HISTORICAL PERSISTENCE OF ANTI-ABORIGINAL BELIEFS

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Abstract -The historical persistence of attitudes and beliefs over hundreds of years is a topic that is starting to be considered in the literature as a core component of understanding economic development and the origin of current attitudes. Historical persistence of attitudes, particularly negative attitudes, have the potential to shape society for generations through formal and informal institutions. This research considers one of those attitudes: anti-Aboriginal beliefs in Australia. This paper uses a conservative dataset of salient massacres against Indigenous Australians (from 1777 to 1928) as an indicator for anti-Aboriginal beliefs, as represented by the low threshold of violence. This dataset of massacres has been geographically matched to voting in the 1967 referendum on Indigenous rights – providing direct insight into the geographical spread of attitudes towards Aboriginal Australians. After controlling for a myriad of factors, we find that the existence of a historical massacre in an area was a significant predictor of the vote for Aboriginal rights. Standard regression models and propensity score matching revealed that on average, for each massacre that occurred, the 'no' vote for Indigenous rights increased by a statistically significant 2 percentage points. In addition to the historical existence of massacres, electorates which had relatively higher indigenous populations, higher unemployment, and more Methodists (a religion) tended to have a higher 'no' vote than other areas. This research has direct practical implications for the reconciliation challenges faced in Australia, and federal discussions regarding services, funding, and Indigenous community autonomy.

Index Terms - Historical persistence, voting, political science, economic history

I. INTRODUCTION

Do distant historical events affect contemporary behaviour? Or alternatively, can historical events reliably predict contemporary behaviour, demonstrating that individual behaviour (attitude) is persistent? There is a growing body of literature interested in understanding cultural and institutional persistence and change [1-6]. The literature on historical persistence to date considers historical data points in Africa [7], Germany[6], Peru [2], Poland (Grosfeld & Zhuravskaya, 2015), and globally [4]. This paper analyses the persistence of social norms and attitudes across generations in Australia. In particular, this paper is interested in whether the incidences of the 19th and early 20th century violence against Aboriginal Australians (in the form of massacres of the Aboriginal population) is a reliable predictor of voting for or against indigenous rights in the 1967 referendum and contemporary voting for the OneNation political party. Historical events and institutions have been shown to reliably impact norms and preferences today [8], and this is primarily because of parental investment, which leads to long term attitude persistence [3]. Despite this persistence, culture can evolve quickly, with attitudes towards gender roles, female employment, human rights, and digitisation changing dramatically over the last century [8]. If culture can both change quickly and persist over time, this research plays a role in indicating whether certain negative attitudes at the core of contemporary society are actually persistent over time.

This article analyses how historical violence is reflected in the context of more contemporary society. The extent of violence towards Aboriginals is a controversial topic, and historians disagree on the extent, degree, and intention of historical violence [9-13]. However, historians generally agree that at least 10,000 Aboriginals were massacred during the colonisation of Australia[1], and that on the most salient massacre sites. We explore the long-term persistence of anti-Aboriginal beliefs using a new data set of 122 massacres which are 'most salient' [2] and a more encompassing dataset including more than 1,000 incidents, which form the foundation events of this research. The main results are derived from a sub-sample of 110 massacres where the number of dead is known. When the colonialists wanted land for living, running livestock, and farming, Aboriginals were moved from that land. Most dispossessions of arable land occurred without resulting in massacres of the indigenous population, yet the legal institutions were not supportive of Aboriginal rights until a referendum in 1967.

[1] As with other historical atrocities, there is also an Australian historian who denies historical violence occurred against Aboriginals 14. Windschuttle, K., *The fabrication of Aboriginal history.* Sydney Papers, The, 2003. **15**(1): p. 20, 15. Windschuttle, K., *The myths of frontier massacres in Australian history.* Quadrant, 2000. **44**(11): p. 17..

[2] The list of 'most salient massacres is a combination of those massacres which are listed on Wikipedia as Massacres against Aboriginals in Australia, and Australianstogether.org. It is understood that seminal work is currently being undertaken by researchers at the University of Wollongong to develop a complete and verified list, which is due to be completed in 2020. Until that complete dataset is released, the current research will use that which is conservative and available.

The year 2017 marked the 50th Anniversary of the 1967 referendum on Aboriginal rights in Australia[3]. Referendums are an opportunity to get direct insight into the attitudes of a specific population. The 1967 referendum on Aboriginals was seen to be at the time a landmark vote which was significant in providing the framework for Aboriginals to achieve equal rights in Australia (although the actual referendum question referred to only being counted in the census and having Commonwealth laws made regarding them). For the purposes of this research, the referendum provides a reflection of attitudes towards Aboriginals in 1967.

This research provides correlational analysis regarding the location of massacres against Indigenous Australians [4], voting in the 1967 referendum on Aboriginals, and contemporary electoral outcomes from 2016. Historical violence has the potential to explain the variation in electoral outcomes and political outcomes in both 1967 and 2016. Although causation links cannot be made, analyses using these datasets have found that areas with a larger number of, and more violent massacres, had a tendency to vote more 'no' for Aboriginal rights in later generations, and this was statistically significant in a number of scenarios. This research builds on the methodology employed in [6] and provides a foundation for future research in the context of Australia, particularly regarding incidences of violence during colonisation and the associated persistence.

