or more.<sup>22</sup> More recently, the Illicit Drug Reporting System, an early warning system monitoring emerging drug trends, has identified increases in the prevalence of amphetamine use among injecting drug users across all states and territories since 1999.<sup>23</sup> The proportion of people presenting to drug and alcohol services with primary amphetamine problems in Australia increased between 1995 and 2001 from 6.5% to 8.8%.<sup>24</sup>

## Amphetamine-related harms

Amphetamines are central nervous system stimulants, which act by increasing concentrations of neurotransmitters, particularly dopamine, in the brain. A growing body of preclinical data also indicates that amphetamine at high doses has the potential to cause long-term changes to neurones.<sup>25</sup> Substantial morbidity is common and compounded by injecting practices which often increase the risk of contracting blood-borne infections such as Hepatitis B, C or HIV. Adverse consequences of chronic high-dose amphetamine use include psychological problems, especially psychosis, dependence, medical complications, financial problems and other social problems.<sup>26</sup>

## Ecstasy / MDMA

After cannabis and amphetamines, Ecstasy (MDMA) is the third most commonly used illicit drug. Data from Australia, Europe and the United States indicate that ecstasy has been tried at least once by about 7% of the general population.<sup>27</sup> Of these users, three in five had most commonly used it at dance parties, so-called 'raves'. In most countries ecstasy is used recreationally as part of a youth sub-culture. The combined stimulant and euphoric properties of ecstasy help to explain the association. Sociability is a major characteristic of ecstasy use.<sup>28</sup> Ecstasy is used primarily recreationally, but studies, particu-

larly in the United Kingdom and Australia, have identified regular and intensive use. There may also be a trend of increasing use by injection.<sup>29</sup>

Ecstasy has a high affinity for serotonin receptors in the brain.<sup>30</sup> Serotonin-producing neurones in the brain regulate aggression, mood, sexual activity, sleep and sensitivity to pain. Serotonin is also important in memory and temperature regulation. In addition, it induces a rapid and substantial elevation of another important neurotransmitter, dopamine, which plays a crucial role in the control of movement, cognition, motivation and reward.<sup>31</sup> Following oral administration, effects become apparent in about 20 minutes and last for about 4 hours.<sup>32</sup>

## Ecstasy-related harms

There has been considerable interest in the adverse effects of use, with particular attention given to the neurotoxic effects of ecstasy. The incidence of serious acute adverse events related to ecstasy is low. However, it is the unpredictability of those adverse events and the risk of mortality and substantial morbidity that makes the health consequences of ecstasy significant. While hyperthermia and low sodium levels are the most significant acute adverse effects, neurotoxicity is potentially the most significant long-term effect. The long term effects of ecstasy remain in dispute, but recent studies are disturbing.<sup>33</sup> Scientists who gave ecstasy to squirrel monkeys and baboons found evidence that it produced the same brain damage seen in people with Parkinson's disease. The researchers found the damage after administering doses similar to those thought to be taken by young people during an all night party.<sup>34</sup> Other studies using sophisticated brain imaging techniques have found persistent abnormalities in brain morphology in ex-users of ecstasy, even with moderate use.<sup>35</sup> These studies tended to use small numbers of subjects and many are confounded by uncertain histories of ecstasy use and use of other drugs. Nonetheless, substantial evidence is mounting that ecstasy is not as benign as commonly assumed.<sup>36</sup>

## General harm to young people

While the prevalence of drug use amongst older teenagers has been known for some time, it has come as a shock to many in the community that so many teenagers under the age of 15 are also using illicit substances. The average age of onset of experimental use has certainly dropped in recent years, with one in fourteen Australian children aged 12-15, or about 80 000 children, having used illicit drugs.<sup>37</sup>

