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POPULATION: THE ELEPHANT IN THE ROOM FOR LAWYERS

Dr Paul Willis *

Lawyers deal with the consequences of population as they practice law, implement policies, and theorise the law. Yet lawyers do so without reference to, or mentioning population. Instead, questions arising from the increase in global population are largely dealt with in the domains of science. As the effects of population growth begin to appear in operations of the law, this article argues there is an increasing need for lawyers to understand and grapple with issues arising from an increasing population. These issues must be addressed within the contexts of the history of population science and the mechanics of population growth, as well as an appreciation of the current issues arising from high global populations.

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I INTRODUCTION

At the time of writing, Australia's population reached 23 million.¹ Not since former Prime Minister Kevin Rudd spoke about his desire for a 'big Australia' in 2009, has there been much public debate about the implications of population outside communities of population ecologists and demographers.² Yet population has flow-on implications for society, economy, and the environment. In short, population has implications for every discipline. While some disciplines have engaged directly with population issues in national fora, legal professionals and academics have been notably silent. This is surprising for two reasons. The first is that the law must manage the implications of population (eg, property rights to food and increasingly scarce resources, migration and refugee law, land law, all areas of public law, and environmental law, amongst other things). The second reason why this is surprising is that lawyers have a long tradition, and close association with what is known to them as "natural law".³ A natural law understanding should equip lawyers with the capacity to help society grapple with the complex issue of population policy, and do so from a scientific basis.

This essay argues that lawyers should end their silence on population and actively engage with population debates. It will do this by firstly providing an outline of the history of the population debate. This historical debate about population is then linked to natural law through the work of John Locke, before canvassing some of the pressing issues surrounding population. The article will then consider the looming issues on the radar of some of Australia's best and brightest, who have observed that lawyers have so far remained on the sidelines of contemporary debates.

II MALTHUS, POPULATION ECOLOGY AND DEMOGRAPHY

Population ecologists and demographers study and model the way populations grow and evolve through time. They are keen to point out that, central to so many of the problems we are facing as a species on planet Earth today, there is one simple equation:

¹ ABC Radio National, 'Australian population to top 23 million tonight', *RN Drive*, Tuesday 23 April 2013 http://www.abc.net.au/radionational/programs/drive/australian-population-to-top-23-million-tonight/4646722.

² Kevin Rudd, 'Building a big Australia: Future Planning Needs of our Major Cities' (Speech delivered to the Business Council of Australia, 2009 Annual Dinner, 27 October 2009)

<http://www.bca.com.au/Content/101620.aspx>.

³ Michael Freeman (ed), *Lloyd's Introduction to Jurisprudence* (Sweet & Maxwell, 8th ed, 2001) ch 3.

there are too many people and not enough resources. The principal resource is food and the question is: how many people are too many for the available food supply? Some would say that we are at the tipping point now, others say we are heading toward it at an alarming rate. Needless to say, some observers think we have already passed the safe carrying capacity of the planet and we are continuing to exist by using our limited resources at an unsustainable rate. We are living on borrowed time.⁴ This was the central thesis behind books such as Tim Flannery's *The Future Eaters* (1994) and Jared Diamond's *Collapse* (2005).⁵ There are many case studies on whole civilisations collapsing after exhausting their resources, such as Easter Island in the eastern Pacific Ocean and Cahokia in the USA, but these are localised events.⁶ Of concern for our present situation is that we are looking at a global collapse of our civilisation due to over exploitation of limited resources.⁷

This problem was first recognised in the works of Thomas Malthus when, in 1798, he wrote *An Essay on the Principle of Population*.⁸ Here he recognised that populations will tend to grow geometrically while the food supply will grow arithmetically, so population numbers will increase at a much greater rate than increases in the food supply. Why do these occur at two different rates? Because an increase in food production could only be achieved through difficult processes such as clearing more land and implementing more intensive productions techniques, while population growth could be much more rapid with typical families consisting of more than the two children per couple required to sustain population numbers.

