Queens of the Desert: Convictism and Marital Attitudes across Australia[†]

By Victoria Baranov, Ralph De Haas, and Pauline Grosjean*

Shall Tasman's Isle so famed, so lovely and
so fair, from other nations be estranged,
the name of Sodom bear?

Rev. John West,
Launceston *Examiner* (1846)

A remarkable number of countries have recently opened up marriage to same-sex couples. In less than 20 years, 17 European countries introduced same-sex marriage while another 11 now recognize registered partnerships or civil unions. The US Supreme Court paved the way for same-sex marriage in 2015 by invalidating state bans on same-sex unions. Yet, these legal changes have also exposed deep social cleavages in opinions about the enfranchisement of sexual minorities and, relatedly, views about traditional marriage. This discourse has been especially divisive in countries that put the issue of same-sex marriage to a ballot. The 2017 postal vote in Australia is a case in point. While 62 percent of the participating Australians voted

in favor of opening up marriage to same-sex couples, the poll led to an acrimonious debate between proponents and opponents. Some have suggested that this polarization dates back to a cultural clash between the elite and the convict underclass when Australia was a penal colony in the eighteenth and nineteenth century (Croome 2017).

While today the middle and upper classes tend to hold more liberal views on social issues (Gennaioli and Tabellini 2019), this was not always the case. To the contrary, monogamous marriage and the repression of homosexuality have historically often been construed as social norms to serve the interests of the elite. More specifically, normative monogamy reduces social instability by limiting the pool of unmarried men—those most likely to cause crime and unrest (Henrich, Boyd, and Richerson 2012). Likewise, heterosexual men tend to view homosexual men as unreliable coalition members (Winegard et al. 2016). In various historical contexts, such as Nazi Germany, homosexual bonds were considered as threatening the established order and therefore heavily repressed by the elite (Oosterhuis 1997).

Convict-era Australia, with its hierarchical society, provides a compelling setting to study the emergence and persistence of conservative marital norms. Society consisted of an elite (colonial authorities and free settlers) that exercised control over what they perceived as a deviant convict underclass. Between 1787 and 1868, Britain transported around 160,000 convicts to the penal colonies of New South Wales and Tasmania. Voluntary migration was limited until the discovery of gold in the 1850s so that convicts made up a substantial part of the founder (white) population. Convicts were not "professional criminals" but "ordinary working-class men and women" (Nicholas 1988) who had often only committed minor property offenses. Yet, the Georgian and Victorian elite looked

down on these convicts and their manners and morals. Karskens (2009) writes how "the constant derogatory remarks [in the written legacy of the eighteenth and early nineteenth century] about 'whoredom' and 'prostitutes' centered on 'transgressive behavior' and the fact that women often lived with men without being officially married."[1] Unmarried cohabitation was a way for convict women to find the most appropriate (and best provider) husband (Karskens 2009).[2] Another perception, which generated great anguish among free settlers and colonial authorities alike, was that homosexual activity was rampant among convicts.[3] These moral concerns of the elite went all the way up to British Parliament and eventually became the driving force behind the antitransportationist movement in the 1840s and 1850s.

The fact that some areas of Australia had more convicts and were more exposed to situational homosexual activity and less strict marital norms may have had lasting effects on their openness to such behaviors. In particular, areas where convicts made up a larger share of the population may be more socially liberal today for two reasons. First, unmarried cohabitation and situational homosexuality among convicts may have contributed to normalizing these behaviors. Second, convicts were lower class and less vested in the enforcement of monogamous marriage and the repression of homosexuality. In contrast, the conservative local elites were deeply concerned about unmarried cohabitation and homosexual behavior, which they saw as a moral threat to the fledgling colony.

We test the hypothesis that a larger share of convicts in the local population led to more liberal marital views today. Convicts were not free to move but were allocated in a centralized manner as a function of labor needs (for which we

will proxy by initial economic specialization). According to Governor Bligh of New South Wales, "They were arranged in our book (…) in order to enable me to distribute them according" (Nicholas 1988). We rely on the quasi-random nature of this centralized process for causal identification. We combine data on the local historical share of convicts with records from the 2017 referendum on same-sex marriage and with data from household surveys. Our results show that in areas that harbored more convicts in the past, substantially more Australians support same-sex marriage today. They also hold more liberal marital views more broadly.