More children are also experiencing behavioural and psychological problems at a younger age, with recent attention being focussed on the harms inflicted on the young by illicit drug use. There has been much controversy about the connection between mental health problems and

drug use; as a rule, does one precede the other? Professor Patrick McGorry of Orygen Youth Health, an organisation helping teenagers with mental health problems, believes that many young people experiment with drugs recreationally and for fun, but the situation can degenerate once it becomes necessary as a relief from their problems. Of all those who seek treatment for mental health conditions, 70% have drug issues. Specifically, 'among those who took cannabis in the month before they were interviewed, 16.5% had a mental illness,' while 16% of ecstasy users reported mental health problems.<sup>38</sup> This is significantly higher than the 9% of the community reportedly diagnosed or treated for a mental illness in 2004. McGorry states that 'a lot of kids just try things but they get dependent if they've got an underlying mental health problem.'<sup>39</sup>

Furthermore, McGorry believes that, in at least half of those patients, the mental health problem is the first to emerge. In other words, while some drug-using teenagers already had some type of mental illness, others developed an illness subsequent to using illicit drugs. This would suggest that 'fifty per cent of drug and alcohol problems in young people could be prevented by effective recognition and treatment of people in early to mid adolescence, even within their own family.'<sup>40</sup> Dr Paul Denborough, a child psychiatrist states that 'often the symptoms of drug problems are treated, but it's issues causing the sadness or behavioural problems that need to be resolved.'<sup>41</sup> He firmly believes that greater investment in early childhood mental health services is urgently needed to effectively tackle this emerging problem.

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# Aboriginal Cultural Identity, Health and Ethics

*The unmet health needs of Australian Aboriginal people is a critical issue.<sup>1</sup> There is a real danger that the wider Australian community has become anaesthetised to the depth of the social inequality at the heart of the problem.*

## Aboriginal Culture

Positioning the health needs of Aboriginal people in the context of their traditional and contemporary culture assists to identify what Aboriginal people require of a public health system. Vickery, Clarke and Adams, note from 'time immemorial to 1786 complex social, cultural and spiritual beliefs and practices informed a successful public health system. This public health system ensured the survival of Aboriginal people over a long period of time.'<sup>2</sup> The Aboriginal model of health is whole of community, rather than person centred. Whilst both Anglo and Aboriginal Australian cultures value a holistic concept of health, the ways in which they are holistic varies. In 1996 Aboriginal health was defined as:

Health does not simply mean the physical well being of an individual but refers to the social, emotional and cultural wellbeing of the whole community. For Aboriginal people, this is seen in terms of the whole of life view incorporating the cyclical concept of life - death and the relationship to the land.<sup>3</sup>

In spite of strong and transparent cultural themes, a significant feature of the contemporary Aboriginal identity is a high level of intra - cultural diversity. In 2001 there were approximately 458,500 Indigenous Australians<sup>4</sup> of which 30% reside in major cities, 'about 43% in regional areas' and 27% reside in remote locations around Australia.<sup>5</sup>

There are two issues to emerge from this. Firstly, the strength of association with traditional Aboriginal culture highly varies from person to person. Health care professionals need to remain responsive to the presentation of individual needs without stereotyping. Secondly, an awareness of the ways in which both Aboriginal and Anglo Australian cultures may mutually influence Aboriginal people is vital. Leading exponents say that 'even the most traditionally oriented of Aboriginal peoples have integrated Anglo Australian medical services into their own health care system....'<sup>6</sup> The dual recognition of both individual and cultural identity must be carefully managed on a case by case basis. This facilitates an environment where an open and honest exchange of information between health care worker and patient is more likely. It has been suggested that Aboriginal culture is complex and diverse and as well as 'understanding the shared values...health professionals need to explore each Aboriginal person's own values, beliefs and cultural norms.'<sup>7</sup>

