Population Ageing Among Non-Maori New Zealanders in Later Victorian Times

A QUIRK OF IMMIGRANT SETTLEMENT HISTORY?*

AT THIS TIME, the cusp of the twenty-first century, age profiles in many countries are being fundamentally reshaped by population ageing or greying, a process apparently unique in world demographic history and one expected to be sustained well into the future.¹ Most evident in Europe and elsewhere in the developed world, including Japan, ageing is a global trend, with its symptoms appearing in a growing number of developing countries as far apart culturally if not geographically as Sri Lanka, parts of India, Thailand, China and Cuba.

Population greying is arguably the most conspicuous longer term structural consequence of the shift from high to low vital rates that lies at the core of the 'theory of demographic transition', the paradigm that has been a central preoccupation of population studies for many decades.² Neither Frank Notestein's original statement of the theory in 1945, however, or later variants of it, elaborate on causally interlinked, equally momentous longer term shifts in the spatial distribution and composition of population. Nevertheless a number of such parallel transformations have been codified in recent times. Perhaps best known of these is Wilbur Zelinsky's 'hypothesis of the mobility transition'³ but several other components of population have also received attention, among them age and gender. These have been considered from several contrasting perspectives, either empirically (e.g. Ansley Coale using historical data for Sweden);⁴ in broad-brush theory building, notably by Donald Cowgill⁵ and, writing a decade later, by Abdel Omran;⁶ or as an exercise in intuitive reasoning supported by case study evidence, as in New Zealand by myself and Andrew Trlin.⁷

As Coale cogently demonstrates and as other writers argue, however, fertility rather than mortality transformation is the prime catalyst of metamorphosis in age distribution. Thus the trajectory of sustained fertility decline that precipitates the process of change within the closed population assumed in the conventional model of 'the demographic transition' also initiates a long-term process of age structure maturation. It does so by progressively diminishing, in wave-like sequence, the relative importance of younger then older children while enhancing that of successive cohorts or groupings of adults to ultimately take in the elderly.

In contrast, the impact of mortality decline on age structure is at once weaker and more subtle. In the early stages it tends to be localized toward the start of the life span, that is among infants and young children, but as the decline deepens over time it is elders who become major beneficiaries. Among populations at an advanced stage of both 'the demographic transition' and Omran's
‘epidemiologic transition (Western model)’, then, improved mortality operates through increased survivorship, especially among women, to accentuate the ageing trend while shifting the gender balance more heavily in favour of females.

Perhaps the most compelling explanation of the ‘theory of demographic transition’, in the European context in the first instance, is that it was a response to the long-term passage in the mode of production from feudalism to industrial capitalism. This process, in turn, triggered the prolonged, complexly interrelated and apparently irreversible transformation in fertility and mortality that forms the core of the theory. Paradoxically, however, while also recognized as an important if not a critical associate among economic and social forces driving the shift in the mode of production, geographical mobility has no place, as a factor of population change, in the conventional or classic model of demographic transition. Yet, as is well known, spatial movement itself can be a potent agent of demographic transformation, as much of age-gender composition as of spatial distribution and other components, not only locally but also nationally and internationally.

This was certainly so in New Zealand during the late Victorian period. Indeed, the ephemeral phase of ageing experienced by the non-Maori population at that time cannot be satisfactorily explained, nor its regional and social connotations understood, if one confines the analysis to mortality and fertility change alone. Rather, one must also take into account the delayed impact on age composition of much earlier international migration flows that linked New Zealand and, it seems reasonable to presume, similar colonial settlements in Australia and elsewhere, with Northern Hemisphere source areas, for example Scotland’s Far North region. In New Zealand’s case it seems rather more symbiotic than merely coincidental that with the Far North, a centre of emigration, it shared, as an immigrant destination, a modest but nonetheless historically important episode of population ageing toward the close of the nineteenth century, at a surprisingly early stage in their respective fertility and mortality transformations.

At that time the two societies were still essentially rural in nature, their economic systems very largely based on different forms of primary production. Demographically, each was in transition, both fertility and mortality being in decline. And yet, in retrospect, rates for both of these so-called vital variables still remained high in both places at the turn of the century compared with, say, the present day. Because of this it seems unlikely that their decline in the 1880s and 1890s was crucial in explaining the ripple of population ageing experienced during those years in New Zealand and no less in the Far North of Scotland at much the same time.

While the broader configurations of the ageing process among non-Maori New Zealanders in late colonial times are well recognized in the literature, neither the national nor regional demographic nuances have been examined in detail. Based on official census and other demographic data, the primary purpose of this paper is to establish in some detail the time-space configurations and principal causal agent(s) of population ageing among non-Maori New Zealanders, including the Chinese, during the last quarter of the nineteenth century and the very early years of the twentieth. The colony’s experience of demographic ageing at that time is contextualized by a brief comparative review...
of selected demographic indicators for the Far North of Scotland, one small example of British regions from which settlers originated.13

In keeping with the rather basic character of the source data, a selection of simple measures is used in Tables 1–6 and in Figure 2 to profile the broad national and underlying regional patterns of ageing among the settler population in New Zealand. This in turn forms the prologue to a concluding section which explores the question of explanation. In other words, what force or combination of forces precipitated the quite sudden, but rather short-lived, surge of ageing in the colony’s non-Maori population at ‘a pace without parallel anywhere, at the time or since: ageing now and yet to come will be positively leisurely by comparison’.14 The central concern in this part of the analysis, developed within a framework of associated and proximate determinants of demographic change, is to review available evidence in order to determine the relative importance of each of the dynamic components, fertility, mortality and immigration as a cause of the episode of population ageing among non-Maori New Zealanders documented earlier.

During the last two decades or so of the nineteenth century, New Zealand’s non-Maori population was overtaken by a strong pulse of demographic ageing. This trend was largely a legacy of immigrant flows during the gold-rush period of the 1860s and 1870s, exacerbated in some degree by fertility decline during the 1880s and 1890s. The ageing trend exhibited distinctive and, in some respects, historically unique temporal, spatial and social characteristics. Enduring for little more than two decades, ageing peaked in the early 1900s and then began to dissipate.

It was also quite unevenly distributed geographically. The elderly became most visible in two South Island regions — Central Otago and the West Coast — and, on the non-Maori social landscape, were most evident in the small Chinese population. The ageing process among the Chinese was dominated by men, somewhat more than in the general non-Maori population, but also very much there. An unusually large proportion of these men had never married and very often existed alone, many without family support, during a long period of troubled economic and social conditions in the 1880s and early 1890s when work was uncertain and insecure. In conclusion it is argued that this early phase of ageing, and the economic and social circumstances in which it occurred, had a lasting impact on social attitudes and welfare policy. Of these, perhaps the most important was confirmation of a transition from minimal to much greater formal collective welfare support of elderly New Zealanders.

According to census records, New Zealand’s total non-Maori population displayed typical symptoms of both relative and subdued numerical ageing in the later Victorian period (Table 1). Between 1874 and Queen Victoria’s death in 1901, strong relative ageing was expressed in a substantial increase in the proportion of those aged 60 years or older, from 2.3 to 6.7% accompanied by a sharp decline in the proportion of children younger than 15 years.15 Whereas in 1874 and 1881 children represented 41.5% and 42.5% respectively of the total population, by 1901 just one in three (33.4%) was so classified. In turn, these opposing trends yielded a threefold expansion of the nominal dependency or aged–child ratio (ACR),16 measured as the number of elderly per 100 children.
aged 0–14 years. As little as 6.3 in 1881, the index reached 10.6 within ten years and by 1901 had doubled to 20.2.

Table 1: Percentage of the total population aged 60 years and over at various census dates for New Zealand and Scotland, including the Far North and Shetland

<table>
<thead>
<tr>
<th>Census dates:</th>
<th>1851</th>
<th>1871</th>
<th>1874</th>
<th>1881</th>
<th>1891</th>
<th>1901</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
<td>2.3</td>
<td>2.7</td>
<td>4.2</td>
<td>6.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scotland</td>
<td>7.4</td>
<td>8.1</td>
<td></td>
<td>7.8</td>
<td>7.9</td>
<td>7.6</td>
</tr>
<tr>
<td>Far Northb</td>
<td>10.5</td>
<td>14.9</td>
<td></td>
<td>13.2</td>
<td>14.1</td>
<td>14.5</td>
</tr>
<tr>
<td>Shetlandc</td>
<td>11.4</td>
<td>13.8</td>
<td></td>
<td>14.4</td>
<td>15.4</td>
<td>16.0</td>
</tr>
</tbody>
</table>

a Selection determined by census date and data availability.
b Comprising the counties of Shetland, Orkney, Caithness, Sutherland, Ross and Cromarty.
c Figures for 1851 include both Shetland and Orkney.


