

New Zealand's population and development path

Unravelling the 'when' 'how' and 'why'

Demographic regimes and national identity

New Zealand's demographic regime, moderate to high population growth for most of the last 170+ years, has shaped 'nation building', especially self-identity (Pool 2016). Increasing population numbers, the quantum of demography, is the value 'writ large' in our consciousness, as an immigrant country with one of the highest rates of natural increase (births minus deaths) among western developed countries (WDCs)¹. Yet, the spectre of slower or negative demographic rates has now appeared for some regions, and even nationally (Jackson and Cameron 2017), invoked popularly by the application to various districts of the inexact and pejorative term 'zombie towns'. Changes to places

and people occur typically because of complex forces of population and development, or natural events, outside local control. The trends in the different factors producing sub-national demographic changes have been identified and parsed in other articles in this issue (Jackson and Brabyn, *infra*; Cameron *infra*).

Slower growth and even population decline are not new in Aotearoa's history, as nineteenth century Māori, and Pākehā in the 1930s depression show. But, with the significant exception of Victorian era Māori, this was transitory. The Marsden programme, to which this article contributes, asks: is New Zealand at an inflection point of a continuing and deeper decline, with a new mix of factors, with subnational decreases a key

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component that might be an ‘early warning’ sign of negative national growth? The question here is whether the population dynamics and structures unfolding since 1970/1980 simply represent continuities (or accelerations) of on-going past trends, or whether instead they are far more profound – a multi-factorial rupture, across major segments of the demographic system and its development co-variate? Or, more sceptically, are they simply an artefact of the first-time availability of digitalised, anonymised, but individual level data sets that give an appearance of real change?

The key question is whether or not Aotearoa has passed a genuine inflection point, which would signal a deterministic spiral towards eventual widespread sub-national, and, ultimately, national decline. Alternatively, if the inflection point is more apparent than real, then could we expect to go back – *grosso modo* – to what we were before 1980/1970, when growth was higher, but the population overwhelmingly Māori or Pākehā². This second scenario seems unrealistic because of the diversified ‘peopling’ streams since 1980, carrying different normative systems from those operating between contact (1769) and then. Prognosis is difficult because there are no national precedents in our history since Pākehā dominated the country’s demographic regime – from circa 1860. Nevertheless, we are not alone in this recent transition – Australia, Canada and the United States face similar situations, although we are closer to Canada and Australia than the United States in terms of proportions of foreign-born and Asian, and well above European comparators. We have the additional factor of a large Pasifika population.

This article argues that the trends seen since the 1970s are period-bound – unique to this one era in New Zealand’s history, particularly for national material factors, demographic, economic and social systems. Yet, perhaps counterbalancing these are some enduring factors, especially values, and related material factors. The latter are easier to identify and study, and even measure, but values and norms are by their very nature difficult to delineate and document

empirically. Nevertheless, as Prue Hyman (2014: 90) argues, ‘Values and norms underlie all economic and social systems...’,³ and this is certainly true for the demographic system as well, because population change is very much a function of both individual and collective ideas. For norms, it is useful to distinguish between what people do – norms as ‘modal’ behaviours, which can be analysed, particularly by looking at demographic trends, which are simply the sum of what groups are doing in their daily lives – and norms as ‘model’ behaviours, the explanatory variables for much of sociology and anthropology, which cannot be quite so easily observed. This is not just a handicap for sociology/anthropology: the dominant explanatory variables for economists, ‘market forces’, are equally as nebulous, so that even the

reductionist as the drivers of change are complex and interrelated rendering it impossible to disentangle them; this is not to eschew ‘causality’ when explaining ‘variance’ as, for example, in regression analyses for narrowly defined situations, but such narrow applications do not unravel complex interactions. If there were an overriding determinant, it might be the values-system, but as noted, norms are unobservable.

Population change is interrelated with development in all its dimensions – cultural, economic, health and social. A model, ‘Total Social Production’, outlined below, provides a wider understanding of these interlocking transitions, and was elaborated to analyse African development. Operationalised for New Zealand by Jackson (1998) to study ethnic stratification, it has many attributes

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great Adam Smith had to refer to the ‘Invisible hand, the unobservable market force that helps the demand and supply of goods in a free market to reach equilibrium automatically’ (www.dictionary.com/browse/invisible-hand).

When analysing the recent decades, a simplistic, oft-cited explanation of the observable changes is that they are economically determined, by (i) globalisation and financialisation⁴, or (ii) some recent, seminal exogenous political-economic event (e.g. Britain entering the European Union, or now its manoeuvring to ‘Brexit’). The causes and effects of these are often measured by changing patterns of employment and shifts in the industrial sectoral labour force, say the explosion of the Finance, Insurance, Real-Estate (FIRE) sector. This article questions this explanation, showing that population changes, which, to reiterate, are shifts in modal social behaviours, preceded economic, recently, post-1970, and historically. This sequencing implies causality, but being deterministic is

essential for the explanation of population change in relation to development and covers most factors of production and reproduction. Jackson’s ‘acclimatisation’ of the model is opportunistic, avoiding the need to test its applicability, particularly apposite when reviewing Aotearoa’s temporal sequencing of multi-factorial changes.

The prime role of this paper is to outline history – how we got to where we are: prognosis is left to other essays in this issue. Since contact in 1769, Aotearoa has passed through three eras, the transformations between which have followed a sort of sequence, with demographic changes preceding economic. Fundamental changes have come from a fuzzy mix of demographic, economic, social and technological shifts, some of which have been ‘game-changers’, as against shocks with short-run effects. The most recent era is covered by this Marsden Programme, which plays a seminal role in documenting and theorising about what is unfolding as a major question globally.