Different cultural values between Aboriginal and Anglo

Australian people can cause significant differences of opinion regarding what is considered appropriate conduct in particular situations. Aboriginal culture places much less emphasis on the individual than is commonly the practice in environments such as hospitals, where Anglo Australian values predominate. During the hospital admission process, for example, the mainstream value of patient autonomy contrasts the Aboriginal persons' expectation that close family members remain highly involved. It has also been explained that 'it could be inappropriate for them to give a history of their own problems...'<sup>8</sup>

The Western ethos of autonomy and independent judgment sharply contrasts the whole of community expression of cultural identity by Aboriginal people, which is summarised well by Jupp:

It is not a speculative philosophy, but one based on the performance of the land - the cycles of nature on a time scale which reached back to the dreaming... Aboriginal philosophy and world view has developed out of the experience of living in our country and is connected to our environment through strong spiritual and emotional ties with the earth...with this philosophy and time scale, individual life takes on much less importance than they do with European cultures. Thus for instance, our history is based on the group and its continuity rather than on individuals. Harmony with the natural world is stressed...<sup>9</sup>

The relevance of these themes to Aboriginal people from all walks of life is evident in the Australian Bureau of Statistics (ABS) 2002, report findings on Cultural Attachment: '22% of Indigenous people were living in their homelands/traditional country'; '54% reported that they identified with a clan, tribal or language group'; '68% had attended a cultural event in the last 12 months'; and '21% spoke an Aboriginal or Torres Strait Islander language.'<sup>10</sup>

## Health and poverty

The socioeconomic position of Australian Aboriginal people is the worst of any population group within Australia. They are said to share the health characteristics attributable to the incidence of poverty and chronic disease of third world countries.<sup>11</sup> Addressing the causes of poor Aboriginal health should include, but falls beyond, the scope of the Australian public health system. Aboriginal people today have poor health that has been directly linked to: unmet housing needs; absent or structurally im-

paired kitchen, bathroom and laundry facilities; malnutrition; unemployment; and poor education retention.

## Cultural discrimination

Before examining these aspects of health in more detail the deeper problem of cultural and identity erosion need attention. Choo states: 'For Aboriginal families, material poverty...is secondary to the more deep seated deprivation that is the consequence of cultural invasion, racism and oppression'.<sup>12</sup> The cultural invasion of Aboriginal people from 1786 to 1967 has resulted in tremendous loss. Loss of homelands and children, segregation from mainstream society, and then forced assimilation with a foreign culture have caused overwhelming pressure on the Aboriginal persons' sense of identity and connection with Aboriginal culture.

Over a long period Aboriginal people have been deprived of opportunities to build social cohesion in culturally appropriate ways. The Australian Human Rights and Equal Opportunity Commission (HREOC) find 'psycho-social stressors' of this nature 'impact on health in four ways, all of which are indicated in Indigenous peoples'.<sup>13</sup> The health impacts cited are to the immune system, circulatory and metabolic functions, mental health problems and destructive and dysfunctional behaviours.<sup>14</sup>

## Housing, income, employment, education and nutrition

In Australia poverty is defined in relative terms, and relates to the inability to 'afford the goods and services needed to enjoy a normal or mainstream lifestyle'.<sup>15</sup> But Indigenous poverty is commonly cited as more extreme than non Indigenous poverty, as Hunter states: 'the circumstances facing many Indigenous people are so different from those of other Australians that conventional income based measures may misrepresent the nature and extent of the poverty amongst them'.<sup>16</sup> The compounding effects of extreme poverty across a range of social indicators such as education, housing, income, nutrition and health prompts us to consider Indigenous poverty in absolute terms, that is: 'difficulty meeting basic needs such as access to water, food and clothing'.<sup>17</sup>

The ABS/Australian Institute of Health and Wealth (AIHW) found in 2002 '58,100 Indigenous households or 35%' lived with structural problems to housing.<sup>18</sup> Additionally, with regards to household facilities the same report states: '1,700 Indigenous households reported that they did not have working facilities to wash people'; '3,500 did not have working facilities to wash clothes or bedding'; '8,300 did not have working facilities for storing or preparing food' and '1,900 did not have working sewerage facilities'.<sup>19</sup> The Australian HREOC on Ab-

original and Torres Strait Islander housing and homelessness states that in the twelve months prior to 2001, '46% of the 213 Indigenous communities which had a population of 50 or more and were not connected to a town water supply' either did not have their water quality tested, or 'had failed testing'.<sup>20</sup> Collectively, these risk factors all contribute to the increased rate of infection and chronic disease.

