ORIGINAL ARTICLE

Indigenous populations of the Pacific and American West

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Abstract

This special issue of the Asia Pacific Economic History Review explores the impact of colonisation on Indigenous populations across the Pacific and American West from the late eighteenth to the early twentieth century. Three of the contributing articles examine ways of modelling Indigeous populations at point of contact and the scale and pace of subsequent declines. A further two explore the problematics of counting violent deaths on the frontier and reconstructing the factors motivating settler aggression. The last article examines the impact of colonisation on sex ratios and the implications of this for marriage rates between and within different ethnicities.

KEYWORDS

colonisation, frontier violence, indigenous populations, sex ratios

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The size of indigenous populations at the point of contact with Europeans is an important number. Population estimates can tell us much about pre-colonial societies and their relationship with the environment, as well as the impact of the arrival of Europeans (Jones, 2014, p. 488). Yet, precisely because such estimates matter, they are often highly contested. In the case of the Americas, for example, some have argued for a population under 9 million in 1492 while other estimates run as high as 112 million people (Denevan, 2014, pp. 207–208). Similar variations are typical of other colonised regions, including Australia and Hawaii, as well as more localised populations (Bradshaw et al., 2021; Hunter & Carmody, 2015; La Croix, 2019). Even where there is something of a historical consensus, such as for the pre-1800 Māori population, the consensus is often based on questionable assumptions (Chapple, 2024).

The role played by disease has been a particular point of contention. Arguments about the contribution of introduced pathogens were central to a series of influential mid-twentieth century analyses of the depopulation of the Americas. Alfred Crosby's work was particularly important. He maintained that the New World was profoundly shaped by a series of virgin soil epidemics introduced by Europeans to which Indigenous populations were 'immunologically almost defenceless' (Crosby, 1976, p. 207). In subsequent years the 'virgin soil' thesis has been widely popularised through the publication of several highly accessible accounts (Diamond, 1997; Mann, 2005). An understanding that introduced disease played havoc with the Indigenous peoples of the Americas in the decades after 1492, has also been key to series of upward revisions of precontact population sizes (Dobyns, 1993, O'Fallon & Fehren-Schmitz, 2011). The same was true elsewhere. Noel Butlin's back cast estimates of the population of Australia in 1788 relied heavily on the impact of introduced disease—especially smallpox and gonorrhoea (Butlin, 1993; Hunter, 2024; Hunter & Carmody, 2015).

Not everyone was convinced. Some historians, anthropologists, demographers and archaeologists remained sceptical of the methods employed, pointing to the lack of hard evidence for widespread population decline triggered by the spread of introduced pathogens (Henige, 1998). These critics did not deny that there was significant population loss, but sought instead to highlight some of the inherent flaws in 'germ-centric' explanations of indigenous population decline (Jones, 2003; Jones, 2015). A particular concern was that accounts that emphasised the role of disease risked obfuscating the impacts of conquest and colonisation. They also pointed to the added danger that siloed biological explanations might lead to the perception that frontier population losses owed more to the failings of Indigenous immune systems than the actions of the invaders. They could even leave the impression that Europeans were innocent bystanders who could not be held responsible for the biological holocaust they unwittingly unleashed on the ranks of immunologically naive Indigenous populations (Jones, 2015, p. 16).

There were other methodological problems too. The identification of infectious agents remains a contested issue. While a disorder historically identified as smallpox ravaged Indigenous populations in Southeastern Australia post-1789, some argue that the disease was more likely to have been chickenpox than smallpox (Hunter & Carmody, 2015). This matters as differing incubation, infection and mortality rates for different diseases profoundly affect demographic modelling of their impacts. There is also an inherent danger in grounding any historical explanation in the supposed immunological differences between Europeans and other peoples. Even if we accept that varying coevolutionary histories with pathogens are likely to have distinguished Europeans from American, Pacific and Australian populations, wide variations in resource production, population density and disease environments across these "new worlds" suggest equal degrees of variation between Indigenous peoples (Collen, Johar, Teixeira, & Llamas, 2022).

Depopulation models that rely exclusively on introduced pathogens have other inherent flaws. If introduced disease was the sole agent of decline, then Indigenous populations would have recovered within a matter of generations (Livi-Bacci, 2008; Stannard, 1990). This argument is particularly applicable to infections which imparted strong antibody responses in surviving populations. Such a recovery process was built into some models, such as Noel Butlin's back casting models for estimating Australia's population at contact (Butlin, 1993). The point remains, however, that introduced disease cannot account for Indigenous population decline alone, highlighting the need to factor into any modelling process 'the turbulence of colonisation' that created a 'devastating susceptibility to imported pathogens' (Jones, 2015, p. 16; Noymer, 2011, p. 181).

Yet, the task of disentangling the social and biological determinants of health is not straight forward. While immunity can be acquired through previous contact with a pathogen, vaccination or placental transfer, it can also be impaired through a deterioration in physical and material circumstances. Resource loss, violence and the coerced extraction of labour are all likely to lead immune suppression (Byard & Maxwell-Stewart, 2024). This has implications for arguments that seek to emphasise the role that violence played in colonial depopulation.