This article contributes to the literature on the long term effects of local culture. Research has found that cultural and religious fragmentation is associated with corruption and civil wars [16]. Additionally, historically strong institutions can have a lasting impact, such that where the Habsburgs ruled there is less corruption today [17]. Further, Medieval Indian trading ports with institutions to support trade across religious lines had less violent religious conflict in both 1850-1950 and in 2002 [18]. The fertility of immigrants' children is influenced by the fertility rates in their parents' country of origin [8]. Current gender roles have been found to be influenced by the historic use of the plough [16], and literacy is irreversibly impacted by changing religious norms [19]. Further, authors have found that economic performance can be predicted by inherited trust [20], that free Medieval Italian cities have higher interpersonal trust today [21], and that the slave trade in Africa has resulted in permanently lower trust levels [7]. The economic effects of historical events have been found with the nationalities allowed to lend under Ottoman rule having contemporary higher bank penetration [22]. The findings of this paper link not only to these areas of the transmission of violence, economic development, and social norms, but also to the literature on 'deep' parameters such as genetic origin, population composition, and technology incubation conditions [23-25].

This paper is structured as follows. Section 2 describes the Australian context, i.e. the Australian Frontier Wars and the 1967 referendum on Aboriginal rights, and the dataset generated for the purpose of this paper. Section 3 presents results and robustness checks. Section 4 discusses the results within the context of previous research. Section 5 concludes.

II. AUSTRALIAN CONTEXT AND DATA

A. Dispossession of land and social implications

What began with British explorers declaring Australia 'Terra Nullius' [5] [9, 26] soon resulted in boats of convicts, military [6], and free settlers arriving to initially settle the Sydney area. The declaration of 'Terra Nullius' both justified dispossession, and directly contradicted the existence of the local population of Aboriginals, for whom records of continuous culture exist for at least 65,000 years [27]. Even the most superficial examination of this declaration reveals a scenario where mass dispossession of land is likely to occur without formal treaties or wars, and that the non-military settlers may often conduct the means of dispossession. The settlement of Australia by the British Empire was a component of the wider convict program [28]. The dispossession of land was intuitively associated with violence where the Aboriginal population did not immediately leave their ancestral territory. Illustrating this is the lack of violence in Queensland prior to 1859, because there was little dispossession of land until that time [29].

The dispossession project was directly supported by colony and Commonwealth policies. For example, the first law enacted in Queensland was establishing that Aboriginal 'Protectors' would control Aboriginal movement, residences, employment, money, and family [30]. The colonisation of Australia and subsequent dispossession of Aboriginal land was

[3] The referendum of 1967 on Aboriginals was worded: Do you approve the proposed law for the alteration of the Constitution entitled— 'An Act to alter the Constitution so as to omit certain words relating to the People of the Aboriginal Race in any State and so that Aboriginals are to be counted in reckoning the Population'?

[4] This paper refers to Aboriginal Australians as those who identify as Aboriginal. As a result of historical population and communication trends, the dataset used in this paper does not include massacres from the Torres Strait Islands. As such, reference to Aboriginal Australians is done with reference to these communities and does not seek to exclude Torres Strait Islanders from the implications of the research, only the methodological analysis.

[5] The declaration provided the British with a legitimacy to begin 'original occupation' of the land without the need for treaties or formal wars with the local population.

[6] The British military was otherwise available given the end of the Napoleonic wars, and given the task of transporting convicts and establishing order in the Australian colonies.

supported by the free settlers, freed convicts, and government alike.

Part of the convict 'reformation' project was remedial labour, which was generally implemented by the 'assignment' of convicts to various farms, both private and religiously administrated [31], and which satisfied both the authorities and colonists in need of labour [32]. In addition to the assignment of convicts to remote locations, remedial ideology motivated the establishment of various religious missions throughout the country and the transport of the Aboriginal and Torres Strait Islanders to these missions, which had farms attached [31].

The colonisation of Australia was dominated by the British Empire and subjects (both free and convict) were transported to Australia since 1788. The settlement formally began in the Sydney area, and spread to the fertile coastline and plains as more settlers arrived. In general, the population of Australia was consistently spread with free and convict settlers, as even in the penal colonies there were a significant number of freemen required to administrate the location. There are two important points to note with regards to the heterogeneity of the population. Firstly, convicts were often sent to Australia for crimes such as stealing a loaf of bread [33], and, secondly, the term was seven years [34] with work and land granted when the prison term was served, and this was generally the rural areas where few settlers had already been established. The result of this is that Australia was generally colonised by the lower classes from Britain, and that convicts had similar opportunities to free settlers once their seven year sentence was served. Historians indicate that the settlement of Australia by British colonists was undertaken in a manner such that areas were balanced in the populations of freemen and released convicts. There are few exceptions to this, with three of the penal settlements housing those convicts who re-committed crimes in Australia, and these were in Moreton Bay (Queensland), Norfolk Island, and Port Macquarie. In British law implemented in Australia, the freed convicts had the same rights as the free settlers regarding land ownership, and voting. Some localities come up time and time again in discussions about historical massacres, and mission sites. Some of these localities include Palm Island [35, 36] and Arukun [31].

Not all Indigenous Australian tribes relocated to infertile desert lands without a fight. Some tribes were hostile towards the invading people, and killed cows or humans when they could. Other tribes moved to the infertile areas and missions without hostilities.