Bailie and Runcie confirm 'the significance of absent or non functioning household infrastructure as a potential contributory factor in poor nutritional status and high rates of respiratory, skin and gastrointestinal infections in Indigenous communities'.<sup>21</sup> Bailie, Stevens and McDonald comment that skin infections are particularly dangerous to Aboriginal children because the underlying pathogen, Group A Streptococcus causes the high incidence of Acute Rheumatic fever, which precipitates rheumatic heart disease.<sup>22</sup> Bailie et al. note that 'the rates of rheumatic heart disease in Aboriginal children are the highest in the world'.<sup>23</sup> They also discuss it's possible connection to the high rates of chronic renal failure. The National Aboriginal and Torres Strait Islander Nutrition Strategy Report cites a high level of gastrointestinal infection amongst Aboriginal children can impair childhood growth patterns.<sup>24</sup> This tragically reinforces the message of the Fred Hollows Foundation that the effects of childhood poverty can last a life time.<sup>25</sup> Further dietary problems are compounded by a reduced capacity to buy fresh food due to financial difficulty.

Household overcrowding compounds these problems, and is also related to 'poor mental health'.<sup>26</sup> The House of Representatives Standing Committee on Aboriginal and Torres Strait Islander Affairs report 'in some houses visited by the committee, it was not uncommon for 15 -20 people and sometimes more to be living in a basic three bedroom home'.<sup>27</sup> Whilst it is believed household overcrowding occurs for cultural reasons, the interaction of income poverty, lack of suitable housing stock and severe infrastructure problems in existing housing stock are other relevant explanations. Substantiating this claim the same Committee reveals that 'about \$2.2b is needed to address capital Indigenous housing needs. This is approximately seven times the current annual funding from all sources...'.<sup>28</sup>

## Conclusion

There is a moral imperative to actively support the work of those who strive to improve Indigenous health. So much is at stake. The determinants of Aboriginal health fall well beyond the scope of the Public and Acute Health systems. I wonder whether wealth and prosperity has anaesthetised mainstream Australia to the welfare needs of those in their midst, rendering an oblivious spirit to the pain and suffering of others. Aboriginal people who live with the effects of extreme poverty face high barriers to a



quality of life that other Australians enjoy. The chances of gaining meaningful employment and the retention of children in education remain compromised under such circumstances. The inequitable distribution of basic resources within the nation are beyond the control of the individual families concerned. There have been reports and inquiries into the unmet health and housing needs of Aboriginal people. Unless action is taken and appropriate funding is allocated to target outcomes that specifically address unmet needs, these inquiries will be rendered futile and Aboriginal people will continue to suffer.

#### ENDNOTES:

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- <sup>5</sup> *ibid.* 4.
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- <sup>9</sup> Jupp J, *Does Australia Need a National Identity?* In Day D, *Australian Identities*, Melbourne: Australian Scholarly Publishing, 1998, 223.
- <sup>10</sup> ABS Report 4714.0 – 'National Aboriginal and Torres Strait Islander Social Survey' Family and Community Attachments, (2002) accessed at <http://www.abs.gov.au/Ausstats/abs@nsf> on 16/02/2006.
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- <sup>20</sup> Australian HREOC, *Aboriginal and Torres Strait Islander peoples in Australia, Housing and Homelessness, 2005*. Accessed at <http://www.hreoc.gov.au/social%5Fjustice/statistics/#toc8> on 16/02/2006.
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Kate Jones