Nevertheless, a number of interacting factors ensured that the population of children continued to multiply. One was continued immigration, another a decline in infant mortality, and a third strong growth in the number of women, that is mothers of reproductive age, during an era when a large majority of women had married by their thirty-fourth birthday.17 Though those aged 0–14 years doubled from 124,035 in 1874 to 257,767 in 1901, their growth during this period was far outpaced by that of the elderly. They experienced a sevenfold increase, from 6983 to 52,173 and, perhaps not surprisingly, throughout the years from 1878–1881 and 1896–1901, growth rates for both male and female elders easily surpassed those for adults younger than 60 years (Table 2).
Table 2: Annual average % change in non-Maori total male and female population aged 15-59 and 60 years and older, 1874-1906

<table>
<thead>
<tr>
<th>Year Range</th>
<th>1874-8</th>
<th>1878-81</th>
<th>1881-6</th>
<th>1886-91</th>
<th>1891-6</th>
<th>1896-1901</th>
<th>1901-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-59 years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>8.7</td>
<td>5.7</td>
<td>3.1</td>
<td>1.4</td>
<td>2.3</td>
<td>1.9</td>
<td>3.2</td>
</tr>
<tr>
<td>Female</td>
<td>10.6</td>
<td>6.7</td>
<td>4.2</td>
<td>.2.1</td>
<td>2.6</td>
<td>2.1</td>
<td>2.8</td>
</tr>
<tr>
<td>60 years and over</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>9.8</td>
<td>11.4</td>
<td>8.3</td>
<td>9.2</td>
<td>8.7</td>
<td>7.8</td>
<td>3.2</td>
</tr>
<tr>
<td>Female</td>
<td>11.3</td>
<td>11.1</td>
<td>7.8</td>
<td>7.6</td>
<td>7.7</td>
<td>7.7</td>
<td>5.4</td>
</tr>
</tbody>
</table>


A further consequence of the rapid growth of elderly non-Maori New Zealanders during these years was that their nominal electoral importance, especially of males, expanded rather dramatically. Indeed, between 1881 and 1901 their share of the total non-Maori population of equivalent male voting age (i.e., 21 years or older) rose from 5.7% and 5.8% to 14.8% and 10.8% for men and women respectively, or overall from about one in 17 to one in eight. It was this shift that fuelled public discussion of the 'plight of the aged' that erupted in the colony during the 1880s and which almost certainly prompted, from 'some point in mid-1896', the Liberal Premier Richard Seddon's awareness of 'the electoral potential of the issue'.

Demographic ageing in New Zealand and Scotland in the later Victorian period differed in several important respects. Of the two, the elderly represented much the higher share of the total population of Scotland from the early 1870s to 1901 (Table 1), nowhere more so than in Shetland county. Meanwhile, as in New Zealand, the proportion of children declined but their number and that of the elderly continued to grow. Both groups, however, did so much more slowly than the same components of the colony's population.

Gender ratios (Table 3) reveal perhaps the most significant social difference between ageing in Scotland's Far North region and in New Zealand during the
latter part of the nineteenth century. In the former, primarily as a residual consequence of male-dominated emigration to New Zealand and other distant colonial shores, women were much more numerous than men. In fact there were just three males aged 60 years or older for every four females in the same age grouping. In New Zealand, however, the reverse prevailed (Table 3). Among the colony’s elderly, at least from 1874, males were much more numerous than females, itself a critical dimension of the elderly ‘problem’ that became, in the 1890s, a strongly emotional issue, at a time when the number of men per 100 women continued to increase.

Table 3: Number of males per 100 females aged 60 years and over at various census dates for New Zealand and Scotland, including the Far North and Shetland

<table>
<thead>
<tr>
<th>Census dates:</th>
<th>1851</th>
<th>1871</th>
<th>1874</th>
<th>1881</th>
<th>1891</th>
<th>1901</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>147</td>
<td>143</td>
<td>153</td>
<td>157</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scotland</td>
<td>73</td>
<td>74</td>
<td>-</td>
<td>73</td>
<td>72</td>
<td>72</td>
</tr>
<tr>
<td>Far Northb</td>
<td>70</td>
<td>74</td>
<td>-</td>
<td>70</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>Shetlandc</td>
<td>61</td>
<td>66</td>
<td>-</td>
<td>58</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

a Selection determined by census date and data availability.
b Comprising the counties of Shetland, Orkney, Caithness, Sutherland, Ross and Cromarty.
c Figures for 1851 include both Shetland and Orkney.


A gender imbalance among adults of marriageable age as substantial as that found both in the Far North of Scotland and in New Zealand created, in both places, a shortage of marriage partners. Because the deficit was of eligible grooms in the former and of prospective brides in the latter, many in both places reached their sixtieth birthday and lived out what remained of their lives as a bachelor or spinster, that is without ever having established an affective family unit. By the end of the Victorian period in Scotland, 11.2% of elderly men and 18.9% of women elders had never married, but for the Far North the equivalent figures, 13.3% and 28.4%, were somewhat higher, especially for women.

In the colony, on the other hand, the contemporary marital pattern was of quite a different order. Census returns for 1901 reveal that while as many as every fifth (21.1%) elderly non-Maori male had never married, this was true of only 4.2% of women of that age — that is to say, marriage was almost universal.
among the latter but far from so among the men. An alternative measure, the number of elders who reported in the census that they had never married per 100 who had, confirms the strong contrast between gendered patterns of marriage and non-marriage among the colony’s elderly non-Maori. Among men this ratio rose from 24 to 31 and then to 35 in 1881, 1891 and 1901 respectively, yet for women remained as low as 8 at each of the three dates.

Statistically, population ageing among non-Maori New Zealanders toward the end of the nineteenth century was perhaps most intense among the Chinese. A small, shrinking minority, they were the only non-Maori ethnic group separately tabulated nationally by age and gender in census returns. Overwhelmingly dominated by men at all adult ages, Chinese totalled 4920 at the 1881 census but only 2832 in 1901. During these years, however, the elderly section of the male population grew strongly. Their number rose from just 34 in 1881 to 359 20 years later, yet this was an almost entirely male population, for not more than one elderly female was recorded at any of the six censuses held during the period.

Among Chinese men collectively, strong sustained ageing occurred. Indeed, the proportion of all males aged 60 years or older rose from less than 1% in 1881 to 12.7% in 1901, that is to almost twice the equivalent proportion for the total non-Maori population. Elderly Chinese men were further distinguished from other non-Maori males of similar age by their exceptionally high frequency of bachelorhood, as reported in the census. Thus, in 1881 (97.1%) and again in 1901 (97.5%), all but a tiny fraction were classified as having never married and were therefore, one might presume, devoid of family attachments in New Zealand.

As unusual as it was in timing, the phase of premature demographic ageing among non-Maori New Zealanders in late Victorian times was, in retrospect, no less unique in terms of the highly nuanced spatial pattern that evolved. To elucidate this dimension of the ageing process, statistics for selected censuses of the time have been organized in terms of a nation-wide network of regions based on geographic counties, until the 1980s used as a base unit in published census area population statistics. In turn, the regions depicted in Figure 1 are loosely modelled on the system defined for the purposes of the Local Government Act 1989. In all, for present purposes, 20 regions were delineated, the majority (12) of them being in the North Island.

Although elderly non-Maori were present in every region at each census between 1881 and 1901, a growing majority of them lived in the South Island, 54.3% and 56.7% at the period start and end respectively. Nevertheless, their relative and numerical importance remained far from uniform over time or from region to region. In fact throughout the two decades, 1881–1891 and 1891–1901, half of the total elderly population lived in no more than four regions. Three of these, Auckland (1901: 7502), North Canterbury (1901: 7467), and Coastal Otago (1901: 8290) were dominated by, even for this period, a sizeable urban centre, while in the fourth, the West Coast (1901: 3601), the economy was governed by extractive industries led by gold-mining. Indeed, the gathering pace of demographic urbanization ensured that rural New Zealand accounted for a shrinking majority of non-Maori elderly from 1881 (59.8%) through to
1901 (53.7%), closely paralleling a similar trend in the non-Maori total population (1881: 58.8%; 1901: 54.4%).