At present neither a more comprehensive meta-synthesis of findings exists, nor a sustainable theory on its 'how' and 'why'; the 'when' seem more concrete – since the 1960s-1980s seems to be a common experience across the WDCs – but that belies real momenta, which may stretch back to roots that are earlier (e.g. Merlin 1971, 2009; Johnson et al 2015; Pace and Mignolli 2016).

Towards an analytical framework: 'Total Social Production'

No systematic corpus of theory exists on sub-national declines, although observations of particular factors and situation-specific interpretations show that this is an important issue across

although health development is valorised. Unfortunately, neo-liberal development economics downplayed 'health development' as a vexing demand-side, fiscal burden, best privatised. Recently, however, mainstream economics sees health as essential for productivity (World Bank 1993, 2007; Stiglitz, 2008; Deaton 2013: Chapt 1).

Integrating demographic factors into development requires models that recognise that 'neither production [and thus the remainder of the economy] nor reproduction [and the rest of demography] can take place in the absence of the other...' (Jackson 1998: 30, drawing on Cordell, Gregory & Piché (1994), in African population studies, and saw

of economic primacy reflects a general failure to adequately conceptualise and integrate the generational replacement of labour power'. This also applies to 'the genesis of the consumer population, without which capitalist production would have rapidly ceased, and capitalism with it' (Jackson 1998: 30-31). Her arguments point to the impacts of momentum effects, of cohort flows, frequently analysed in mortality, fertility and numeric ageing. But, momenta also have wider roles: they constitute the fundamental structural factors of population and development. Such trends are not like those, say, of stock-markets or 24-hour news cycles, both of which fluctuate dramatically, almost minute by minute; instead, structural forces generate momenta that endure and are irreversible. For example, a seminal action of South Africa's apartheid was coercively to block 'urban influxes' of Blacks, assigning them to non-metropolitan 'Bantustans'. Even so, the regime failed to combat natural forces, and, since apartheid ended, agglomeration has accelerated, with 'townships', such as those neighbouring Cape Town, growing rapidly (Pool 2014). Yet, change can be sudden, even unforeseen; the decision by an absentee corporation to close a plant may affect regional development (Cochrane & Pool *infra*). Similarly, migratory 'churning' in New Zealand's migration patterns in the 2010s, has an impact culturally, socially and economically (Pool 2015a, 2016).

To operationalise the total social production model, it is necessary to recognise the recent dominance and expansion of the U.S. FIRE-sector (see former Republican strategist, Phillips, 2006; Aotearoa, Kelsey 2015). Its financial sub-sector oils development, while real-estate facilitates residential development. But, often the FIRE-sector diverts investment from productive activities, has a major role in agglomeration, positive or negative, and is an engine of sub-national decline. It also drives consumption, yet may be negative: Auckland's housing for example.

Jackson, drawing on Cordell et al, identifies the following traits of total social production (paraphrasing Jackson 1998: 31-32)⁷. 'Social organization' depends on both production and social

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WDCs. Moreover, conventional models in population and development have limited utility, as they are factor-specific, deterministic and uni-directional. For example, Frank Notestein's (1945) demographic transition, really natural increase, excludes long-term natural decrease or migration, both pertinent to sub-national declines (Casterline 2003; see also epidemiological transition, Omran 1982; industrial sector transformation, Chenery & Syrquin 1975; and Maddison 1982). The mobility transition model is not merely deterministic, but confounds migration with population redistribution (e.g. urbanisation). Focusing on internal migration makes the model less applicable to the effects of international movements (Bedford & Pool 2004)⁵. The World Bank (2009), extolled agglomerations, downplayed the inverse, regional declines, and simplistically attributed causation to 'market forces'. Richard Nelson's (1956) powerful model on 'low level equilibrium traps in underdeveloped economies' may have application to marginalised regions⁶ but it does not cover demographic change,

'reproduction of the labour force', often forced or indentured, as vital for labour-intensive colonial production – mining, plantations, public infrastructure). Jackson focused on Aotearoa's ethnic stratification, constructing a model sufficiently complex to cover most of the issues being dealt with here. But, it needs 'tweaking' at its edges – for example, adding child survivorship and seeing migration as merely one process producing geographic re-distribution. Equally, recognition must be given to structural economic factors. It already covers economic factors – employment, the labour force, consumption – but macro-economic drivers provide the underlying momenta of sub-national changes.

Total social production, with its roots grounded in social theory, implicitly underpins the classical population and development literature. Above all, 'economic production and demographic reproduction are both material processes, and that neither dimension can be subordinated to the other... [T]he problem

reproduction, which includes fertility and child survivorship. In low mortality populations, fertility drives levels of natural increase, but, recently, where regional age-structures are disproportionately older, natural decrease from old-age mortality is seen (US, Europe: Johnson et al 2015; NZ: Jackson & Brabyn *infra*). Presaging the more recent literature on 'demographic dividends', Jackson identifies the importance of the labour force age-group, responsible for production, and also for childbearing and childrearing. A demographic dividend occurs when the costs of social support decline because of fertility decreases occurring before ageing sets in, and the resultant dividend is invested in productive sectors. This requires pro-active policies and efficient management, whereas diverting economic and social investment into some rentier activities will dissipate dividends. In the period from 1970s-2010s Māori and Pākehā age-momentum effects provided a 'Window of Opportunity' for such dividends, but Aotearoa squandered this (Pool 2016). High Māori (and Pasifika) fertility rates in the 1970s have produced momentum effects; at first, high child dependency, constraining household savings. But declining natality since then could generate new dividends through national and sub-national labour markets, but only if pro-active education, work-training and labour market policies were implemented (Jackson 2012, 2016).