## Ethical Issues in the Use of Implanted Medical Devices

*The use of machines to undertake a physiological task for an ailing body is not new nor is the use of implanted medical devices. The first part of this discussion will focus only on implanted cardiac devices (ICDs) that are considered life-saving and implants used to affect the brain in some way. These devices may pose unique ethical concerns. The second half of the discussion will comment on a report from Europe which addresses these ethical concerns and makes some useful recommendations.*

### Implants and ethics

Some of the latest implantable medical devices have been developed to take advantage of information and communication technologies. Devices that use these capabilities are referred to as Information and Communication Technology (ICT) implants. The functions that ICT implant-

able medical devices achieve are based on programmable or algorithmic calculations mostly using non-biological substances such as silicon.<sup>1</sup> Examples of active ICT implantable medical devices include cardiovascular pacers for those with heart disease, auditory brainstem and cochlear implants which help people to hear, as well as identification and location devices. There are also biosen-

sors which are implanted inside the body for accurate monitoring of inaccessible parts, for example, sensors in the brain of patients with Parkinson's disease or epilepsy.<sup>2</sup>

Sven Ove Hansson has proposed that there should be a systematic approach to implant ethics because of the issues that may arise such as those concerning end of life issues, enhancement of human capabilities beyond normal levels, mental changes and personal identity, and cultural effects.<sup>3</sup> Another factor that needs addressing is the increasing use of some devices as 'standard' treatment, rather than as 'life-saving' devices. When resources are limited, surgically implanted medical devices should be last-line rather than standard. There are risks associated with any implantable device, particularly the risks from having a surgical procedure, infection, allergy, device malfunction, inherent hazards, products becoming out-of-date, and the prospect of life-long monitoring.<sup>4</sup>

### Use of implanted cardiac devices

The use of artificial heart valves, pacemakers and implantable cardiac defibrillators is increasing. Pacemakers function to revert or stabilise abnormal heartbeats. Cardiac defibrillators have the capacity to restore a heartbeat. These implanted devices usually become permanent fixtures, although they don't have an indefinite life-span themselves and may need to be replaced. As the use of implantable cardiac devices such as pacemakers or cardioverter-defibrillators increases, and recipients get older, these may become a consideration in end of life care decisions. In the same context of requests to withdraw life-sustaining treatment such as mechanical ventilation, haemodialysis, artificial hydration, and nutrition, a person with a terminal illness may want their cardiac implant to be disabled or turned off.

Withdrawal of pacemaker or ICD support is said to be neither painful nor burdensome.<sup>5</sup> As in withdrawal of other life-sustaining treatments at the end of life, decisions made about inactivating or removing cardiac devices should be within the parameters of the law, as well as being ethically acceptable. Permanent pacemakers may impede the natural dying process.<sup>6</sup> It may be assumed that any person who receives some sort of implant has been fully informed about the risks and benefits and voluntarily consented to the procedure in the first place. It may also be assumed that certain implants, such as the various intracardiac devices cost a lot of money. Disabling or removing them should only be performed for valid clinical or compassionate reasons, after appropriate counselling.

All the care attendant on treatment before and after a device has been implanted also costs money. Monitoring the device for the rest of the recipient's life-span becomes a burden whose need should be addressed prior to consent

being given. Therefore, it is vital that any requests for a device to be disabled for medical reasons, only be done if not to do so makes life more burdensome. It may also be assumed that mentally capable persons may make decisions to disable their own devices without requesting medical advice, for example, deliberately letting battery packs run out of charge. This would be tragic and represents a type of failure of supportive networks – another area which would need to be considered before a device is implanted. A potential ethical dilemma may arise if a cognitively intact person, who has an ICD, declines any and all treatment, even if they are not terminally ill. In this situation, would the ICD be considered a treatment that can be refused, or, in the case of an implanted cardiac defibrillator, a request for a Do Not Resuscitate order?