Malthus contended that populations were kept in check through behavioural choices. He proposed two checks within this system — 'preventative' measures such as moral restraints on population growth (abstinence or delayed marriage etc.) and 'positive' checks (disease, starvation, war and so on). Without these restraints population growth

⁴ Global Footprint Network < http://www.footprintnetwork.org/en/index.php/GFN/>.

⁵ Tim Flannery, *The Future Eaters* (Reed Books, 1994); Jarad Diamond, *Collapse: How Societies Choose to Fail or Succeed* (Penguin Group, 2005).

⁶ See M Scott Taylor and James A Brander, 'The Simple Economics of Easter Island: A Ricardo-Malthus Model of Renewable Resource Use' (1998) 88.1 *The American Economic Review* 119 for an economic modelling of this collapse; T. Hunt, 'New evidence points to an alternative explanation for a civilization's collapse' (2010) 94 *Scientific American* 412; Margaret Scarry (ed), *Foraging and Farming in the Eastern Woodlands* (University of Florida Press, 1993) 206-231; Marvin Harris, *Cannibals and Kings* (Random House, 1977).

⁷ Jarad M Diamond, *Collapse: How Societies Choose to Fail or Succeed* (Penguin Group, 2005).

⁸ Lauren F Landsburg, *Thomas Robert Malthus: The Concise Encyclopedia of Economics* (2008) Library of Economics and Liberty http://www.econlib.org/library/Enc/bios/Malthus.html.

would lead to a catastrophe of some description, causing a collapse in the population to a more sustainable size. Malthus thought that humans do not overpopulate to the point of starvation, only because people change their behaviour in the face of economic incentives.⁹

The ideas of Malthus evolved into the school of neo-Malthusianism where advocates argue for various measures to curb population growth, usually through widespread family planning and better access to contraceptives.¹⁰ But critics have pointed to the failure of Malthusian predictions because of increased agricultural production and other technological advances that have tinkered with the food supply of the equation. This has been a recurring theme of the debate on population; we can support the geometric increase of the population if we also increase food production geometrically through artificial measures.

Two books published in 1948 kept the Malthusian nightmare alive. *Our Plundered Planet* by Fairfield Osborn and *Road to Survival* by William Vogt, both carried dire warnings for the future of humanity based on Malthusian predictions of unchecked population growth and limited food resources.¹¹ Although neither book was particularly popular, they are credited with both reigniting the population debate after World War Two and inspiring Paul Ehrlich to write *The Population Time Bomb* in 1968.¹²

Ehrlich went out on a limb predicting massive starvation in the 1970s and 1980s caused by a growing population. But once again, the predictions were thwarted by the Green Revolution of the 1960s and 1970s, which saw many third world countries greatly increase their food production. There were famines in this period, the most widely known being the Ethiopian disasters of the 1980s, which inspired Bob Geldof into organising Live Aid, but Ehrlich had predicted much greater disasters that did not happen in this period. Ever the pragmatist, Ehrlich still stands by his earlier predictions, albeit modified into future calamities over longer timeframes.

⁹ Ibid; It was while reading Malthus that Charles Darwin realised the principle of natural selection, that huge numbers of off-spring cannot be supported by the limited resources available thus leading to a competition for resources and a struggle for existence.

¹⁰R Abramitzky and F Braggion, *Malthusian and Neo-Malthusian Theories* Stanford University

http://www.stanford.edu/~ranabr/Malthusian%20and%20Neo%20Malthusian1%20for%20webpage%20040731.pdf>.

¹¹Fairfield Osborn, *Our Plundered Planet* (Little, Brown and Company, 1st ed, 1948); William Vogt, *Road to Survival* (1948).

¹²Paul Ehrlich, *The Population Time Bomb* (Buccaneer Books, 1968).

In 1972 *The Limits to Growth* was published which looked at computer modelling of unchecked economic and population growth with finite resource supplies.¹³ Commissioned by the Club of Rome it looked at five variables, world population, industrialization, pollution, food production and resource depletion, and assumed that exponential growth most accurately described these patterns of increase. *The Limits to Growth* also assumed that the ability of technology to increase the availability of resources grows only linearly, in line with the original thesis of Malthus.¹⁴ Two of the scenarios presented in *The Limits to Growth* ended in "overshoot and collapse" of the global system by the mid to latter part of the 21st century, while a third scenario resulted in a "stabilized world".¹⁵ *The Limits to Growth* sold over 50 million copies worldwide and still remains influential in current debates around population issues.