In Australia in particular, the literature has become polarised regarding the roles of disease, violence, and resource loss in Aboriginal depopulation. Accounts that have sought to minimise the impact of European colonisation on Indigenous populations have emphasised the role of disease (Windschuttle, 2003). As a result many historians have adopted a counter-position which seeks to place the role of violence front and centre (Clements, 2014; Ryan, 2012). As with disease episodes, primary documentation of frontier violence in the nineteenth century is at best patchy, further complicating these arguments (Burke & Wallis, 2019).

Three papers in this volume focus on critiquing or applying modelling techniques used to estimate initial populations. Boyd Hunter (2024) provides a critical evaluation of Australian economic historian Noel Butlin's methodologies for estimating '(1) the size of pre-contact Aboriginal population ... and (2) the causes and magnitude of subsequent native depopulation'. Hunter argues that Butlin's major contribution to this activity was to specify models with population parameters that incorporated disease, violence, and resource depletion factors, and thereby allowed consideration of alternative hypotheses concerning the importance and timing of each of these factors. Butlin's work relied on a back-casting demographic methodology that reduced reliance on 'anthropological descriptions of Aboriginal [societies] relates to populations that were radically destabilized' (Hunter, 2024, p. 3). A critical insight of Butlin's analysis is that 'killing and resource taking were often intimately related, sometimes as two sides of the same coin' and that disentangling the two effects was often impossible (Hunter: 5).

Hunter praises Butlin's use of historical narratives to both complement and inform his quantitative population backcasting models. Use of quantitative models to structure and augment historical narratives for a particular topic has become common in economic history in the twenty-first century, and Butlin's plays a pioneering role in this development. Hunter points out several possible extensions of Butlin's methodology, in particular remedying its lack of geographic detail in its economic and demographic modelling. Tallavarra et al. (2018) is an example of how an existing technique for modelling population—estimating maximum carrying capacity—can be enhanced by using detailed geographic and archaeological-anthropological data. Hunter concludes by affirming the value of integrating analysis by Indigenous scholars into the field of economic history in Australia, and emphasises how this should allow identification of new topics and data ignored by previous economic historians.

Roger Byard and Hamish Maxwell-Stewart (2024) use extensions of Butlin's techniques to critique and extend population estimates for the Aboriginal population of Tasmania at European contact (1790s contact with sealer gangs and 1803 colonial settlement). These estimates vary widely, ranging from 800 to 20,000 people. They try to narrow this range by adapting and applying population backcasting techniques discussed in Hunter (2024). Effective backcasting requires a baseline population estimate with solid foundations, and Byard and Maxwell-Stewart argue that estimates of the Indigenous Tasmanian population exiled to Flinders Island in the 1830s can be made 'with some precision'. From this baseline estimate, the impacts of resource loss, violence, and disease on population are modelled back to European contact.

They present three estimates of initial population derived with backcasting models armed with different assumptions. The first is derived under the assumption that the only factors driving population decline from western contact are sexually transmitted diesease introduced by early interaction with sealer gangers from the mid-1790s followed by epidemic disease as observed on Flinders Island and elsewhere over the 1829–1837 period; and the second and third models incorporate low and high estimates for the introduction of scabies and annual resource loss . Using baseline population estimates on Flinders Island in the 1830s ranging from 311 to 373, the three models yield population estimates for 1803 ranging from 3848 to 12,106. The lowest estimate corresponds with one made earlier by archaeologist Rhys Jones and others based on estimates of the size and number of Aboriginal groups in Tasmania. The upper end of this range is higher than both Butlin and Tallavara et al.'s estimated carrying capacity for Tasmania (9000 and 3500-6200, respectively). Violence and land dispossession play big roles in Byard and Maxwell-Stewart's projections, as Models 2 and 3 show sharp drops in population between 1825 and 1830.

Simon Chapple (2024) opens his analysis of Māori populations with the assertion that 'the question of the contact-era Māori population size is significantly underresearched in New Zealand'. A concensus estimate of roughly 100,000 people at European contact has been generally accepted since the early 1990s despite upward revisions in contact populations for other Pacific Island groups. Chapple's analysis extends archaeologist Atholl Anderson's use of population density in an analogue population (preindustrial Iceland) to provide bounds for New Zealands's population. The population analogue technique is far from new. It was used by William Denevan (2014, p. 208) to estimate likely pre-1492 populations for the Amazon basin as early as 1970 but has been used less by recent researchers.

Chapple's strategy is to compare relatively precisely measured population densities in four particular New Zealand geographic areas and then to compare them with population densities estimated for other islands around the global that have similar geographies and human activities. They are Tasmania, Vancouver Island, Tierra del Fuego and Iceland. Application of this technique to New Zealand and its identified population analogues yields a wide range of population estimates for New Zealand, particularly because '[e]stimated densities from other pre-industrial large temperate islands also vary considerably from a low of 0.04 to a high of 1.5 people per km^2. Population at contact estimates derived from this methodology for New Zealand vary from roughly 10,000 people to over 400,000 people, thereby widening the range of estimates. After some discussion of why higher estimates could be more plausible, Chapple concludes that his analysis indicates that a contact-era population over two hundred thousand is a distinct possibility, which indeed was the New Zealand intellectual consensus as recently as the 1960s'.

