

# Following through: the value of tracing British settlers across time and space

MARGARET GALT

## **Abstract:**

Many statistics about British settlers in New Zealand come from death certificates. This article suggests, then, a longitudinal database by linking the records of 1,860 first generation settlers. They had high levels of internal migration before leaving Britain and between 20 and 30 percent lived in another country before they arrived here. Between 12 and 19 percent of them left, though only after 16 years on average. But return migration was only between 5 and 8 percent, a fraction of the estimates for Australia and the United States. Rather most men sought greener pastures elsewhere, notably Australia.

In March 1893, the Victorian Police Gazette announced: “Shederick Rawsthorne is inquired for by his daughter Florence Rawsthorne, address – General Post Office, Toronto, Ontario, Canada. He is said to have been at one time a resident of Gore. It is not known whether Gore is in New Zealand or Australia.”<sup>1</sup>

In one way this is a trivial event: uncertain even of which country her father had emigrated to, Florence was one of many pleading for lost fathers, husbands, wives, sons, and daughters. But Shadrack’s life illustrates three key issues with our current understanding of the nineteenth-century British migration to New Zealand. Phillip and Hearn’s analysis, based on a random sample of death certificates, has provided a statistical understanding of our British settlers, a group which was largely undifferentiated in the official statistics.<sup>2</sup> While this has been supplemented for the Scots and Irish by genealogical records and for some local areas, most notably the Caversham project, even now our understanding of the British settler society remains largely based on death certificates.<sup>3</sup>

Our reliance on death certificates means we may be missing key parts of the story, including the contribution of those who did not die here; the role of the wider British diaspora in settlers’ lives; and finally, the ability to track patterns across time and space to see intra- and inter-generational impacts. This article is going to suggest, and then trial, a methodology to overcome these issues through linking the many sources of information that are now available electronically, and then use a trial database to increase our understanding of the pathways to and from New Zealand.

## **The advantages and disadvantages of death certificates as a source**

Before suggesting an alternative, let us first consider the merits of using death certificates. On the upside they were the nearest alternative to the census schedules, which were destroyed by the Government after each census until 1966.<sup>4</sup> In particular, death certificates in New Zealand contain a “mini biography” covering birth, death, and marriage, own and parent’s occupation, spouse, and the age of children. Using them as a first cut was not unreasonable.<sup>5</sup>

But there remain issues. First, to get their random sample, Phillips and Hearn were required to use anonymised records, so they could not check the veracity of the data or add extra information to it. Shadrack Rawsthorne illustrates why this is an issue. Before his death in 1934, Florence’s plea is the only contemporary record of Shadrack’s life in New Zealand, as

he never enrolled to vote, appeared in any newspaper, or in the migration records.<sup>6</sup> This is a case where the death certificate should give us more than any other source, but it does not. It lists neither wife nor children nor parents and gives his birthplace as 'England' and occupation as 'labourer'. In fact, when he arrived, he had parents, a wife and two children living in England. His Invercargill grave shows Florence's 'Gore' was in New Zealand and if his death certificate correctly records that his time in New Zealand was 54 years, a surprisingly precise number when so little else is known, then he came to New Zealand in 1880 when Florence was only nine.<sup>7</sup> Despite this, she clearly knew something about his life and wanted to be in touch.

It looks as if he left England as an effective divorce (one of 12 clear cases in the database described below). In the 1881 English census, his wife Matilda, with their son Thomas (b. 1876), was living as an annuitant with her sister and brother-in-law in Fulwood, Lancashire.<sup>8</sup> But in 1882 she married (probably bigamously) Frederick Judson in New York, where she lived the rest of her life (as also does Thomas). It is interesting that Florence clearly knew Shadrack was still alive in the antipodes despite her mother's remarriage.

The death certificate statement 'labourer' also underestimates his skills. On his 1871 marriage certificate, he was described as a 'cotton manufacturer' and in 1874 he, with John Hartley, was granted a British patent for 'improvements in the size and finishing of yarn when sized.'<sup>9</sup> It appears before his bankruptcy in 1875<sup>10</sup> he was a man of means, as his father-in-law, a cheese merchant, left an estate in 1902 of £7,617. We do not know his New Zealand occupation, but many men used 'labourer' rather than 'retired' in old age. He died aged 84 at Lorne Farm, a Southland Charitable Aid Board benevolent institution, suggesting he was then without family support and poor.<sup>11</sup> His death certificate suggests he was a man with low skills and no family. But in reality, he had an international family (though we do not know if Florence, his son, or his parents did make contact) and both a skilled and entrepreneurial background.

Secondly, using death certificates means we only include those who died here yet we know many people left, particularly for Australia. Phillips and Hearn commented this 'presupposes that those who remained and died in New Zealand had similar characteristics to the substantial numbers who migrated and then left. This may not be a major problem for our purposes, since arguably the ones who stayed and died in New Zealand were the migrants of long-term significance. They were the settlers.'<sup>12</sup> It does feel like an extreme definition.

Those who died soon after arrival give little concern. Walter Leonard Radford, who arrived in the colony in 1884 hoping to cure his consumption but died merely weeks later after spending all his time sick in a hotel, can easily be excluded using the length of time in New Zealand listed on his death certificate. His impact is likely to be low even though he was 'followed to the grave by a large number of those who had known him during his short stay.'<sup>13</sup> The more important issue is missing people like John Allan Randall who migrated aged about 18 in 1872 and farmed in Canterbury for 25 years. He died in 1901 while in London establishing one of the country's major industries as the manager of the Christchurch Meat Company.<sup>14</sup> Similarly, Isaac Railey, who died in New South Wales, had a significant impact on the Coromandel gold mining industry through his Railey battery stamper, now a historic mining site in the Hauraki goldfield.<sup>15</sup> Until we know whether there were a significant number of such cases, we do not know if there is a problem or not.

Finally, historians both here and internationally are moving beyond snapshots to following people across time and space to see how their lives developed. In New Zealand these types of datasets have, for instance, followed the life course of mental illness,<sup>16</sup> the fortunes of World

War I soldiers,<sup>17</sup> the development of Irish identity,<sup>18</sup> and persistence in a local community.<sup>19</sup> Overseas, larger databases, through linking census records have revealed unsuspected outcomes, such as that literacy mattered more for social mobility in rural Norfolk than in industrialised Birmingham;<sup>20</sup> that Italians did better in Argentina than in the United States;<sup>21</sup> and that the late nineteenth century pay-penalty for recent migrants to the United States was caused by declining migrant skill levels, not labour market prejudice.<sup>22</sup> Linking across surviving records has even been used on papyrus from Roman Egypt to illuminate the workings of that ancient society.<sup>23</sup>

So far each of the New Zealand studies has created a dataset for its own specific purpose, but the trend overseas is towards large datasets for many different projects. Some are now linked across national borders, and some made more generally available through IPUMS (Integrated Public Use Microdata Series).<sup>24</sup> Most are based on linking censuses, with the most ambitious projects currently attempting to link all the Canadian census collections from 1851 to 1921.<sup>25</sup> But as New Zealand does not have census schedules, a different approach will be required.