III NATURAL LAW

While lawyers may be excused for not knowing about Malthus or the nuances of his legacy to debates about population, lawyers should be interested in population. After all, it has a bearing on almost all aspects of their work and all lawyers have studied natural law as part of their training whether in a course on jurisprudence, legal theory, or introduction to law. At a general level, lawyers in private practice depend on economic growth for business and economic growth is linked to population growth.¹⁶ Economic growth is starting to receive some attention from lawyers in the context of environmental sustainability, but population is overlooked or ignored.¹⁷ At the day-to-

¹³ D H Meadows, D L Meadows, J Randers and W W Behrens III, *The Limits to Growth* (Universe Books, 1972).

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Leanne Mezrani, 'Down and out ... of the box', *Lawyers Weekly* (online) 28 February 2013 <www.lawyersweekly.com.au/features/down-and-out-of-the-box>; Brigid O'Gorman, 'Economic pressures squeezing the profession', Lawyers Weekly (online) 8 August 2013

<http://www.lawyersweekly.com.au/news/economic-pressures-squeezing-profession>; Matthew Kidman, 'If our population doesn't grow, the economy stalls', *Sydney Morning Herald* (online) 16 July 2012 < http://www.smh.com.au/business/if-our-population-doesnt-grow-the-economy-stalls-20120715-2246h.html>.

¹⁷ Lawyers For A Sustainable Future <http://www.sustainablelawyers.org/>; Washington Lawyers for Sustainability <http://www.washingtonlawyersforsustainability.org/>; Thomas Bourne, 'Why lawyers have a part to play in sustainable development', The Guardian (online) 16 February 2012

<http://www.theguardian.com/sustainable-business/blog/sustainable-business-development-law>; 'Sustainability alliance formed', *Lawyers Weekly* (online) 30 July 2010

<http://www.lawyersweekly.com.au/news/sustainability-alliance-formed>; 'Going green: Case study - Allens Arthur Robinson', *Lawyers Weekly* (online) 3 February 2011

<www.lawyersweekly.com.au/features/going-green-case-study---allens-arthur-robinson>; Claire Chaffey and Briana Everett, 'The business of going green: why law firms should reduce their carbon footprints',

day level, population has a bearing on specific areas of practice, such as migration and refugee law, and planning and environment law, amongst many other areas of practice.¹⁸

Lawyers learn from jurisprudence that justice might not always coincide with law. They learn this along with a distinction between laws of nature and human-made law. Put another way, a distinction between natural law and positive law. Natural law might be thought of as "God's will", or laws of biology and physics existing independently of what humans pronounce law to be law. What humans pronounce law to be is known as positive law. The relationship between law and justice, and natural law and positive law is contentious and has occupied some of the greatest minds stretching back to Greek civilisation.¹⁹ The works of Malthus, as discussed here, are a classic example of natural law and the debates about what natural law might be.

Two jurisprudential issues are relevant to Malthus's population principle. The first is whether or not natural law exists independently of human reason as immutable laws of nature or whether natural law is the result of anthropomorphic judgments about what is natural. In other words, was Malthus's principle of population a physical truth or a moral proposition? The second concerns another dualism, which is the extent to which humans are separate to nature or part of nature and therefore subject to natural law. It is the second jurisprudential issue, which is of greatest concern here. Central to this second issue is the contribution of Locke, which most lawyers would be familiar with.

In his Second Treatise of Government, Locke presents the case for the emancipation of his emerging middle class from the shackles of the Church, the Monarchy, and the landed aristocracy, giving ideological birth to our modern capitalist way of life.²⁰ Locke argued that while God had given the earth and its fruits to mankind in common, man was free to privatise or appropriate common property by mixing his labour with it; a moral fairness argument aimed at rewarding those who work. However, Locke also understood that this natural law argument would pose a risk to nature if pursued to its ends:

Lawyers Weekly (online) 3 February 2011 <www.lawyersweekly.com.au/features/the-business-of-going-green-why-law-firms-should-r>.