This short paper contributes to two strands of the literature. The first speaks to the influence of founder populations on long-run societal outcomes. Bazzi, Fiszbein, and Gebresilasse (2019) finds that the US frontier attracted individualists whose descendants are still more individualistic today. Relatedly, Knudsen (2019) shows how in Sweden the self-selection of individualistic out-migrants led to more collectivist norms. In our setting, convicts did not choose to move to Australia but were selected on the basis of their social class and inclination to transgress norms. We find that these traits contributed to a more socially liberal society.

Second, we contribute to the literature on the support for legal same-sex relationship recognition. Previous work focuses on individual correlates of attitudes toward gays and lesbians, such as gender, age and religiosity, or the role of the media (Fernández, Parsa, and Viarengo 2019). In a related paper, using the same historical setting, we show how male-biased sex ratios instilled strong masculinity norms that heighten crime, bullying, occupational gender segregation, as well as negative views about homosexuality (Baranov, De Haas, and Grosjean 2019). This short paper focuses instead on the effect of convictism. Even though convictism created more male-biased sex ratios, we show that, controlling for the proportion of men, the presence of convicts led to more favorable views about homosexuality—thereby counterbalancing the negative legacy of male-biased sex ratios. This paper is also closely related to Brodeur and Haddad (2018), which relates the distribution of the US LGBT population to the gold rush. Our mechanism highlights how self-selection of socially liberal individuals to the gold rush may help explain their results.

[1] In reality, marriage rates were higher for women in Australia than Britain (Grosjean and Khattar 2019).

[2] For convict men, who were not the best marriage prospects themselves, unmarried cohabitation was often the only access to mating opportunities, given the skewed sex ratio among convicts. Authorities had to agree to a marriage between convicts and often refused to grant such rights to convict men, while convict women were freer to marry (nonconvicts).

[3] A government official stated that "the horrible crime which brought down fire from heaven on those devoted cities mentioned in scripture, exists and is practiced here to a great extent" (Norton 2016). See also opening quote.

I. Data and Methodology

A. *Data*

Historical convict and population data come from the first reliable census in each state (Historical Census and Colonial Data Archive) and are described in detail in Grosjean and Khattar (2019). Our main unit of observation is a historical county.[4] As only New South Wales and Tasmania were penal colonies,[5] convicts were present in a third of the 90 historical counties. We merge these data with two contemporary datasets. First, we obtain the results of the 2017 referendum (Australian Marriage Law Postal Survey) at the level of 141 electoral districts. The referendum was conducted by the Australian Bureau of Statistics and asked, "Should the law be changed to allow same-sex couples to marry?" Eighty percent of eligible Australians submitted a vote, of which 62 percent voted in favor of marriage equality (data available at https://www.abs.gov.au/).

Second, we use HILDA, a nationally representative survey that identifies respondents at a fine-grained geographical level. Of interest are the question on attitudes toward enfranchisement of sexual minorities—"Homosexual couples should have the same rights as heterosexual couples do"—and several questions on marital attitudes: "Marriage is a lifetime relationship and should never be ended," "Marriage is an outdated institution," "It is alright for an unmarried couple to live together even if they have no intention of marrying," and "It is alright for a couple with an unhappy marriage to get a divorce even if they have children." Answers range from 1 (strongly disagree) to 7 (strongly agree). We present results for each marriage question and their principal component (recoded so that a higher value indicates more liberal views). These survey data allow us to control for individual characteristics and investigate whether the long-term impact of the presence of convicts differs across groups.

To match present day to historical data, we rely on historical boundaries digitized by Grosjean and Khattar (2019). We match these boundaries to the smallest geographic units used by the census—statistical areas level 1 (SA1)—which contain 400 people on average. For the vote result, we then match electoral districts to the SA1s, while for the survey data we match on SA1 directly. This gives us a sample of 46,634 SA1s and 43,852 individuals.