Population ageing was a pervasive phenomenon across the network of regions. All shared in the expansion of elderly that occurred over the 20 years to 1901, but by far the strongest growth was on the West Coast where numbers multiplied ninefold, from 416 to 3601. Expansion was also very rapid in three other rural provincial regions: Manawatu (162 to 1351) in the North Island and, in the South Island, Central Otago (331 to 2142) and Southland (520 to 3037). Nevertheless, the absolute gains registered for the West Coast (3185) and also for Southland (2517) were somewhat greater than was experienced in the three urban-centred regions that contained the largest populations of elderly throughout the period 1881–1901, namely Coastal Otago (6095 in 1881 to 8290 in 1901), North Canterbury (5427 to 7467), and Auckland (4607 to 7052).
In all, the South Island accounted for five of the six regions in which the proportion of persons of voting age who were 60 years or older exceeded the national average of 12.8%. The largest cluster was on the West Coast where one in five voters (20.8%) was an elderly person, followed by Central Otago (17.0%), Nelson (16.2%), Coastal Otago (14.9%), and North Canterbury (13.4%). Auckland, in the North Island, was the sixth. There, one in every seven (14.2%) of all non-Maori voters was elderly. Elsewhere in the North Island, in contrast, relative ageing remained comparatively weak. Even in 1901, for instance, the elderly in most regions there represented 10% or less of all adults of voting age — that is, the proportion was commonly well below the national average.

Regional location quotients provide a complementary perspective on the geographical concentration of the elderly relative to children (0–14 years) in late Victorian times. Perhaps most obvious was a persistent broad contrast, strongest in 1901, between quotients that were, on average, appreciably higher in the South than the North Island. In both there was a wide range of experience among the regions. In several, among them East Cape and Taranaki, the index was less than 1.0 in 1881, and lower again in both 1891 and 1901. In a second grouping, epitomized by Northland, Auckland, and Wellington in the North Island and, in the South, by Nelson, quotients had peaked as early as 1881. Thereafter they diminished toward or even below 1.0, the threshold at which the proportions of the nation’s elderly and younger non-Maori adults in a given region were the same.

Perhaps most remarkable, however, was a third cluster of regions, all in the South Island and all distinguished over the years 1881–1901 by a progressive strong increase in the relative concentration of elderly. They included (1901 location quotients in brackets) North Canterbury (1.09), East Otago (1.16) and Southland (0.94) where the proportion of elderly remained quite low despite very strong growth over the previous two decades or so. But the supreme exemplars were undoubtedly Central Otago (1.48) and, even more, the West Coast (1.81), the regional average for the latter being surpassed by a very wide margin indeed in both Grey (2.4) and Westland (3.1) counties.

Nevertheless, whether they lived in Northland, Southland or in some region in between, men outnumbered women elders everywhere in late Victorian New Zealand (Table 4). Yet again, however, their distribution was far from even. Especially during the 1890s and early 1900s, the relative scarcity of women was most marked in the South Island and in two regions in particular, the West Coast and to a lesser extent Central Otago. In the 1860s and for some time to come their economies had been dominated by activity on thriving gold fields but now, toward the century’s end, these were increasingly relict. At their peak the diggings had been populated, for the most part, by very few old but many young to middle aged men. By 1901, however, age distribution in both regions had been transformed. On the Coast, every elderly woman was outnumbered by as many as 3.7 men of similar age, a ratio that had been even higher in 1891 (4.5:1). Equivalent ratios for Central Otago, 3.0:1 and 3.4:1, respectively, were lower but still remarkably high.
Table 4: Number of males per 100 females aged 60 years and over by region in the North and South Islands in 1881, 1891 and 1901

<table>
<thead>
<tr>
<th>Region</th>
<th>1881</th>
<th>1891</th>
<th>1901</th>
<th>1881</th>
<th>1891</th>
<th>1901</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auckland</td>
<td>124</td>
<td>121</td>
<td>123</td>
<td>119</td>
<td>136</td>
<td>129</td>
</tr>
<tr>
<td>Coromandel</td>
<td>160</td>
<td>189</td>
<td>210</td>
<td>203</td>
<td>169</td>
<td>201</td>
</tr>
<tr>
<td>Waikato</td>
<td>212</td>
<td>192</td>
<td>168</td>
<td>333</td>
<td>451</td>
<td>372</td>
</tr>
<tr>
<td>Bay of Plenty</td>
<td>231</td>
<td>191</td>
<td>193</td>
<td>129</td>
<td>122</td>
<td>122</td>
</tr>
<tr>
<td>East Cape</td>
<td>251</td>
<td>186</td>
<td>233</td>
<td>160</td>
<td>172</td>
<td>176</td>
</tr>
<tr>
<td>Hawkes Bay</td>
<td>160</td>
<td>160</td>
<td>151</td>
<td>127</td>
<td>139</td>
<td>135</td>
</tr>
<tr>
<td>Taranaki</td>
<td>141</td>
<td>141</td>
<td>160</td>
<td>221</td>
<td>336</td>
<td>300</td>
</tr>
<tr>
<td>Wanganui</td>
<td>149</td>
<td>164</td>
<td>164</td>
<td>231</td>
<td>173</td>
<td>181</td>
</tr>
<tr>
<td>Manawatu</td>
<td>142</td>
<td>173</td>
<td>174</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wellington</td>
<td>113</td>
<td>109</td>
<td>115</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wairarapa</td>
<td>173</td>
<td>161</td>
<td>166</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>North Island</th>
<th>140</th>
<th>142</th>
<th>150</th>
<th>144</th>
<th>162</th>
<th>166</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
<td>143</td>
<td>153</td>
<td>157</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


In contrast, the male bias among the elderly was consistently weakest in Wellington where the gender ratio varied within a narrow band (109–115), and to a lesser extent in Auckland, North Canterbury and Coastal Otago. In each of these the non-Maori total population was, for the period, among the most urbanized in the colony. Presumably this circumstance made each of the three regions a more congenial place of residence for elderly women than did the countryside. Many men of similar age needed to work to survive, however, and often sought employment in rural areas as highly mobile itinerants employed in land clearance, farming, seasonal work, public works construction, perhaps gold-mining, and other mainly manual work.

This, of course, was also the case in other parts of the colony. Men everywhere were much more strongly represented among elderly outside rather than within the towns, especially in the South Island (Table 5). Indeed, averaged across the entire colony, the overall rural gender ratio among the elderly not only remained strong but actually increased during the last 20 years of the Victorian period. So too did the difference between rural and urban ratios, again a longer term legacy of an earlier phase of settlement dominated by men. For example, whereas the rural ratio was 166 and the urban 115 in 1881, by 1891 the equivalent figures had reached 185/121, and ten years on were 201/119.
Table 5: Number of non-Maori males per 100 females aged 60 years and over by rural and urban residence on the West Coast, Central Otago and New Zealand in 1881, 1891, and 1901

<table>
<thead>
<tr>
<th></th>
<th>1881</th>
<th>1891</th>
<th>1901</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Coast</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>559</td>
<td>692</td>
<td>531</td>
</tr>
<tr>
<td>Urban</td>
<td>165</td>
<td>250</td>
<td>212</td>
</tr>
<tr>
<td>Total</td>
<td>333</td>
<td>451</td>
<td>372</td>
</tr>
<tr>
<td>Central Otago</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>254</td>
<td>377</td>
<td>343</td>
</tr>
<tr>
<td>Urban</td>
<td>152</td>
<td>232</td>
<td>185</td>
</tr>
<tr>
<td>Total</td>
<td>221</td>
<td>336</td>
<td>300</td>
</tr>
<tr>
<td>New Zealand</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>166</td>
<td>185</td>
<td>201</td>
</tr>
<tr>
<td>Urban</td>
<td>115</td>
<td>121</td>
<td>119</td>
</tr>
<tr>
<td>Total</td>
<td>143</td>
<td>153</td>
<td>157</td>
</tr>
</tbody>
</table>


A further very distinctive spatial dimension of population ageing in the colony was strong expansion in the relative importance of elders in those regions in which growth in the number of children tended to be weakest, and vice versa. This loose inverse relationship between the two age groupings was perhaps most evident in the form of a sharp cleavage between the North and South Islands. In the former, where absolute and relative expansion of the elderly was in general much less robust than in the South, most regions experienced strong growth in number of children throughout the years 1881–1901.