¹⁸ Gavin W Jones, 'An Australian Population Policy' (Research Paper No 17, Parliamentary Library, 1996-7); Graeme Hugo, 'Globalization and Changes in Australian International Migration' (2006) 23(2) *Journal of Population Research* 107; Stephanie Quine, 'Lawyer slams tightening of 457 visa program' *Lawyers Weekly*, 14 March 2013.

¹⁹ Michael Freeman (ed), *Lloyd's Introduction to Jurisprudence* (Sweet & Maxwell, 8th ed, 2001) 83.

²⁰ John Locke, *Second Treatise of Government* (Hackett Publishing, first published 1690, 1980 ed).

It will perhaps be objected to this, that if gathering the acorns, or other fruits of the earth, etc makes a right to them, then any one may ingross as much as he will. To which I answer, not so. The same law of nature, that does by this means give us property, does also bound that property too.²¹

He therefore placed three limits on his justification for private property. Locke's first limitation was that a man should only take 'as much as any one can make use of before it spoils' and beyond this is more than his share and belongs to others, known as the "spoilage limit".²² His second limit, known as the "labour limit", was that 'the rightful appropriation is limited to the amount a man can procure with his own labour'.²³ And his third limitation, known as the "sufficiency limit" held that a man may appropriate only as much as he leaves 'enough, and as good' for others.²⁴ Still, Locke was no ecologist and his natural law justification was one that could be transcended by money and markets. He claimed that these natural law limits to the appropriation of common property would not lead to disaster because the privatisation and development of land would lead to more prosperity than if the land was left in common:

[T]hat he who appropriates land to himself by his labour, does not lessen, but increase the common stock of mankind: for the provisions serving to the support of humane life, produced by one acre of inclosed and cultivated land, are... ten times more than those which are yielded by an acre of land of an equal richness lying waste in common. And therefore he that incloses [sic] land, and has a greater [at 23] plenty of the conveniences of life from ten acres, than he could have from an hundred left to nature, may truly be said, to give ninety acres to mankind.²⁵

Wastage would be avoided because people would trade what they could not use or did not want for money.²⁶ This argument persists today and is often advanced by the mining industry amongst many others.²⁷ It is the argument that development leads to prosperity through the trickle-down effect and do not tax the industry because it risks

²¹ Ibid 20.

²² Ibid 20-1 [31].

²³ Ibid 21 [32].

²⁴ Ibid 21 [33].

²⁵ Ibid 23-4 [33].

²⁶ Ibid 23, 27-8 [33].

²⁷ Australian Broadcasting Corporation, 'What's Yours Is Mine', *Four Corners*, 7 June 2010

<http://www.abc.net.au/4corners/content/2010/s2920792.htm>; Richard Denniss, 'It's all smiles for some, but mining boom benefits don't "trickle down", *The Conversation*, 5 September 2011.

<http://theconversation.com/ 5 September 2011 http://theconversation.com/its-all-smiles-for-some-but-mining-boom-benefits-dont-trickle-down-3138>.

killing the golden goose.²⁸ It is also the argument that technological development will continue to allow population to grow and living standards to improve despite environmental pressures.²⁹

But is this realistic? Was Locke correct first time around before he claimed that money and markets would save us from natural law limits? What can lawyers tell us about population based on their training and practice?

IV A LOOMING CRISIS?

The factors coming into play on a global scale are the looming peaks in resource production and use. An abundance of phosphate and its use as an agricultural fertiliser for example has, until now, been instrumental in making the world's food bowls more productive than ever. But now the supplies of cheap and easily accessible phosphate are disappearing.³⁰ Ingenious methods of capturing phosphate from human urine are being seriously investigated in some countries, including Australia, to try and replace the millions of tons that were quarried out of the ground over the last half-century.³¹

Peak oil, the point at which consumption of oil out strips the supply is either here now, will be here soon or may have already been passed depending on whom you speak to. This peak has been deferred somewhat by the expanding of oil reserves due to new techniques of oil and gas extraction. But regardless of the stocks available, we have passed a peak for using fossil fuels, a peak determined by the damage such use causes to the environment. We must reign in and curb our use of fossil fuels if we are to have any

