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INTERNAL EMPIRES I: SOCIAL INSTITUTIONS OF THE FRONTIER

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INTERNAL EMPIRES I: SOCIAL INSTITUTIONS OF THE FRONTIER

One of the attributes most consistently highlighted in the literature on frontier society is the tendency to spontaneous social organisation. However, despite the resilience of the ‘frontier thesis’ within sociology and political science, it has not been subject to a rigorous empirical examination. Does it constitute a description of the social norms and institution of the western United States, or is it one manifestation of a more general ‘frontier phenomenon’, found in other times and places? In order to answer these questions, this article examines data on the nature of social relations in frontier zones in four countries: Brazil, Russia, Canada and the United States. Taking a wide range of survey items, we find that higher levels of voluntary activity, social trust, tolerance of outgroups, and civic protest are distinctive features of frontier life, and not simply a feature of the American historical experience.

JEL: Z13, N90, R23.

Keywords: Social institutions, social capital, settlement patterns, historical institutionalism, frontier thesis.

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1. Introduction

“The wilderness masters the colonist. It finds him a European in dress, industries, tools, modes of travel, and thought. It takes him from the railroad car and puts him in the birch canoe. It strips off the garments of civilization and arrays him in the hunting shirt and moccasin. It puts him in the log cabin of the Cherokee and Iroquois and runs an Indian palisade around him. Before long he has gone to planting Indian corn and plowing with a sharp stick; he shouts the war cry and takes the scalp in orthodox Indian fashion. In short, at the frontier the environment is at first too strong for the man. He must accept the conditions which it furnishes, or perish, and so he fits himself into the Indian clearings and follows the Indian trails. Little by little he transforms the wilderness, but the outcome is not the old Europe...” (Turner, 1920, 4)

Perhaps one of the most significant developments in modern history has been the territorial expansion of the west. In 1491, Europeans occupied a small, peripheral peninsula accounting for, at most, 6.8% of the world’s landmass. Four centuries later, the peoples of the European peninsula had charted, conquered, and settled much of North America, Australasia, South America, and, via the Russian Empire, the northern third of Asia - a group of territories accounting for a phenomenal 45.1% of the world’s surface⁴.

Yet the inhabitants of these ‘neo-Europes’ did not, and could not, simply replicate the social, economic and political structures of their lands of origin. The colonial experience saw newcomers struggling to establish government in regions very different from their home countries, and the institutions they founded there were marked by their relationship with indigenous peoples, the availability of free land, and their distance from titular rulers in Europe, who could govern their actions only with great difficulty. As factor endowments differed markedly in these new territories, equilibrium economic and political institutions were naturally different to those of the home continent (Sokoloff and Engerman 2005, Acemoglu and Robinson 2001). The availability of what Borgstrom (1965) termed ‘ghost acreage,’ or free and unoccupied land, made ‘extractive’ feudal practices difficult to maintain, except in the presence of

⁴ The Americas constitute 42,549,000 km², Siberia and Central Asia 16,806,550km², Australasia 7,885,000km², out of a total global landmass of 148,940,000km². Europe’s landmass, including European Russia, is 10,180,000km².

a large indigenous population⁵ or imported slaves (Acemoglu and Robinson 2001). And the absence of central government left settlers to fend for themselves, experimenting with new and more egalitarian forms of administration such as the township, the Cossack Krug, or local assembly (Tocqueville 1835).

Perhaps one of the best known arguments that the settlement process led to a unique set of social and political institutions is the ‘frontier thesis’ of American historian Frederick Jackson Turner, expressed in his 1893 essay, ‘The Significance of the Frontier in American History’ (Turner 1920). Though focusing primarily on the United States, Turner had argued that it was the existence of a western expanse which could explain America’s culture of individualism and egalitarianism, arguing that ‘what the Mediterranean Sea was to the Greeks, breaking the bond of custom, offering new experiences, calling out new institutions and activities’, ‘the ever retreating frontier has been to the United States’ (Turner 1920: 20). Turner maintained that the frontier could explain not only American social norms, but also the consolidation of democracy, going so far as to argue that the defining struggle of the US, the abolition of slavery, was not a victory of the North over the South, but rather of the frontier over the last vestige of feudal hierarchy in the east; Lincoln himself being the ‘embodiment of the pioneer period’ and the ‘embodiment of democracy in the west’ (Turner 1920: 142-3)⁶.

Such arguments are also familiar from the works of French nobleman Alexis de Tocqueville. In *Democracy in America* Tocqueville had similarly noted the ‘democratic character’ of the settlers, characterised by individualism, lack of hierarchy, and voluntarism; and, like Turner, saw it rooted in the relatively widespread ownership of land and consequent absence of a feudal aristocracy. In America, he argued, men are ‘seen on a greater equality in point of fortune and intellect’, on account of the relatively equal ownership of land, which ensured that there were no ‘great landed estates’ and that ‘the aristocratic principle’ remained weak. Notably, for Tocqueville, it was not the actual equality of wealth at any given

⁵ Even in Russian Siberia, there is evidence of difficulty in maintaining a servile peasantry, as Siberian peasants ‘enjoyed freedom from exploitation by *pomeshchiki*’ (feudal landlords) and as a result ‘attained a standard of living which was beyond the dreams of peasants in the central provinces of European Russia’ (Forsyth 1992: 115).

⁶ On this point, Turner is unambiguous, arguing that: ‘The free pioneer democracy struck down the slave-holding aristocracy on its march to the West’ (Turner 1920: 143).

point which mattered - indeed, he noted that there is no 'deficiency of wealthy individuals in the United States', and 'no country, indeed, where the love of money has taken stronger hold on the affections of men, and where the profounder contempt is expressed for the theory of the permanent equality of property' - yet because 'wealth circulates with inconceivable rapidity,' 'it is rare to find two succeeding generations in the full enjoyment of it'. Thus the absence of any settled hierarchy of rank and status, or the leisure to develop such systems of societal distinction; 'most of the rich men were formerly poor; most of those who now enjoy leisure were absorbed in business during their youth' (Tocqueville 1835).

The purpose of this paper is to examine whether the frontier effect observed by Turner and Tocqueville reflects a more general consequence of frontier settlement, and not simply a particularity of the United States. In section II, we extend our discussion of the theoretical background. Section III defines our understanding of the frontier, and delimits a series of cases for the study. Section IV provides a more definitive charting at the subregional level. In section V, we examine the history of frontier zones, showing how in each country case the conditions of frontier settlement differed, yet provided an underlying uniformity to the cases. Section VI then examines empirical data to show how frontier areas differ from non-frontier areas in their social institutions.

II. Theoretical Background

Why, according to Turner and Tocqueville, did the process of frontier settlement lead to egalitarian social and political institutions? At root, both writers saw the unique condition of the frontier being its unusual combination of factor endowments. 'The most significant thing about the American frontier,' Turner had maintained, was 'that it lies at the hither edge of free land' (Turner 1920: 4). This, in turn patterned the economic nature of frontier life, each farmer the sovereign owner of his own house on the prairie. This made it a 'democratic self-sufficing, primitive agricultural society, in which individualism was more pronounced than the community life of the lowlands,' and the 'indented servant and the slave were not a normal part of its labor system'. Whereas the coastal regions were specialised in the labour intensive and land

constrained process of ‘producing staples,’ the frontier lands were ‘engaged in grain and cattle raising’, as well as gathering and trapping, ‘supplying its scarcity of specie by the peltries which it shipped to the coast’ (Turner 1921: 59).

This economic structure, Turner had argued, had two important consequences. The first was political, with an important link from agrarian freeholding to democratic consolidation, because ‘economic power secures political power’ (Turner 1921: 17). The United States, Turner rightly noted, was not born as a consolidated democracy; its early history was characterised by numerous struggles over the extension of the franchise, the defence of liberties, and of course, the abolition of slavery. On each area, Turner notes, the frontier states added their weight to the democratic shift. Even within the Eastern states, Turner notes, it was their western ‘frontier’ region which had demanded and ensured a universal male vote⁷. Contemporary political scientists will recognise that similar arguments have been made about the link from agrarian, freeholding societies to premodern democracy in Switzerland or the United States (e.g. Boix, 2003).

The second important consequence of egalitarianism in land was egalitarianism in social relations. For Turner, the ‘the frontier is productive of individualism’ because the settlers themselves were autonomous units, not dependent on government or upon feudal elites for their defense or their support; the frontier ‘produces antipathy to control, and particularly to any direct control’ (Turner 1920: 16). Moreover, the opportunity cost of subjugation was free land, and ‘men would not accept inferior wages and a permanent position of social subordination when this promised land of freedom and equality was theirs for the taking’ (Turner 1920: 145). The frontier was a site of individualism, therefore, and also a certain equality; not an equality of income, necessarily, but an equality of status, with little in the way of aristocratic airs and graces⁸.

⁷ Pace Turner: ‘It was *western* New York that forced an extension of suffrage in the constitutional convention of that State in 1821; and it was *western* Virginia that compelled the tide-water region to put a more liberal suffrage provision in the constitution framed in 1830, and to give to the frontier region a more nearly proportionate representation with the tide-water aristocracy’ (Turner 1921: 17).