This article adds to our knowledge of British settlers in New Zealand in three ways. First, it investigates the feasibility of constructing such a comprehensive database and uses the results of a small trial of just over 5,000 adult men who were active in New Zealand between 1840 and 1913 to assess how it could be done and what it might tell us specifically about the movement of migrants; secondly, it shows how the construction of the database in itself revealed information both about our people and about our records; finally, the article uses the database to take a fresh look at the extent to which arriving in New Zealand was part of a longer pattern of movement.

### **Constructing the Database**

The main issue for a New Zealand longitudinal database is not a lack of information, but how to extract information from many disparate sources. As a highly literate society, with an early functional government, there are a plethora of lists covering many aspects of people's lives. This means the issues around creating a database are nearer to those faced by Statistics New Zealand with its Integrated Data Infrastructure (IDI) database,<sup>26</sup> which links disparate datasets created by government agencies, rather than the issues faced by overseas researchers linking historic censuses.

The big issue when constructing the IDI was the lack of a unique identifier to enable accurate matching across sources. Creating this type of database is simplified, and the risk of mismatches reduced if, rather than just trying to match each source, the dataset is built around a strong 'spine'. The strongest spine is one that both catches everyone (comprehensiveness) but in which every person only appears once (uniqueness). The IDI uses the Inland Revenue personal database as its spine on the basis that no-one wants to pay tax twice, but 'the taxman' wants them to pay at least once.<sup>27</sup>

There is no equivalent option that is comprehensive and unique for the spine of *this* database but there are three possible close candidates: the combined electoral rolls; the New Zealand Society of Genealogists' Kiwi Index;<sup>28</sup> and the combined online index of births, deaths, and marriages (BDM). But each has issues. Both the electoral rolls and the Kiwi Index fail on uniqueness. The Kiwi Index does not link different records, meaning there are usually many entries for each person, with enough variation to hamper amalgamation. Similarly, no single electoral roll would cover the period 1840 to 1913 but combining them would inevitably mean duplicate entries, with again enough variation to make them difficult to amalgamate. Electoral

rolls are also incomplete (more so than the Kiwi Index) as enrolment rates for men varied from a low of around 55 to 60 percent in the 1870s to a high of 95 percent in the 1890s and women were only on the roll from 1893.<sup>29</sup>

This leaves the combined BDM index as the best available spine. This captures everyone who was born or married, who appeared in the records of births as a parent, or who died in New Zealand.<sup>30</sup> These were closer to satisfying the uniqueness criterion (particularly births and deaths, and relatively few men had multiple marriages) but the resulting database is not comprehensive. It misses those who were both born and died overseas, those who never married, or married and had all their children overseas.

The BDM records also can be combined to create a mini biography that then constructs family groups which increases the accuracy of record linkages, particularly for common names.<sup>31</sup> Creating the family group began with the death index, which includes the age at death, giving an approximate birth year. Those born in New Zealand are matched to their birth record, which gives their father's full name and the mother's first name; otherwise they are identified as the first generation and the equivalent BDM searched in Britain and Australia.<sup>32</sup> Children with the same parents were collected into families, and finally, if the parents were married in New Zealand (or found overseas), then their marriage date and maiden name were captured.

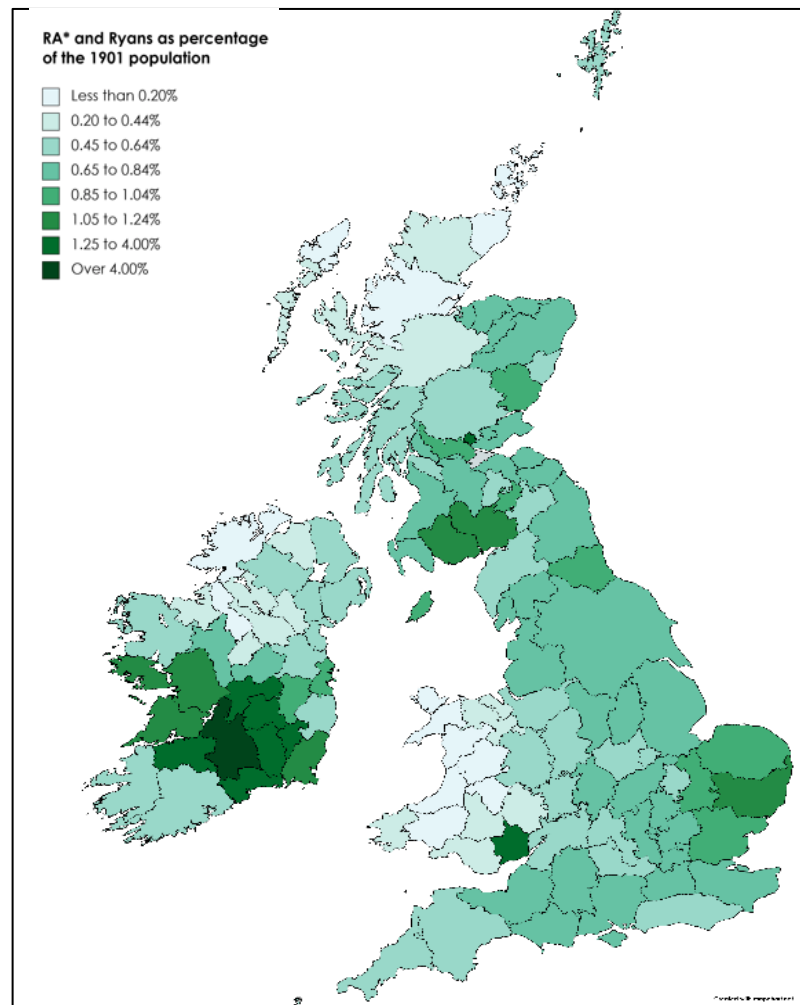
Data linkage is too time- and resource-consuming for a lone researcher to cover the whole population and this meant compromises. First, for the purposes of this trial, women were considered too difficult. They changed name on marriage and are missing from many key records, particularly the electoral rolls prior to 1893. Further, even when they were included, the information tended to be less revealing about their lives. For instance, they were generally 'married woman' in the electoral roll, regardless of whether they worked or not. The records were equally unhelpful for tracing Māori. Until 1913 it was not compulsory to register Māori births and deaths, and marriages were only required to be registered from 1911. This suggests that creating a comprehensive database for them would require different sources, knowledge of te reo Māori, and appropriate resolution of the issues around data sovereignty.

Secondly, linking random names requires too much search time, so this is a non-random sample driven by the fact that most records were organised alphabetically by surname. Choosing a starting letter would mean capturing everyone whether they stayed or left, had children or not and has the advantage of linking across male-side family relationships. After some research, the letter R was selected because it accounted for 5.0 percent of the New Zealand population, and, importantly for a database focused on British migrants, that percentage was similar in England (4.5%), Wales (6.7% – a little high), Scotland (5.5%) and Ireland (4.8%).<sup>33</sup> R also has the valuable attribute of having the least concentrated surnames of any letter.

So, the project began using R, but it took only a brief time to realise that 5 percent was too large. Matching was more time-consuming than anticipated and the size of the underlying population was larger. Naively, I had assumed it would be a bit more than 5 percent of the 1891 male adult population (in other words, that any turnover would be offset by the smaller population in the early years). In fact, the final database suggests a much higher rate of turnover and I now estimate that an R database would have approached 18,000. So, the final database covers all the men over the age of 12 who were in New Zealand long enough to end up in any of the records and whose surname began with RA or was Ryan. RA had the virtue of avoiding the Read/Reed/Reid and Robertson/Robinson confusions,<sup>34</sup> and Ryan ensured sufficient Irish.