Meanwhile, the child section of the population diminished in all but one region in the South Island where, in general, the spatial process of change intensified markedly over time. In the earlier part of the period, in the 1880s, the decline was confined to Coastal and Central Otago, but by the 1890s and early 1900s it had deepened in these regions while also spreading to embrace all other regions apart from Southland. For reasons that remain unclear, this region remained unaffected. In fact Southland’s child population multiplied by half, from 11,001 to 16,937 between 1891 and 1901, and yet over the same period it diminished by more than 10% in neighbouring Coastal Otago (-11.4%) as well as on the West Coast (-17.8%) and in South Canterbury (-12.9%).

The conjunction of often divergent change over time in the regional growth of non-Maori children and elderly is effectively summarized by aged–child or nominal dependency ratios (ACR) depicted in Figure 2. That ratios for all regions, but most notably those in the South Island, were appreciably higher in both
1891 and 1901 respectively than they had been ten years earlier once more confirms the spatial pervasiveness of an ageing process that intensified rapidly, in particular during the 1890s. Such a trend also implies the intercession of broad trans-regional factors, such as economic deprivation during the Long Depression, that apparently impacted negatively on demographic behaviour and composition, especially in the South Island, for example through fertility-induced shrinkage in the size of the child population.

In detail, whereas in 1881 only ACR for Nelson (12.0) and Auckland (10.0) were 10.0 or higher, by 1891 this category contained as many as ten regions and over the next decade all of them were gathered in. Indeed, at the 1901 census the number of elderly per 100 children exceeded the national average (20.2) in six regions, but highest by far was the West Coast’s ratio of 37.2, followed by Central (31.4) and Coastal Otago (25.8). Each of these ratios was twice, and in the case of the West Coast three times, the low of 12.6 for both East Cape and Manawatu in the North Island.

Overall though, the nominal ACR in 1881 was appreciably lower in the North Island (16.9) than in the South Island (23.8) where it exceeded the national average in six of some eight regions. Typically, but not without exception in both the North and South Islands, the ratio of elderly to children was higher in urban than in rural places. By 1901, however, there were two conspicuous exceptions to this generalization, both of them in the South Island. There, on the West Coast (41.1/31.2) and in Central Otago (33.4/25.0), the rural ratio greatly exceeded the urban.

At the close of the Victorian period, then, two adjacent South Island regions, the West Coast and Central Otago, had emerged without peer as domains of the elderly, and in particular of older men. Indeed it was in these two regions that the contemporary phase of relative population ageing, as a spatial phenomenon, appears to have climaxed. By 1901 the West Coast contained not only the third-largest but also the most rapidly expanding regional concentration of persons aged 60 years or older. Central Otago’s elderly population was much smaller, but it too had multiplied rapidly since 1891, on average by 27% annually.

The several demographic consequences of such strong growth were, on balance, much greater for men than for women. Most dramatic, perhaps, was a steep escalation in the potential electoral importance of elderly men on the Coast, at the time a Liberal stronghold. There they were ‘often living in appalling conditions’ with little prospect of relief, for this was a time in New Zealand ‘marked by a deliberate attempt to keep all formal collective welfare activity to a minimum, and to maximise individual, family and informal neighbourly assistance when need arose’. In other words the support of dependants, whether elder or younger, was deemed to be an inappropriate commitment for the colonial government.

The plight of elderly men on the West Coast must have been exacerbated by the relative geographical and social isolation of many of them. Fully two-thirds lived outside the towns in 1881, a proportion little changed 20 years later. During this time the share of all men of voting age on the Coast who were aged 60 years or older rose from just 3.3% in 1881 to one in four (26.1%) in 1901 and in
Figure 2: The aged–child ratio (ACR) (number of persons 60 years of age or older per 100 children aged 0–14 years) for non-Maori population in major regions, 1881, 1891 and 1901

rural areas to almost twice (27.3%) the average (14.8%) for the entire colony. Equivalent figures for elderly West Coast women were 2.6% and 11.7% and, for males and females in the same age band in Central Otago, 3.6/20.5% and 4.4/11.9% respectively.

In both regions a parallel decline occurred in the number of people under 15 years of age. The two trends were sufficiently large to induce a several-fold increase in the number of elderly per 100 children — that is, in the regional ‘burden’ of nominal dependency. By 1901, then, as recorded earlier in this paper, the ACR had reached levels at that time unprecedented in the colony’s non-Maori demographic history, especially in the countryside.

A notable consequence of the rapid growth of the elderly population, of men much more than women, must have been their greater visibility in the social landscape. In both regions they were encountered much more often than elsewhere in the colony — on town streets, in pubs and on cottage verandahs, especially in rural areas but on the old goldfields in particular, and above all on the West Coast. There, the elderly gender ratio climaxed at 451 in 1891, the highest recorded by any region during the last 20 years of Queen Victoria’s reign (Table 5).

Even so, the ratio was much higher again in rural parts of the West Coast, topping the colony in both 1881 and 1891 and again in 1901 (Table 5). The male bias was most pronounced in Grey county where the ratio climbed from 642 to as high as 1082 between 1881 and 1891, then fell away to 777 in 1901. Indeed, on the West Coast, as in all of the colony’s regions throughout the later Victorian period, there was a marked contrast between high rural and usually much lower urban gender ratios (Table 5).

Equally remarkable during the 1880s and 1890s, however, was a persistent strong rural–urban and male–female contrast in the pattern of marriage and non-marriage among the elderly (Table 6). In no other regions in the colony, in the countryside or in town, did such a large group of males in their 60s or older remain unmarried, many of them apparently living alone and often destitute. Kinlessness, the absence of close blood relatives, may have been common too, certainly in the largely male and mainly bachelor elderly Chinese population, for ‘even if’, according to Fairburn, ‘the individual emigrated with a large contingent of relatives or was subsequently joined by a stream of them or was a member of a large established family, the restless dispositions of most of the households would soon have dispersed them, placing them outside the [geographical] range needed for effective association and collaboration’.
Table 6: Unmarried per 100 married non-Maori males and females aged 60 years and over for rural and urban populations on the West Coast and in Central Otago 1881–1901

| Year | Rural | | | Urban | | | Total | |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|      | male  | female|       | male  | female|       | male  | female|       |
| West Coast | | | | | | | | | |
| 1881 | 160.8 | 3.7  |       | 47.7  | 26.3  |       | 118.6 | 13.0  |       |
| 1891 | 226.3 | 3.9  |       | 66.5  | 12.3  |       | 154.0 | 7.7   |       |
| 1901 | 192.2 | 8.8  |       | 57.1  | 3.4   |       | 136.6 | 4.8   |       |
| Central Otago | | | | | | | | | |
| 1881 | 123.4 | *    |       | 33.3  | 7.1   |       | 92.7  | 1.9   |       |
| 1891 | 123.7 | 7.9  |       | 48.7  | 9.1   |       | 104.7 | 8.2   |       |
| 1901 | 92.8  | 2.8  |       | 33.3  | 14.3  |       | 89.7  | 5.9   |       |

* no unmarried women were recorded in rural areas in Central Otago in 1881.


Fairburn’s perspective on this matter has been contested, however, for example by Lyndon Fraser. Using empirical evidence garnered from an analysis of sample data for Irish migrants to the West Coast and, earlier, for Irish Catholics and other settlers in Canterbury, Fraser argues that while ‘transience was a pervasive fact of immigrant life for both sexes it did not lead to atomisation or a breakdown of familial cooperation’. On the contrary, ‘rather than pursuing their own self-interest, the immigrants relied heavily on strong kinship bonds and ethnic ties after their arrival and did not eschew these vital links during subsequent movement’. These links provided information about work opportunities as well as accommodation and material support when needed. On the other hand David Thomson concluded that both arguments might be valid. While some newcomers settled down and developed strong local social connections, there were others, notably many among the large numbers of unmarried men, who maintained an unattached, transient life style.

Certainly at the 1901 census every second male elder on the West Coast, and two of every five in Central Otago, was classified as never married. Rural males were most affected, those in Central much less so than those on the Coast. Between 1881 and 1901 the number of unmarried per 100 married rural men remained consistently well above equivalent ratios for both urban men of the same age and for elderly males across the whole colony (Table 6). Together with the strong male bias in gender ratios for both the elderly and young adults, the marital pattern confirms the deeply distorted social structure of the time in both regions, yet one most strongly expressed among rural communities on the Coast. There, in Inangahua and Grey counties, the number of unmarried per 100 married elderly men was at times much larger than the regional average (Table 6). Having failed to establish their own nucleus of immediate relatives
earlier in life, large numbers of such bachelors inevitably faced a ‘familyless’ old age; their presence providing the evidence on which the authorities of the time based their view that ‘the gaps in kinship aid were most evident in the case of the elderly’.