The Myall Creek massacre was the first time in Australian history where the massacre was investigated and some of the colonial killers were hung [37-41]. Until that time, massacres were not hidden, as punishment did not occur [39, 42]. This means that before 1838 there are consistent pieces of evidence in the media of the time regarding massacres, specifically naming the perpetrators [40]. However, after this time, massacres more commonly took the form of poisoning, which could not be as easily be traced to individuals. The massacres after 1838 were still reported in a factual manner in the press, often using creative terminology such as 'dispersals' and 'sprees', but the incidents were rarely investigated and the perpetrators were never punished. The most recent massacre in our dataset against Aboriginals was the Coniston Creek Cattle Station Massacre in 1928 where up to 110 Aboriginals were killed [42]. This paper would be bereft to avoid mention of the intergenerational impact of these massacres on Aboriginals themselves. We will not attempt to cover this topic appropriately, only to mention the potential impact of massacres on these communities via a lack of social mobility. Although Aboriginals were recruited as workers all over Australia [43], they were only actually paid (and it generally went to a 'custodian' even then) after 1951 [35]. The systematic removal of young people [13] ensured that no hereditary wealth was able to be accumulated in Aboriginal communities, despite work for others [32].

Historians have commented on the contribution of an 'authoritarian culture' providing the foundation for the contemporary Australian cultural self-perception as being anti-authoritarian while at the same time being law-abiding [32]. The post-Napoleonic wars era of Australian colonisation saw the otherwise unoccupied British military deployed to transport convicts to Australia and operate the Australian prisons [44]. The military culture of "violence as a form of authority" (p.104) [44] was transferred into legal institutions, with laws designed based on the assumption that released convicts will re-commit [28]. Laws were designed to apply this authoritarian dominance over the Aboriginal population as well, with laws enacted in 1854 and 1865 to take all Aboriginal children for 're-training' [30]. This 're-training' which was intentionally a small minute amount of knowledge and skills, because the Aboriginal population had not 'earned' it [31]. In 1828, 80% of the white Australian population was male [28]. A simple way of considering the attitudes towards Aboriginals and how they manifest in violence is to consider the acts of violence as at a time when the 'threshold for violence' was relatively low (Voightlander and Voth, 2012). Although the country-wide (or multi-colony-wide) threshold was low, the instances of massacres did not occur in every area where Europeans and Aboriginal Australians came into contact. Hence, it can be extended that massacres against Indigenous Australians occurred where the European population was particularly

negatively opinionated regarding the Aboriginal population, and the low threshold for violence provides data on which communities held anti-Aboriginal beliefs to a larger extent than the wider population. The invasion of Australia by colonialists, convicts, and free settlers was one of the few instances in modern times where the invading people did not seek official paths towards land acquisition such as through official wars and treaties (as happened in the U.S., Canada and New Zealand). The implications of this are twofold. The first is that any violence on a mass scale against Aboriginals occurred by the European population, in the general vicinity of inhabitation of both Europeans and Aboriginals, and not in a formal 'war' where violence would ordinarily occur[7]. Thus, massacres against Indigenous Australians were generally conducted by settlers (rather than a military force)[8], and can be used as a data point which indicates the beginning of the social norm for anti-Aboriginal views in that location, as being represented by a low 'threshold for violence'. Secondly, there was significant benefit to the Europeans by killing Indigenous Australians in easier settlement of Indigenous lands through fewer physical opposition both at the time of the massacre, and in the future given that so many women and children were generally killed in each massacre. This provided a direct incentive to Europeans to massacre the Indigenous population. The incentive to murder specific groups of people has been discussed by other authors with particular focus on the benefits of murdering Jewish money lenders in Europe over the last five hundred years [50].

[7] However, the British government in Australia was involved in violence and dispossession. The earliest example of this is the massacre of 1816 when Governor Lachlan Macquarie recorded in his journal on the 10th April: "*I have this Day ordered three Separate Military Detachments to march into the Interior and remote parts of the Colony, for the purpose of Punishing the Hostile Natives, by clearing the Country of them entirely… the officers Commanding the Military Parties have been authorized to fire on them to compel them to surrender; hanging up on Trees the Bodies of such Natives as may be killed on such occasions, in order to strike the greater terror into the Survivor*s." 45. Macquarie, L., *Diary 10th April 1816 - 1st July 1818*. 1816, Original held in the Mitchell Library, Sydney.

[8] However, the state of Queensland had an official '*Native Mounted Police*' which was a state funded formal operation where the Aboriginal population was moved on from potential settlement land or killed. There are dozens of books written about this system in Queensland. See, for example 12. Evans, R., K. Saunders, and K. Cronin, *Race relations in colonial Queensland: A history of exclusion, exploitation, and extermination*. 1993: University of Queensland Press.; 46. Loos, N., *Invasion and resistance: Aboriginal-European relations on the North Queensland Frontier, 1861-1897*. 1982, Canberra, Australia: Australian National University Press.; 47. Skinner, L.E., *Police of the pastoral frontier: Native Police, 1849-1859*. 1975, St Lucia, Queensland: University of Queensland Press.; 48. Queale, A.Q.-P.-L.-A., *Queensland Police and Native Police, 1860*. 1900, Brisbane, Queensland: Queensland Parliament Legislative Assembly.; 49. Richards, J., *The secret war: A true history of Queensland's Native Police*. 2008, St Lucia, Queensland: University of Queensland Press..