<http://www.smh.com.au/national/pm-determined-to-spread-mining-spoils-20120531-1zklv.html>; "Resource Tax Splits the Ranks of Business", *Sydney Morning Herald* (online), 22 February 2010

³⁰ David Gabel, *The Coming Crisis in Phosphate Supplies* (20 July 2011) Oil Price.com

²⁸ Nick Bryant, 'What Gina Wants: Gina Rinehart's quest for respect and gratitude', *Monthly*, May 2012, No. 78 <http://www.themonthly.com.au/issue/2012/may/1340006623/nick-bryant/what-gina-wants>. There Bryant quotes Rinehart as saying: 'That flight changed my parents and our lives, and initiated a great wave of prosperity, which flowed to the state of West Australia, to the federal government, directly to companies and their employees involved in the industry and, invisibly, to every person in Australia.' Concerning the proverbial goose that lays the golden egg, see Andrea Hayward and Greg Roberts, 'PM determined to spread mining spoils', *Sydney Morning Herald (Online)*, 31 May 2012

<http://www.smh.com.au/business/resource-tax-splits-the-ranks-of-business-20100221-onvc.html>. ²⁹ Paul Toohey, 'Andrew Forrest, Gina Rinehart blueprint to populate Australia's north', *News Limited Network* (Online), 1 April 2013 <http://www.news.com.au/national-news/andrew-forrest-gina-rinehart-blueprint-to-populate-australias-north/story-fncynjr2-1226609870393>.

<http://oilprice.com/Metals/Commodities/The-Coming-Crisis-In-Phosphate-Supplies.html>. ³¹ It's Liquid Gold, UTS Newsroom (21 February 2013) <http://newsroom.uts.edu.au/news/2013/02/it-sliquid-gold>.

chance of avoiding the more dire consequences of global warming.³² For whatever reason, the prognosis is that the days of cheap fuels for the tractors and agricultural machinery that helped make farmland more productive are a thing of the past.

Even 'peak arable land' is an approaching reality as we exhaust what areas are available to grow crops.³³ There is only so much of the earth's surface that is suitable for growing crops and we may already have exceeded that area or exhausted the soils there. Elsewhere arable land is disappearing under urban sprawls, being eaten up by encroaching deserts or turned to wastelands through rising salt in the water table. We are simply running out of places to grow the food we need to sustain the current population and that does not account for the new arable land that will be needed to produce the food for the expanding population.

Add to the peak problems global changes in climate and ecology and it appears that the anti-Malthusian escape clause of simply producing more food for an ever-growing population has now been closed off. We have used our only "get out of jail free" card.

In mid-2012 Jeremy Grantham, the British investor, Co-founder and Chief Investment Strategist of the asset management firm Grantham Mayo Van Otterloo (GMO), was quoted at length expressing concerns for the future of food production across the planet.³⁴ GMO is one of the largest fund managers in the world, and Grantham specialises in analysing global economic forecasts — and his global assessment is not good. He argues that we will not be able to meet the global demand for food in 2050 given the estimated increase in food consumption. He predicts that rising prices will make food too expensive for hundreds of millions of people.

V RECENT DEBATE — WHERE ARE THE LAWYERS?

The Royal Institution of Australia (RiAus) had a detailed public discussion about population growth late in 2011 when the global population passed 7 billion, and the question of population for Australia has been polarised between the neo-Malthusians

³² P Newell and M Paterson, *Climate Capitalism: global warming and the transformation of the global economy* (Cambridge University Press, 2010).

³³ Anthony Judge, *Checklist of Peak Experiences Challenging Humanity* (12 August 2008) Laetus In Praesens http://www.laetusinpraesens.org/musings/peaks.php.