⁸ This could mean ‘levelling down’ as well as ‘levelling up’; Turner noting that not only the ‘humor, bravery, and rude strength’ of the frontiersman, but also ‘the vices of the frontier in its worst aspect, have left traces on American character, language, and literature, not soon to be effaced’ (Turner 1920, 24).

Tocqueville, likewise, laid emphasis upon the absence of hereditary landownership and the Just as Turner identified these attributes as distinctively American, yet saw the western frontier as their culmination, Tocqueville likewise highlighted the importance of the ‘frontier’:

‘At the end of the last century a few bold adventurers began to penetrate into the valleys of the Mississippi, and the mass of the population very soon began to move in that direction: communities unheard of till then were seen to emerge from the wilds: States whose names were not in existence a few years before claimed their place in the American Union; and in the Western settlements we may behold democracy arrived at its utmost extremes.’

If the availability of land and lack of aristocracy had led to the birth of the democratic ethos on American coastline, the accentuation of these features in the American interior saw these attributes taken there to their logical limit.

Yet because both Turner and Tocqueville wrote about the American frontier, the question this paper confronts is whether their observations are valid for frontier areas in general, or must be considered only a particularity of the American historical experience. For if the settlement of the western US was a natural experiment in history, then it is an experiment which has been repeated many times and in many different contexts, from the Brazilian jungle, to the Australian outback, to the Siberian taiga. And while the independent variables vary greatly in all these cases, with different settler peoples, colonial powers, and historical eras, if the root hypothesis is true that differential factor endowments of land and labour pattern the evolution of social and political institutions, then some trace of its effects should be found in all such cases, and not simply one.

Most studies of the effects of colonial settlement have tended to focus on explaining differences between settler societies, rather than between settler and non-settler polities. As explanations for the tendency of one region to be more prosperous, democratic, or socially cohesive, scholars may cite the impact of the policies of the colonial powers, such as whether they imposed common or civic law, or deployed direct or indirect rule (Gerring et al. 2011). Alternatively, the nature of the settlers

themselves may be highlighted, with a distinction between ‘Anglo-Saxon,’ protestant migration flows and non-protestant migration (Huntington 1996). Finally, the situation of the indigenous population may be considered relevant, including its impact on the land-labour ratio, or the maintenance of extractive practices, such as the *mita* or labour corvee (Acemoglu and Robinson 2001). A study of the frontier, however, would look for a common effect in all frontier areas, where land is plentiful relative to labour, and the influence of central government relatively attenuated, vis-a-vis non-frontier areas, including the home countries or regions of the settler population. That is the objective of this paper.

III. Defining the Frontier

The frontier may be defined by several attributes, including administrative remoteness (distance from the central government), population sparsity, or the relatively recent arrival of its transitory population. For the purpose of this project we understand frontier zones as essentially far flung regions in which most of the population are migrants, or the children of migrants, and in which, by consequence, the institutions of public order, the police and judiciary to local government and administration, are relatively young and newly formed. It is the recency of administrative structures, we argue, which constitutes the core of the frontier, and other attributes which are contributors. Areas with low population density may or may not be frontier zones, for example, though many frontier zones have low population density by virtue of the recent origin of the inhabitants; the arrival of a populus into a formerly blank geography, in new townships, and thus new mayoralities, new electoral districts, is a typical characteristic of the frontier.

Among the potential sites of study for this project, we considered a number of frontier 'zones' within contemporary polities in the world today. These were assessed based on the extent to which they meet several of the frontier criteria, namely distance from government, recency of population flows, and population sparsity. A summary is provided in Table 3.1.

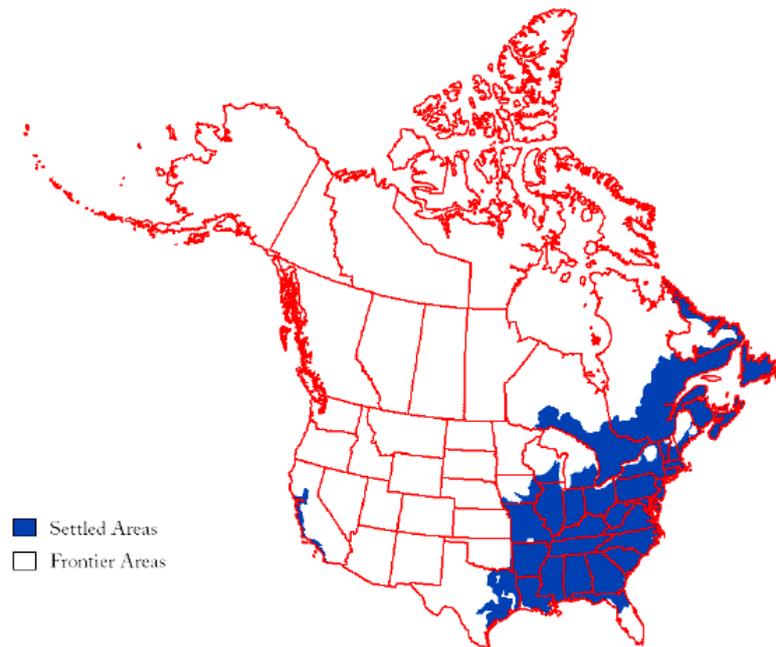
Table 3.1 – Attributes of Territories Considered for Frontier Status

	Distance from Political Authority	Population Sparsity	Net Migration, 1950-
Brazilian Interior			
- <u>North (Amazonas)</u>	2860km*	3.8/km ²	
- <u>Centre-West</u>	930km*	8.1/km ²	
- <i>national av.</i>		22/km ²	
Canadian West			
- <u>Alberta</u>	2874km	5.9/km ²	High
- British Columbia	3551km	4.76/km ²	Medium
- <u>Saskatchewan</u>	2213km	1.75/km ²	Medium
- <i>national av.</i>		3.41/km ²	
United States Frontier			
- <u>Southwest</u>	1905km	28.5/km ²	High
- California	3700km	93.3/km ²	Medium
- Northwest	3746km	25.41/km ²	Medium
- <u>Rocky Mountains</u>	3189km	25.55/km ²	High
- <u>Alaska</u>	5422km	0.49/km ²	High
- Upper Midwest	1502km	15.0/km ²	Low
- <i>national av.</i>		32/km ²	
Russian Federation			
- <u>Siberia</u>	2821km	3.76/km ²	High
- <u>Far East</u>	6434km	1.0/km ²	High
- Urals	1159km	6.8/km ²	Low
- Northern Provinces	995km		Low
- <i>national av.</i>		8.3/km ²	
Argentina			
- Cordoba	625km	Low	Low
- Mendoza	958km	Medium	Low
- <i>national av.</i>		14/km ²	
Chinese Western Provinces			
- <u>Xinjiang</u>	2414km	13/km ²	Low*
- <i>national av.</i>		140/km ²	
Kazakhstan			
- <i>national av.</i>		5.8/km ²	

* distance from historical capital (Rio de Janeiro); capital moved to Brasilia in 1960

An alternative method of identifying the frontier is simply to look at the dates of historical settlement. Robinson and Garcia-Jimeno (2009) have computed the share of total land area in North America with population density below 0.7725 people per square kilometre (2 per square mile), in 1850 for the United States and in 1851 for Canada, using data from the United States Census (1898) and the Dominion Bureau of Statistics (1957).

The Frontier in North America circa 1850 (Source: Robinson and Garcia-Jimeno, 2009)



The resultant analysis serves well for the purposes of defining frontier zones within the United States and Canada, with everything West of Missouri and Arkansas, with the exception of California, whose major population centres were already settled by this point in time, counting as frontier in the United States and everything west of Ontario constituting the frontier of Canada.

Robinson and Garcia-Jimeno (2009) also provide data from Latin America, collected from various sources, which allow us to identify frontier zones within the Federative Republic of Brazil.

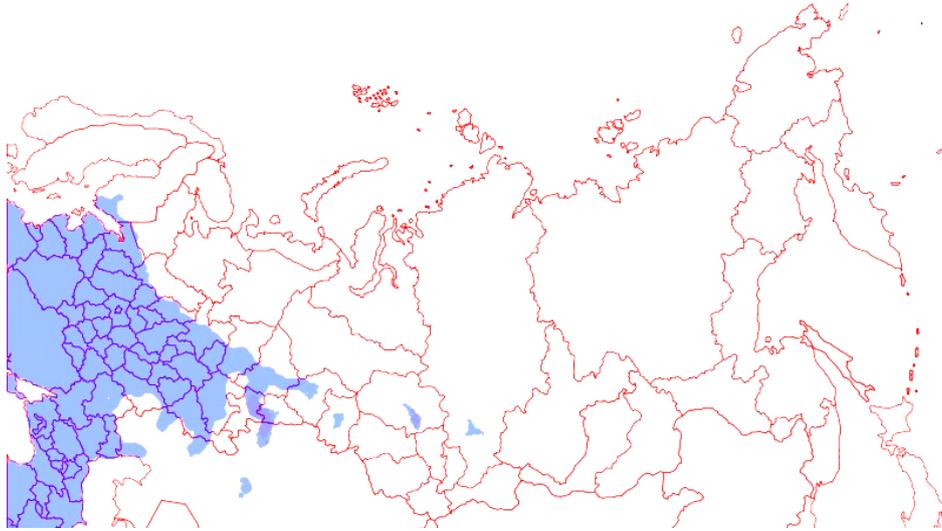
The Frontier in South America circa 1850 (Source: Robinson and Garcia-Jimeno, 2009)



Brazil was relatively less settled than either the United States or Canada, circa. 1850, with population largely concentrated around the coastal cities of Rio de Janeiro, Sao Paulo and Salvador, and the vast inland interior largely untouched. On the basis of this criterion, therefore, the frontier zones of Brazil constitute the Northern Amazon region, plus the vast interior of the Centre-West, as well as the Southern states of Paraná, Santa Catarina and Rio Grande do Sul, which were as yet unsettled.