The two functions of production and reproduction typically result in sexual divisions of labour. Gender still affects remuneration, status within occupations and choice of job (Hyman 2014). Age also has classificatory effects: in WDCs retirement affects employment levels. '[R]eproduction of the labour force,' is merely one aspect of its renewal. Others are: 'replacement of older workers to respond to new demands [up-skilling], and to offset death and emigration'; maintenance of good health; social support systems for non-workers. In-migration affects replacement, so population geography is critical.

Finally, the family represents the main locus for production, plus the reproduction of the labour force. With

today's dominant workplace-home separation, this should apply less than when households were central to production and reproduction (e.g. Aotearoa's family owner-operated dairy farms). But overseas, National Transfer Accounts (NTA) exercises show that the family still remains critical, even in formal economies with wide workplace-home gaps⁸.

Jackson also introduces 'the concept of lag time, first as it pertains to the period between first births and their eventual arrival at the labour market, and second as it pertains to the childbearing patterns of subsequent generations'; momentum effects are correlates of this. Because of lags and momenta nation-states continue to grow even when reproduction levels

change have their own momenta and enduring effects whose roots often go back very far. Some roots may lie less in population-economic factors *per se* than the broader political economy, the wider society and pervasive ideational constructs. Thus, the question of whether or not recent decades are unique in the history of New Zealand's political economy is not at all academic.

Aotearoa's population and development:

Historical eras

Over its post-1769 history, New Zealand went through three major eras⁹: a Turbulent period, 1769-1880s/1890s; 'Recolonisation', 1880s/1890s-1970s; and the current Neo-turbulent period starting in the 1970s. The interest here is the

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have dropped to below replacement. Other non-demographic phenomena, such as infrastructure projects, are subject to lag time, even when completed according to plan. Other examples are the installation of new plant; delays between workforce planning, recruiting and new employee(s) being at their workplace(s).

The discussion above covers natural increase, labour markets, population redistribution, shifts in age-structures and cohort momentum effects, all of which have longer-term provenances. There are still survivors of early 20th century birth cohorts; the 1930s cohorts were born closer to the New Zealand Wars (1860s) than the Global Financial Crisis (2000s).

The total social production model directly addresses economic changes through its emphasis on labour and production, although less directly on consumption. But this belies more fundamental questions about the drivers of sub-national change and differentials, a problem exacerbated by the tendency to carry out short-term analyses. In reality the population-economic drivers of

transition from the second to the third, but some important values and tangible determinants of development were laid down in the first era, and so it must be briefly discussed.

Turbulent Era, 1769-1880s/1890s

First came a Turbulent period, for much of which time – to ca.1850 – the country was virtually mono-cultural, Māori. By 1901, however, Māori were only 5 percent of the total in what was then bi-cultural, with very small numbers of Chinese and others. Māori passed 10 percent of the total only in the final decades of the 20th century. A list of key events for Māori in the Turbulent era would include contact; the inter-tribal 'Musket Wars'; the far more significant impacts on Māori of introduced diseases to which they had no immunity; the very successful Māori enterprises, both domestic and international, in an epoch of paleo-globalisation; colonial annexation; two major colonial wars, the second of which (1860s) lasted 12 years, was highly asymmetric, had very high fatality rates (for Māori) and at peak

involved 29 percent of all imperial troops, worldwide outside Britain and India. Growing competition from settler-owned extensive grain farms in the 1860s' wars was reinforced by the destruction of Māori horticulture. The cardinal factor, from the 1840s into the 20th century, was the loss of most of their land and other resources – thus their capital (so defined, Piketty 2014: 46-48, 213). This loss came from a mix of warfare, invasion (O'Malley 2016) and frequently dubious legal means (Pool 2015a; *Parliamentary Commission Report*, Rees & Carroll 1891). For Māori, land loss is a source of enduring bitterness, only mitigated since the 1970s by the Waitangi Tribunal/Office of Treaty Settlements processes. They restore some of the

Pākehā population growth came more from natural increase than migration, as settler fertility levels neared biological maxima (1870s) and child survivorship the most favoured anywhere. This trend and its underlying pro-natalism were to be reprised in the Baby Boom but at a lower level (births per woman 1870s, 7.0; 1960, 4.0). Such values may persist in residual form in the maintenance since the 1970s of exact replacement, a high level for WDCs today. Finally, Pākehā redistributed geographically. In a seminal study Miles Fairburn, referring to 'bondlessness', showed that they were highly mobile residentially, more so than North Americans (Fairburn 1989; Nolan 2009; Pool et al 2007). In 1840, three-

South Africa and the United States, Native-Americans were enslaved (Resendez 2017: chapters 10 and 11) and others imported (e.g. Africans to the Americas; Malays to the Cape)¹¹. The evangelical ethos transmitted itself to the post-war Welfare State, via preferred settler-recruitment systems (Vogel's *Immigration and Public Works Act, 1870*), the Liberal Government's policy 'experiments' (Sinclair 1959: Part Two, chapter II), the *Social Security Act, 1938*, and since then by the *Accident Compensation Act, 1972*, the *Superannuation Act, 1974*, aborted by Robert Muldoon, the *Treaty of Waitangi Act, 1975* and the *New Zealand Superannuation and Retirement Act 2001*.