III. DATA AND METHODOLOGY

This research follows the methodology outlined in [6] with direct application to the Australian context. Although historical data in Australia is unreliable as a result of the relatively low population, broad geographic locations, and slow rates of institutional establishment across rural areas, this research method has been designed to maximise the analyses that are possible with the data which is available. There are two main datasets used in the current paper:

1. Massacres of Aboriginal Australians
2. Voting in the 1967 referendum on Aboriginals

In addition to the above two, additional datasets have been developed in order to test the full model regarding the transmission of social norms. The additional datasets which have been developed are:

A. Control variables within the 1966 and 1971 Censuses
B. A complete list of violent incidents regarding Indigenous Australians

In order to ensure complete replicability of this research, the above datasets are available at SSRN, and design detail are provided in this section.

1) Massacres of Indigenous Australians

The current research leverages the diversity of disproportionate retaliation by settlers in the form of massacres of Aboriginals. In order to ensure that true 'disproportionate violence' is considered, the definition for 'massacre' in this paper is ten (10) Aboriginals killed or more. Further, the massacres included in the dataset are those which have been documented in the community websites of Wikipedia and AustraliansTogether[9], ensuring that only those massacres which are uncontested are included in the analyses. The full model is presented in this paper which controls for various important demographic variables of the electorates in 1967, including Aboriginal population, religion, unemployment, primary production employment, and others. These datasets have been developed from the Censuses of 1966 and 1971.

The goal for the dataset regarding massacres of Indigenous Australians is to ensure that the most conservative possible dataset is used which reflects the completely uncontroversial and uncontested massacres, established as occurring by historians and the historical media. The dataset regarding the massacres of Aboriginal Australians was developed by using existing lists of massacres, predominantly

[9] It is understood that a current research project funded by the Australian Research Council (ARC) is formalising the complete dataset of massacres against Aboriginal and Torres Strait Islanders 51. UniversityOfNewcastle, *Mapping the massacres of Australia's colonial frontier*. 2017: https://www.newcastle.edu.au/newsroom/featured-news/mapping-the-massacres-of-australias-colonial-frontier. and once this dataset is available, this will greatly contribute to the outcomes of this and associated research.

Wikipedia, and AustraliansTogether. In order to develop a dataset which provided the level of information required to answer the research questions raised in this paper, each massacre entry recorded the location, year, and maximum reported dead. Historians agree that reported dead numbers are greatly underestimated, and so the 'maximum reported dead' figure was used to ensure that the analyses accurately reflect the foundation of knowledge developed by historians in this field. The locations of massacres are presented in Figure 1.

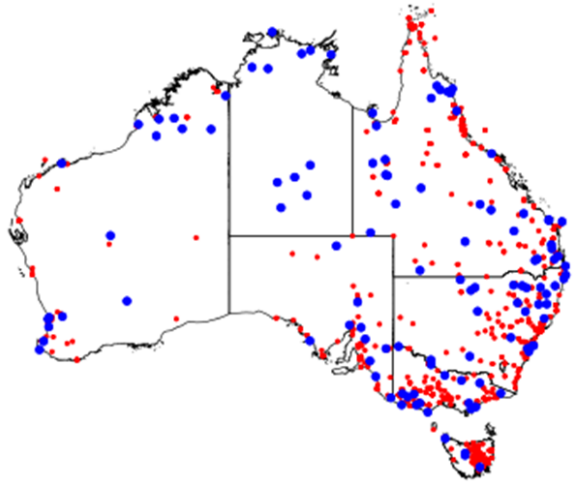


Figure 1. Geographical locations of massacres

Source: Own elaboration based on AustraliansTogether and Wikipedia (Blue markers) and extended dataset (red markers)

2) Voting in the 1967 Referendum on Aboriginals

Almost two hundred years after the first settlers arrived to Australia, the referendum in 1967 was a symbolic opportunity for voters to recognise the rights of Aboriginals and the constitution to be amended to reflect this. The referendum was purely symbolic in that the ramifications of the actual vote would have no tangible effects on the non-Aboriginal voters. Indigenous Australians already had the right to vote since 1962, and the referendum did not seek to deliver a greater amount of services to them, nor to their communities. Hence, it can be argued that there were no 'costs' at all in voting 'yes' on the ballot. Despite this, the percentage of 'yes' votes vary widely across electoral districts, with an average of around 90% 'yes'. It is the goal of this paper to explain some of the relationships between historical events and the voting in the referendum. It can be argued that without any cost for voting 'yes', the referendum truly was a measure of anti-aboriginal sentiment in electorates in 1967.

Referendums provide a unique window into the attitudes held by populations, and this is particularly the case in countries where voting is mandatory, as it is in Australia. The referendum in 1967 provides a direct indication of the attitudes held by the majority of Australians in different locations regarding the Aboriginal population. It has been mentioned earlier and it is worth mentioning again that the referendum question was seen to be regarding granting rights to the Indigenous population, although in reality the question related only to the ability for the Commonwealth government to make laws regarding Indigenous Australians, and to count them in the census. Thus, there was no actual disadvantage to the majority of the population for voting 'yes' in the referendum. Despite this, the average 'yes' vote across the country was only 90%. Indeed, this referendum was expected to be such a landslide 'yes' vote that the government of the day included a second referendum on the same day regarding senate reform, but that was not passed.

The dataset used is the actual votes for 'yes' in each federal electorate in the 1967 referendum. The Northern Territory and Australian Capital Territory were not able to vote in Commonwealth referendums until 1969, and so this research uses the massacres and voting for the six (6) Australian states in 1967. The percentage of the 'Yes' vote in the referendum for each electoral district has been matched to the relevant massacre data so that for each electoral district[10] it is understood which massacres occurred and the details of those massacres.