For Russia, we have constructed our own map using the Russian Empire Census of 1897, which is the earliest complete census conducted in Russian territory. On account of the natural increase in population, we have estimated figures approximate to the expected level of 1850, and charted population density for these estimates.

The Frontier in Russia circa 1897



In 1897, settlement in Russia was largely confined to European Russia, plus the cities of the Ural region; before the construction of the Trans-Siberian Railway (begun in 1891 but completed in various stages in 1897, 1904, and 1916) areas of Siberia and the Far East were only very sparsely populated, with small townships in Krasnoyarsk, Tomsk, and Novosibirsk (founded in 1893). In addition, the towns of the Northern arctic region (Arkhangelsk and Severodvinsk) were only thinly populated, while the future population centre, Murmansk, had yet to be founded (1916). On the basis of this criterion, then, the ‘frontier’ regions of Russia include Siberia, the Arctic North, and the Far East.

IV. Mapping Frontier Zones

The frontier zones identified in this project then, are illustrated below in Figures 4.1 For the social capital analysis in section VI, the main source of data is the World Values Survey (World Values Survey 1981-2007), and because the comparative survey data for the World Values Survey uses the economic regional identifiers of the US Census Bureau, rather than more detailed identifiers based on the federal state, we have had to make some category decisions for the purpose of the statistical analysis.

In the case of Canada, all of the western provinces, including British Columbia, were relatively unsettled in the mid-nineteenth century. However, unlike the American frontier – yet in common with Russia - the Canadian frontier also has a northern dimension, as well as an east-west axis. Indeed, this distinction seems embodied in the very classificatory terms used by the Canadian authorities, by which the relatively settled areas are referred to as ‘provinces’, whereas the icy, barren, wastes of the North are considered ‘territories’, with the implication of settlement process that remains yet nascent. Accordingly, the Arctic regions of Nunavut (population 31,906), the Yukon (population 33,897) and the Northwest Territories (population 41,462) are also included, though carry lesser weight in the analysis, on account of population weighting. By contrast, the relatively northern and remote provinces of the Eastern seaboard, such as Prince Edward Island or Newfoundland, cannot be considered frontier areas, as despite their population sparsity they were among the first regions to be settled by Europeans (Newfoundland dating its first settlement in 1610).

Figure 4.1 Frontier Regions of Four Countries

Frontier Regions of the United States



The West South Central region, which includes Texas, has been included in its entirety, despite that this also brings in Louisiana, Arkansas, and Missouri; this was considered acceptable on account of the low population density of the latter states in 1850, and the relatively greater weight of Texas in the analysis, on account of its larger population.

Frontier Regions of Canada



Frontier regions of Canada. Frontier regions are shown in dark, and include the provinces of Alberta, Saskatchewan, Manitoba, and British Columbia, and the territories of Nunavut, Yukon and the Northwest Territories.

Frontier Regions of Brazil



Frontier regions of Brazil. All the Amazonian regions of the Northwest are included, as well as the interior regions of the Centre-West. The coastal regions of Northeast, Southeast and the South are excluded. The coastal regions of the South are not considered frontier areas for the purpose of this project, as these were among the second wave of settlement in the late nineteenth century.

Frontier Regions of Russia



The frontier regions of Russia include the Eastern regions of Siberia and the Far East, together with the Arctic regions of the North, all of which, in spite of scattered and tentative settlement in the Russian imperial period, only became settled *en masse* in the twentieth century.

Note that for the Yamalo-Nenetsky region of Russia, the visible area on the north coast that is in light grey, is the only Arctic province which is not included in the sample; this unfortunately is for reasons of survey classification, as this territory is considered a part of the Ural economic region, rather than either the neighbouring Arctic or Siberia, and when analysing survey data is often coded simply as *Ural* without more detailed information. As the region accounts for only 0.35 per cent of Russia's population, we hope that its exclusion will not significantly alter the results of our analysis.

V. History of Frontier Regions

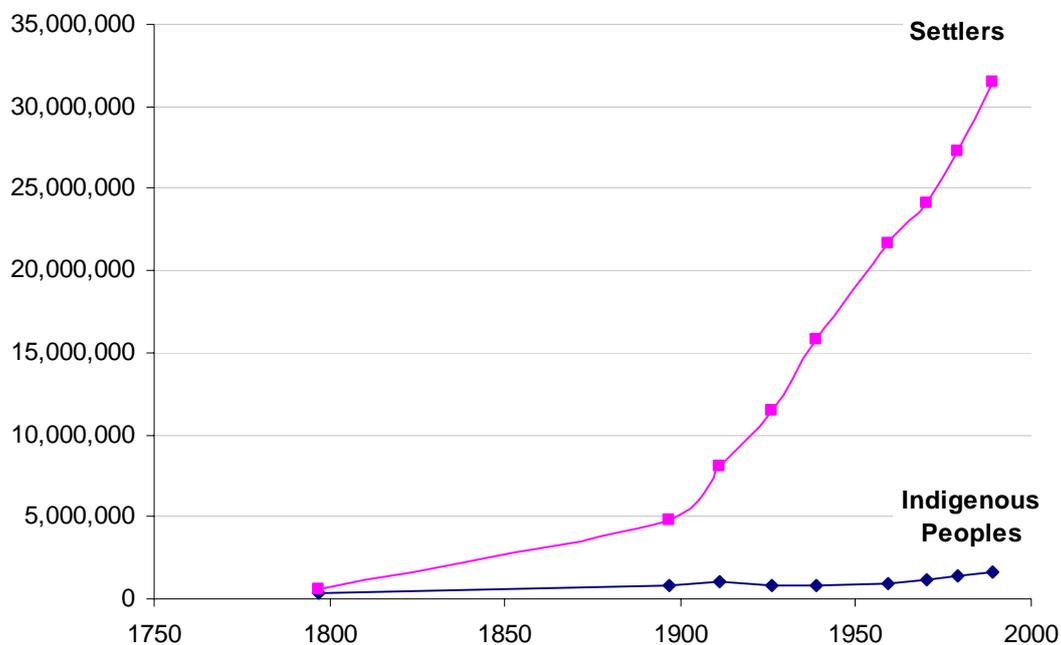
In this section, we provide a brief historical overview of two alternative cases of frontier settlement, Russian Siberia and the Brazilian West, in order to show that similar frontier histories to those narrated by Jackson Turner can be found in other country contexts. Largely as a result of Jackson Turner's work, the frontier history of North America is relatively well developed (Billington 1977, Hartz 1955, Hofstadter 1949). In this chapter, however, we aim to show that the 'frontier phenomenon' exists beyond the North American context, by examining the colonisation and settlement of the Brazilian interior, as well as the settlement of the Northern third of Asia by the Russian Empire, and later, the Soviet Union.

Russia

Before the nineteenth century, Russia's population was almost exclusively situated in its European part, along the banks and tributaries of the Volga River. However, with the charting of Siberia in the seventeenth century, settlement of the eastern lands began in earnest. We can divide this settlement process into three distinct periods. The first phase, from 1620 to 1858, was the phase of 'military colonisation', in which the Tsarist state sought first to subjugate the remaining Khanates of the Siberian steppe, and then to establish military garrisons and outposts across its vast newly-acquired domains. During this period, many of the newcomers to the Russian East were either soldiers or prisoners, and a substantial proportion of the region's inhabitants remained the indigenous peoples and tribes of the North Asian landmass. The second phase, from 1858 to 1917, was that of frontier settlement, as newly-emancipated serfs, gold prospectors, and religious sects flocked eastwards to take advantage of the relative freedom and economic opportunity offered by the region's open land and natural resources. During this time the population boomed from 4.2 to 21.6 million inhabitants, including a very substantial number of free migrants. Finally, the third phase, from 1917 to 1989, was that of planned settlement under the Soviet Union, which, as we shall see, also saw substantial voluntary, as well as non-voluntary, migration to the region.