The most persistent and consistent example of a values system and related material development, has been the Pākehā obsession with pastoralism, driven by 'land-abundance' myths – sheep 'ranching' started immediately (1843) after annexation. 'Grasslands' farming has been essential to nation-building, economically, in moulding its demography, social structures social organisation and political dynamics. But, to put it in context, it was part of a land-grab of immense proportions, encompassing the Americas, southern Africa, Siberia and Australasia (Weaver 2006), and even in the metropole itself – Highland and Irish 'clearances', Anglo-Welsh 'enclosures' (Pool 2015a: passim). Everywhere, this required the displacement of the native owners, whose mixed land-uses were to yield to beef and sheep ranching, and sometimes extensive grain farming. In Aotearoa, Māori, like Irish or Scottish peasants/crofters, were forced onto small lots or displaced into other regions, to eke out their living, highly dependent on potatoes, subject to episodes of blight.

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capital essential for development, until then reliant on earned income (Cochrane & Pool *infra*). Conversely, Pākehā gained that capital and much of New Zealand's development relied on its exploitation; many Pākehā refuse to acknowledge this 'ghost at the party'.

For Pākehā, this era was also turbulent. There were numerous commodity 'booms', from extractive industries; Michael King says, 'It is difficult to see how New Zealand could have survived as a viable country had it continued to rely solely on wool and grain and extractive commodities for its national income' (King 2003: 237). Pākehā fought wars and skirmished with Māori. Booms attracted major inflows of gold-diggers; settler-colonists gained from the dispossession of Māori from their land; and wars engaged military and militia-migrants. Net immigration was heavily concentrated into just two quinquennia, 1861-65 and 1871-75, then after this slowed, with brief outflows (Pool 2015b). Rapid Victorian

quarters were in what became Auckland Province, going down to 47 percent (1857/58), but still with 74 percent in the North Island. But, by 1874, goldrushes, 'ranching'¹⁰, grain booms, 'bondlessness' plus the northern war saw 55 percent in the South, with Dunedin briefly being Aotearoa's prime settlement. By 1896, however, the North Island once again outnumbered the South, and by 1901 Auckland was the leading city, with growing ascendancy, accelerating in the Baby Boom, and since 1970.

From contact, various nation-building values and determinants of development have been inherited and perpetuated, more or less, until the present. For example, Aotearoa's delayed annexation, compared to Australia, although Cook 'discovered' both in 1769-70, plus the power of evangelicals in Whitehall ca.1840, focused on 'Aboriginal protection', ensured that Aotearoa was never a slave or convict colony – nor used indenturing. In other settler-colonies as in

Recolonisation, 1880s/1890s – 1970s

James Belich argues, convincingly, that New Zealand then went through a century of 'Recolonisation', 'a renewal and reshaping of the links between colony and metropolis after an earlier period of colonisation'. In this era, 'New Zealand became the town-supply district of London. London became the cultural

capital of New Zealand' (Belich 2001: 29-30). This was a period of relative stability demographically and economically, sustained by a values-system that went through only gradual transitions, underpinned by the production and export of pastoral products.

The game-changers shifting Aotearoa from turbulence seem to have been provoked by three demographic changes among Pākehā, now enjoying demographic and political hegemony. First (late 1870s), radical volume declines in immigration occurred, even a brief loss, presaging several other modest outflows – 1926, mid-1930s, late-1960s – in an era when net immigration generally remained steady but not spectacular (Farmer 1985: Fig 14). Secondly, and simultaneously (1870s-1901), 'family values' shifted from a colonial reproductive regime (early, almost universal, marriage; high fertility rates) to that prevalent in Britain – not achieved through contraception, which, anyway, was still very primitive technologically. There were marked increases in the age at first marriage and in female celibacy (Pool et al 2007: chapters 3 and 4). This reprise of British patterns of nuptiality coincided with other values-shifts (Belich 2001: 30): '[R]obust and ruthless town- and camp-led progress was written out, steady and farm-led progress was written in... relations with Britain became more deferential ... sub-nationalist ... [a] permanently junior partnership...' Thirdly, inter-provincial migration had been high in 1891-96, when the redistributions northwards and through pastoral intensification reached high levels. Tellingly, however, the mobility declined, and never reached early 'Recolonisation' levels again until 1991-96 (Brosnan 1989; updated by me).

New technologies (1880s) facilitating 'Recolonisation' are often cited as overriding determinants, yet, coterminous timing with massive demographic shifts suggest that causal pathways are more diffused. Indeed, two decades ensued before most farmers had adopted technologies, a process reinforced by land reforms (1891-1911) (McAloon 2008: 5), a product of values-systems favouring property rights, yet guaranteeing access to

comfortable living-standards for the average family. Paradoxically, the Liberal Party's tenurial reform architect, Gaelic-speaking John McKenzie who had witnessed highland clearances, saw little dissonance in displacing Māori from their lands (Brooking n.d.).

Recolonisation was underpinned economically by pastoralism: New Zealand, the 'dairy farm of the Empire' (King 2003: 237). David Greasley and Les Oxley show that grasslands farming intensified from the 1880s, a shift made possible through freezing, dairy processing and milking machine technologies, plus legislation that 'dismantled the large estates', thereby definitively precluding plantation agriculture. Together, these

passed Dunedin (6th), recently outdone by Tauranga, a small centre (3,000) in 1936.