³⁴ Barrie Dunstan, 'Credit crisis bad, food crisis worse', *Australian Financial Review* (online), 3 August 2012 <http://www.afr.com/p/markets/market_wrap/credit_crisis_bad_food_crisis_worse_uE0XnS7acaqPzd5TJ UYwH0>.

and the unrestricted population growth advocates.³⁵ An Australian Population Policy research paper published in 1997, found that estimates for a sustainable population size varied from 5 to 150 million people, but that there ought to be a natural levelling off at around 23 million.³⁶ On 23 April 2013 the population of Australia reached 23 million people.³⁷

There has been a push from people, such as Dick Smith, to take population policy seriously as a national issue and set discussions on what is an appropriate population for Australia within the machinations of Federal Government. To date, of the four major political parties in Federal politics, only the Greens have a policy on population. The others — Labor, Liberal and the Nationals do not appear to have a specific population policy, but do have other policies that contribute to issues surrounding a sustainable population. The Greens' policy does not set numbers of people but urges for population pressures on natural resources to be lightened to a sustainable level. Most importantly, it advocates for population issues to be determined by environmental parameters and not economic pressures. Occasionally individual politicians may make statements about a desired population for Australia, for example see Julia Gillard on a "Big Australia", but these are not made within a broader policy setting with a strongly supported evidence base.³⁸ Clearly a more widespread and detailed discussion concerning population issues needs to happen both within the halls of power as well as across the broader Australian community.

In July 2012 the Australian Academy of Science brought together many of Australia's brightest minds on population matters for the 2012 Theo Murphy High Flyers Think Tank in Adelaide. Their topic of conversation was *Australia's Population: shaping a vision for our future*. These were top young scientists and social scientists from across disciplines and around Australia. They met over two days to discuss who will we be?

³⁶ Gavin W Jones, 'An Australian Population Policy' (Research Paper No 17, Parliamentary Library, Parliament of Australia, 1996-7)

³⁵ Science Behind The Headlines, *Beyond Seven Billion: Paul Willis interview with Tom Bourne, Barney Foran, Graeme Hugo, Clare Peddie, Udoy Saikia and Tory Shepherd* (6 December 2011) Royal Institution of Australia http://riaus.org.au/events/science-behind-the-headlines-beyond-seven-billion/.

<http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/r p/RP9697/97rp17>.

³⁷ Australia to Reach 23 Million by 23 April 2013 (19 June 2013) Australian Bureau of Statistics http://www.abs.gov.au/AUSSTATS/abs@.nsf/mediareleasesbyReleaseDate/A959C7C902683284CA257 B550015D8D0?OpenDocument>.

³⁸ *Gillard Shuts Door on 'Big* Australia' (12 August 2010) ABC News 24

<a>http://www.abc.net.au/news/2010-06-27/gillard-shuts-door-on-big-australia/884050>.

How will we share activities and resources? What will we do? And how shall we live in our habitat? Recommendations arising from the gathering were published in a report released in late 2012.39

While the best and brightest early career researchers spanned disciplines including economics, social sciences, ecology, biology and technology to consider how 'a vision for Australia's future might be shaped by population', notably absent were legal academics at a forum where it was recognised that:

Whilst science can inform what we do, the decisions we take will be affected by what we value. The work groups expressed this by articulating shared values that could help guide the development of an Australia we would prefer to see. These commonly shared ideas were equity, sustainability, opportunity, diversity, justice and agency.40

And:

These are questions not just for scientists, but for everybody, therefore the key recommendation of the Think Tank was for an informed national conversation on Australia's future population.⁴¹

The report agreed, as a fundamental basis of discussion, that no optimal population size should be sought. Wary of controversy, the report chose to avoid an ideal population number noting:

Given the divisive and nature of the current national debate, consideration of 'population' should be abandoned as a beginning for discussion and alternative points such as consumption and active contributory or productive ageing could be used instead.42

And adopting the assumption:

As a fundamental basis of discussion, it was agreed that no optimal population size should be sought. There is widespread recognition that no such (scientific)

³⁹ Theo Murphy High Flyers Think Tank 2012, 'Australia's Population: Shaping a vision for our future' (Australian Academy of Science, Adelaide, 26-27 July 2012) 2

<www.science.org.au/events/thinktank/thinktank2012/documents/recommendations.pdf>. ⁴⁰ Ibid.

⁴¹ Ibid.