B. *Methodology*

Our baseline specification is

$$(1) \quad y_{ipc} = \alpha_1 + \beta_1 \times Convicts_c + X_{pc}^G \Gamma_1$$
$$+ X_c^H \Pi_1 + T_{pc}^C \Lambda_1 + X_{ipc}^C \Theta_2$$
$$+ \delta_s + \varepsilon_{ipcs},$$

where y_{ipc} are electoral outcomes in SA1 p of historical county c, or the survey-based measures for individual i in SA1 p of historical county c. The variable $Convicts_c$ is the share of convicts in historical county c; δ_s is a vector of state dummies; X_{pc}^G and X_c^H are vectors of time-invariant geographic and historic characteristics that may correlate with the presence of convicts and still influence present-day outcomes. Although highly centralized, convict spatial allocation was not exactly random but also determined by labor needs. We therefore control for county historical economic specialization by including in X_c^H the population shares employed in the main categories of employment in nineteenth century Australia. To account for geographic differences across postcodes that may correlate with agricultural potential, we control for latitude, longitude, and land formation. We also control for mineral, coal, and gold deposits. Sex ratios were highly skewed across colonial Australia: on average one convict woman was transported for every 5.3 males. The historical sex ratio has been shown to strongly influence gender norms (Grosjean and Khattar 2019) as well as male-male competition and views toward homosexuality (Baranov, De Haas, and Grosjean 2019). We therefore control for the historical male and female population in all specifications.

Baseline SA1 controls T_{pc}^C are the present-day sex ratio, population, and urbanization (from the 2011 and 2016 Censuses). Since views about marriage and homosexuality are strongly tied to religion (Aksoy et al.

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[4] There were 90 counties with an average of 4,480 individuals in each.

[5] Western Australia received less than 10,000 convicts in total.

TABLE 1—ATTITUDES TOWARD MARRIAGE AND SUPPORT FOR SAME-SEX MARRIAGE IN AUSTRALIA

	2017 postal vote: Percent voted in favor		HILDA: Attitudes toward marriage				
			Supports SSM	Marriage is for life	OK to live unmarried	Marriage outdated	Divorce is OK
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Convict share	0.339	0.352	0.181	−1.076	0.753	0.810	0.551
	(0.133)	(0.110)	(0.093)	(0.329)	(0.325)	(0.235)	(0.312)
Observations	46,633	46,582	43,852	34,603	34,588	34,504	34,550
R^2	0.28	0.59	0.14	0.06	0.12	0.03	0.04
Mean of dependent variable	0.49	0.49	0.54	4.06	5.59	2.71	5.39
Number of clusters	90	90	81	81	81	81	81
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Minerals and land type	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Historical controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Present-day population	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Present-day religious and econ	—	Yes	Yes	Yes	Yes	Yes	Yes
Individual-level controls	—	—	Yes	Yes	Yes	Yes	Yes

Notes: Standard errors clustered at the historical county level. Geographic controls are at the postcode level and include the postcodes centroid and the minerals and land type of the postcode. "Minerals and land type" is the presence and type of mineral deposit (major coal, major gold, other) and land formation (plains and plateaus, mountains, other), which are provided by Geoscience Australia. Historic controls are the historical county population by gender as well as the proportion of residents working historically in agriculture, domestic services, manufacturing and mining, and government services and learned professions. "Present-day population" is the number of men to women (SR) at the postcode, the total population density of the SA1, whether it is urban, and its population. "Present-day religion and econ" includes education (share completed year 12), unemployment rate (by gender), religion shares, median age, median household income, and proportion born overseas at the SA1 level. Demographic data are from averages from the 2011 and 2016 Census. Individual-level controls include age, gender, education, income, sexual orientation, and if born in Australia. Dependent variable in column 3 is an indicator variable corresponding to the response to the question, "Homosexual couples should have the same rights as heterosexual couples do." Positive responses are coded as 1; neutral or negative responses are coded as 0. Dependent variables in columns 4–7 are on a 7-point Likert scale (with 1 = strongly disagree and 7 = strongly agree).