Since making this choice back in 2012, the county level data from the 1901 census has become available for part surnames like RA\*. Figure 1 shows the distribution of RA\*/Ryan surnames as a proportion of the county population, and it is fairly even across Britain, though Wales and the far north of Scotland have a smaller proportion. The Irish, on the other hand, are very overweighted and Ryans are concentrated in the southern counties, notably Tipperary, with a similar overweighting around Glasgow and Cardiff due to Irish migration.

**Figure 1: RA\* and Ryan surnames as a percentage of the 1901 county population**



Source: Mapped from data from [www.thegenealogist.co.uk/search](http://www.thegenealogist.co.uk/search) accessed 26 Aug 2022 and the census figures from Mitchell, Brian R. *Abstract of British historical statistics*. CUP Archive, 1962, and mapped using <https://www.mapchart.net/uk.html>

The goal was to attach to this spine an observation for each man at about 10-year intervals. The key sources were the computerised New Zealand electoral rolls,<sup>35</sup> the British censuses (and to a lesser extent the British and Australian BDM records) and the information, including the family trees, on Ancestry.com. Since all the sources (but particularly the key BDM and electoral rolls) were incomplete before about 1865,<sup>36</sup> *Papers Past* was used to identify missing men in the 1840 to 1865 period. However, while these sources were systematically searched, any other relevant data that came to hand was also added. (See Appendix A for the major sources.)

The final step was to cross-reference with genealogies on Ancestry.com, checking their accuracy against what was already known. One lesson from this trial is that it would be less time-consuming and no less accurate to go from the BDM to Ancestry and then to electoral rolls and censuses. Family researchers proved very reliable and particularly useful for untangling people with common names. A recent American study confirms this, with a very low mismatch of paternity and maternity in the Family Tree database, and when an academic machine-matched research database was compared to Family Tree, they agreed over 93 percent of the time; moreover, when they disagreed further research concluded that the Family Tree was correct three-quarters of the time and the academic database only one-quarter.<sup>37</sup>

Any database created by joining multiple sources runs two key risks – false links and missed links. False links occur when it is assumed two pieces of data are about the same person, and these are most likely when many people share a name.<sup>38</sup> The highly fractionated R surnames meant that 70 percent of the total database had a unique “first plus surname” combination. Duplicate names were, of course, more frequent in the Ryan section (only 40% unique).<sup>39</sup> (See Appendix A for details.) To minimise false matches, unless the match was ‘pretty well certain’ (about 90-92% on the Fuzzy Excel lookup scale) a new ‘person’ was created.<sup>40</sup> This increases the risk of missed links – where a match should have been made but wasn’t. At the end of the data collection the list of 5,624 “people” was edited by deleting those who died before the age of 12<sup>41</sup> and then casting a critical eye over the duplicate names seeking missed matches. Spotting duplicates becomes easier with more data, but the way the database was created means remaining errors are likely to be concentrated in the nineteen names shared by more than ten men.

The data collection phase ended when new sources were not finding new men, suggesting that close to every man over the age of 12 whose surname began with RA/Ryan and who had lived in New Zealand for more than a short time before 1913 had been captured. If men were missed, they are most likely to be early settlers who had died or left New Zealand before 1865 when records are sparser. The final database has 5,491 men.<sup>42</sup>

So, is it a representative sample? To assess this, the database was compared with the census figures and against the 9,394 random sample of death certificates (up to 1915) used by Phillips and Hearn. Details of these checks are provided in Appendix B, but, in summary, the database shows a very good alignment with both, though it over-samples the Irish and under-samples the Scots in the period up to 1867 even though, to my surprise, it captured a slightly higher proportion of migrants in that period.

The first result from the database is that there are now three large databases of the county of the English and Scottish migrants, of which the Phillips and Hearn has the most robust methodology. While there are variations in the detail, all three paint the same broad picture: high Scottish migration relative to English and an excess of migrants from southern England and highland Scotland. To the extent that the unique character of New Zealand society resulted from its mix of immigrants, it is this distribution that created it.

### **Lessons from Creating the Database**

Matching itself revealed some interesting insights into early New Zealand life. There were only four families which changed their surname permanently – those with the names of Rabbit, Ratter, Ratt, and Ramsbottom.<sup>43</sup> All have agricultural overtones suggesting names which had been acceptable for centuries in the United Kingdom became socially unacceptable on migration to New Zealand. The Ratt family (my own great-great-grandparents) had been

literate and happily using the Ratt spelling in Rutland from at least 1660 onwards until they migrated to New Zealand in 1842. Many added a W before their name (so excluding themselves, including my forebears) but some adopted Rait or Radd (in which case they stayed in). The Rabbit family added an extra T (and sometimes an S) and the Ratters changed to Rattray. One branch of the Ramsbottom family changed their name to Rantley, while another became the only family to use a deed poll to change to Ramsey, but only in 1913, many years after they had changed in practice. Everyone else just did it informally.

There were other reasons why men changed their surname. Very young illegitimate children often took the name of their mother's husband when she married, and they were included depending on their "life name". But another small group of about 10 men changed names for more nefarious reasons. William Ramwell joined the list when the Auckland solicitor William 'Rigby' was recognised by a former acquaintance as the Bolton-near-Manchester lawyer, William Ramwell, who had absconded with £50,000 of his client's funds, creating a false trail that he had died a common miner in Australia.<sup>44</sup> Similarly, James Paterson Rankin changed to David McClymont and William David Ramsden changed his surname to Ross as they tried to escape paying for their respective wives and children. The Police Gazette helped by regularly publishing aliases. People stayed in or exited from the database depending on their true name, but were also traced under the alias.

The database also revealed that all the sources had errors, even the BDM register. Particularly prior to 1890, death certificates were missing although cemetery or probate records proved the person had died here,<sup>45</sup> and many children who died very young had only either their birth or death recorded (fortunately, usually the death). Finally, a few names were spelt so creatively the person could not be identified. William Radbounce, a woodcutter in the 1858 Auckland electoral roll, had a surname so unique that no-one else in New Zealand, Australia, Britain, or the combined world databases of Ancestry.com had it. I do not know who he was, but I doubt his surname was Radbounce. Similarly, a long hunt for Louis Radinovic who, according to BDM, married Ada Gill, ended when it was found she really married Louis Lynch. (Where Radinovic came from remains a mystery.) Of all the key records, the electoral rolls had the most errors, particularly those for 1893 and 1896, which give the appearance of having been prepared in haste and the latter of being a light edit of the former. The level of errors in these two electoral rolls would suggest they should be used with some caution.

The date of migration proved particularly difficult, especially for non-assisted migrants for whom many records are beyond hopeless. It is impossible to match a Mr, Mrs, Master, and Miss Ramsay, with no ages or other information. There were also about a dozen migrants from the more informative assisted-migrants records who never again appeared in the New Zealand or Australian records. For instance, the migration records show William, Lucy and Elizabeth Rantley arrived in 1880, but none of them were found again. It seemed unlikely that all of these were cases like George L Rance, who died in London on the eve of boarding his ship; likelier explanations include that they never came but the records were not amended or that their surnames were radically misspelt.