⁴² Ibid.

optimum exists and there are very few effective mechanisms that can be used to manage population size. There was also a consensus that continuous growth, either of population or the economy, will not in itself resolve the significant challenges facing Australia. Rather, growth was seen by participants as bound up with other complex and changing dynamics that need to be better understood.⁴³

Generally it was felt that no such scientific optimum exists and there are very few effective mechanisms that can be used to manage population size. There was also a consensus that continuous growth, either of population or the economy, will not in itself resolve the significant challenges facing Australia. Rather, growth was seen as being bound up with other complex and changing dynamics that need to be better understood. Finally, almost all participants were concerned that scientists and science have been relatively absent from debates on Australia's future population. This is the central thesis of this article: science has a crucial role defining and describing the impacts of population growth on this country as well as assisting in providing solutions to challenges associated with a changing and growing population. As the effects and impacts of population growth spill over into areas of law, it is appropriate that lawyers and legal professionals become acquainted and familiar with the science that underpins these issues.

The key recommendation of the Think Tank was for an informed national conversation on Australia's future population. A national conversation initiated by universities and researchers must be open to a broad cross-section of communities across urban and rural Australia. Further, it was accepted that it is not for scientists to determine the role of such different possibilities in our future. Instead, science can be used to underpin the principles that ought to inform a proper public discussion, that is, the national conversation.

So where are the lawyers? There is a distinct paucity of engagement by legal practitioners and research by legal academics concerning population. A search of the web research repository Social Science Research Network using keywords "law" and "population" demonstrates the paucity.⁴⁴ Plenty of lawyers write about the

⁴³ Ibid.

⁴⁴ Social Science Research Network < http://www.ssrn.com/>.

environment, and while scientists could do more to pursue population issues, lawyers might want to start to contribute.

The fallout from population pressures on resources will affect different areas of law in different ways. Changing pressures on land-ownership and use caused by population growth will mean a reassessment of some areas of property law. Spreading dwindling resources across an increasing population will affect a number of areas of commercial law. The migration of people from countries with less resources and higher populations will affect international law, a phenomenon that is currently playing out in the Asylum Seeker debate.⁴⁵ In fact the variety of impacts of population growth on the laws of Australia is so diverse that the underlying, unifying cause may escape the attention of legal professionals dealing with single issues in isolation. This article aims to reveal this pattern and refocus the attention of the law on to that much wider issue.

VI CONCLUSION

Lawyers spend much of their day addressing issues that stem from the tensions of a growing population. Population has a direct bearing on almost every aspect of law, for example environmental law, refugee and migration law, family law, land and resources law, administrative and constitutional law, and so on. Lawyers also have a long natural law tradition and are familiar with Locke's natural law justification for capitalism and his "natural law limits". So it is surprising there has been virtually no engagement by lawyers in debates about population, which tends to turn on the merits of Malthus' natural law on population as well as Locke's natural law limits. It is not only surprising, it is also a concern because like other disciplines that already grapple with population questions, lawyers will need to address the issues posed by a growing population.

The sustainability of both global and national populations is brought into question as increasing demands on environmental resources cannot be met. This is at the core of the argument of a population crisis. As we proceed into an era of environmental debt caused by increasing population, we will need to pay more attention to the issues surrounding that debt. This is particularly so within the legal professions where looming questions

⁴⁵ Ehhsan Veiszadeh, Economic Migrants Coming by Boat: Carr (27 June 2013)

http://news.smh.com.au/breaking-news-national/economic-migrants-coming-by-boat-carr-20130627-20yne.html>

related to population growth includes legal issues, such as property and resource rights, human rights and conflicts with natural law. It is hoped that this article will encourage those discussions to take place.