A peculiar feature of social life both on the West Coast and in Central Otago during the later Victorian period was that while few unmarried women aged 60 years or older were to be found in either region, the number of married women was usually less than half the size of the equivalent group of elderly males. In 1901, for example, married males outnumbered women by 895 to 436 on the West Coast and, in Central Otago, by 716 to 266. It is possible, of course, that some of these older men may have misreported their marital status, and that others had wed a partner younger than 60 years. Equally plausible, however, is the hypothesis that, at census time, husband and wife were recorded in different regions, and that their spatial separation was itself an expression of the high level of geographical mobility in search of employment — especially pressing among unlanded male workers — that is said to have characterized the general population and, more especially, a large proportion of the colony’s male labour force. Among the latter, of course, elders seeking gainful employment were deeply affected. Very often they ‘had no choice or felt they had no choice but to accept whatever work and wages were offered to them’, no less because so much employment in New Zealand was intermittent.

This at a time when job opportunities for the elderly were being diminished by difficult economic conditions during the Long Depression and in particular by employers who, as a consequence of the Industrial Arbitration and Conciliation Act 1894, were taking ‘every available measure to maximise efficiency, which in many cases meant laying off aged workers’.

The phase of population ageing that overtook non-Maori demographic development during the later years of the nineteenth century was a transitory phenomenon distributed quite unevenly among the colony’s network of regions. Enduring for little more than two decades, it spilled over into the very early years of the twentieth century, yet within the first decade several key indicators of ageing faltered, some more or less plateauing, others actually declining.

This was certainly so of the total number of elderly. According to the census record they continued to grow during the first decade of the new century, but on average much more slowly per year (3.6%) than during the 1890s (9.7%). As a result of this change, in tandem with the somewhat weaker expansion (1901–1911: 2.2% per year) of the child population, the dependency ratio rose from 20.2 in 1901 to plateau at 22.4 in both 1906 and 1911. Nevertheless, while the proportion of elders among the total non-Maori population aged 21 years or older held steady at a little more than 10% between 1901 and 1911, a portentous change in gender composition was well underway. During this decade, the number of elderly males per 100 females declined from 157 to 133. Indeed, the continued erosion of male dominance was driven by natural increase which progressively replaced immigration as the prime source of population growth. In turn, this development, reinforced by an existing disparity in survivorship favouring females, ensured that from 1936, the gender mix among the elderly would feature a growing surplus of women. The Chinese were a qualified
exception to this trend in that, among them, ageing continued to intensify during the first decade of the new century. In proportion, those aged 60 years and older climbed from less than 13.0% (359) to 17.4% (443) between 1901 and 1906, reaching 18.4% (480) at the 1911 census when they remained, much as before, entirely male and mostly never married.

Nevertheless demographic ageing in the non-Maori population at large was in retreat among the regions, nowhere more than on the West Coast and in Central Otago. In both, the number and proportional importance of the elderly, location quotients, and both dependency and gender ratios, all peaked in 1906 or earlier. On the West Coast, the number of elderly tumbled from 3989 to 3325 between 1906 and 1911 (that is to less than the total for 1901 (3601)), and in Central Otago from 2255 to 1968. Consequently, regional location quotients also fell, marginally in Central Otago but steeply on the West Coast. There, the quotient plunged from 1.18 to 1.22 between 1901 and 1911, implying that death and outward migration had caused rather rapid spatial deconcentration among local elderly.

This contention is supported by at least two other pieces of evidence: the decline, discussed above, in the number of persons aged 60 years and older; and the parallel transition toward a stronger female presence among the elderly. Indeed, over the first decade after Queen Victoria’s demise, the gender ratio diminished by as much as a third in both regions, from 372 to 221 on the West Coast and, in Central Otago, from 300 to 218.

What then, were the primary causes of this interlude of premature population ageing at the national level, and why was its development much more intense on the West Coast and in Central Otago than it was in other regions? In seeking answers to these questions three interrelated sets of variables need to be considered. First, there is age–gender composition. Structural change, for example population ageing, might be induced and then sustained by any one — or more likely by some interactive combination — of a second group of factors, the trio of dynamic or proximate determinants of age structure, fertility, mortality and migration.

Functionally, the role of the proximate determinants is a mediating one. They stand between age–gender structure itself and a third set of components, the associated factors, which in turn orchestrate the behaviour of each of the proximate determinants. In a collective sense, associated factors include a multiplicity of cultural, social, economic, environmental, political and other variables. Examples range from legislative measures affecting the role and value of children, to economic conditions as well as nuptial behaviour and contraceptive practices in the case of fertility; in regard to mortality, from living conditions and nutrition to the role and status of women; and, for migration, they might address opportunity for personal economic and social improvement as well as immigration policy.

Because of the magnitude of the change and its negative impact on population growth as well as the relative size of the child component, the vigorous, sustained downward shift in non-Maori fertility initiated during the terminal decades of Queen Victoria’s reign was perhaps the most remarkable demographic transformation of the period. In retrospect, according to Colin O’Neill, ‘the
marital European birth rate' declined by almost a third (30.2%) between 1878 and 1901, and by 1921 had fallen a further 25.9%. Despite the continued but relatively small flow of immigrant children, such a rapid transition to a lower level of reproduction must have, alone, altered the demographic balance between people of different ages. In particular the slow growth of the child population it precipitated undoubtedly contributed to overall ageing by diminishing their proportional share of the non-Maori total population (from 42.5% to 31.3% between 1881 and 1911) while increasing that of adults, including the elderly. Moreover, as detailed earlier in this paper, these shifts in age distribution caused the nominal dependency ratio to rise, especially in the South Island.

While economic hardship imposed on families by the Long Depression of the 1880s probably induced many couples to have fewer children, a key associated factor in the transformation from relatively large to much smaller families was a profound change in nuptiality. By the turn of the twentieth century, customary female age at marriage had switched from comparatively young to the delayed pattern of Europe. Clearly, as the reproductive transition of the period implies, a substantial reassessment of the economic role and value of children, and of the relative costs of rearing them, became entrenched in the minds of non-Maori parents.

From the later 1870s, such a shift was certainly encouraged, if not precipitated, by legislative intervention in the lives of children, to protect 'them from market forces and adult exploitation'. Collectively, the restrictions imposed by the State might have also negatively influenced the reproductive aspirations of parents by both redefining their responsibilities to children and eroding the ability of the latter to earn and contribute directly to net family income. In this process the Education Act of 1877 and the Factory Acts of 1891 and 1894 appear to have been pivotal. The former, supported by the School Attendance Acts of 1894 and 1901, increased the number of children who went to school by providing, with some exemptions, those aged between 7 and 13 years (14 years from 1901) with a free but compulsory education. On the other hand, while the Factory Acts imposed similar age restrictions on the employment of boys and girls, 'more stringent school attendance regulations were the single most important factor in restricting the growth of paid, child employment'. The impact of this development was intensified, so it seems, by a parallel increase in credentialling, that is 'the growing number of occupations which required more advanced educational qualifications for job entry' and which 'was undoubtedly a major contributing factor to the growth of school retention'. In turn, credentialling led, in the 1880s and 1890s, to an older school population 'as more pupils entered and completed work in the senior classes', thereby delaying the age at which children might join the labour force.

Through the reduced flow of children into the population at the base of the age pyramid, then, fertility transformation certainly appears to have exacerbated the episode of population ageing that occurred among non-Maori late in the nineteenth century. Nevertheless, neither the timing nor the magnitude of the decline in fertility is, alone, sufficient to explain the ageing trend in terms of its occurrence, limited duration, uneven spatial manifestation, emphatic male bias, and other distinguishing features. Nor indeed is mortality, also strongly in
transition in the late nineteenth century, and in particular infant mortality 'primarily because of socio-environmental factors, notably nutrition and the lack of industrial slums, rather than medical advances or public health measures'.