It is for the migration date that access to our migrant's death certificates would have added the most value. This is despite the fact that the migration date has proved to be the least reliable information when death certificates were used in a study of Scottish migrants<sup>46</sup> and in the small selection of death certificates available to this study.<sup>47</sup> However, it still was usually indicative of the real date. In this study the death certificate's 'guess' was usually within half a decade of the known real date of arrival. When I could not locate better information, an arrival date was

imputed based on their last overseas and first New Zealand observations, but as the database only collected information at about ten yearly intervals, the imputed dates are only accurate to the decade. When the decade could not be deduced, the arrival date was coded as missing.

### **Pathways to New Zealand**

The database has the potential to be used for a wide variety of topics and will be particularly useful for those that require following people across time and across family ties, including intergenerational patterns. However, for this first article, the focus is on how being a settler in New Zealand fitted into the longer pattern of movement for the individual and the pattern of family movement.

The database demonstrates New Zealand's migration was clearly just part of the wider movement of British people in the mass migration of the late nineteenth century. This can be seen in three different outcomes: the international pathways settlers took before arriving; the family level interconnections with the wider world; and the extent to which New Zealand was only a temporary part of a longer journey that ended elsewhere. This article is going to focus on the pathways to and from, but inevitably the wider diaspora will show through, as in the case of Shadrack and Florence.

The men in the RA/Ryan database had diverse pathways to New Zealand. There were 1,858 men for whom we know their country of birth and who arrived aged 16 and over;<sup>48</sup> for 722 of them, we have at least one other observation of their location (with an average of 3.7 observations) after their birth but prior to their migration.<sup>49</sup>

The sources are less likely to capture people just passing through a location, and it has some significant gaps, the most important of which is the lack of sources outside of the English-speaking world. So, the sources captured James Guest Ralph leaving his birthplace at Marazion, Cornwall when he was young and becoming a sawyer in Trew, Cornwall, but not that he then spent three years with his younger brother in the goldmines of Central America. It was more likely to observe him return to London (but did not) then move to Victoria and Tasmania, but it did record his migration from Tasmania to be a sawmiller and then retire in Masterton. The missing information was only available from his entry in the Cyclopedia of New Zealand.<sup>50</sup> Australia was a particular problem because it was such a significant pathway and subsequent destination. Like New Zealand, Australia destroyed its census records, so we are forced to rely on their electoral rolls, BDM records and genealogical reconstructions, all of which are biased towards men of substance who have children.

While at least 70 percent of the English and Scottish migrants had a second observation, only 40 percent did for the Irish, Australian, and those born in the rest of the world. This means that how we deal with those with only a birthplace matters. If we assume that everyone with only a birthplace migrated from there, we calculate an upper bound of the level of direct migration from birthplace. But if they did stay there, it is hard to understand why they could not be found. If we assume that they all moved to an unobserved place (like Central America) then we calculate a lower bound. But the number who are missing is too high for this to be a credible explanation for all the missing observations. Both are reported in the statistics below, and the truth will lie in-between. However, only for the English and Scottish are the upper and lower boundaries close.

It is a judgement call whether moves between England, Scotland, Wales, and Ireland should be described as 'international'. I have decided to do so, because for many people it meant losing



‘home’ with its small familiar ways, probably particularly for the Irish.<sup>51</sup> The database also records English migration within England and Scottish migration within Scotland prior to their arrival in New Zealand and, while I am not covering it here, it suggests considerable mobility, with only between a quarter (minimum) and a half (maximum) migrating direct from their birthplace. This is consistent with the level of internal migration found in their 1911 censuses.

Figure 2 shows the pathways between birthplace and New Zealand. Between 11 and 15 percent of the English (including the few Welsh) migrants and 16 to 21 percent of the Scots lived in another country before coming to New Zealand. The English primarily moved to Australia, (7-10%) though a few moved to Scotland (1-2%). Scots were more likely to move to England before migrating (6-8%) or to Australia (8-10%) with a small proportion doing both. Between 0.4 and 3 percent of both English and Scots migrated to another part of the world, with about half of these going to Canada or the United States.

**Figure 2: Country of residence compared to birthplace**

		Birthplace					Distribution by country of residence
		England and Wales	Scotland	Ireland	Australia	Rest of World & Unknown	
Country of residence prior to NZ	England/Wales	85-89%	6-8%	4-11%	0%	24%	47-55%
	Scotland	1-2%	79-84%	2-5%	0%	2-5%	14-17%
	Ireland	0%	1.0-1.3%	41-77%	0%	0.4-2%	5-12%
	Australia	7-10%	8-10%	14-35%	97-99%	7-25%	14-18%
	Rest of world	0.4-3%	1-2%	3-7%	1-2%	45-84%	6-13%
	Distribution by birthplace	51%	15%	15%	7%	12%	
	N=	945	275	282	136	220	1858

Note: The range represents the minimum (all those not observed stay in their birthplace) and maximum (those not observed assumed to have left their birthplace) of the country of residence.

Australia was very clearly a pathway to New Zealand. Only 7 percent of the men were born in Australia, but between 14 and 18 percent of the immigrants had lived there, most for only a few years, but a few for decades. There is little sign that convicts moved to New Zealand in large numbers. Only three were identified in the database, which is low even allowing for them concealing their background.<sup>52</sup>

While there are fewer observations for Irish migrants, Australia was a particularly important pathway for this group. Somewhere between 14 and 35 percent of Irish came via Australia, and this was concentrated in the flow to the 1860s goldfields.<sup>53</sup> A higher proportion of Irish migrants also spent time in England or Scotland and, despite the difficulty in tracing them, about 5 percent came via the rest of the world (primarily North America and India), many with the British military.<sup>54</sup> Overall, the Irish had the lowest level of direct movement, even if we assume those without any observations elsewhere all came straight from Ireland. Australia was also a conduit for those whose were born in the rest of the world and unknowns, but Britain was an even more important pathway, with something like 30 percent coming to New Zealand via the British Isles.

### The Role of Chain Migration

The database places men in family groups on the father’s side prior to their migration. This will understate the impact of family links on migration. Even though we were not looking, in 16 cases sisters in New Zealand (and not brothers) were a significant reason behind the decision to migrate. It will also miss family members with different surnames, like George Joseph Charles Ratcliffe (migrated 1910 and served in World War I with the NZEF, including being wounded in action) who migrated to join his uncle Andrew Sayers in Ohura. Similarly, Herbert Ramsden, who died after only 4 months in the colony, was ‘nearly related’ to Mr and Mrs Pickering in his obituary.<sup>55</sup> This means the database will underestimate the proportion who had adult family members to support them in the colony, though having family does not mean they are necessarily supportive. One charming self-written will by Henry Rayner (born 1862, migrated 1884, died 1914) left money to his four siblings in Scotland but adds ‘...my Brother Robert W. Rayner may advertise once for them if he thinks fit but no money is to be wasted on trying to fiend Annie and James Rayner as thair whare a bouts have not been known for many years ...’ [as spelt]<sup>56</sup> However, from the wills I have read, leaving money to overseas relatives was uncommon. When there was no New Zealand-based family, the more common recipients were local friends, church, or charities (in that order).