Envisaging 'Recolonisation' as a period of stability seems unrealistic given two World Wars and others, depressions (1880s; 1930s), the 'Baby Boom', Korean War Wool Boom (1950-51), 'Great/Long Boom' (1935-66, Easton 2010) and the rapid Māori rural exodus. Nevertheless, for dominant Pākehā, loyal subjects of 'England', norms and values remained relatively stable, adhering to mores and ideas they believed characterised the 'mother country'. The last Dominion to ratify the Statute of Westminster (1931), Parliament passed the *New Zealand Constitution (Request and Consent) Act* in 1947, over strong opposition from the

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factors created New Zealand's iconic regime of family-owned and operated farms, for eight decades providing most farmers with satisfactory living-standards in a country with the highest GDP globally – at least as late as 1938. Moreover, this affected the population geography, leading to high levels of urbanisation early in the 20th century (Greasley & Oxley 2005, 2009). However, this was an urban system underpinned not by heavy or textile manufacturing, but linked to the processing and export of pastoral produce, and the import of manufactured goods from the 'mother country'. Coastal secondary cities, Gisborne, Timaru, Whanganui, Invercargill, Napier and New Plymouth, exported directly to Britain. During the Baby Boom, some grew at rates above New Zealand's as a whole, but from 1976 their growth dropped. The largest urban areas, Auckland, Wellington, Christchurch, Dunedin and Napier-Hastings consistently retained this ranking from 1936 to 1976, after which Hamilton (4th) and Napier-Hastings (5th)

opposition which viewed the bill as disloyal.

During 'Recolonisation', Aotearoa's strategic directions were really dictated by the concerns of the Pākehā majority. Even after World War II, in a *de facto* sense – economically (trade), culturally and socially, and demographically, through British migration preferences – New Zealand remained closely linked to 'Home'. In fact, Aotearoa's metropole-dependent mentality persisted until the 1960s/1970s: the British flag flew, alongside its own, 'God Save the King/Queen' was played before shows, with the audience expected to stand. Britain's decision to join the European Union in 1973, although previewed and with diversification underway from the 1960s (Easton 2010: 10), was an emotional shock. Gary Hawke (1985) devotes a chapter to the significance of 1967-68.

Two very important demographic events occurred after World War II: Māori urbanisation and the eponymous Baby Boom. Other demographic changes were

Table 1: Per annum Growth (%), Major Urban Areas Combined, New Zealand Regions

Regions	AKL	RNI	SI	NZ
1936-76	3.0	2.0	1.7	2.3
1976-96	2.0	0.3	0.2	1.1

AKL = Former Auckland Province; RNI = Rest of North I; SI = South I

unfolding (see below), but cumulatively more muted, typically continuities of trends seen historically.

Starting in the 1940s, but accelerating in the 1950s, Māori urbanised very rapidly – pre-1970, the highest among people anywhere (Pool 1991: 152-55, citing University of California, Berkeley, study). Until then, Māori had been largely 'out of sight, out of mind', residing in hilly, marginal regions of the North Island, or in hamlets on tiny pockets of land, for e.g. the Waikato. Urbanisation was initiated and executed by Māori themselves, although the welfare-state gave housing, job-training, welfare and health. The introduction of a new armoury of chemotherapeutics, and equal access to social welfare and health systems, produced a diminution, but not an elimination, of health gaps between with Pākehā. Māori fertility rates remained high until the 1970s (Pool 1991: 152-59).

Meanwhile, Pākehā entered the longest, highest, most intense (timing and spacing) Baby Boom in the WDCs. Its duration exceeded the American by almost a decade, and other attributes were more extreme. First births were early, even younger than in the colonial hyperfertility period (1870s), and intervals between births short (Morgan et al 2001; Pool 2007). These dynamics have long-term consequences for New Zealand – the simple fact of a second peak ca.1970 affects all superannuation metrics – yet New Zealand commentators uncritically cite American perspectives rather than our own. At the time, moreover, fertility was not just the driver of growth, but also of its fluctuations – disordered cohort flows, a less tumultuous oscillatory factor than migration became in the post-1970 era (Pool 2003).

The Baby Boom remains enigmatic, a deviation from long-term fertility declines starting c.1880, and still evident (2010s). Despite its iconic status, the Baby Boom lasted merely 22 percent of the period since 1880: 60 years of fertility decline

until 1945; the Boom, 30 years; then fertility fluttering around replacement for 40 years since. Most WDCs, including Pākehā (ca.1936) reached replacement fertility in some interwar periods, but there were also marked rural-urban differentials: in 1921, rural Pākehā birth-rates per 100 women, 15-44 years, were almost twice as high as urban (Tiong 1988: 163-64).

The Baby Boom was a 'fad' that gripped all the WDCs simultaneously after World War II, less in Europe, more in Neo-Europes, intensively but quickly curtailed in Japan. The mechanics of what happened are reasonably clear, pointing to period-specific proximate determinants, rather than cohort-effects, but the underlying causes have not been satisfactorily documented. Andrew Cherlin's comparison of America's Baby Boom and Baby Bust (see below) dynamics still does not elucidate for us whether it was a new trend, or was a reprise of tradition harking back to late Victorian New Zealand family building, as if the WDCs wanted a 'last fling' before entering subsequent transitions to sub-replacement fertility (Cherlin cited in Morgan 2003; Pool 2007)¹². While Pākehā fertility increased, differentials (rural-urban, class and religious) decreased, except ethnically: Māori (high) – Pākehā (medium)¹³. There were, however, significant intra-urban differentials, mainly because of neo-local patterns of family building that clustered young parents into suburbs, in 'state-house rentals', or State Advances' financed owned dwellings. Inflows of young Māori couples into these suburbs intensified intra-urban differentials. Nevertheless, reproductive capacities were still weighted towards rural Pākehā New Zealand. In 1966, in an era when the force of childbearing was at young ages, there were 154 young rural adults (15-34 years) for every 100 older (35-64 years); in metropolitan New Zealand the ratio was 89. In the Neo-Turbulent period (see

below), a shift-share in the composition of the adult populations occurred, affecting the nation's reproductive capacities. By 2001, the ratio was 51 rural, 86 metropoli. Young adults were now city-dwellers, but, because of career pressures and work-family life imbalances, urban Total Fertility Rates (TFRs) had dropped, and levels of childlessness had increased. This was notable in central Auckland and Wellington, where Māori also followed these trends (Pool et al 2007: Fig 4.2, 186-88; Pool et al 2005a: 8-20). By 2001, non-metropolitan regions also had TFRs approximating national levels, except for peripheral North Island areas where Māori were heavily represented.