Source: Columns 1–2: Australian Bureau of Statistics, Marriage Postal Survey 2017. Data are originally at electoral level and have been matched to SA1s. Columns 3–7: individual-level data from HILDA waves 2008, 2011, 2015 (and 2005 for column 3). Minerals and land-type data come from Geoscience Australia. Demographic data are averages from the 2011 and 2016 Census.

forthcoming), we include the local shares of religious groups in the most saturated specifications. Lastly, the individual controls X_{ipc}^{C} include gender, sexual orientation, marital status, age, income, education, and whether the respondent was born in Australia. We cluster standard errors by county.

II. Results

Columns 1 and 2 of Table 1 provide our results for the 2017 referendum using the share of votes in favor of same-sex marriage as the dependent variable.[6] All specifications include state fixed

effects, the geographic and historical controls outlined above, and baseline SA1 controls. Columns 2–7 also control for present-day religiosity, income, and unemployment.

The estimated coefficient is positive, large, statistically significant at the 1 percent level, and stable across specifications. The share of votes in favor of marriage equality is substantially higher in areas where more convicts were present in colonial Australia. In our preferred specification (column 2), the coefficient associated with the share of convicts suggests that a one standard deviation increase in the local share of

[6]We express votes as percentages of eligible voting population. That is, although "yes" won 62 percent of all

expressed suffrage, it only represented 49 percent of the voting population (given 21 percent abstention). Our results are unaffected by controlling for abstention.

Table 2—Heterogeneity

	Support for same-sex marriage			Liberal attitudes toward marriage (PCA)		
	(1)	(2)	(3)	(4)	(5)	(6)
Convict share	0.181	0.178	−0.010	0.863	0.859	0.514
	(0.093)	(0.095)	(0.122)	(0.247)	(0.257)	(0.355)
Male × convict share		0.009			0.009	
		(0.044)			(0.093)	
Australia born × convict share			0.189			0.343
			(0.084)			(0.281)
Observations	43,852	43,852	43,852	34,374	34,374	34,374
R^2	0.14	0.14	0.14	0.08	0.08	0.08
Mean of dependent variable	0.54	0.54	0.54	0	0	0
Number of clusters	81	81	81	81	81	81

Notes: Controls include state fixed effects; geographic and historical controls' minerals and land type; present-day population, religion, and economic controls; and individual-level controls. See notes in Table 1 for details.

Source: Individual-level data from HILDA waves 2005, 2008, 2011, 2015. Minerals and land-type data come from Geoscience Australia. Demographic data are averages from the 2011 and 2016 Census.

convicts (0.21) is associated with a 7.4 percentage point higher probability of voting in favor of same-sex marriage. This represents 15 percent of the mean. Columns 3–7 in Table 1 provide respondent-level results from the HILDA survey and confirm that a higher historical presence of convicts is associated with more liberal views about rights for same-sex couples and marriage in general.

While voting results are not available at the individual level, we can explore heterogeneous effects by individual characteristics, such as gender or Australian ancestry, with the HILDA survey. Table 2 shows that the convict coefficient is statistically identical for men and women. However, the legacy of convictism on views about same-sex marriage is only significant for individuals of Australian decent. This points to socialization within families as a potential mechanism of cultural persistence.

III. Discussion

We rely on a unique historical experiment that quasi-randomly relocated individuals of Georgian and Victorian England's underclass across the penal colonies of Australia. The resulting geographical variation in the shares of underclass convicts and upper-class free migrants prompted acrimonious local conflicts about sexual and marital freedom. This social division persisted for more than 150 years and resurfaced as a fierce debate about same-sex marriage. We find that in areas where the share of convicts was higher historically, people were more likely to vote in favor of same-sex marriage in 2017. They also continue to hold more liberal views about marriage in general. Our results highlight how founder populations can have lasting effects on locally held social norms and that the particular dimensions along which founding populations are selected can shape the social future of countries.

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