During the first phase of Russian control over Siberia during the seventeenth and eighteenth centuries, settlement remained largely limited to military expeditions and the use of the territory as a prison colony, similar perhaps, to the initial use made by the British of the Australian subcontinent. Serfdom hindered the possibility of extensive migration in Asia, owing to small number of available volunteers from the free peoples of the Russian Empire, and coercion provided the main method population resettlement. Gageimester estimates that in 1796-97 the population of Siberia accounted for 939,000 people, of which 363,000 were natives, or indigenous peoples, and 576,000 were settlers or their descendants. As at that time, the total population of the Russian Empire counted 36 million people, the peoples of the frontier accounted for only 2.6 per cent of overall population, while the settler population accounted for only 1.6 per cent. The population of Siberia remained disproportionately spread among its many indigenous tribes, who still constituted almost two-fifths of the total. The period from 1797 to 1858 saw the population of Siberia triple, but this was mainly due to natural increase, and not any substantial inflow of migrants.

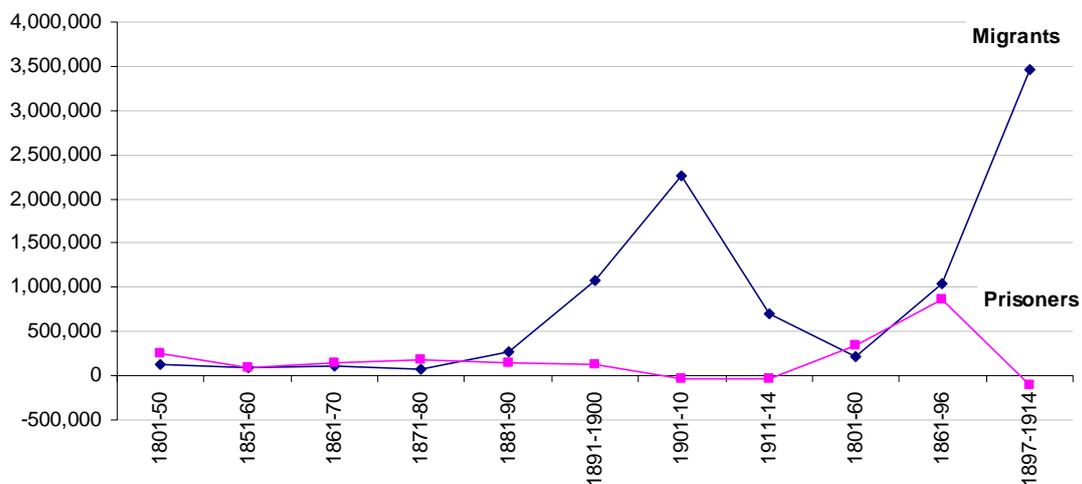
Figure 5.1 Indigenous and non-Indigenous Population of Siberia, 1796-1989



Sources: 1976-7 data from Gagemeister, 1854. Subsequent data cited in Forsyth, James A., *History of the Peoples of Siberia. Russia's North Asian Colony, 1581-1990*. P. 405. Calculated from *Aziatskaya Rossia*, vol. I, pp. 82-5; V.I. Kozlov, *Natsionalnosti SSSR*, 2nd edn, 1982, pp. 285-7; *Narody Sibiri; USSR, Censuses, 1959, 1970, 1979*, and preliminary data for 1989 published in the Report on the USSR, 1990, no. 201, pp. 15-19.

A new, second phase in the settlement of Siberia began in the middle of the nineteenth century, driven by the eastward migration of runaway serfs and the increasing resettlement of followers of persecuted religious sects. The latter were often at the forefront of colonisation, and their pioneering efforts resemble the American colonists to a considerable degree. Thus from 1858 to 1896 the population of the frontier zones increased by 85 per cent, and then just in another 18 years, rose again by 68 per cent. In total, 5.5 million newcomers entered the region during this period, a migration comparable to the inflows to the United States during the same era. The fastest growth was observed in the Far East, thanks to the development of Pacific markets and sea transportation, followed by Siberia, ‘Steppe Land’ (the region most remote from the Trans-Siberian Railway), and Turkestan. Figure 4.2 shows the rates and the sources of population growth in the Asian part of Russia that occurred through resettlement. Two categories of settlers were registered in the official statistics: peasant settlers, and forcibly resettled prisoners and exiles. The data does not include three categories of persons that could not be registered: illegal immigrants during the times of serfdom, townspeople, and industrial workers moving from the European part of Russian into its Asian regions. Regarding the gaps in the table and the categories of settler that were not registered and accounted, the estimated number of this omitted figure can’t exceed more than 600,000 people in 19th century and 1,100,000 for the period from 1800 to 1915 (Obolenskiy, 1928).

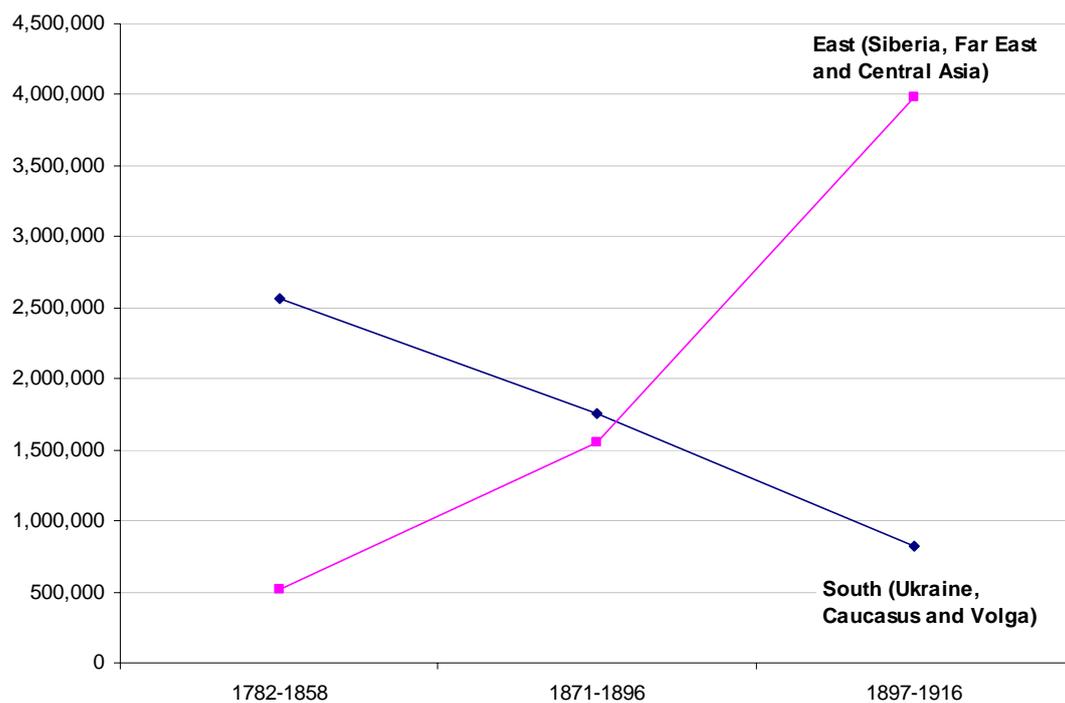
Figure 5.2 Settlers in the Asian part of Russia, 1801-1914



Source: Obolenskiy V.V. (1928, C. 84). *International and inter-continental migrations in pre-war Russia and the USSR*. Moscow: Central Statistical Board.

During this time period, Siberia also overtook the Ukraine and Caucasus as the primary destination for internal migrants within the Russian Empire. Resettlement in the Russian empire was primarily agrarian in nature, and alleviated the agrarian crisis in the agricultural provinces of the Central Black Earth Region of Russia and Malorossiya. In the period before the Peasant Reform of 1861, the main direction of migrations was to the south, yet after the reforms, it became the east. In 1871-1916 the number of internal migrants accounted to more than 9 million people. The census of 1897 reflected the high mobility of the population: 14.6 per cent of the population of the Russian Empire did not live in the province where they were born, and during the post-revolutionary period (1920-1991) 90 million people moved within the boundaries of the Soviet Union, largely from villages to towns and cities.

Figure 5.3 Internal Migration Flows in Imperial Russia, 1782-1916



Source: Mironov B.N. (2009). *Historical sociology of Russia*. St. Petersburg.

The third and final phase of the settlement of Siberia occurred under the Soviet Union, from 1917 to 1989. From 1926 to 1989, the population of Russia's Asian territories rose from 12.1 million to 32 million: by the 1990s, the population of Siberia was greater than that of Canada. While forced resettlement formed an important contribution to these population flows, it would not be wholly accurate, as sometimes

portrayed, to view the region as a mere ‘industrialised prison camp’ (Kravchenko, 1946), as the expansion of the civilian sector also formed an important contribution to the region’s growth.

Nonetheless, during the Stalinist era in particular, forced resettlement did again become a major source of population growth in Siberia (Table 5.1). During the three decades after 1930, six million people were internally deported in the USSR, with most of these sent to the Arctic North, Siberia, or to Central Asia. Forced resettlement started with the deportation of Cossacks in 1919, and reached a high point with the total deportation of ‘punished nations’ during the Second World War; according to P. Polyani’s findings, there were more than 110 deportation operations, which can be grouped into 47 deportation campaigns (Polyani, 2001). This population resettlement occurred almost exclusively during the Stalinist era under the aegis of the infamous Gulag system, which operated from 1930 to 1960, and a substantial portion of the increase in Siberia’s population during this period can be attributed to this movement.