Indeed, on balance, the substantial improvements in death rates and life expectancy that underpinned the mortality transition favoured a younger rather more than an older age distribution, much as envisaged by Omran in the third stage, 'age of receding pandemics late phase', of 'the epidemiological transition'. This is because much of the change in mortality rates was confined to infants and pre-school children. To a limited degree, this would have compensated for births 'lost' due to the concurrent decline in fertility, while also ensuring that more people reached adulthood and lived to old age. Thus, although survivorship among elderly males and females did increase during the 1890s and into the 1900s, 'low levels of infant mortality were the key factor producing the high levels of life expectation achieved' in the late nineteenth century.

For example, the non-Maori adjusted infant mortality rate (quinquennial average) reduced by 28.7% between 1871-1875 and 1896-1900, from 116.7 to 83.7 per 1000 live births, and by 1906-1910 had fallen to 69.6 (as published), or by a further 16.8%.

Fertility transformation occurring more or less in tandem with infant mortality decline perhaps implies that the one contributed in some measure to the other. Certainly the former signals a decrease in family size, a longer term shift cogently documented by Miriam Gilson. Conceivably, fewer siblings in a household might well have favoured less infant mortality by impeding the transmission of infectious disease among juvenile members; it might also have facilitated subtle, health-promoting improvements in the domestic environment, such as in the quality of parenting, physical living conditions, nutrition and clothing.

In sum, differences between male and female death rates and life expectancy during the sustained mortality transition initiated in late Victorian times can be discounted as a significant determinant of the pronounced male domination of gender ratios that distinguished demographic ageing at that time from the present phase — 'the age of degenerative and man-made disease' in Omran's classical (Western) model of 'the epidemiological transition' — in which women comfortably outnumber men. In fact, in the earlier period, as confirmed by life tables computed from official data by Ian Pool, the comparatively small disparity that existed between the sexes advantaged females. At age 60 for instance, at each census from 1876 through the 1880s and 1890s to 1911, women lived on average between 1.18 (1911) and 2.11 (1881) years longer than men.

Finally, there is the explanatory role played by the third proximate factor, that is migration in the form of immigration, the inward flow to the colony of people from abroad. Unfortunately, published returns from New Zealand censuses spanning the Victorian period and first decade of the twentieth century do not provide direct data on non-Maori immigration. Nevertheless, aggregate statistics pertaining to birthplace, a proxy for immigration, were collated for men and women combined for provincial districts and, from the 1878 census, for boroughs and counties as well. Of more interest in the present context, however, are national birthplace statistics refined by age and gender and first published in 1896.
From this source, details of persons born outside the colony — the foreign (overseas) born or immigrants — are derived by subtracting the number of New Zealand-born from those of equivalent age in the total population. These residual data confirm that elderly alive over the period 1896–1911 were almost entirely an immigrant group, and totally so in the case of the Chinese. In reality, the length of the settlement period was just too short to have allowed more than a miniscule New Zealand-born population of grandparent age to exist come the century’s end. A person born in the colony and aged 60 or older in 1900 would have needed a birth date no later than 1840, the year the Treaty of Waitangi was signed, a time when the colony’s total non-Maori population was still very small. Census statistics on birthplace, then, provide unequivocal circumstantial evidence that immigration rather than fertility or mortality was the proximate factor primarily responsible for the wave of demographic ageing among non-Maori New Zealanders toward the end of the nineteenth century.

Though evidently diminishing over time in proportion to an increase in those born in New Zealand, the dominance of immigrants among non-Maori elderly nonetheless persisted to and for a time beyond 1911. Whereas in 1896 virtually every (99.7%) elderly non-Maori in the colony claimed an overseas birthplace, by 1911 the proportion had slipped to 94.5%. Meanwhile too, male numerical dominance among the immigrant elderly weakened appreciably. Between 1896 and 1911 the gender ratio fell from 158.8 to 132.3 males per 100 females. Rather more portentous for the future gender mix among the elderly at large, however, was the even balance of males and females among the still small but fast growing non-Maori population of persons aged 60 years or older who had been born in New Zealand. Between 1896 and 1911 their number rose from 129 to 3862.

By association, then, Kevin McCracken’s analysis of census data on the foreign-born over the period 1840 to 1911 does much to clarify both the demographic origins and spatial configurations of population ageing among non-Maori during the last 20 years or so of the 1800s and the early 1900s. In essence, in the context of “the demographic transition” model, the phenomenon is exceptional, an example of immigration-induced premature population ageing. While very largely a quirk of the settlement process acted out in earlier decades, the ageing trend was clearly accentuated by the radical transformation in fertility that came toward the end of the nineteenth century but owed little of its impetus to the substantial decline in mortality which occurred over the same period. The impact of immigration was epitomized by the large numbers of foreign-born men drawn to Otago province — effectively, to rural Central Otago — in the early 1860s following the discovery of gold in the hinterland, which of course became the immediate destination of many newcomers from abroad. This was certainly so in 1861 for example, a year in which Otago alone not only absorbed over 87% of immigrants to New Zealand but also accounted for one of every three settlers born outside the colony.

From 1864 however, many miners and opportunistic service providers left Central Otago for the West Coast where further discoveries of gold had been made. There they mingled with many who had travelled from elsewhere in New Zealand, swelled by the Irish and others who came directly from overseas, many crossing the Tasman Sea from the goldfields discovered earlier in Victoria,
Australia. Altogether, by 1871 well over four of every five people on the Coast was an immigrant. While persons born in Ireland and in Australia congregated there in disproportionately large numbers, the same was so of both Irish and Chinese in Central Otago.

In review, then, the explanatory power of birthplace evidence is compelling. It implies a strong causal link between the advent of sizeable, mainly rural, mostly unmarried male mining populations in both Central Otago and the West Coast in the 1860s and, within 30 years or so in both regions, the onset of vigorous demographic ageing dominated by single, often familyless males, largely made up of survivors of the original influx. This, in varying degree, was a pattern repeated elsewhere in the colony, but one usually much more intensely manifested in the countryside than in the towns. Moreover the connecting time line is very well captured by David Hamer who points out that many of Premier Richard Seddon’s ‘West Coast constituents who had come to seek gold in the 1860s when aged between 25 and 40 . . . were now [in the 1890s] in their seventies and in urgent need of help’. At the time however, ‘elderly men, in particular, were frequently characterised as troublesome, drunken, unable to fend for themselves . . . and a social nuisance’ who, if they had to be, were best assisted ‘under firm supervision in a home’. Including some Chinese, a number of elderly men from throughout Otago province, but especially from ‘the old goldfields’ of Central Otago, found themselves recipients of discretionary charitable aid — indoor relief — in the Benny, Dunedin’s Otago Benevolent Institution, said to be the largest establishment of its kind in the colony. The incarceration of elderly people in such places, observes Kay Saville-Smith, served to confirm their social marginality.

Ephemeral in time and place it might have been, yet the late Victorian surge of largely immigration induced male-dominated population ageing among non-Maori New Zealanders delivered a number of enduring social consequences, some of social or institutional interest, others bearing upon attitudes to and policies affecting the elderly. One of considerable social importance at the time, and which persisted into the earlier part of the twentieth century, derived from the shortage of grandmothers implied by the pattern of strong gender imbalance among the colony’s elderly. Such a deficit, as Fairburn argues, must have weakened the informal intergenerational transmission from mother to married daughter of wisdom and advice about nurturing children. Presumably, however, the severity of this dislocation was somewhat muted by the steep decline in fertility from the late 1870s, and with it family size. Nevertheless, deprived thus of grandmotherly support in many cases, young mothers found themselves in comparative social isolation, a situation that helps to explain, contends Fairburn, the rapid expansion, from its inception in 1907, of the Plunket Society ‘with its body of alternative dogma and enthusiastic precept’.

The late Victorian surge of ageing was also a central reason why, Thomson argues, the colonists turned away from the prevailing strategy of self-reliance in conjunction with family responsibility and their corollary, minimalist formal collective or public social support of the needy, in favour of the development of what became known, in the twentieth century, as the welfare state.
Furthermore, although the nineteenth-century emphasis on individual self-reliance persisted for some time, ageing during the 1880s and 1890s drove, according to Saville-Smith, a profound and lasting shift in public perception of the social and economic position of the elderly in New Zealand society. From that time the dominant assumptions about the lives of older people that have informed State policy lie most comfortably with those that underpin Wilson’s ‘down hill all the way’ model of individual ageing. This pessimistic perspective is predicated on the assumed inevitability of growing dependency and incapacity as one grows old.