3) Control Variables

The control variables which have been used are those which have come out of the literature as potentially having an effect on the attitudes of people. The control variable dataset has been developed following a strict process which has ensured that although the electoral districts do not match to the statistical divisions[11] for which data was gathered, a representative understanding of the demographics of each electoral district has been ascertained.

In order to overcome the mismatch between the electoral district and statistical districts, control data has been gathered for the largest town in each electoral district which has unique data in the 1966 Census. One town (or city/municipality) was selected for each electoral district, based on population in 1966. In 1966, Australia was still very sparsely populated, and outside of the state capital cities there were relatively few people. Over time, urbanisation has accentuated this trend. Each representative town is used to understand and control for demographic and cultural traits which appear more in some electorates than in others. The controls which were included in this study include: unemployment, aboriginal population, workforce makeup, education, religion, location of birth, nationality, and age. These are the

[10] The massacres were mapped to the 1967 Electoral districts. The current federal electoral districts are significantly different.

[11] The statistical divisions are the geographic areas for data collection in the national census, and do not overlap with federal electorates consistently or predictably.

variables which are available in the 1966 Census and are likely to be indicative of cultural trait persistence. A major control variable used in the current research is the proportion of Indigenous Australians in an area. Given that the actual referendum in 1967 provided the Commonwealth government with the authority to count Indigenous Australians in the census, the data from the 1966 census provides only state-based population data[12]. Hence, the data regarding the population of Indigenous Australians in specific locations is available in the 1971 Census[13].

IV. HELPFUL HINTS

We apply two empirical strategies to unravel the relationship between the massacres on Indigenous People and the vote for indigenous rights: (1) standard regression models and (2) propensity score matching. The regression model we estimate is of the following form:

$$Y_i = \alpha + \beta mass_i + \gamma X_i + a_i + \varepsilon_i$$

Where Y_i stands for share of 'yes' vote in the 1967 referendum at the district level i; $mass_i$ is a massacre indicator, which is captured by three variables, i.e. massacre dummy indicating whether a massacre in a given district i occurred or not, number of massacres and number of deaths due to massacres at the district level (the latter two variables measure intensity of massacres); vector X_i includes a host of control variables such as district population, town population, share of aboriginal population, share of people born outside Australia, share of people working in primary and manufacturing sector, share of people in a workforce which approximates economic development of given areas, and lastly religion variables, i.e. share of Catholics, Protestants (Church of England) and Methodists (these are three main religions in Australia); a_i stands for state fixed effects[14], which are included in all regressions. As demonstrated in Figure 2 and as further confirmed by the Shapiro-Wilk test, the outcome variable (share of 'yes' vote in the 1967 referendum) is not normally distributed. For that reason, besides the OLS regression models, we also perform Poisson (maximum likelihood) regressions, which allow for skewed distribution of the outcome variable. For robustness checks, we apply the same regression models allowing for different coding of main explanatory variables. Specifically, we consider only these massacres, which occurred before Australia became independence, i.e. before 1901, or only these massacres, which happened between 1838 (the Myall Creek Massacre) and 1901. As a further robustness check we use propensity score matching models (nearest neighbourhood, radius and kernel matching methods) using the same set of control variables to estimate propensity scores via logistic regressions.

Before turning to the regression results, Figure 2 illustrates the relationship between the main explanatory variables (number of massacres and log number of deaths due to massacres at the district level) and the main outcome variable (share of 'yes' vote). As seen in Panel A, which takes into account all data points, there is a negative correlation between the support of Indigenous rights and the number of massacres and the number of Indigenous people killed. In Panel B, we further show that the negative association is not driven by outlying observations. Lastly, in Panel C we demonstrate that the negative correlation holds if one drops districts with no massacres and, hence, also with no Indigenous population killed in the massacres. Pearson's coefficients of correlation between all variables used in this paper are reported in Table A1 in the appendix.

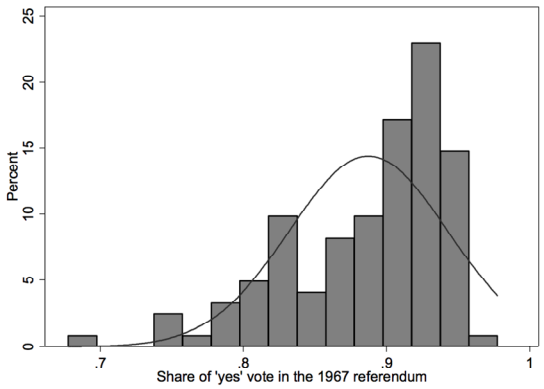


Figure 1. Distribution of the main outcome variable: share of 'yes' vote in the 1967 referendum

Table 2 presents baseline regressions based on the OLS with clustered standard errors (for comparison Table A2 in the appendix reports the same regressions with robust standard errors). As seen in columns 1-3, which includes only state fixed effects apart from the main explanatory variables, there is a statistically significant association between 'massacres' varaibles and the share of 'yes' vote in the 1967 referendum. Districts, which in the past observed massacres of

[12] Until that time Indigenous Australians were under the authority of individual states – hence the referendum to allow the federal government to make laws regarding them and count them in national census.