For those who arrived aged 16 or over, about 45 percent of migrants were married prior to arrival. Irish were significantly less likely to arrive married (30%) and also more likely never to marry. About 15 percent of all migrants also had a close adult male relative in the country, primarily their father, brother, or an adult son. Again, the Irish were less likely to have wider family (though the difficulty in tracing families in Ireland may have exaggerated this difference.) When multiple adult family members came, they tended to do so all at once or only a year or two apart. The Rackley family from Woodley, Berkshire, was fairly typical, with Joshua James (b. 1822) coming as an assisted migrant in 1874 with his wife and adult son Joshua and his young family, followed in 1875 by another son Joseph and his family, and finally, in 1878, by another son, Richard, reuniting the whole family over four years.

**Figure 3: Family support on arrival**

	England	Scotland	Ireland	Australia	Rest of World & Unknown	All
Married prior to migration	51%	48%	30%	41%	31%	44%
Married after migration	22%	15%	28%	37%	30%	24%
Never married	27%	38%	42%	22%	39%	32%
	<b>Male family members – fathers, brothers, adult sons</b>					
None	84%	84%	91%	88%	93%	86%
1	11%	11%	5%	9%	6%	10%
2	3%	2%	1%	4%	1%	3%
3 or more	2%	3%	2%	0%	1%	2%

Note: Migrants arriving aged 16 and over.

While few families took between 5 and 10 years, about 20 percent of chain migration took a decade or longer, suggesting some compelling reason delayed their ultimate migration. The sons of Thomas Rae and Isabella Olive were typical of this pattern, joining their parents in New Zealand over a series of migrations that began in 1863 and finally ended in 1890. Another common pattern for delayed migration was old age. Samuel Snell Raby went to Australia as a young man, but returned to England and lived his life there, only migrating to New Zealand in 1930 to join his daughter, before dying in 1932. Both married and unmarried migrants had a similar pattern regarding male relatives, suggesting that men were not more likely to migrate with other adult family men if they didn't have a wife.

Migration was sometimes not a one-time affair. Trips across the Tasman were not all short and some involved a few years of settlement on each side.<sup>57</sup> The Raphael family of Christchurch had various members who straddled the Tasman including Simeon Raphael. He was born in London in 1827 and had children in Adelaide in 1855, Christchurch in 1865, and Melbourne in 1866. When he left Christchurch in 1868 he was arrested for unpaid debts at Oamaru. In 1870 he had another child in Richmond, Victoria, before a final child in Christchurch in 1875. We then lose track of him until his death in Melbourne in 1895.

Repeat migration was largely trans-Tasman, though occasionally it occurred over longer distances, such as Absalom Ramsden, who seems to come out from England twice, once in 1908 with his son, Henry James, and again a few years later. When people did travel back to Britain it was often for education. Ernest Rawson came to New Zealand with his parents as a small child in 1858, but he went to London to train as a doctor in the 1870s, returning by 1878. He subsequently made several visits to England, including at the 1901 census, but he is back in New Zealand by 1911 and died in Wellington in 1924.<sup>58</sup> Visits like this, or John Joseph Ryan's (b.1886) return to Ireland to visit his elderly parents, became more common in the early 20<sup>th</sup> century, when living standards were higher and the cost of travel lower.

### **Those who Left: Greener pastures or Returning home?**

So, did New Zealand settlers stay here? Without a database like this it is almost impossible to know. For instance, using sources based on place of birth understates the movement of settler children and grandchildren, because a British person moving from New Zealand to either England or Australia becomes just another British person, not an ex-New Zealander. In New Zealand's case, this is an extremely important issue as the high level of population movement with Australia means many may have moved there, and many returnees may have transited through Australia, just as many arrived via there.

Of the 1,858 first generation settlers, 347 were not found in the New Zealand death register, New Zealand Cemeteries database on Ancestry.com, the FamilySearch probate file, or in the death notices of Papers Past. (For the purposes of this analysis, those who died overseas on active war service, either in the Boer or First World War, are counted as 'New Zealand' deaths.) An overseas death was found for 225 of these. Given the extensive search, it seems highly likely, but not certain, that the majority of the remaining 92 also died somewhere overseas. It is most likely that they died in Australia as it was much more difficult to trace those with common names once they moved outside of their New Zealand context, and the lack of census records makes this more difficult in Australia than in Britain.

This means that between 12 percent (assuming all unknowns died in New Zealand) and 19 percent of settlers (assuming they all died elsewhere) of the RA/Ryan database died overseas. If we take the mid-point – 15 percent – as a reasonable estimate, at first glance this seems

consistent with Tony Ward’s recent estimate that some 20 percent of migrants to Australia returned home.<sup>59</sup> But it is not. Most of those who died elsewhere did not return home – they migrated to Australia.

A third of the British men who left New Zealand are known to have died in Australia and I strongly suspect that a high proportion of the third whose death place is unknown did as well. Only 56 out of the 1,858 – about 3 percent – are known to have returned to the United Kingdom and, making the unrealistic assumption that all whose death place is unknown also went there only raises this to 8 percent. While the small numbers make it dangerous to place weight on the variances, they do suggest that return migration may have been less common amongst the Scots and Irish. This implies the return migration rate was nearer to 5 percent than 15 percent, and that those that left New Zealand were more likely to be seeking greener pastures than the comfort of home. Unsurprisingly, the exception is the Australian-born men, of whom 30 percent left, with 90 percent of these returning to Australia.

**Figure 4: Overseas deaths in the RA\*/Ryan database**

Place of death (below)	Birthplace					Total
	England	Scotland	Ireland	Australia	Rest of world & unknown	
England	45	3	3	0	3	54
Scotland	0	3	0	0	0	3
Ireland	0	0	2	0	0	2
Australia	59	12	8	40	21	140
Rest of world	14	4	4	0	5	27
Unknown	63	14	16	4	24	121
Total	181	36	33	44	53	347
Average years before leaving	21	12	16	14	12	16
Percentage of migrants with unknowns	19%	13%	12%	32%	24%	19%
Percentage of migrants without unknowns	12%	8%	6%	29%	13%	12%

Note: This excludes deaths in Europe or the Middle East during World War 1 which are treated as ‘local’ deaths.

However, those few who did return home showed many of the same features that Ward found for the Australian-born in the English census. About 10 percent were in occupations that were naturally mobile – notably soldiers, like John Ryan, a corporal with the 57<sup>th</sup> Regiment, or sailors, like James Ryan, a seaman turned London dock labourer. About the same proportion were young people who migrated as children and returned for secondary school (like Wynne Dudley Raymond at Harrow) or university (John Rawson, a medical student). Most of these returned to New Zealand at the end of their studies.

About 15 to 20 percent appear to be genuine cases of return migration but, unlike the Ward analysis, these families were of modest means. John Ramage, a blacksmith in both countries, returned in 1880, after six years and with three New Zealand-born children. Similarly, Lincoln Ramsbottom, who migrated about 1882, was a dairyman in both New Zealand and Australia,

before returning to England to become a school attendance officer and then a deputy registrar of births, deaths and marriages in Lancashire.