Strong if not compelling evidence for such thinking lies embedded in early legislative initiatives. Of seminal importance in this respect was the Hospital and Charitable Institutions Act of 1885, ‘a landmark in our welfare history . . . [which] . . . established a national system of hospitals and charitable relief . . . [and] . . . confirmed that responsibility for the sick and poor was a charge upon all parts of the country and all sections of the community’. In effect, according to Saville-Smith, the 1885 Act initiated a lasting process of incremental State intervention in the lives of older New Zealanders, a process driven by the perception that growing old and being elderly were twin elements of a social problem defined in ways that led to the medicalization of ageing and increased economic dependency among those at that life stage. In turn, this shift was heavily intensified, it seems, by a progressive closure of opportunities for independent individual income determination and self-sufficiency. This was especially so in the cities ‘where older men were being forced out of employment as minimum wages were being written into awards and employers could no longer employ them at lower rates’. In addressing these matters, Saville-Smith argues that from 1885 greater dependency among older people was accentuated by State policy which emphasized the nuclear family on the one hand while, on the other, fostering the dual system of publicly-funded income support and institutional care of the elderly that still underpins this sector of the public welfare system today.
NOTES

*While this paper is not part of the contracted output of the Caversham Project, supported by the Foundation for Research, Science and Technology, it is a 'scoping paper' for that Project and has benefited in important ways from the author's involvement. This includes access to information and related discussions, especially those generated by research on geographical mobility as part of the project's Sites of Gender theme. I am also most appreciative of the many helpful comments on earlier drafts of this paper offered by Professors Richard Bedford (Waikato University), Erik Olssen (Otago University) and Guy Robinson (Kingston University), as well as Dr Kevin McCracken (Macquarie University) who also kindly supplied the data for New South Wales used in footnotes 14 and 28. The author would also like to thank Emma Beer and Erik Olssen for their help with footnoting.

1 Population or demographic ageing might be defined in several different ways. As used in this paper, it refers to relative ageing, that is an increase in the proportion (percentage) of persons aged 60 years or older.

2 Notestein proposed a four-stage model of 'the demographic transition', as follows: in stage one, high crude birth (CBR) and death (CDR) rates result in low levels of natural increase and population growth; in two, the CDR begins to decline but the CBR remains high, so that both natural increase and population growth accelerate; in three, because the CDR continues to diminish and the CBR begins to do so, rates of natural increase and population growth also start to decrease; and by four, the CDR and the CBR have fallen to very low levels, bringing a return to small rates of natural increase and population growth. F.W. Notestein, 'Population — the long view', in T.W. Schultz, ed., Food for the World, Chicago, 1945, pp.36–57. Some recent versions of the model add a fifth stage, evident in parts of Europe today for example, where a low CBR combines with a low but rising CDR to induce a trend of natural decrease giving rise to overall population decline.


9 As defined here, the Far North region of Scotland comprised the counties of Shetland, Orkney, Caithness, Sutherland, and Ross and Cromarty. It should also be noted here that flows from overseas also incorporated movement from goldfields in Australia, first to Central Otago and soon after to the West Coast (this aspect is further discussed in notes 65 and 67).


12 The analysis is confined to non-Maori because of a number of considerations, not least being that the range and quality of time-place series of data available for this group is superior to the equivalent data for Maori.

13 For contrasting perspectives on overseas emigration from Scotland, see Eric Richards,
200 BRIAN HEENAN


Thomson, p.155. Whether such a phase of population ageing was typical in colonies of broadly similar origin elsewhere in the world is unclear but may well have been if the experience of New South Wales is any guide. There the proportion of persons aged 60 years or older also edged upwards in late Victorian times, from 4.3% in 1881 and 1891 to 5.6% in 1901. Over the same period however, the number of elderly men per 100 women of the same age declined from 161 in 1881 to 138 in 1901, by which time the relative surplus of older males in New South Wales was much smaller than it was in New Zealand. Referring to a similar contrast in the gender composition of the general population rather than the elderly alone, Fraser suggests that the difference was a matter of timing, that 'the gold rushes (1864–1865) [on the Coast] took place at the same time as colonization and did not follow the introduction of agriculture or extensive pastoralism, as in New South Wales and Victoria. In addition the Coast’s gold, coal and timber were extractive industries based on heavy manual labour', Lyndon Fraser, ‘Irish Migration to the West Coast 1864–1900’, in Lyndon Fraser, ed., A Distant Shore: Irish Migration and New Zealand Settlement, Dunedin, 2000, p.89.

Benchmarked by present-day levels of ageing in, say, parts of Europe where 15% and sometimes considerably more of the population is aged 60 years or older, the peak figure of 6.7% for New Zealand non-Maori in 1901 is indeed rather modest. In this paper, however, it is the ageing trend rather than the proportion of elderly that is of central interest.

Nominal’ in that many elderly of the period, including most men, were part of the paid workforce rather than economically dependent, as were some children younger than 15 years. For example, a summary table in the 1891 census report places some 7123 (8.5%) boys and 2333 (2.8%) girls aged 5–15 years in various occupational groupings. Primary production (54.3%) and commerce (22.4%) accounted for most of the boys, and domestic service for three of every five of the girls.

For instance between 1874 and 1901, the number of women aged 15–34 increased from 42,231 to 163,874. Moreover, of women aged 30–34 in 1881, 87.9% were married, though by 1901 the figure had declined to 71.9%.

In fact females did not become eligible to vote until 1893.

Thomson, p.155.

Hamer, p.147.


Children under 15 years represented 36.6% and 33.4% of Scotland’s population in 1881 and 1901 respectively.

In Scotland between 1881 and 1901 for example, the number under 15 years of age and 60 years or older increased by 9.4% and 17.1% respectively.

Hamer, p.146.

While marriage is possible at any age older than the prevailing legal minimum, customary practice among non-Maori New Zealanders has meant that, historically, most have tended to marry within the span from about age 20 to their late 30s. The more even gender balance that evolved within this age bracket (20–39 years) in the later Victorian period implies a considerable improvement, from about 1891, and perhaps the later 1880s, in the prospect that males of this age might find a marriage partner of similar years. The number of males per 100 females aged 20–39 years ranged as follows: 1864: 240.7; 1871: 198.0; 1881: 136.0; 1891: 109.7; 1901: 105.5.

Heenan, ‘Living Arrangements Among Elderly Shetlanders’, p.220. Among counties comprising the Far North of Scotland in 1901, the highest proportions for men (Sutherland, 20.5%) and women (Sutherland, 33.8%; Shetland, 34.8%) were well above the national average.

The first significant immigration of Chinese occurred in the mid-1860s when miners from the Victorian goldfields were invited to work fields in Central Otago. Later arrivals, often farmers and artisans, mostly came from Canton and in turn sponsored relatives from China. Triggered by difficult employment conditions and a perception that the Chinese presented an economic threat, a poll tax was introduced in 1881 to dissuade their further immigration.

In this respect the colony’s Chinese at this time were by no means unique. In New South Wales in 1901, for example, in a Chinese total population of 11,140, males (94.0%) vastly outnumbered women. Men also accounted for all those (1507) aged 60 years or older, or for 14.4% of the Chinese total population of males, a proportion more than twice that (6.2%) accounted for by
elderly across the entire state in 1901. *New South Wales Statistical Register for 1901 and Previous Years*, Sydney, 1903, p.678.

29 In fact 21 regions were recognized but one of these, Taupo, was excluded from the regional analysis because of the tiny number of elderly persons living there (four in both 1881 and 1891, rising to 27 in 1901). Fiordland county was also omitted for much the same reason.

30 The location quotient is an index of relative geographical concentration. As used here, the quotient is the product of the national proportion of the total elderly (60 years and older) in each region divided by the national proportion of children (0–15 years) in the same region. Thus a quotient of 1.0 indicates that the relative degree of spatial concentration is the same for both age groups; figures above or below 1.0 imply that the elderly have a stronger or weaker presence, respectively, than do children.

31 The location quotient for Southland had been 0.72 and 0.87 in 1881 and 1891 respectively.

32 As used here, the terms ‘urban’ and ‘rural’ refer to the population of administrative boroughs and counties, respectively, as published in census reports of the period.

33 Hamer, p.146.

34 For a stimulating, extended examination of the social circumstances and issues of public moment affecting the welfare of the colony’s elderly, see Thomson, p.18.