Across WDCs, higher rural fertility spawned rural exoduses, yet ensured productive and reproductive capacities sustaining country life-ways. But when rural fertility transitions approach urban, trends in natural increase – 'natural decrease' – exceed out-migration rates, as in France, and elsewhere in Europe and the United States (Merlin 2009: 13; Johnson et al 2015). The Baby Boom may thus have dampened down rural-urban differences in intended and actual family sizes, but eventually generated non-metropolitan fertility declines.

With the exceptions of the Baby Boom and Māori urbanisation, gradualism characterised New Zealand's post-war demography, especially its spatial dimensions. Trends producing shifts from Turbulent to 'Recolonial' continued, sometimes accelerating: urbanisation, metropolitanisation, and two waves of suburbanisation. The first depended on public transport limits (interwar years) and then post-war extensions became possible because of automobiles. Aotearoa's population gradually redistributed northward during 'Recolonisation', so, for example during 1936-1976 the Auckland Province's share increased, especially larger urban centres (Table 1). North Island growth was rapid 1936-1976, but in 1976-1996, after 'Recolonisation', nationally New Zealand grew slowly, but differences between Auckland and the other regions increased – relatively and absolutely. While most 'Auckland Provincial' cities – Auckland, Hamilton and Tauranga – grew rapidly and Whangarei emerged,

Gisborne's increases were like the Rest of the North Island.

In the last years of 'Recolonisation', complex sets of changes were underway that would accelerate in the Neo-Turbulent period. The Baby Boom ended not 'with a whimper but a bang': the 'Baby Bust'. The farming sector was becoming more efficient so the rural workforce gradually decreased; conversely the secondary sector grew slowly, peaking in the early 1970s, while the tertiary sector grew gradually.

Neo-Turbulent Period, 1970s to the Present

The 'Neo-turbulent Era'¹⁴ has erupted since the early 1970s. 'Recolonisation' has been supplanted by numerous shocks and game-changers to the demographic and economic system.

This era commenced in the 1970s with demographic changes of lasting significance. First came 'Baby Busts' for both Māori – the most rapid on record anywhere (Pool 1991: 166-75) – and for Pākehā. Both reflected values changes: for Māori, limitation of family sizes; Pākehā a shift from early to older childbearing. Both demanded resort to effective contraception: the 'Pill', which had been rapidly adopted by Pākehā married women in the 1960s, expanding in the 1970s for timing, spacing and limitation; sterilisation, limitation; modern condoms, timing; and the IUD (Pool et al 1999). Moreover, this occurred with little resort to induced abortion, despite a moral panic and controversy (1970s), mainly imported from the United States (the Supreme Court case, *Roe vs Wade*, 1973). The abortion debate is a good example of an accelerating pattern: the speed of diffusion of values that can become distorted in transit (Sceats 1988: chapters 4 and 6). Since then fertility has fluttered around replacement, a little higher for Māori, counteracting the instability migration has inflicted on the demographic system. Contextually, there was a radical shift from marriage as the preferred form of first union to cohabitation (Pool et al 2007: Figs 6.1, 6.2). There were other values-shifts in the 1970s, such as religious affiliation and rapid secularisation (Young 1997: chapter 9).

Secondly, after net-emigration (late 1960s), the largest wave of net-immigration

since 1871-75 hit exactly a century later, but was followed over the next quinquennium by net-emigration – an inter-quinquennial, intra-decennial pattern that continued at least until 2010. These migratory oscillations have buffeted the entire demographic system since then, a common factor across the WDCs. Moreover, churning – by age, occupation, national origin and ethnicity between inflows and outflows and between adjacent calendar years – has added to this instability. Yet, over the long term, migration has barely affected the net stock of population, by comparison with natural increase: from 1976 to 2010, its contribution was one

this period. The primary sector gradually declined (1951-91) from 19% to 11% of the workforce, then withered (2006, 7%). The secondary sector remained steady around 34 percent into the 1970s, then plummeted, manufacturing alone dropping 1986-2006 from 20% to 12%. The tertiary sector grew gradually 1951-86 (< 10 percentage points), ballooning thereafter by almost 20 points. Decreases in manufacturing were offset by expansion of tertiary's FIRE sub-sector, doubling to 16 percent, 1986-2006. This is strongly reflected in the national accounts: 14 percent of GDP was transacted in the FIRE sector in 1986, reaching 25 percent

Functionally, pastoralism continues to hold a highly significant place in New Zealand's economy, despite employing but a minute proportion of the labour force and being a minor component of GDP ...

percent, despite historically high inflows 2001-05; it contributed merely 20 percent of growth, 2010-14; but exciting commentators with short memory-spans, it was a massive contributor over the last two years (Pool 2015b)¹⁵.