Table 5.1 Internal deportations in the USSR

Period	Number of deportees
1920	45,000
1930-1931	2,050,000
1932-1934	535,000
1935-1938	260,000
1939-1941	395,000
1941-1942	1,200,000
1943-1944	870,000
1944-1945	260,000
1947-1952	400,000
Total	6,015,000

Source: Polyani P. (2001: 239). *Not on their own will. The history and geography of forced migrations in the USSR*. Moscow.

After the abolition of the Gulag system, Soviet authorities continued to prioritise the settlement of Siberia by less coercive means, including wage incentives, subsidised housing and transport infrastructure, the relocation of academic institutions, and the expansion of civilian economic activity, above all in the burgeoning mining and natural resources sector. Nonetheless, from the mid-1950s to the mid-1970s the out-migration of population from Siberia was greater than in-migration. The last large-scale migration of agricultural resettlement was directed to the virgin lands of Kazakhstan and Western Siberia in the 1950s, while intense migration from European Russia continued only to the North and the Northeast, and not the Siberian frontier. One reason for that was the failure of migrants to stay in new settlements in very modest, if not harsh, life conditions, another cause was that the human resources of the central regions of Russia, where most of the immigrants came from, exhausted and the Center and the North West of the country started attracting migrants because of the shortages of the labour force. According to Zaslavskaya and Kalmyk, between 1960 and 1975 Siberia's net 'loss' of population as a result of exchange with other regions was in excess of 800,000 workers. In the 1970s the share of cities with a declining population was 3.5 times higher in Siberia than for Russia on the whole (Zaslavskaya and Kalmyk, 1981). The collapse of the Soviet Union saw a temporary respite, as in the 1990s 3.3 million people, largely ethnic Russians from the former Soviet republics of Central Asia, crossed the border into Russia. However, the frontier phase of Siberia's history largely occurred during the period from 1862 to 1917, and is unlikely to resume further, despite the renewed attraction of the region's natural resources to entrepreneurs and speculators.

Brazil

The Brazilian interior, from the Amazon jungle to the central Pantanal, was settled by Europeans only at a very late stage in its colonial history. Though Brazil had nominally been under Portuguese rule since 1500, by the late eighteenth century, almost three centuries later, Brazil's settler population was overwhelmingly located along the Atlantic coast, leaving the interior the domain of an albeit diminished native population. Following estimates published by Alden (1963), by 1776 only 9.1 per cent

of Brazil's population of settlers and 'domesticated' natives lived in the frontier zone, leaving over 90 per cent situated among the coastal provinces⁹.

The subsequent settlement of the Brazilian interior can be separated into three distinct phases, each representing the respective rationales of the settlers for that period. The first phase, which began with the initial claims on the Amazon in 1534 and continued until the mid-nineteenth century, can be characterised as a 'conquest' phase, in which the prime rationale for the settlement of the Northern interior was the capture of Indians for enslavement as plantation labour. During this period, Europeans remained a minority 'bridgehead,' and frequent conflicts occurred between indigenous tribes and European settlers. The second phase, from 1850 to 1940, was the era of the rubber boom, and consequently witnessed the first wave of substantial economic migration from the coasts. With the prospect of rapid profit, a substantial wave of settlement penetrated the interior provinces, and the first major cities began to develop. Finally, a third 'consolidation' phase has run from 1940 to the present, and been characterised by the combination of land-intensive ranching among individual settlers, and a separate logic of territorial consolidation by the Brazilian state, which has sought to render its interior territories 'governable' through road infrastructure, military expenditure, and, perhaps most symbolically, the relocation of the capital inland to Brasilia.

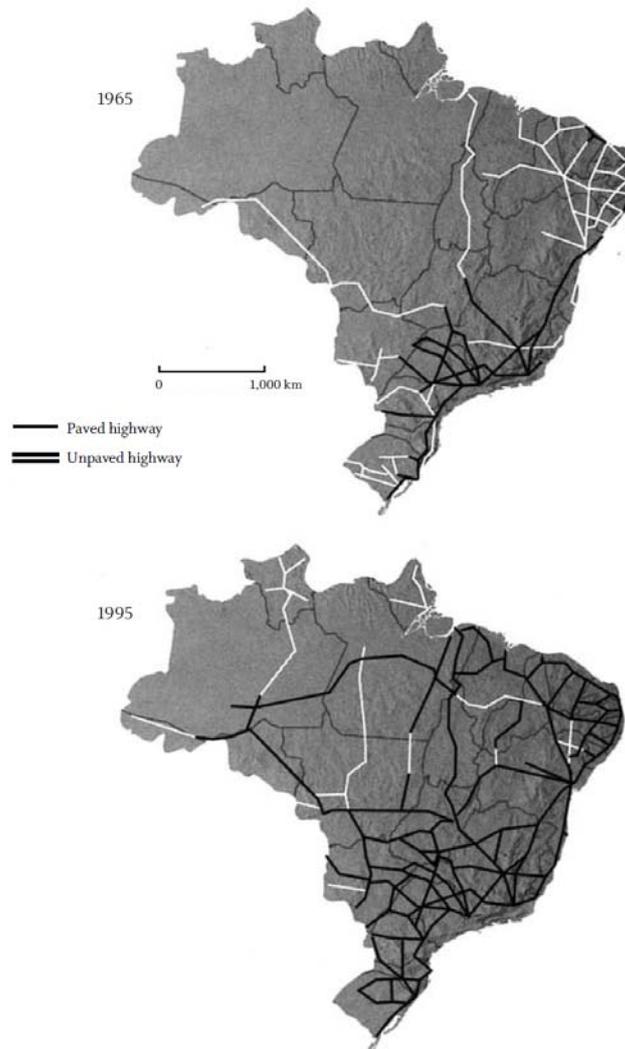
During the first phase of interior colonisation, expeditions up the Amazon river and into the interior Pantanal were led by military garrisons, and precarious settlements formed by planters seeking to establish sugar groves and traders involved in the cultivation of cocoa. Despite royal edicts against the use of indigenous slaves, in 1570, 1595, 1609, 1655 and 1680 Indian slaves were widely acquired, while the Jesuit orders attempted to convert the Indian population to Christianity, whereupon they would be settled in villages (*aldeias*) in the outskirts of the settler habitations. The frontier thus remained a zone which was defined by its indigenous population, or rather the relationship between a settler bridgehead and the indigenous population whose souls and labour they sought to acquire.

⁹ Estimates from a wider range of sources compiled by Alden (1987) arrive at a yet lower figure, at 7.6 per cent of total population.

From 1850 to 1912 commenced the second phase of colonisation, led by a rubber cycle that saw a significant voluntary inflow of people and capital to the Amazon region. Celso Furtado has estimated that 260,000 migrants came to Amazonia between 1872 and 1900, and a total of 500,000 by 1910 (Furtado 1957). As a consequence, between 1872 and 1906, the population of the area swelled from 337,000 to 1.1 million (da Silva Prado 1956). With the growth of the rubber industry, Amazon cities such as Manaus vastly expanded in size, and saw the formation of a more diversified social structure.

With the decline of the Amazonian rubber industry in the mid-twentieth century, the development of the Amazonian basin went into remission, until the third phase of development in the interior began in the 1960s with the aid of significant government support. Symbolically, the capital itself was moved from the coast to the newly founded city of Brasilia, nested within the Centre-West. More practically, the military government of the 1960s placed great emphasis on the geopolitical and strategic merits of interior development, allocating large sums for urban, transport, and military infrastructure. With the launch of 'Operation Amazonia' in 1966, substantial amounts were allocated for highway development, making possible the penetration of the interior for the first time (Figure 4.1). Fiscal subsidies were offered for business relocation, via the Superintendency of the Manaus Free-Trade Zone (SUFRAMA). As in the American and Russian frontiers, the state acted as a major actor in planning and encouraging frontier development; by the 1980s the region had gone from a distant frontier to an 'urbanised and industrialised jungle' (Lourenço 2009).

Figure 5.4 The Brazilian Highway System in 1965 and 1995



Source: Quatro Rodas, *Guia rodoviário 1995* (São Paulo: Editora Abril, 1995).

By the opening of the twenty-first century, the settlement and development of the Brazilian interior remains an ongoing process. While the population of the interior provinces has expanded to reach 27.7m in 2005, this is only 15 per cent of the Brazilian total, a gradual increase from the roughly 10 per cent of the population which lived in the interior in the early colonial period. Meanwhile, with the increasing settlement of the interior regions, indigenous groups have become steadily marginalised by settlers; though due to miscegenation, indigenous ancestry remains important, with autosomal studies showing that as much as 18.5 per cent of the DNA content of the contemporary inhabitants of Northern Brazil can be traced to indigenous origin. In many respects, the Brazilian ‘frontier’ remains very much a ‘frontier zone’, and its settlement is far from complete.