In at least two cases, the return migration mirrors Shadrack Rawthorne's effective divorce, but, in both cases, it was the wife and children that moved back to England, indicating that perhaps family support was more important for them. Margaret Ramage returned to Scotland where, in 1891, she and her youngest daughter were domestic servants. Her husband, John Miller Ramage, disappears from New Zealand and only reappears in Canada in 1911. Just as Florence wanted to keep in touch with her father, one of John's daughters eventually migrated to Canada and married there. When he died in Edinburgh, Scotland in 1962, at the advanced age of 104, she is one of the two executors of his estate.

Based on the 310 men for whom the immigration and emigration dates are known, those who left had been in New Zealand for an average of 16 years, and English returnees were nearer to 20 years. Because the database does not capture short-term visits, only about one in five stayed for less than 5 years, while over a quarter did not leave until after the 20-year mark. The average length of stay gradually declined over time, probably with the reducing cost of travel. Using the Phillip and Hearn divisions, those who came 1840-52 averaged 14 years before leaving, 1853-70 averaged 19 years, 1871-90 averaged 15 years, and 1891-1913 averaged 13 years.

## **Conclusion**

This article started with the question of whether death certificates were an adequate substitute for the linked census databases being constructed overseas. The results suggest that, as valuable as it has been as a starting point, we are likely to have a better understanding with a more comprehensive database. Death certificates miss between 12 and 19 percent of migrants, most of whom stayed for decades, and using birthplace as a proxy for background is often misleading. New Zealand's migration was less linear and far more integrated with the wider British migration flows of the late nineteenth century than a simple story that people left their village to come to New Zealand.<sup>60</sup>

This article has deliberately pitched my database as a trial, rather than a final product. The database is a systematic one based on surname, not a standard random sample, and the biases this might introduce are yet unknown. It is also difficult to match across sources and it will contain errors, despite my best efforts to make it robust. But as a trial it shows that a longitudinal database – an historical equivalent to the IDI – could be constructed, and that even if it is time-consuming, and at times frustrating, it is likely to yield a richer understanding of settler New Zealand. In fact, tracing migration flows only partially plays to the strengths of the database. The more significant value may be in comparing different groups across time, space and generations.

I began the database with the hope of answering questions such as: What was the level of intergenerational mobility in early New Zealand? Can we measure the impact migrating to New Zealand had on people's lives? How did these people create the economy that supported them so well? But different researchers would have different questions and having one "go-to" database – as the IDI has become in the social policy area – would open the way to asking and, more importantly, answering questions that we have yet even to contemplate.

## Acknowledgements

I would like to thank Dr Rebecca Lenihan, Professor Charlotte Macdonald, Karen Brown, and the editors of this paper, who have encouraged me as I re-engaged with academic writing and stimulated my thinking through their insightful feedback.

## Appendix A: Key Sources and metrics of the names

The top ten sources, in order of significance, were:

1. New Zealand Births, Deaths, and Marriages historical index  
<https://www.bdmhistoricalrecords.dia.govt.nz/>
2. New Zealand Society of Genealogists, Five Significant Electoral Rolls, CD, 1881,1893, 1896, 1911, and 1925.
3. Ancestry.com New Zealand Electoral Rolls, 1853-64 and 1938 and cemetery records.
4. Ancestry.com British census records, 1841-1911 and parish register records.
5. FreeBMD.com Index to the English births, deaths, and marriages  
<https://www.freebmd.org.uk/>
6. Ancestry.com and FamilySearch submitted family trees.
7. Papers Past obituaries <https://paperspast.natlib.govt.nz/>
8. National Archives online resources, notably WWI military files (from their website) Wills and Probates (via FamilySearch), and Immigration records (via FamilySearch).
9. New Zealand Society of Genealogists, Kiwi Index.
10. Various regional lists including the Canterbury MacDonald Biographies, the Otago Early Settler Index, and the Alexander Turnbull Library biographies index. As these were time-consuming, they were mainly used to disentangle individuals with the same name or when very little had been found from other sources.

Information was also added to the database from any other reliable source.

## Key metrics of the database

	RA	Ryan	Total database
Number of men	4375	1116	5491
Unique surnames	318	1	319
More than 10 men with same “first plus surname”	9 names 161 men (4%)	10 names 334 men (30%)	19 names 495 men (9%)
Largest “first plus surname” group	25 (<1%)	71 (6%)	96 (2%)
Number with unique “first plus surname”	3407 (78%)	445 (40%)	3852 (70%)

**Appendix B: Comparisons with other data sources**  
**Comparison with the Census data**

The table below compares the birthplace of those in the database for the specified years with the birthplaces reported in the census. The census figures will have a higher proportion of New Zealand born because they include children who did not live until the age of 12 and the database stopped collecting children who would not be 12 before 1913.

The main discrepancies are the high proportion of Irish and lower proportion of Scottish in particular in the 1851-67 period, and a marginal over-representation of the early settlers.

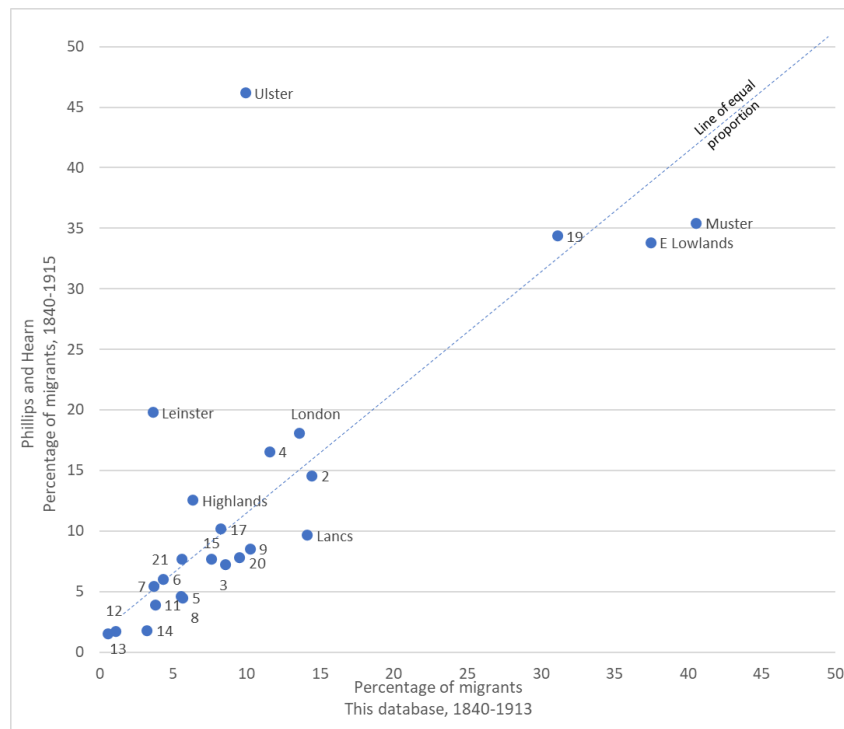
Source: New Zealand Official Yearbooks and Statistics New Zealand long run population series.

	Census			Database		
	1851-67	1871-86	1891-1911	1851-67	1871-86	1891-1911
New Zealand	28%	45%	66%	26%	45%	63%
Australian Colonies	5%	4%	4%	3%	3%	5%
England and Wales	34%	25%	15%	37%	27%	19%
Scotland	16%	11%	6%	12%	8%	5%
Ireland	11%	10%	6%	16%	11%	6%
Rest of World	5%	5%	3%	4%	5%	4%
Unspecified	1%	0%	0%	2%	1%	0%
Number				909	2554	4713
% of av. population				0.60%	0.53%	0.55%

The graph below compares the distribution by British county with Phillips and Hearn. As discussed in the main article, the over-representation of the southern Irish countries is particularly notable.