[13] The 1971 Census reports on the population of Indigenous Australians in specific towns/cities/suburbs in a separate document to the general Census reports, illustrating that it took even more than 4 years for the national statisticians to incorporate questions regarding Indigenous Australian ethnic identification in the census. More than 90% of the electorates are represented by the towns/cities/suburbs indicated in the 1971 Census. For the electorates which did not have specific population figures, data was used for the nearest town in proximity which did have figures.

[14] Tasmania, Queensland, New South Wales, Victoria, South Australia and Western Australia.

Indigenious Australians tend to be less in favor of granting them rights. In coulumns 4-6 we report extended models with a full set of control variables. Although the size of effects drops in the extended models, all coefficients are statisically significant at the 1% level. According to column 4, districts which observed massacres recorded on average 2 percentage points lower support for the rights of the Indigenous population. Turning to the massacre intensity variables, one could gauge from column 5 that one more massacre in a district translates into 1 percentage point lower support in the referendum. Lastly, in column 6 we show that 100% increase in number of deaths due to massacres results in approximately 1 point lower support for Indiginious rights. In Table 3 we demonstrate that results are similar when we apply Poisson regressions, which are more suitable when the outcome variables have skewed distribution. It should be noted that some of the control variables display a robust relationship with the outcome variable. Whereas the size of the district (population size) is positively associated with a vote for aboriginal rights, the share of aboriginal population, share of people employed and percentage of Methodists seem to negatively affect vote for Indigenous rights.

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	% of 'yes'	% of 'yes'	% of 'yes'	% of 'yes'	% of 'yes'	% of 'yes'
Massacre dummy	-0.047***			-0.019***		
	(0.008)			(0.003)		
No. of massacres		-0.015***			-0.010***	
		(0.002)			(0.002)	
Ln (No. of deaths, sum)			-0.010***			-0.005***
			(0.002)			(0.001)
Ln(Pop district)				0.044***	0.044***	0.041***
				(0.008)	(0.009)	(0.009)
Ln(Pop town)				0.005	0.007**	0.006
				(0.003)	(0.002)	(0.003)
% of aboriginal population				-0.648***	-0.306**	-0.566***
				(0.072)	(0.107)	(0.070)
% of born outside				0.041	0.053	0.033
				(0.039)	(0.039)	(0.035)
% working in primary sector				-0.128	-0.165	-0.099
				(0.124)	(0.137)	(0.139)
% working in manufacturing				0.004	-0.023	-0.007
				(0.052)	(0.033)	(0.048)
% in work force				-0.046**	-0.053***	-0.049***
				(0.014)	(0.004)	(0.009)
% of Catholics				-0.098	-0.138*	-0.101
				(0.086)	(0.057)	(0.082)
% of Protestants (CoE)				0.029	-0.032	0.016
				(0.045)	(0.035)	(0.044)
% of Methodists				-0.079**	-0.086***	-0.083**
				(0.030)	(0.016)	(0.027)
Constant	0.857***	0.853***	0.855***	0.377**	0.392**	0.406**
	(0.003)	(0.002)	(0.003)	(0.125)	(0.109)	(0.126)
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	122	122	122	122	122	122
R-squared	0.668	0.731	0.708	0.821	0.856	0.834

Table 2: Baseline results: OLS regressions

Note: Clustered (state level) standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Next, we turn to robustness checks to show that our results are insensitive to sample selection, types of massacres and modelling assumptions. In Table 4 we show that our results from baseline regressions are robust if we consider the massacres occurring in two different sub-periods: (1) before 1901 and (2) in years 1838-1901. This is another evidence to support the point that massacres further removed in time serve as a reliable predictor of anti-aboriginal sentiments revealed in the 1967 referendum, confirming that negative attitudes are carried over time (from generation to generation). Table 5 show that results are robust to different coding of massacres, i.e. when massacres are referred to as being a part of a 'war' condition are excluded (one could argue that massacres occurring during the 'war' time are qualitatively different and do not reflect anti-aboriginal sentiment, but are committed to decimate the opponent's fighters).

In Table 6 we present the last robustness checks – propensity score matching estimation. Matching is performed based on scores generated by modelling treatment propensity (i.e. observing a massacre at the district level) based on the same set of control variables as used in baseline regressions. Table 6 reports the average treatment effect for treated (ATT), using nearest neighbor, radius and Kernel matching methods. Propensity score matching enables controlling for non-linearity and ensures that only comparable districts (based on observables) are taken into account.

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	support_on	support_on	support_on	support_on	support_on	support_on
dummy_massacre	0.035**			0.014*		
	(0.011)			(0.006)		
(count) massacre		0.007**			0.001	
		(0.003)			(0.002)	
ln_no_deaths_avg_new			0.00788**			0.004*
			(0.00232)			(0.002)
ln_pop				0.068*	0.064*	0.069*
				(0.030)	(0.031)	(0.030)
ln_areakm				0.001	0.002	0.000
				(0.001)	(0.001)	(0.001)
share_aboriginal				-0.002	-0.019	-0.016
				(0.162)	(0.194)	(0.158)
share_high_educ				-0.147**	-0.144**	-0.149**
				(0.054)	(0.054)	(0.056)
share_born_australia				0.116***	0.115***	0.117***
				(0.026)	(0.027)	(0.025)
share_catholic				-0.011	-0.002	-0.012
				(0.074)	(0.076)	(0.075)
share_unemploy				0.697***	0.711***	0.683***
				(0.149)	(0.154)	(0.143)
Constant	0.034***	0.037***	0.0334***	-0.855*	-0.805*	-0.865**
	(0.010)	(0.011)	(0.00912)	(0.366)	(0.378)	(0.358)
Observations	150	150	150	150	150	150
R-squared	0.149	0.107	0.188	0.521	0.506	0.531

The above table indicates the relationship between massacres and contemporary political outcomes. The share of voting for ON (One Nation Political Party) is related to the existence of historical massacres in specific areas. Although this result is only significant to the 10% level, it does illustrate a strong trend.