VI. Social Institutions of the Frontier

One of the attributes most consistently highlighted in the classical literature on frontier society is the tendency to spontaneous social organisation. In the words of Turner, one of the things ‘that impressed all early travelers in the United States was the capacity for extra-legal, voluntary association,’ and the ‘power of the newly arrived pioneers to join together for a common end without the intervention of governmental institutions’ (Turner, 1920: 189). A century earlier, Tocqueville had also noted the widespread flourishing of ‘not only commercial and industrial associations in which all take part, but others of a thousand different types – religious, moral, serious, futile, very general and very limited, immensely large and very minute’ (Tocqueville 1835). Indeed, so impressed was Tocqueville with this aspect of American society that he considered local voluntarism a defining attribute of American democracy (Goldhammer, 2007). Distant from central government, and beset by persistent hazards and dangers from natural disaster to conflict with indigenous peoples, frontier peoples have had to act collectively to provide public goods, disaster relief, and military defence.

However, despite the resilience of the ‘frontier thesis’ within sociology and political science, it has not been subject to a rigorous empirical examination. Does it constitute a valid description of the social norms and institution of the western United States? And if so, is it a peculiarity of American history - or is it one manifestation of a more general ‘frontier phenomenon’, found in other countries and times? In order to answer these questions, in this section we examine data on the nature of social relations in frontier zones. In particular, we examine the accuracy of the hypothesis that frontier zones are more conducive to the formation of ‘social capital’ in the form of relatively dense social networks characterised by a strong undergrowth of voluntary activity. Taking a wide range of survey items and a sample of four frontier areas from the United States, Brazil, Canada and the Russian Federation, we show that higher levels of voluntary activity, social trust, tolerance of outgroups, and civic protest are distinctive features of frontier life, and not simply a feature of the American historical experience.

Approaches to Social Capital

As has been widely noted, ‘social capital’ is a multidimensional phenomenon (Bermeo and Nord, eds. 2000; Anheier 2004). Building on Coleman’s definition of social capital as an individual resource, early studies of social capital emphasised the importance of personal networks and ties, examining indicators such as the density of voluntary associations (Putnam 1993, 2000). According to this approach, civic associations act as ‘schools of democracy’ by teaching their members skills in organisation and voluntary cooperation, as well as providing the horizontal networks needed in order to mobilise in pursuit of collective goals. In response to criticisms which highlighted the possibility of ‘negative’ social capital in which collective action might occur to achieve ‘antisocial’ outcomes (Berman 1997, Levi 1997) a distinction was drawn between ‘bonding’ and ‘bridging’ ties, or between those ties which reinforce within-group solidarity and those which reinforce a more general sense of social solidarity by connecting diverse social strata. Accordingly, a ‘normative’ approach to social capital developed over a second wave of research which laid emphasis on intergroup norms such as tolerance and general social trust (Fukuyama 1995, Knack and Keefer 1997). Greater social trust, according to this approach, facilitates collective action, and also reduces ‘transaction costs’ associated with economic as well as social enterprise. Important ties were also formed in this phase between social capital researchers and institutional economics, in particular in the study of how informal norms of trust reinforce and are reinforced by formal institutions of contract security (Levi 1998, Williamson 1996, Greif 1994). Finally, following from the study of how informal and formal institutions relate, a school of literature from within behavioural political science has laid emphasis on the importance of informal practices relating to protest activism, such as the willingness of citizens to demonstrate, mobilise pressure campaigns through media and petition, and join in strikes or boycotts, which at the formal level serve to make elites more accountable (Inglehart et al. 2005, Dalton 2008, Norris 1999).

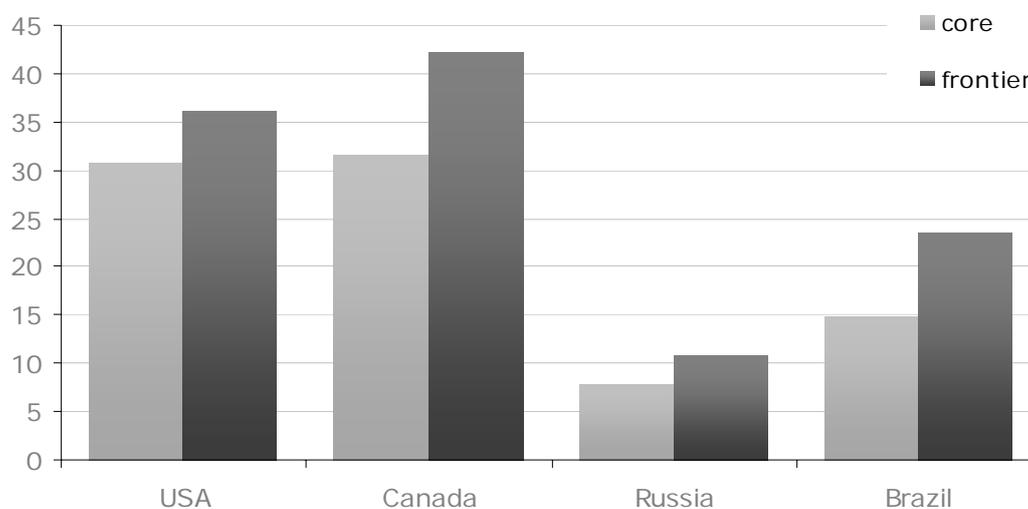
In this section, we examine each of these dimensions of civil society as they relate to frontier and non-frontier regions of the countries under consideration. We begin by examining descriptive statistics for each of the three aspects of social capital highlighted in the literature: voluntary association, norms of intergroup tolerance and trust, and civic activism and protest. In the second section, we conduct a series of

regression models to demonstrate the existence of a general ‘frontier effect’ on each of these areas of social organisation.

i) Voluntary Association

The first dimension of social capital which we investigate is the extent of voluntary association. We measure voluntary association by reference to a battery of questions fielded in the World Values Surveys, in which respondents were asked to report, for a range of different types of civic association (religious, cultural, professional etc) whether they are an ‘active member’, an ‘inactive’ member, or ‘not’ a member at all. We find compelling evidence that voluntary activity is more widespread in frontier areas. Figure 6.1, for example, shows the proportion of respondents in both core and frontier zones of the US, Canada, Russia and Brazil who report being either ‘active’ or ‘inactive’ members of arts and cultural associations.

Figure 6.1 Percentage of Respondents who are Active or Inactive Members of Arts or Cultural Associations



It is noteworthy that the proportion is elevated in every frontier region, relative to the country average. In a number of cases, the gap is quite large: the distance between the frontier and non-frontier regions of Canada, for example, is substantially larger than the gap between Canada as a whole and the United States. Similarly, the frontier regions of Russia are as close, on this measure, the non-frontier regions of Brazil as they are to the rest of the Federation.

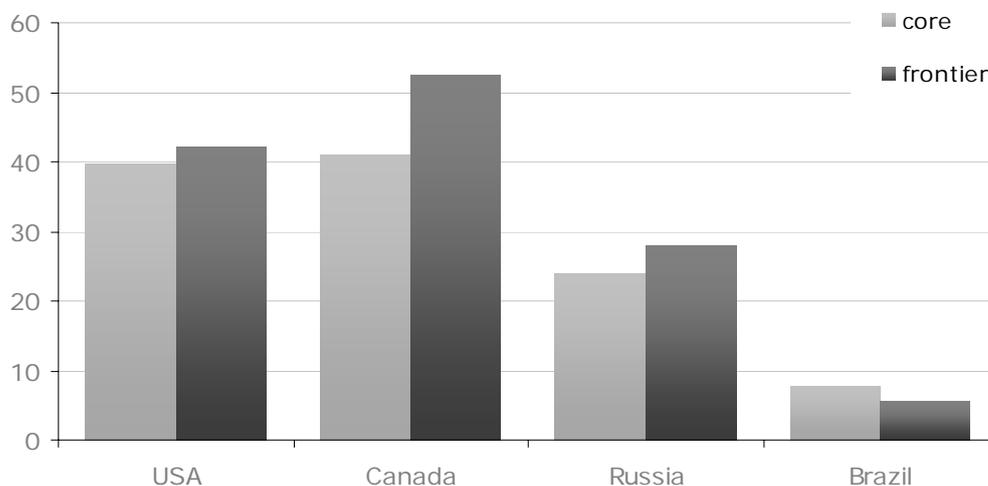
Overall, then, these results are consistent with the view that life in the frontier zone are conducive to a higher level of spontaneous social organisation than life in the dense and settled ‘core zones’ of a state.

ii) Normative Dimensions of Civic Life

Social Trust

The second dimension of social capital upon which we report is the ‘normative’ aspect; whether there is a high level of tolerance and trust between members of society. Since Almond and Verba’s classic (1963) study of civic culture, one of the most widely used survey indicators is a question asking respondents whether they feel that ‘in general, people can be trusted’ in their society, or whether ‘you can’t be too careful who you trust’. Displayed in Figure 6.2 are the proportions who report a subjective sense of social trust, across the frontier and non-frontier zones of the four countries under consideration.