### Use of implanted brain devices

The idea behind brain implants which may act like a machine (brain-machine interfaces - BMIs) or as an extension of a computer (brain-computer interfaces) is that they will extract signals directly from the brain. This may restore lost sensory or motor function, for example, to people who have spinal injuries. As Gerhard Friehs and colleagues comment, 'Although BMIs are not capable of activating alternate pathways (anatomical compensation) or truly restoring the structural lesion to its original state (anatomical recovery), they may be helpful in restoring lost function (functional recovery)'.<sup>7</sup> For example, experimental work has been done to help people who have treatment resistant depression with the use of chronic deep brain stimulation.<sup>8</sup> Another application being trialled in the United States of America is the BrainGate system which will allow people who can't move to operate a computer with their thoughts, via a tiny silicone chip and electrodes implanted in their brain.<sup>9</sup>

Artificial devices that are being developed to mimic brain function raise ethical issues because the brain not only affects memory, but also mood, awareness and consciousness which are part of a person's fundamental identity.<sup>10</sup> One of the concerns raised about brain implants or prostheses is whether the recipient would have any control over what is remembered given that forgetting enables us to deal with painful situations.<sup>11</sup> It is also speculated that microelectronics is providing unprecedented capabilities for monitoring and controlling brain function to such an extent that it can reveal the contents of a person's memory to those who know how to access or abstract such data. This raises concerns about the appropriate limits to the use of this technology.<sup>12</sup> On the flip side, it would also be possible to implant artificial memories, for example, databases in the brain which could allow someone to recognise and know detailed histories of people without meeting them.<sup>13</sup> It is further speculated that the cognitive abilities of people with dementia could be improved to such an extent that they may not be perceived as the same people any more by those who knew them previously.<sup>14</sup>

## Recommendations and Regulation

The European Group on Ethics in Science (EGE) has made recommendations about the ethics of certain types of medical devices. This group is a neutral independent, pluralist and multidisciplinary body which advises the European Commission on the ethical aspects of science and new technologies. In the absence of more specific ethical guidelines, the EGE recommendations provide a useful starting point given that it seems unlikely that the growth in the manufacture and use of approved and experimental implantable medical devices will diminish any time soon. And like any new medication, treatment or service, the long-term benefits or harms are unknown. The potential for ‘function creep’, or using devices for purposes beyond their original scope is also potentially problematic. This is an issue which the EGE has identified as an area of concern and has stated that, ‘although ICT implants may be used to repair deficient bodily capabilities they can also be misused, particularly if these devices are accessible via digital networks’.<sup>15</sup>

With any new treatment or therapy there is always at least two ways of considering its impact on mankind – whether it will do good or harm. For entertainment value, science-fiction has been very comfortable with the notion of futuristic man-machine hybrids along with its horror offshoots when the machine part runs amok. But with the prospect of even more sophisticated implantable medical devices becoming available, their effects in the real world and humanity in general need to be publicly debated especially when the impoverished nations of our world have trouble meeting even their most basic needs to survive. The EGE have also considered the individual effects of such devices and state, ‘One might even think of such devices as a threat to human dignity and particularly to the integrity of the human body, while for others such implants might be seen primarily as a means for restoring damaged human capabilities and therefore as a contribution to the promotion of human dignity.’<sup>16</sup>

### Use of ICT implants in general

The EGE suggest that the derived ethical principles about ICT implants include (in summary):<sup>17</sup>

- **Non-instrumentalisation:** The ethical requirement of not using individuals merely as a means but always as an end in themselves.
- **Privacy:** The ethical principle of not invading a person’s right to privacy.
- **Non-discrimination:** People deserve equal treatment, unless there are reasons that justify differences in treatment.
- **Informed consent:** The ethical principle that patients are not exposed to treatment and research without their free and informed consent.
- **Equity:** The ethical principle that everybody should

have fair access to the benefits under consideration.