In the 1980s, game-changers switched from population to the economic system. The main features of the neo-liberal revolution, passing through 'Rogernomics', 'Ruthenasia' and their successors is well documented, so needs no elaboration here. Over recent decades, micro-economic values – 'Homo economicus, a calculating subject...' (Mishra, 2017), 'individualism and self-actualization...' (Morgan 2003) – and their macro-level analogues, financialisation and marketisation, have dominated development paradigms, a significant effect of which has been increased social and regional inequality (Rashbrooke 2013; Boston & Chapple 2014; Cochrane and Pool *infra*; Pool et al 2005b). First, the industrial sectoral structure of the workforce underwent radical changes in

in 2006; the community, social and personal services sector, including health and education rose from 4% to 12% of GDP, 1986-2006.

Functionally, pastoralism continues to hold a highly significant place in New Zealand's economy, despite employing but a minute proportion of the labour force and being a minor component of GDP (8 percent). Quantitatively, however, grasslands' products play a major role in trade, a direct hangover of 'Recolonisation', which still accords pastoralism a high status among attributes that dictate national identity. Primary-sector exports (pastoral, horticultural, fish, wood and other minor items) constitute 62 percent of the total.

Pastoralism has gone through major mutations over recent decades, mainly further intensification: a growing emphasis on dairying alone, reflected in the heavy dependence of dairy products, at the expense of meat and wool, in export incomes. There is increasing reliance on, and heavy usage of, artificial fertilisers,

tenurial changes from family farms to agri-business, often combining multiple former family farms, a waged farm workforce, and increased herd sizes, whether per dairying enterprise, or cows handled per milking-unit (Jackson unpublished). Additionally, 'land-abundance' myths have been stoked by converting other land into dairying (for example, sheep farms; exotic pine plantations; ranches tussock-grass inland basins). Accompanying this has been a population-geographic shift: dairy farming is still dominant in humid western regions of the country, but it has now become significant for less humid eastern regions, requiring major use of river- and aquifer-sourced irrigation.

Nationally, Pasifika levels are well above replacement; Māori above but declining, with age-patterns of childbearing converging towards Pākehā, who are slightly below replacement; and Asians well below.

From 1980 New Zealand became a highly diversified multi-cultural society, in part because of Māori (15 percent of the total), but also Asian, Pasifika and other migrant waves. In 1981, New Zealand was bi-cultural: 87 percent were Māori or Pākehā. For 2013, it is difficult to estimate ethnicity because of 'total response' coding routines by Statistics New Zealand, but probably 25 percent are neither Māori nor Pākehā. Overall, nearly 40 percent of New Zealanders are of non-European descent – far higher levels than those stoking xenophobic fires in Britain. Without minimising Aotearoa's social tensions, like Canada we seem to have avoided extreme ideological divisions. In the 1960s, both countries chose policies of 'integration' (which assumes that cultures all have equal worth) over 'assimilation' (which assumes that the culture being assimilated is gaining a superior culture) (Hunn 1960¹⁶; clause 9; Royal Commission, Canada, 1969).

Finally, New Zealand seems to have followed international trends in peri-urbanisation and also rurbanisation. Pierre Merlin (2009) points out that, not only are French metropolitan-dwellers suburban, but peri-urban – expanding dormitory zones have triggered an 'exode urbaine'. This is reinforced by the functional metropolitanisation of previously small towns with limited services: Tauranga is New Zealand's prototype. Furthermore, Aotearoa also seems to have adopted other WDC-wide patterns. Already, one-quarter of territorial local authorities have more than 20 percent of their population aged 65+ years, one-third saw declines in population numbers 1996-2013, and by

2033 a shift will occur between the 'old' form of population decline (migration) to the 'new' (natural decrease) (Jackson and Cameron 2017).

From old to new regimes: unravelling 'when', 'how' and 'why'

From 1980 New Zealand dramatically changed the general path of population and development followed from the 1880, 'Recolonisation', itself a radical change from the 'Turbulence' that marked Aotearoa's 110-year passage from contact between Māori and Pākehā. 'Recolonisation' was a period of relative stability built around metropole-periphery exchanges, particularly commodities exchanged for manufactures, and an imbibing of the culture and even political direction (for example, military command, World War I) of 'Mother England'. But, starting in 1970, Aotearoa entered another 'Turbulent' era, radically different from 'Recolonisation' as much as it differed from the 1769-1880s.

Projections suggest, moreover, that a point of 'no return', of unstoppable decline, has been reached for some sub-national areas of New Zealand. These parameters, indicate complex interrelations between population and development (Jackson & Cameron 2017; Jackson & Brabyn *infra*).

Three questions were set at this article's start, two partially answered. First, for the hegemonic Pākehā, 'when' the shift from 'Recolonisation' definitively commenced, was the 1970s/1980s, depending on the variable. 'How' such seminal changes in trajectories occurred has also been identified. Demographic changes initiated the start both of 'Recolonisation' and the 'Neo-Turbulent' period, but were co-terminous with other 'game-changing' events – freezing technologies (1880s) and Britain's entering the EEC (1970s). Furthermore, both emergent regimes correlated temporally with fundamental values-shifts, affecting, in both cases, social organisation's plinth, the family, as shown in radical fertility declines. In both cases, socio-cultural values-shifts preceded, and possibly opened the road for, major legislature-driven restructuring. The Liberal Party's tenurial reforms reinforced technology, producing rural intensification, and other effects; legislatively-imposed financialisation and globalisation of the 1980s/1990s established the development agenda of the neo-Turbulent period.

Nevertheless, 'why' remains unanswered. The demographic, social and economic interactions, historically or today, seem beyond unbundling; demography is not destiny, nor are the economy, society or ecology overriding determinants. The Total Social Production (TSP) framework proposed here identifies critical parameters: reproduction, and replacement, plus 'production', which increasingly also involves consumption of goods and services, confounded by the domination of the FIRE-sector by its contribution to GDP. Whether it contributes to national wealth, as against product, is a moot question.