## Comparison with Phillip and Hearn's regional analysis

### Proportion of Migrants from each region: 1840 to 1913/15



#### Key

1	London	7	Midlands W	13	Wales	19	W Lowlands
2	SE Eng	8	Midlands S	14	Offshore	20	Borders
3	East Eng	9	York	15	Far North	21	Connacht
4	SW Eng	10	Lancashire	16	Highlands	22	Leinster
5	Midlands E	11	NE Eng	17	NE Scot	23	Muster
6	Midlands C	12	NW Eng	18	E Lowlands	24	Ulster



- 
- <sup>1</sup> Victoria Police Gazette, 1 March 1893, 64 accessed through Ancestry.com
- <sup>2</sup> Jock Phillips and Terry Hearn, *Settlers: New Zealand Immigrants from England, Ireland and Scotland 1800-1945* (Auckland: Auckland University Press, 2013).
- <sup>3</sup> Rebecca Lenihan, *From Alba to Aotearoa: Profiling New Zealand's Scots Migrants, 1840–1920* (Dunedin: University of Otago Press, 2015); Lyndon Fraser, “Irish Migration to the West Coast”, *New Zealand Journal of History*, 34.2, 197–225; <https://caversham.otago.ac.nz/>.
- <sup>4</sup> S. R. Strachan, “Archives for New Zealand Social History”, *New Zealand Journal of History* 13.1 (1979): 89-95.  
<https://www.nzjh.auckland.ac.nz/document.php?wid=1295&usg=AOvVaw3PT5RKVY8xFI8h5HlyUBL9>
- <sup>5</sup> This was my own approach in a very early attempt to understand the origin of New Zealand’s British settlers. Margaret Galt, “Who came to New Zealand? New light on the origins of British settlers, 1840–1889”, *NZ Population Review* 21.1 (1995): 50-71.
- <sup>6</sup> Despite searching hard, I cannot find him in these records. The information on Rawsthorne and others used as illustrations is from their files in the database constructed for the rest of this article. The sources are provided below.
- <sup>7</sup> There is an S Rawsthorne migrating from London to Melbourne in 1878, but without an age or occupation to provide a definitive link. This person is listed in the single men.
- <sup>8</sup> I could not find Florence in the 1881 census.
- <sup>9</sup> The Commissioner of Patents’ Journal, 9 Jan 1874, p. 25. London: Patent Office accessed through Ancestry.com.
- <sup>10</sup> *The London Gazette*, 2 March 1875 p. 1464  
<https://www.thegazette.co.uk/London/issue/24186/page/1464>
- <sup>11</sup> New Zealand Cemetery Records, Invercargill Burials and Cremations, p. 542, accessed through Ancestry.com 5 Sept 2022. His death certificate gives his age as 86.
- <sup>12</sup> Phillips and Hearn, p. 17.
- <sup>13</sup> *Press*, Christchurch, 11 August 1884  
<https://paperspast.natlib.govt.nz/newspapers/DTN18840811.2.9>
- <sup>14</sup> *Press*, Christchurch, 21 Feb 1901, p. 4  
<https://paperspast.natlib.govt.nz/newspapers/CHP19010221.2.27.12>
- <sup>15</sup> “New Battery at Karangahake”, *Te Aroha News*, 23 Oct 1886 and  
<https://www.thetreasury.org.nz/the-journal/raileys-battery-waitawheta-gorge> accessed 5 Sept 2022.
- <sup>16</sup> Angela McCarthy, Catharine Coleborne, Maree O’Connor, and Elspeth Knewstubb, “Lives in the Asylum Record, 1864 to 1910: utilising large data collection for histories of psychiatry and mental health”, *Medical History* 61, no. 3 (2017): 358-379. <https://doi.org/10.1017/mdh.2017.33>
- <sup>17</sup> Tom Brooking, Dick Martin, David Thomson, and Hamish James, “The ties that bind: Persistence in a New World industrial suburb, 1902–22”, *Social History* 24, no. 1 (1999): 55-73.  
<https://doi.org/10.1080/03071029908568052>
- <sup>18</sup> Lyndon Fraser, “To Tara via Holyhead: the emergence of Irish Catholic ethnicity in nineteenth-century Christchurch, New Zealand”, *Journal of Social History* 36, no. 2 (2002): 431-458, 379.  
<https://doi.org/10.1353/jsh.2003.0013>
- <sup>19</sup> The various papers from the Caversham Project. <https://caversham.otago.ac.nz/>
- <sup>20</sup> David Mitch, “Literacy and occupational mobility in rural versus urban Victorian England: Evidence from the linked marriage register and census records for Birmingham and Norfolk, 1851 and 1881”, *Historical Methods: A Journal of Quantitative and Interdisciplinary History* 38, no. 1 (2005): 26-38. <https://doi.org/10.3200/HMTS.38.1.26-38>
- <sup>21</sup> Santiago Pérez, “Southern (American) Hospitality: Italians in Argentina and the United States During the Age of Mass Migration”, *The Economic Journal*, 131.638 (2021), pp. 2613–28  
<<https://doi.org/10.1093/ej/ueab016>>.
- <sup>22</sup> Ran Abramitzky, Leah Platt Boustan, and Katherine Eriksson, “A Nation of Immigrants: Assimilation and Economic Outcomes in the Age of Mass Migration”, *Journal of Political Economy*, 122.3 (2014), pp. 467–506 <<https://doi.org/10.1086/675805>>.