- **The precautionary principle:** Ethics should aim at ensuring the respect for human rights and freedoms of the individual, in particular the confidentiality of data.

Social control of people is an unsettling prospect. Whilst the use of ICT implants is increasing, it is not yet rampant in the community. However, there is intermittent debate about more reliable ways of identifying and locating people to the point where some communities have begun ‘micro chipping’ individuals. These microchips are not medical devices, yet some implanted medical devices may support the function that microchips perform. Indeed, the EGE notes that ICT implants may allow individuals to be located on a permanent and/or occasional basis, and allow the information contained in electronic devices to be changed remotely without the subject’s knowledge.<sup>18</sup>

Overall, the EGE recommendations are not only comprehensive, but also cautionary. They suggest that there could be value conflicts between the personal freedom to use one’s economic resources to get an implant that will enhance one’s physical and mental capabilities and what society at large considers desirable or ethically acceptable. In this context they name ICT implants for which special caution is necessary, such as: those that cannot be removed easily; those that influence, determine or change psychic functions; implants that due to their network capability could be misused in several ways for all kinds of social surveillance and manipulation; military applications; distinction between therapeutic applications and enhancements is not always clear; and ‘intrusive’ technology that by-passes normal sensory experience. Of particular ethical concern are implants which influence the nervous system and the brain and therefore human identity as a species and those that will biologically and culturally influence future generations.<sup>19</sup>

### The future ‘age of enhancement’?

The future promises even more sophisticated devices. For example, an artificial hippocampus, or brain prosthesis that could restore or enhance memory is being developed. Cortical implants and artificial retinas are also being developed to restore function to those with visual impairment.<sup>20</sup> These sorts of implants could be considered to be potentially beneficial if used to help the recipient function independently or with minimal support. However, other devices are being developed to not merely restore function but possibly enhance certain capabilities beyond what is considered normal.

Devices on the drawing board include those that may enable invisible communication with others – reading minds perhaps. It may also be possible to amplify the intellectual capacity of ‘healthy’ individuals. Artificial vision using infrared technology is postulated, perhaps giving peo-

ple the ability to see in the dark. An audio tooth implant which can act like a tooth phone was actually developed in 2002.<sup>21</sup> Recipients of these enhancement devices would surely then have an unnatural and unfair advantage over those that lack them. It is also not difficult to imagine the many creative ways this technology could be used in a restrictive rather than enabling way, for example, remote controlling of certain populations, implanting false memories, 'brain-washing' and covert surveillance. Far-fetched perhaps? But not inconceivable. After all, we are frequently reminded that we now live in an age of terrorism.

## Conclusion

Science and technology and breakthroughs in medical therapies have had many beneficial effects for humanity. Even so, there are many communities around the world, which for various reasons such as circumstance of birth, poverty and war will derive little or no benefit from these 'technological marvels'. So in a concluding message the EGE has thoughtfully suggested that implantation of ICT devices for health (not enhancement) purposes should be governed by the principle that: 'the objective is important, like saving lives, restoring health or improving the quality of life; the implant is necessary for this objective; and, there is no other less invasive and more cost-effective method of achieving the objective'.<sup>22</sup> As Sven Ove Hansson suggests, 'Although the most that one can hope for from a transplant is the restoration of normal function, technological devices can, at least in principle, be constructed to improve function to above-normal levels. Implant ethics therefore has to deal with issues of normality and disease, and with the admissibility of human enhancement.'<sup>23</sup>

If society consents in principle to the increased use of medically implanted devices, it is potentially accepting the prospect of enhancement. As long as technology is used to reduce inequality it is likely beneficial, but until

such time that this can be evidenced development should be less frantic and more pedantic.

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- <sup>17</sup> *ibid.* 22-23.
- <sup>18,19,20,21</sup> *ibid.* 20
- <sup>22</sup> *ibid.* 30
- <sup>23</sup> Hansson S O, 521.

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