REFERENCE LIST

A Articles/Books/Reports

Diamond, Jarad, *Collapse: How Societies Choose to Fail or Succeed* (Penguin Group, 2005) Ehrlich, Paul, *The Population Time Bomb* (Buccaneer Books, 1968)

Flannery, Tim, The Future Eaters (Reed Books, 1994)

Freeman, Michael (ed), *Lloyd's Introduction to Jurisprudence* (Sweet & Maxwell, 8th ed, 2001)

Harris, Marvis, Cannibals and Kings (Random House, 1977)

Hunt, 'New evidence points to an alternative explanation for a civilization's collapse' (2010) 94 *Scientific American* 412

Locke, John, *Second treatise of Government* (Hackett Publishing, first published 1690, 1980 ed)

Osborn, Fairfield, *Our Plundered Planet* (Little, Brown and Company, 1st ed, 1948)

Scarry, Margaret (ed), *Foraging and Farming in the Eastern Woodlands* (University of Florida Press, 1993) 206-231

Taylor, Brander, 'The Simple Economics of Easter Island: A Ricardo-Malthus Model of Renewable Resource Use' (1998) 88.1 *The American Economic Review* 119

Vogt, William, Road To Survival (1948)

Young, Robert, Darwin's Metaphor (Cambridge University Press, 1985)

B Other

ABC Radio National, 'Australian population to top 23 million tonight', *RN Drive*, Tuesday 23 April 2013 http://www.abc.net.au/radionational/programs/drive/australian-population-to-top-23-million-tonight/4646722

Australian Broadcasting Corporation, 'What's Yours Is Mine', *Four Corners*, 7 June 2010 http://www.abc.net.au/4corners/content/2010/s2920792.htm

Bryant, Nick, 'What Gina Wants: Gina Rinehart's quest for respect and gratitude', *Monthly*, May 2012, No 78

<http://www.themonthly.com.au/issue/2012/may/1340006623/nick-bryant/whatgina-wants>

Denniss, Richard, 'It's all smiles for some, but mining boom benefits don't "trickle down", *The Conversation*, 5 September 2011 < http://theconversation.com/its-all-smiles-for-some-but-mining-boom-benefits-dont-trickle-down-3138>

Dunstan, Barrie, 'Credit crisis bad, food crisis worse', *Australian Financial Review* (online), 3 August 2012

<http://www.afr.com/p/markets/market_wrap/credit_crisis_bad_food_crisis_worse_uE 0XnS7acaqPzd5TJUYwH0>

Hayward, Roberts, 'PM determined to spread mining spoils', *Sydney Morning Herald* (online), 31 May 2012, <http://www.smh.com.au/national/pm-determined-to-spread-mining-spoils-20120531-1zklv.html>

Jones, W Gavin, 'An Australian Population Policy' (Research Paper No 17, Parliamentary Library, Parliament of Australia, 1996-7)

<http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentar y_Library/pubs/rp/RP9697/97rp17>

Landsburg, F Lauren, *Thomas Robert Malthus: The Concise Encyclopedia of Economics* (2008) Library of Economics and Liberty <http://www.econlib.org/library/Enc/bios/Malthus.html>

'Resource tax splits the ranks of business', *Sydney Morning Herald* (online), 22 February 2010 <http://www.smh.com.au/business/resource-tax-splits-the-ranks-of-business-20100221-onvc.html>

Rudd, Kevin, 'Building a big Australia: Future Planning Needs of our Major Cities' (Speech delivered to the Business Council of Australia, 2009 Annual Dinner, 27 October 2009) <http://www.bca.com.au/Content/101620.aspx>

Science Behind The Headlines, *Beyond Seven Billion: Paul Willis interview with Tom Bourne, Barney Foran, Graeme Hugo, Clare Peddie, Udoy Saikia and Tory Shepherd* (6 December 2011) Royal Institution of Australia http://riaus.org.au/events/science-behind-the-headlines-beyond-seven-billion/

Social Science Research Network < http://www.ssrn.com/>

Theo Murphy High Flyers Think Tank 2012, 'Australia's Population: Shaping a vision for our future' (Australian Academy of Science, Adelaide, 26-27 July 2012) <www.science.org.au/events/thinktank/thinktank2012/documents/recommendations. pdf>

Toohey, Paul, 'Andrew Forrest, Gina Rinehart blueprint to populate Australia's north', *News Limited Network* (online), 1 April 2013 <http://www.news.com.au/nationalnews/andrew-forrest-gina-rinehart-blueprint-to-populate-australias-north/storyfncynjr2-1226609870393>