- 
- <sup>23</sup> Saskia Hin, Dalia A. Conde, and Adam Lenart, “New light on Roman census papyri through semi-automated record linkage”, *Historical Methods: A Journal of Quantitative and Interdisciplinary History* 49, no. 1 (2016): 50-65. <https://doi.org/10.1080/01615440.2015.1071226>
- <sup>24</sup> <https://www.ipums.org/mission-purpose> accessed 5 Sep 2022
- <sup>25</sup> Jeremy Foxcroft, Kris Inwood, and Luiza Antonie, “Linking Eight Decades of Canadian Census Collections”, *International Journal of Population Data Science*, 7.3 (2022) <<https://doi.org/10.23889/ijpds.v7i3.2076>>.
- <sup>26</sup> <https://www.stats.govt.nz/integrated-data/integrated-data-infrastructure/> accessed 5 Sep 2022.
- <sup>27</sup> Statistics New Zealand (2014) “Linking Methodology used by Statistics New Zealand in the Integrated Data Infrastructure Project”. Even then it is not totally comprehensive as there are some people who do not have an income and so do not pay taxes, such as children and other family members who are not in the workforce.
- <sup>28</sup> <https://genealogy.org.nz/Kiwi-Collection/11197/> accessed 5 Sep 2022.
- <sup>29</sup> John E. Martin, “Political participation and electoral change in nineteenth-century New Zealand”, *Political Science* 57.1 (2005): pp. 39-58. <https://doi.org/10.1177/003231870505700104>
- <sup>30</sup> This is the electronic index of “Births, Deaths and Marriage Historical Records” available at [www.bdmhistoricalrecords.dia.govt.nz](http://www.bdmhistoricalrecords.dia.govt.nz)
- <sup>31</sup> Luiza Antonie, Kris Inwood, Chris Minns, and Fraser Summerfield, “Selection bias encountered in the systematic linking of historical census records”, *Social Science History* 44, no. 3 (2020): 555-570. <https://doi.org/10.1017/ssh2020.15>
- <sup>32</sup> This was done using Ancestry.com and Freebmd.org.uk.
- <sup>33</sup> The percentages are based on a count of the *FamilySearch* database. The original selection was informed by William Farr, “Family Nomenclature in England and Wales”, *Sixteenth Annual Report of the Registrar-General of Births, Deaths, and Marriages in England* (1856); David Kenneth Tucker, “The forenames and surnames from the GB 1998 Electoral Roll compared with those from the UK 1881 Census”, *Nomina* 27 (2004): pp. 5-40 [http://www.snsbi.org.uk/Nomina\\_articles/Nomina\\_27\\_Tucker1.pdf](http://www.snsbi.org.uk/Nomina_articles/Nomina_27_Tucker1.pdf) ; and Sean J. Murphy, “A Survey of Irish Surnames 1992-97” [https://www.academia.edu/9204227/A\\_Survey\\_of\\_Irish\\_Surnames\\_1992\\_97](https://www.academia.edu/9204227/A_Survey_of_Irish_Surnames_1992_97) [accessed 14 Aug 2022]. This also contains an 1890 list.
- <sup>34</sup> The RI’s and RU’s were both too small to provide an adequate database. Ryan was the eighth most common surname in Ireland in the nineteenth century. See Murphy (2009).
- <sup>35</sup> The New Zealand Society of Genealogists *Five Significant Electoral rolls* CDRom for the 1881, 1893, 1896, 1911 and 1925 electoral rolls and the 1853-64 and 1938 electoral rolls on Ancestry.com.
- <sup>36</sup> Registration of births, deaths and marriages was not compulsory before 1862 and was almost certainly not complete for a while after that (to my surprise, even for deaths).
- <sup>37</sup> Joseph Price, Kasey Buckles, Jacob Van Leeuwen, and Isaac Riley, “Combining family history and machine learning to link historical records: The Census Tree data set”, *Explorations in Economic History* 80 (2021): <https://doi.org/10.1016/j.eeh.2021.101391>
- <sup>38</sup> Erratic spelling is more common with illiteracy, so the high overall literacy rate in the population helped. Where there was a strong risk of this (such as in the Ramsay/Ramsey or Randall/Randell/Randle groups) everyone was indexed under the dominant spelling of the name, though their record was under their actual spelling.
- <sup>39</sup> Middle names only became common towards the end of the nineteenth century and people with them did not use them consistently in the various sources, so they were not relied upon when matching men.
- <sup>40</sup> To get this estimate, I used a trial set of the most marginal linkages to establish the level of Fuzzy Excel probability required to match my own links. This suggested equivalence to their 90-92% probability range.
- <sup>41</sup> The database was never intended to cover men who were not adults, but those who died young were kept in the database until this time to prevent mismatches with same-named individuals. This proved to be a useful thing to do and would be the recommended procedure.

---

<sup>42</sup> The data for this article was extracted on 31 March 2022. As additional information comes to hand it is incorporated into the database. However, it is now extremely unusual to find a new person, or to identify a missed match (which eliminates a person).

<sup>43</sup> In cases like these all the forward, backward and sideways links were still made.

<sup>44</sup> *New Zealand Herald*, 18 April 1888 p. 8

<https://paperspast.natlib.govt.nz/newspapers/AS18880418.2.60> Ramwell died in the United States, where the main evidence for his presence was an insurance claim when his house burnt down. He was also in the newspapers for being the perpetrator in a breach of promise case prior to leaving England. The jilted lady may have ultimately felt relieved if she ever knew of his subsequent activities.

<sup>45</sup> It is unclear whether this is an issue with the index or with the death certificates. I only accessed the index.

<sup>46</sup> Rebecca Lenihan (2015), pp. 28-29.

<sup>47</sup> Forty-seven death certificates were on Ancestry.com or attached to a probate. At the end of collecting, I purchased 20 of the hardest to find men's death certificates but I found in every case I already knew more (sometimes far more) than the informant, which left little incentive to purchase more. One of these was Shadrack Rawsthorne's.

<sup>48</sup> There were 38 who were excluded because their country of birth was not known with reasonable accuracy. This analysis did include the 23 men where the time of arrival was not known to within a decade.

<sup>49</sup> These largely come from overseas censuses, the Australian electoral roll, their marriage, and the birth of their children.

<sup>50</sup> *Cyclopedia of New Zealand* (Cyclopedia Company, Wellington: 1897) Vol 1 p. 966

<sup>51</sup> These patterns are the same whether children are included or not, though the figures given in the text are for those who arrived in New Zealand aged 16 or over. This data can also be used for internal migration though the lack of censuses for Ireland means their internal migration is much more uncertain. There were too few from Wales for separate analysis, so they have been included with the English figures.

<sup>52</sup> Patrick Rattigan born in Longford, Ireland; John Raisin of Leicester; and John Trenley Rance from Buckinghamshire. Concealing this background is more difficult now that the convict records are online than it would have been in the nineteenth century.

<sup>53</sup> This is consistent with previous research, notably Lyndon Fraser, "Irish Migration to the West Coast", *New Zealand Journal of History*, 34.2, 197–225. <https://doi.org/10.1353/jsh.2003.0013>

<sup>54</sup> The small group of children born in India quite frequently gave a birthplace in Britain (often at their fathers' birthplace). It is likely that they also did this in the official statistics (such as census reports, marriage and death certificates), so these may also undercount births in India to British parents.

<sup>55</sup> WWI service record, Service no 10/4186. National Archives, IE19573073 and *Waipawa Mail*, 6 April 1889 p. 2 <https://paperspast.natlib.govt.nz/newspapers/WAIPM18890406.2.7>

<sup>56</sup> I also could not find them. "New Zealand, Archives New Zealand, Probate Records, 1843-1998", database with images, *FamilySearch* (<https://familysearch.org/ark:/61903/1:1:QK9V-L7LP> 9 March 2021), Henry Rayner, 1914, citing Dunedin Probate and Letters of Administration Files (I), 1907-1950, record number 2726, Archives New Zealand, Auckland Regional Office; *FamilySearch* digital folder 100624573.

<sup>57</sup> Rollo Arnold, "The Dynamics and Quality of Trans-Tasman Migration, 1885–1910", *Australian Economic History Review* 26, no. 1 (1986): 1-20. <https://doi.org/10.1111/aehr.26101>

<sup>58</sup> *Evening Post*, 21 March 1924 <https://paperspast.natlib.govt.nz/newspapers/DOM19240322.2.30> and his database record.

<sup>59</sup> T. Ward, "Return Migration from Nineteenth Century Australia: Key Drivers and Gender Differences", *Australian Economic History Review*, 61.1 (2021), 80-101 <https://doi.org/10.1111/aehr.12212>

<sup>60</sup> A significant theme of James Belich, *Replenishing the Earth: The Settler Revolution and the Rise of the Angloworld* (Oxford, New York: Oxford University Press, 2011).