Two papers in this issue address violence between Indigenous groups, settlers, and militaries. Warren Anderson (2024) uses the timing of conflicts in the Western United States to explore

political and economic motivations for conflicts. He examines over 1800 conflicts of varying intensity between the US government and Native American tribes from 1830 to 1897. He finds that both political and economic factors drive conflict. This includes presidential election cycles. Conflicts increased during US election years when there was a recession, thereby pointing to wars supported by incumbent politicians looking for an election issue . Three different economic factors were also important. First, conflicts increased when pressure was placed on resources used by Indigenous peoples. In particular, violence increased as gold mining increased within a state. Second, conflicts increased with the expansion of railroads in western states. Third, extermination of buffalo, a major food supply for many Native Americans exacerbated conflict. Warren's central conclusion is the conflicts between tribes and the US government were driven, not just by anti-Indigenous sentiment, but also by political and economic factors.

Mark Finnane and Jonathan Richards (2024) provide a warning about the dangers of making extrapolations from archival remnants of violent incidents. In Queensland, Australia, it is commonly accepted that large numbers of Indigenous peoples were killed in encounters with settlers in the second half of the nineteenth century. A series of publications by historians Raymond Evans and Robert Ørsted Jensen have revised calculations of violent mortality in Queensland radically upwards, with 66,680 Aboriginals and settlers killers over the course of the nineteenth century. Finnane and Richards (2024) do not dispute "the violence of Australian colonization" but rather suggest that recent calculations of the overall number of Aborigines, settlers, and police killed suffer from flaws in the methodology underlying these calculations.

They note that "it is indeed the discovery and analysis of the wide range of sources available that should give pause to highly conditional projections of violent mortality premised on an absence of records". They argue that the methodology deployed in these new studies is unreliable, reflecting errors in counting and calculation, as well as underestimating selection bias associated with particular samples of violent deaths. A critical question is whether evidence of events found in archival remnants can be treated as a random sample of violent deaths. This question is, however, difficult to address, as much of the relevant underlying data is not publically available. Compounding this difficulty, Finnane and Richards (2024) argue that it is unknown 'how their sample of fatal 'collisions' is distributed over time and between regions' in Queensland.

They caution against extrapolating violent mortality from selected incidents where the underlying data is so imperfect to the entire province of Queensland. Rather, it would be more valuable to focus on carefully documenting detailed local and regional studies to inform a better understanding of colonisation's impact on First Peoples. They conclude by stating that "the scale of casualties of Native Police activity in Queensland was momentous" but that little is added to our understanding of these events "by attempts to quantify the impact beyond those grounded in quantitative estimates that respect the wide range of error in such historical calculations".

Analysis by Halliday, La Croix, Price, and Van Leeuwen (2024) of Hawai'i's early twentieth-century marriage market has its roots in a massive decline in the Native Hawaiian population which began shortly after contact with James Cook's expedition in 1778. While recent estimates of Hawai'i's pre-contact population are highly contested (ranging from 400,000 to one million people), the roughly 71,000 part and full Native Hawaiians counted in 1853 represent massive declines of between 82.25% and 92.9% from the 1778 population. Precisely because it is better documented than other places, the Hawaiian experience is illuminating. It suggests that the impacts of infertility and subfecundity stemming from introduced disease and other stresses

associated with a rapid integration into a wider capitalist economy may have been under-estimated elsewhere (Stannard, 1990, p. 328).

Faced with empty fields and acute labour shortages, the independent Kingdom of Hawaii allowed importation of indentured plantation labour with the aim of stimulating production and export of sugar. The resultant entanglements with the United States, the most important market for Hawaiian sugar, culminated in the overthrow of the Hawaiian monarchy in 1893 and annexation by the United States in 1898. The first three decades of US colonial rule were marked by even greater influxes of overseas labour from Europe, the Carribean, Asia, and the United States. For many ethnic groups, single male labourers predominated. When the United States annexed Hawaiii, many plantation workers decided to stay in Hawaii and start families. Male-biased within-group sex ratios often meant there was intense competition among potential grooms for potential brides within ethnic groups.

Halliday et al. (2024) digitise complete counts of three Hawaii censuses (1910, 1920, and 1930) that allow econometric analysis of marital and household choices for men and women of marriageable age in the colonial Hawaiian population. The three territorial censuses allow a precise designation of a person's ethnicity and thereby allows these researchers to examine how within-group and extra-group sex ratios affected individual choices of marriage, inter-ethnic marriage, number of children, and size of household. Male-biased sex ratios are at the center of their analysis, because the sex ratios affect competition among males in the marriage market as well as increase the bargaining power of potential brides. Halliday et al. (2024) find a complex set of results, with two standing out in particular. First, both within-group and extra-group sex ratios can play a substantial role for both men and women in making marital and household choices. Second, both within-group and extra-group sex ratios are important in male and female decisions to marry a person from another ethnic group.

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