Figure 6.2 Proportion of Respondents Stating that Generally People Can be Trusted

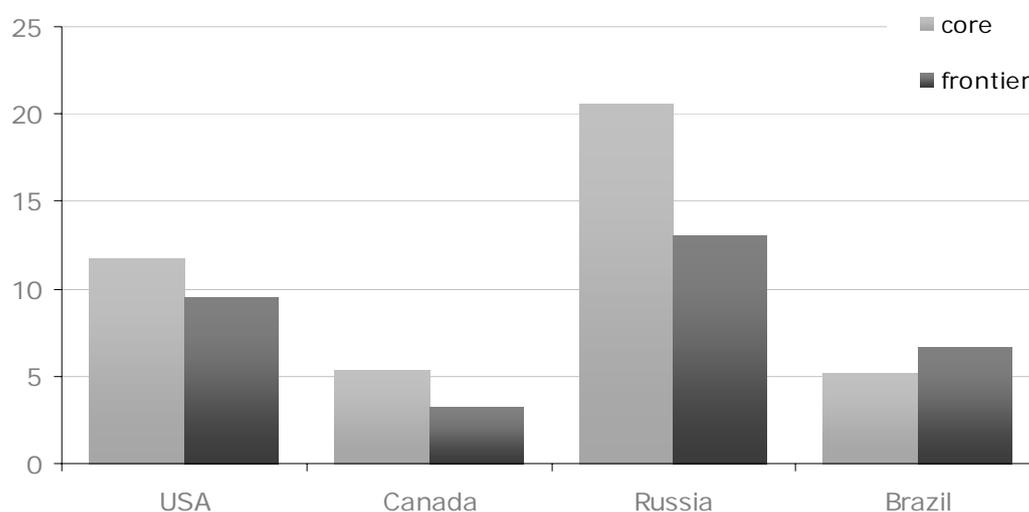


General social trust is higher in all of the frontier zones of each country, with the exception of Brazil. This is a surprising finding, given the higher correlation between social trust and lower crime rates; and the fact that inhabitants of frontier zones are at significantly greater risk of violent crime than in non-frontier areas (explored further in the next chapter). Furthermore, for this item the within-country differences are generally smaller than the between-country differences.

Outgroup Tolerance

As well as social trust, another important 'normative' dimension of social capital is outgroup tolerance, defined as the willingness to 'get along' with individuals of a different origin or identity. Figures 6.3 and 6.4 report two items relevant to this dimension, which are the proportion of respondents who would object to having as neighbours people who are 'foreign workers or immigrants', and people who are 'of a different race'.

Figure 6.3 Percentage of Respondents Objecting to Having a 'Foreign Worker or an Immigrant' as a Neighbour

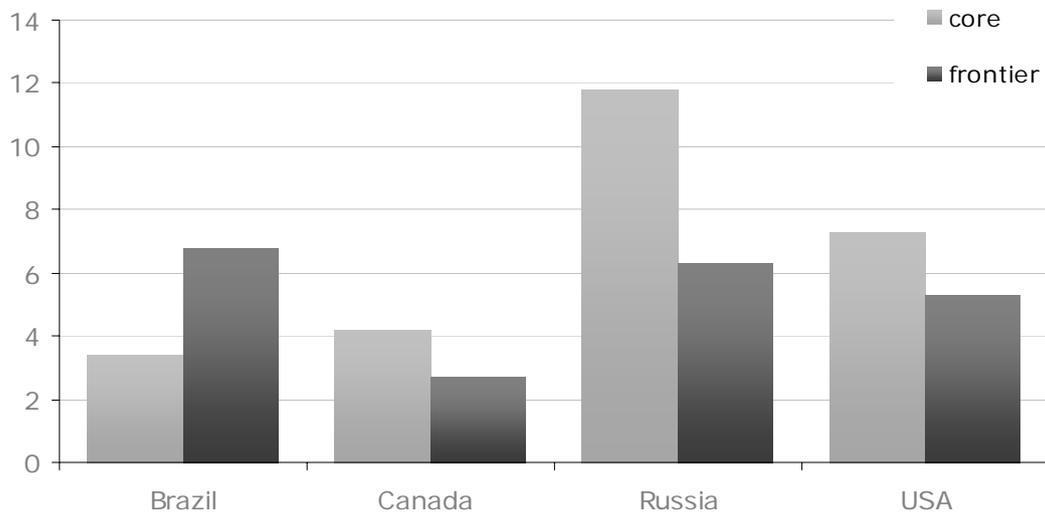


In all of the frontier regions, with the exception of Brazil, rejection of migrants is lower than in non-frontier areas. This is perhaps contrary to the general social perception, given many frontier zones are also border zones in which migrants are relatively common.

Within-country differences can also be large; notably, Russians living in Siberia are comparable to Americans on their tolerance for migrants, and quite different from the more xenophobic norms prevalent in European Russia. Furthermore, two common objections to the use of this survey item can be immediately dispelled; first, that tolerance reflects lack of ethnic heterogeneity, for Siberia contains a wide diversity of ethnic groups, including no small number of migrant workers; second, that tolerance of outgroup 'neighbours' on the frontier may reflect simply the distance between dwellings in such regions - and thus the reduced salience of neighbours of any kind

(as in European Russia, the inhabitable dwellings of Siberia are overwhelmingly apartment blocs).

Figure 6.4 Percentage of Respondents Objecting to Having Person of ‘a Different Race or Ethnicity’ as a Neighbour

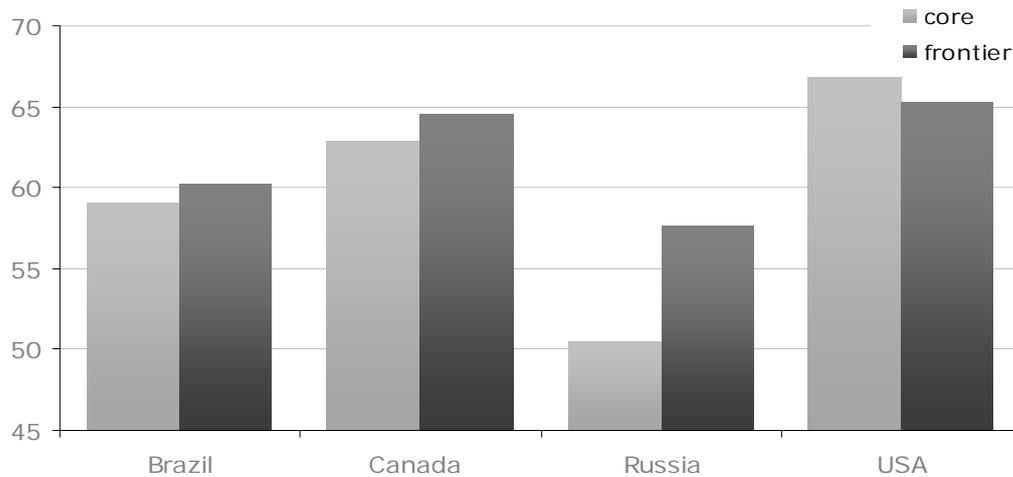


Rejection of neighbours of a different race follows a similar pattern to rejection of migrants, with the additional observation that rejection appears particularly sharp in Brazil. Again, this most likely reflects the ongoing tensions between the indigenous and non-indigenous peoples of the Brazilian Northwest.

iii) Protest Politics

The final dimension of social capital which we examine for the frontier and non-frontier regions is the tendency of citizens to mobilise in civic activism, such as protest or petition. Figure 6.5 reports data from an item in the World Values Surveys regarding whether respondents ‘have’ or ‘would be willing’ to attend a peaceful demonstration, one of the most common means of registering social protest.

Figure 6.5 Percentage of Respondents Who ‘Have Done’ or ‘Would be Willing to’ Join a Peaceful Demonstration



In every country the proportion of respondents in frontier areas willing to engage in protest is higher than in the non-frontier areas, with the notable and perhaps surprising exception of the United States, where the proportion is marginally lower. These results are perhaps surprisingly, given that mass demonstration is typically associated with the metropolitan centre rather than peripheral frontier zones; yet this may simply reflect a bias in news reporting due to the overweighting of correspondents in such areas. We can see for example that in Russia, inhabitants of Siberia are significantly more likely to have engaged in social protest than residents in other regions of the country.

Regression Models

It is possible that the descriptive associations illustrated above do not reflect deeper attributes of a ‘frontier culture’, but instead reflect contingent attributes that may result from the certain socioeconomic attributes of the frontier areas, such as that they may be disproportionately small towns, or have older and more settled residents, or perhaps have lower levels of educational attainment. In order to establish an independent association between frontier zones and higher levels of ‘social capital’, we report results on Table 6.1 of a series of regressions on the country samples, controlling for age, gender, income, education, the size of the town or city, and the year of the survey, as well as country fixed effects. Included in the sample are all respondents from all waves of the World Values Surveys in Russia, Canada, the United States and Brazil, a total of 64,885 respondents. As dependent variables we

use each of the social capital indicators: a combined index of membership of voluntary associations (*voluntary*)¹⁰, the survey item for general social trust (*trust*), an index of political action (whether the respondent has recently signed a petition, attended a demonstration, or joined a boycott), whether the respondent would have neighbours of a different race (*tolerate other race*), and whether the respondent would be willing to have neighbours who are immigrants or foreign workers (*tolerate immigrant*).