DISCUSSION AND CONCLUSION

In this paper we show that electoral districts, which in the past observed massacres of Indigenous People tend to be less in favor of granting them rights in the 1967 referendum. This is despite that voting 'yes' in the referendum indicated that Indigenous Australians would be provided with more government services, have access to more resources, or in any way result in disadvantage to the population of European descent.

The foundation for this paper is based on the work by [6] which uses historical violence as a reflection of attitudes based on the low threshold for violence. As with historical anti-Semitism, historical anti-aboriginal beliefs carried a benefit – in this case, of potentially having access to more land for settlement, clearing, and agriculture. However, while the benefits of violence were country-wide, actual violence against Indigenous Australians was not. This historical heterogeneity of behaviors illustrates the different beliefs and attitudes held in different locations. This seemingly random location of massacres allows for similar methodology as those followed by [6]. Further, the referendum in 1967 provides a degree of insight into the beliefs held in different localities, because the question is the only time in the history of this country when the entire country was forced to answer a question which effectively ascertained without doubt their attitudes towards Indigenous Australians.

The datasets developed for this research are unique and have never been combined to determine the historical persistence of certain attitudes or social norms in the Australian context. Although the Australian context provides only an indication of six (6) generations maximum, this is still significant given the significant national, social, and economic changes which have occurred over the period of colonial settlement.

This research has found that the existence of massacres of 10 or more Indigenous Australians is a significant predictor of anti-aboriginal sentiment over the course of up to six (6) generations. This relationship is most significant in electoral districts with higher populations of Indigenous Australians, higher unemployment, and more Methodists. This research does not indicate causality, only that there is a relationship, albeit a statistically significant one.

The results of this research are critically important for the reconciliation project which continues in Australia. Understanding how persistent attitudes can be over generations can empower the country, and those who allocate resources, to ensure that communities are served in the most appropriate manner. Importantly, this research focusses on the attitudes held predominantly by the descendants of the perpetrators of violence. If attitudes continue so strongly across generations from those who conducted violence, one can only imagine the level of trauma passed intergeneration for those who were the victims and survivors of the violence. The potential for the study of intergenerational trauma with this data is powerful.

This research has provided insight into the persistence of attitudes in the Australian context regarding a topic that have potentially important ramifications for the reconciliation process, and in ensuring that all Australians have the opportunity to understand the impact of their forefathers on their own current attitudes.

This research has focused on a very narrow component of the historical persistence of attitudes and it is proposed that future research consider such important aspects as intergenerational trauma, contemporary political outcomes, current attitudes, stock market participation (i.e. trust). The potential scope for the application of this dataset and research focus is wide.

REFERENCES

[1] Bisin, A. and T. Verdier, On the joint evolution of culture and institutions. 2017, National Bureau of Economic Research.

[2] Dell, M., The persistent effects of Peru's mining mita. Econometrica, 2010. 78(6): p. 1863-1903.

[3] Doepke, M. and F. Zilibotti, Occupational choice and the spirit of capitalism. The Quarterly Journal of Economics, 2008. 123(2): p. 747-793.

[4] Giuliano, P. and N. Nunn, Understanding cultural persistence and Change. 2017, National Bureau of Economic Research.

[5] Nunn, N., The importance of history for economic development. Annu. Rev. Econ., 2009. 1(1): p. 65-92.

[6] Voigtländer, N. and H.-J. Voth, Persecution perpetuated: the medieval origins of anti-Semitic violence in Nazi Germany. The Quarterly Journal of Economics, 2012. 127(3): p. 1339-1392.

[7] Nunn, N. and L. Wantchekon, The slave trade and the origins of mistrust in Africa. American Economic Review, 2011. 101(7): p. 3221-52.

[8] Fernandez, R. and A. Fogli, Culture: An empirical investigation of beliefs, work, and fertility. American Economic Journal: Macroeconomics, 2009. 1(1): p. 146-77.

[9] Brantlinger, P., " Black Armband" versus" White Blindfold" History in Australia. Victorian Studies, 2004. 46(4): p. 655-674.

[10] Evans, R., Fighting words: writing about race. 1999: Univ. of Queensland Press.

[11] Evans, R., A history of Queensland. 2007: Cambridge University Press.

[12] Evans, R., K. Saunders, and K. Cronin, Race relations in colonial Queensland: A history of exclusion, exploitation, and extermination. 1993: University of Queensland Press.

[13] Evans, R. and B. Thorpe, Indigenocide and the massacre of Aboriginal history. Overland, 2001(163): p. 21.

[14] Windschuttle, K., The fabrication of Aboriginal history. Sydney Papers, The, 2003. 15(1): p. 20.

[15] Windschuttle, K., The myths of frontier massacres in Australian history. Quadrant, 2000. 44(11): p. 17.

[16] Alesina, A., P. Giuliano, and N. Nunn, Fertility and the Plough. The American Economic Review, 2011. 101(3): p. 499-503.