35 Saville-Smith, p.78.

36 While the stronger preference among elderly women for town residence and elderly men for rural life reflected the pattern in the larger population, this was not without, at least on the West Coast, some variation among birthplace groupings. For example Fraser reports that Irish men on the Coast were more likely than other foreign-born males to settle on the goldfields or in developing agricultural areas. Among Irish women, in contrast, proportionately more settled in local towns than occurred among other national groupings apart from those born in Australia. Fraser, ‘Irish Migration to the West Coast 1864–1900’, p.90.

37 Fairburn, p.167.

38 Lyndon Fraser, *To Tara via Holyhead: Irish Catholic Immigrants in Nineteenth Century Christchurch*, Auckland, 1997 and Fraser, ‘Irish Migration to the West Coast 1864–1900’.

39 Fraser, *To Tara via Holyhead*, p.56.

40 ibid., p.90. One assumes, if Fraser is right, that these would have been equally true of immigrants older than 60.

41 The number of unmarried per 100 married elderly men in Inangahua county was 266.7 in 1881, 258.6 in 1891 and 181.6 in 1901, compared with ratios of 230.0, 360.0 and 280.3, respectively, in Grey county.

42 Thomson, p.96.

43 Fairburn, p.164.

44 Fraser, *To Tara via Holyhead*, p.54. On this subject, Fraser concluded that ‘all segments of the sampled groups were on the move regardless of age or condition’, p.87.


46 Fairburn, p.104.


48 For example the number of survivors at exact age 60 out of 100 non-Maori males and females born was, for men, 57 and 62, and for women 61 and 65, in 1891–1895 and 1900–1905 respectively, *New Zealand Official Yearbook 1915*, Wellington, 1915, pp.190–2.

49 It should be recognized, however, that the demographic transformations discussed in following paragraphs, in fertility and associated variables, mortality, and age–gender distribution and so on, were integral parts of a much larger complex of societal change in New Zealand that gathered momentum during the closing years of the nineteenth century. As it evolved, the process converted the country from a pioneer rural colony to a settled, primarily urban society.


56 ibid., p.17.

57 Scents and Pool, 'Perinatal and Infant Mortality', p.252.

58 ibid.

59 ibid., p.253.


62 That a not dissimilar happening took place in the Far North of Scotland in the nineteenth century, though under somewhat different socio-demographic circumstances, perhaps suggests that migration-induced population ageing was a more common occurrence in contemporary immigrant origin and destination societies than has been documented to date.

63 Grateful appreciation is expressed to an anonymous reviewer of this paper who, among other points made, concurs with the general assessment about the relative importance of immigration and fertility and mortality transformation in explaining the ageing trend but suggests that fertility decline alone probably contributed as much as between 27% and 35% of the increased proportion of people age 60 years and over from the 1870s to 1900. Turned around and discounting mortality, these figures suggest that between 65% and 73% of the ageing trend during this period was accounted for by immigration.


65 Hearn argues that the discovery of gold stimulated three major streams of migrants to Otago. One of these comprised people already living in New Zealand, another from the United Kingdom, and a third from the Australian colonies, especially from Victoria to which, with New South Wales, the West Coast Irish (who comprised about a quarter of the Coast's population between 1864 and 1901) were tied by 'close links of mobility and kinship', 'The Irish on the Otago Goldfields, 1861–71', p.76 and Fraser, 'Irish Migration to the West Coast 1864–1900', p.104.

66 According to McCracken, Otago's share of the colony's foreign born rose from 33.5% to 37.6% between 1861 and 1864 while in 1871 the province (in effect Central Otago) contained 98% of the total population of Chinese. By 1911, however, the proportion had fallen to 55% as a consequence of rapid urbanization, a process that intensified from the mid-1880s, and presumably also as a result of repatriation to China and the incarceration of elderly Chinese in establishments like the Otago Benevolent Institute. The total number of Chinese in New Zealand was 2832, 2570, and 2630 in 1901, 1906 and 1911 respectively. McCracken, Vol. One, pp. 20, 101; Vol. Two, figures 25 and 27.

67 Analysis of sample data (i.e. from sources other than the official census of population) for Central Otago by Hearn and for the West Coast by Fraser, indicate broad, independent support for these conclusions insofar as a majority of migrants were male, of younger working age (i.e. in their 20s and 30s), and single when they arrived in Otago beginning in 1861 and four years later on the West Coast. Hearn, 'The Irish on the Otago Goldfields, 1861–71', p.77 and Fraser, 'Irish Migration to the West Coast 1864–1900', p.94. However both Hearn and Fraser also document important differences in detail between people born in Ireland and those born elsewhere, for example in terms of movement origin and pathway, age, and marital status.

68 An intriguing commentary on other life transitions of the time is yielded by brief biographical data provided in Hamer on Liberal members of the House of Representatives. Of 117 members listed, one in four had been born in New Zealand but 47 (40.2%) had arrived in the colony before 1867, all except three of them during the decade 1856–1866. Hamer, p.146.

69 Thomson, p.96.

70 In Building the New World: Work, Politics and Society in Caversham 1880s–1920s, Auckland, 1995, p.44, Erik Ollsen records that in 1907 a deputation from the Otago Benevolent Institute’s
trustees, seeking the repatriation of aged and destitute Chinese, complained to the government that 15 were inmates of the 'Benny' while another 74 were receiving aid. Tennant's observation, however, that 'in the 1900s the Otago Benevolent Trustees and the United Board paid a portion of the cost of returning aged Chinese to their homeland', suggests that repatriation did take place and was, one might presume, a factor in the slowing growth, between 1901 and 1911, of the Chinese population both in total and of those aged 60 years and older. Margaret Tennant, *Paupers and Providers: Charitable Aid in New Zealand*, Wellington, 1989, p.81.

71 According to Thomson the 'Benny's' inmate population peaked in the mid-1890s. It was preponderantly male. He mentions that the earliest surviving list of inmates furnishes details of 285 persons receiving indoor relief on 1 January 1898. Of those aged 60 or older, men (194) outnumbered women (34) by almost six to one.
72 Saville-Smith, p.82; Thomson, p.96.
73 Fairburn, p.166.
74 ibid.
75 Thomson, p.154.
76 This is based on Caversham Project documents which contain extracts from the outdoor relief casebooks of the Otago Benevolent Institute. The minimalist approach seems to have been very much at the forefront of the minds of the Otago Benevolent Society's inspectors who were, in effect, 'gatekeepers' for the outdoor relief it provided. They frequently recommended to the trustees that an applicant's needs should be the responsibility of the individual or their family rather than that of the charitable organization, a local echo of cases on the maintenance of destitute persons that came before the Wellington magistrates courts in the 1890s through to the early 1900s. See Thomson, pp.144-7. Two examples from the Benny's records confirm local practice. In his report of 19 December 1894 on relief that had been claimed by John Perry, aged 55 and unemployed, the inspector advised that 'the man's relief be discontinued, his family should support him'. Moreover the Society's trustees were not averse to using the justice system to achieve the same end, as was done in the case of Ron MacDougall, a widower aged 70 of Maria Road, South Dunedin. According to the inspector's report of 10 June 1897, 'there is a magistrate's order against him [i.e. MacDougall's son aged 48] to pay 10/- per week toward his father's support, which he paid for six yrs, up till April last when he ceased paying'. The source of these examples is Annabel Cooper, ed., 'The Otago Benevolent Institute', Caversham Working Paper, Dunedin, 2000-3, Vol. Two, pp.77, 90. I am most grateful for permission to quote this evidence gathered by the Sites of Gender team.
77 Thomson, p.161.
78 Saville-Smith, p.78.
80 Tennant, p.27.
81 Saville-Smith, p.78.
82 ibid., p.92.
83 Hamer, p.46.
84 Saville-Smith, p.92. The signal given in 1991 by the then National Government that it intended to 'encourage people to move from state dependence to personal and family self-reliance', presumably including the elderly, seems to imply a return to the individual self-help/family responsibility view of social welfare provision held by government in the earlier part of the colonial period. J. Shipley, et al., *Social Assistance: Welfare that Works. A Statement of Government Policy on Social Assistance*, Wellington, 1991, p.17. This intention came at a time when 'there is still a strong sense of family obligation, and reciprocity, but with a need for state support because demands on family are beyond their capacity to provide', especially for the elderly and other such vulnerable groups. M. McPherson, 'The Extended Family in New Zealand: Demographic Description and Policy Implications', *New Zealand Population Review*, 49, 1 (2000), p.85.