To add to the complexities, some sub-national areas seem to be in spatio-demographic-developmental decline. As Richard Nelson (1956) showed, this could

become a 'low-level equilibrium trap', a notion applying to nineteenth century Māori (Pool 2015b: Fig 1.1). This situation could also occur, extend and deepen sub-nationally through declining natural increase due to age-compositional differentials at reproductive ages (Jackson and Brabyn 2017). 'Reproduction' in the TSP could also enter a 'low fertility trap' (Lutz 2007) for diametrically contradictory reasons: (i) rural areas have older age-structures, fewer young parents and thus fewer children, (ii) 'rurban' settlements have structures that are weighted towards retirees, who bear smaller birth cohorts. Yet (iii), metropoli disproportionately house young adults, potential parents, who, paradoxically, produce low birth numbers because of family-building constraints due to prolonged education, subsequent career-development and work-family life imbalances. Offsetting these are the effects of intra-urban ethnic differences. Nationally, Pasifika levels are well above replacement; Māori above but declining, with age-patterns of childbearing converging towards Pakehā, who are slightly below replacement; and Asians well below. These can translate into geographic variance. In 2001, central Auckland had a TFR of 1.7, 1.4 in central Wellington, but 2.5 in Southern Auckland Urban Area and Porirua, where Māori and Pasifika are clustered (Pool et al 2007: chapters 6-9, Tables 8.4, 8.5).

If low-level equilibria are to be averted, material interventions must be effective (McMillan 2016). Most problematically,

because it depends on values-systems and population structures, fertility cannot be freed from traps. Perhaps the most emblematic attempt to turn around underdevelopment was in southern Italy in the postwar period, *La Cassa per il Mezzogiorno*, developed in part by the World Bank, driven by passionate anti-communist Walt Rostow, fearing that Italy would become a Soviet satellite. He believed that the 'traditional', enduring ideas, should be destroyed and replaced by the far superior modern values (Rostow 1960: chapter 2; Lepore 2013). While the Mezzogiorno programmes had some success (Franklin, Harvey 1969: chapter 4), much of this came, paradoxically, through development based on the enduring ideas and customs - Rostow's anathema, often agro-turismo ventures (e.g. in Puglia). Fertility levels (TFR, 2013 = 1.31) are now the lowest in Italy, and at an historic low (Pace and Mignolli 2016: Table 7.3). Positive trends for Total social production have not been regained.

- 1 Anglo-America, Australasia, north-western Europe, Greece, Iberian Peninsula, Italy, Malta and Japan.
- 2 I summarise a longer paper (Pool forthcoming, a).
- 3 She is particularly concerned about gender issues and inequalities that I do not address here except in passing.
- 4 Globalisation is hardly new. Soon after contact Māori had successfully globalised their extensive, domestic networks, both through their own commodity trading enterprises, and in extractive industry 'joint ventures' (Pool 2015a: chapters 6-9).
- 5 If one takes Māori until 1900 one can show that the demographic and epidemiological transition models cannot be applied to much of colonial history - (Pool 2015b: especially 312-14). Since then, these models and those on labour force transformation have accurately described the Māori experience (Pool 1991: especially Fig 9.1).
- 6 I drew on his ideas in positing that, by the 1890s, Māori were in an 'underdevelopment trap' (Pool 2015b: Fig 1.1; his modelling requires data not available for 19th century Māori).
- 7 Most of the others relate to issues of relationships of power,

and any resulting competition and conflict that are indirectly of relevance to *Tai Timu Tangata*.

- 8 'Intra-family', or private, transfers include material and non-material supports: e.g. cash gifts and loans to family members, gifts of property and goods; cash inputs assisting public 'free' services such as schooling (e.g. payment of stationery) and health; etc. The 'public', comprise benefits and other forms of social-security from agencies, including housing, health, education, income-support, unemployment relief/payments. Few NTA exercises have looked at non-monetised transfers (e.g. after-school supervision of children whose parent(s) work(s) by grandparents (Lee and Mason 2014; United Nations 2013).
- 9 This postulate comes from a partially-written book by me on New Zealand's population and development, 1769-2010. Ideas for it were generated by the Marsden Programme, plus numerous books, monographs and papers on Aotearoa's demography. I also commissioned and locally edited ESCAP (1985).
- 10 I use the more widely understood term ranching for extensive grazing, even though in Australasia these farms are called 'stations', or 'properties'.
- 11 In inter-tribal wars Māori enslaved the losers, but this ceased after colonization, with the sole exception of the Moriori enslaved by Ngāti Mutunga, which, contrary to an empire-wide abolition, continued after the Chathamians were annexed in 1843.
- 12 In different circumstances increases in fertility are seen in developing countries before a decline, (Dyson and Murphy 1985), and applies to Māori (Pool 1991: 113).
- 13 Total fertility rates, per woman, Māori 6.0+, Pakehā 4.0+
- 14 See note ii.
- 15 I want to stress that I am very much in favour of immigration, as it enriches New Zealand's social fabric and ensures that some services can actually be provided. But, I am very concerned about the way it is managed. Because of the flows of New Zealand residents, strict control is impossible, but the inflows of the last few years have been partially due to arrivals on study visas being counted as long-term and permanent arrivals.
- 16 Hunn's language, which today seems quaint, even ambiguous in places, belies the significance of his advocating integration over assimilation, segregation - still legal and enforced in the United States, South Africa and Australia - and symbiosis (which he dismisses). The Canadian Commission's findings (and implementation) show how strategic this direction was there, and for New Zealand; the *Treaty of Waitangi Act, 1975*, made this strategy more concrete.

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