[17] Becker, S.O., et al., The empire is dead, long live the empire! Long-run persistence of trust and corruption in the bureaucracy. The Economic Journal, 2016. 126(590): p. 40-74.
[18] Jha, S., Trade, Institutions and Religious Tolerance: Evidence from India. Stanford University Research Paper, 2008. No. 2004.
[19] Botticini, M. and Z. Eckstein, From farmers to merchants, conversions and diaspora: Human capital and Jewish history. Journal of the European Economic Association, 2007. 5(5): p. 885-926.
[20] Algan, Y. and P. Cahuc, Inherited trust and growth. American Economic Review, 2010. 100(5): p. 2060-92.
[21] Guiso, L., P. Sapienza, and L. Zingales, Long Term Persistence. NBER Working Paper, 2008. No. 14278.
[22] Grosjean, P., A history of violence: The culture of honor and homicide in the US South. Journal of the European Economic Association, 2014. 12(5): p. 1285-1316.
[23] Comin, D., W. Easterly, and E. Gong, Was the wealth of nations determined in 1000 BC? American Economic Journal: Macroeconomics, 2010. 2(3): p. 65-97.
[24] Putterman, L. and D.N. Weil, Post-1500 population flows and the long-run determinants of economic growth and inequality. The Quarterly journal of economics, 2010. 125(4): p. 1627-1682.
[25] Spolaore, E. and R. Wacziarg, The diffusion of development. The Quarterly Journal of Economics, 2009. 124(2): p. 469-529.
[26] Macintyre, S., A Concise History of Australia. 1999, Cambridge: Cambridge University Press.
[27] Clarkson, C., et al., Human occupation of northern Australia by 65,000 years ago. Nature, 2017. 547(7663): p. 306.
[28] Evans, R. and B. Thorpe, Commanding men: Masculinities and the convict system. Journal of Australian Studies, 1998. 22(56): p. 17-34.
[29] Breslin, B., W. Robertson, and N. Loos, Exterminate with pride: Aboriginal-European relations. 1992.
[30] Kidd, R., The way we civilise: Aboriginal affairs, the untold story. 1997: Univ. of Queensland Press.
[31] Loos, N., White Christ Black Cross: The emergence of a black church. 2007: Aboriginal Studies Press.
[32] Lewis, G., A history of the ports of Queensland: a study in economic nationalism. 1973: University of Queensland Press.
[33] Lambert, R.D., Reclaiming the ancestral past: Narrative, rhetoric and the 'convict stain'. Journal of Sociology, 2002. 38(2): p. 111-127.
[34] Clark, M., The origins of the convicts transported to eastern Australia, 1787–1852 1. Australian Historical Studies, 1956. 7(26): p. 121-135.
[35] Rosser, B., Dreamtime Nightmares: Biographies of Aborigines under the Aborigines Act. Canberra: Australian Institute of Aboriginal Studies, 1985.
[36] Watson, J., Palm Island: Through a Long Lens. 2010, Canberra, Australia: Aboriginal Studies Press.
[37] Harrison, B., The Myall Creek massacre. Records of times past: ethnohistorical essays on the culture and ecology of the New England tribes. Canberra: Australian Institute of Aboriginal Studies, 1978: p. 17-51.
[38] Logan, W. and K. Reeves, Places of pain and shame: dealing with'difficult heritage'. 2008: Routledge.
[39] Morris, B., Frontier colonialism as a culture of terror. Journal of Australian Studies, 1992. 16(35): p. 72-87.
[40] Wood, R., Frontier Violence and the Bush Legend: The Sydney Heralds Response to the Myall Creek Massacre Trials and the Creation of Colonial Identity. History Australia, 2009. 6(3): p. 67.1-67.19.
[41] Collins, J., Walking Together at Myall Creek: Dreaming Beyond 'A Cult of Forgetfulness'. Australian Folklore, 2015. 30.
[42] Wilson, B. and J. O'Brien, 'To infuse an universal terror': a reappraisal of the Coniston killings. Aboriginal History, 2003. 27: p. 59-78.
[43] Evans, R., Kings in Brass Crescents: Defining Aboriginal Labour Patterns in Colonial Queensland Indentured Labour in the British Empire 1843-1920, ed. K. Saunders. 1984.
[44] Evans, R. and W. Thorpe, Historical reconsiderations IX: Power, punishment and penal labour: Convict workers and Moreton bay. Australian Historical Studies, 1992. 25(98): p. 90-111.
[45] Macquarie, L., Diary 10th April 1816 - 1st July 1818. 1816, Original held in the Mitchell Library, Sydney.
[46] Loos, N., Invasion and resistance: Aboriginal-European relations on the North Queensland Frontier, 1861-1897. 1982, Canberra, Australia: Australian National University Press.
[47] Skinner, L.E., Police of the pastoral frontier: Native Police, 1849-1859. 1975, St Lucia, Queensland: University of Queensland Press.
[48] Queale, A.Q.-P.-L.-A., Queensland Police and Native Police, 1860. 1900, Brisbane, Queensland: Queensland Parliament Legislative Assembly.
[49] Richards, J., The secret war: A true history of Queensland's Native Police. 2008, St Lucia, Queensland: University of Queensland Press.
[50] Cohn, S.K., The Black Death and the Burning of Jews. Past and Present, 2007. 196: p. 3-36.
[51] UniversityOfNewcastle, Mapping the massacres of Australia's colonial frontier. 2017: https://www.newcastle.edu.au/newsroom/featured-news/mapping-the-massacres-of-australias-colonial-frontier.

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