Table 6.1 Frontier Zones and Social Capital

	Trust	tolerate other race	tolerate immigrant	civic activism	voluntary (1)	voluntary (2)
Frontier Zone (2/0)	0.025*** (0.004)	0.004* (0.002)	0.005* (0.003)	0.008** (0.003)	0.01* (0.004)	0.008** (0.003)
Gender (1 = male)	0.011 (0.008)	0.01** (0.004)	0.007 (0.004)	-0.04*** (0.005)	0 (0.007)	0.002 (0.005)
Age	0.002*** (0)	-0.001*** (0)	-0.001*** (0)	-0.003*** (0)	0* (0)	0 (0)
Income	0.022*** (0.002)	0.002* (0.001)	0.001 (0.001)	0.013*** (0.001)	0.021*** (0.001)	0.018*** (0.001)
Age of educational completion	0.005*** (0.001)	0.001** (0)	0.001*** (0)	0.005*** (0)	0.004*** (0)	-
Size of village/town	-0.003 (0.002)	0.000 (0.001)	0.003** (0.001)	0.001 (0.001)	0.001 (0.002)	0.001 (0.001)
year of survey	-0.041*** (0.004)	0.006** (0.002)	-0.008*** (0.002)	-0.007** (0.003)	-0.034*** (0.005)	-0.038*** (0.004)
Russia dummy variable	-0.194*** (0.011)	-0.044*** (0.006)	-0.061*** (0.007)	-0.306*** (0.008)	-	-0.257*** (0.011)
Brazil dummy variable	-0.266*** (0.013)	0.003 (0.006)	-0.002 (0.007)	-0.078*** (0.009)	-0.01 (0.01)	-0.028*** (0.008)
US dummy variable	-0.028** (0.009)	-0.024*** (0.005)	-0.061*** (0.006)	0.025*** (0.007)	0.057*** (0.009)	0.051*** (0.008)
Constant	0.255*** (0.024)	1.923*** (0.012)	1.959*** (0.014)	0.78*** (0.017)	0.208*** (0.035)	0.34*** (0.028)
Adj. r ²	0.121	0.01	0.017	0.179	0.142	0.248
N	14209	14472	14472	14370	5013	7557

Note: In the first model for voluntary association, the Russian cases are dropped due to absence of education data during the waves of the survey in which these voluntary association items were fielded in the Russia. In the second model, the education variable is dropped to bring these cases back into the sample.

¹⁰ The index of membership of voluntary associations includes membership of religious associations, cultural and arts societies, women's groups, environmental groups, trade unions, political parties, and professional associations.

The models demonstrate that certain sociodemographic attributes are strongly associated with aspects of social capital, in particular income and education; these are predictive of higher trust, tolerance of outgroups, and civic activism. The period effect, as measured by the year of the survey, suggests that social trust and voluntary association have been declining over time, while the age effect suggests older individuals have greater social trust, though a lower tolerance of outgroups and a lesser propensity to engage in civic activism.

The models also show that, other things equal, inhabitants of frontier zones are likely to have higher social trust, be more tolerant of neighbours who are migrants, or from a different ethnic group, and more likely to have engaged in some form of civic activism, such as protest or petition. The coefficients suggest that, all else equal, an estimated 5 per cent more residents of frontier zones in the regression sample say that people can 'generally be trusted', relative to non-frontier zones, against a sample mean of 32.7 per cent. Furthermore, 1 per cent more will tolerate a neighbour who is foreign or of a different race, relative to the sample mean rate of rejection of 7.6 per cent.

A Global Frontier Effect?

From de Tocqueville to Putnam, much of the literature on the frontier and its effects on civic association and the performance of local-level institutions has been based on the experience of the United States (Tocqueville 1835, Putnam 2000). Meanwhile, a number of scholars have questioned the extension of the frontier hypothesis, and even de Tocqueville contrasted the manners of settlement of the United States and Russia (Robinson and Jimeno-Garcia 2011). A natural question arises therefore as to whether the coefficients observed in Table 6.1 reflect only the influence of US observations, or whether the frontier effect can be observed independent of this sample. For that reason, Table 6.2 shows the results of the previous set of regressions, but with the US respondents excluded, and thus only the sample of respondents from Russia, Canada and Brazil.

Table 6.2 Frontier Zones and Social Capital (ex-US)

	trust	v37	v39	activism	voluntary (1)	Voluntary (2)
Frontier Zone	0.021*** (0.005)	0.003 (0.003)	0.003 (0.003)	0.013** (0.004)	0.016** (0.005)	0.011** (0.003)
Gender	-0.004* (0.001)	0.008 (0.005)	0.008 (0.005)	-0.041*** (0.007)	-0.001 (0.008)	0 (0.005)
Age	0 (0.008)	-0.001*** (0)	-0.001*** (0)	-0.003*** (0)	0 (0)	0 (0)
Income	0.001*** (0)	0.002* (0.001)	0.002 (0.001)	0.012*** (0.001)	0.017*** (0.002)	0.013*** (0.001)
Age of educational completion	0.019*** (0.002)	0.001* (0)	0.001* (0)	0.006*** (0)	0.004*** (0)	-
Size of town	-0.007*** (0.002)	-0.001 (0.001)	0 (0.001)	0 (0.001)	0 (0.002)	0.001 (0.001)
year of survey	-0.017*** (0.004)	0.003 (0.002)	-0.002 (0.002)	-0.023*** (0.003)	-	0.075*** (0.003)
Russia dummy variable	0.093*** (0.013)	-0.047*** (0.007)	-0.062*** (0.008)	-0.224*** (0.011)	-	-
Canada dummy variable	0.298*** (0.012)	-0.004 (0.007)	0 (0.007)	0.076*** (0.01)	0.015 (0.01)	0.035*** (0.007)
Constant	0.081** (0.025)	1.942*** (0.013)	1.963*** (0.014)	0.757*** (0.02)	0.059* (0.025)	-0.216*** (0.02)
Adj. r ²	0.126	0.011	0.016	0.179	0.074	0.194
N	11881	9724	9724	9658	2923	5145

Sample: all respondents in Russia, Canada, Brazil.

In short, even after the exclusion of the United States from the sample, a clear ‘frontier effect’ upon social capital remains evident. The frontier zones of Brazil, Canada and Russia have higher levels of social trust, greater levels of civic activism, and a higher density of voluntary association, than those which were settled at earlier points in time. The only set of variables in which we now do not see a significant effect is ethnic tolerance. However, on closer examination, this appears entirely due to the Brazil sample, in which the relation does not appear to hold; if Brazilian respondents are excluded from the regression, a very strong ‘frontier effect’ upon tolerance emerges ($p = 0.000$). We may speculate as to why the frontier zones of Brazil do not appear more tolerant of migrants or ethnic minorities than the coastal

areas, though one theory may be that the Northwest of Brazil, unlike the frontier zones of Canada, Russia, or the United States, retains a large indigenous population, and ethnic tensions between settlers and the native population remain a salient feature of social life in the frontier areas.

The Brazilian Frontier – the Exception that Proves the Rule

As noted, among the descriptive statistics presented in this section, Brazil sometimes appears as an outlier. Relative to the coastal regions of the country, the Brazilian interior exhibits lower social trust, and notably greater rejection of outgroups, with significantly higher proportions of respondents who would reject having neighbours of a different ‘race’ or ethnic group or who are immigrants or ‘foreign workers’. This seems superficially inconsistent with the implications of the frontier hypothesis, according to which autonomous and self-reliant settler populations, building a new life in areas distant from central administration, ought to exhibit lesser hierarchy and stronger bridging ties between the settling peoples.

However, unlike the relatively ‘virgin’ frontiers of North America or the Siberian tundra, which were cleared of their indigenous peoples as the wave of European advance broke upon them, the Brazilian interior retained a significant indigenous population following the arrival of European colonialists, in spite of massive population loss. By consequence, the relationship between European settlers and the natives of the Amazon rainforest and Pantana zones patterned the nature of the economic and social institutions established in this area, including a legacy of land conflict, dispossession, and population enslavement, which leaves their mark upon the region to the present day. To the extent that the frontier hypothesis is a thesis about the equilibrium set of institutions when the land to labour ratio is skewed in favour of excess land, this is confirmatory: as Engerman and Sokoloff (2005) have argued in respect to Latin American countries more generally, where colonists encountered large numbers of indigenous peoples - and by consequence a ready source of labour - the incentive existed to establish exploitative economic practices, such as the use of slavery or corvee labour, unequal land holding patterns, such as the *encomienda*, and hierarchical political and social structures, based on the distinction between the European overlord and his more swarthen underlings. In short, by virtue of the availability of a large and captive indigenous population, the Brazilian frontier

became a territory for exploitation, and one of liberation. A brief survey of the history of Amazonian Brazil serves to illustrate this fact.

Contemporary estimates suggest that in the Brazilian interior, unlike on the Russian or North American frontiers, indigenous peoples remained demographically significant until late in the colonial period. In 1810, for example, the British minister at Rio de Janeiro, Lord Strangford, furnished a series of estimates of the ethnic composition of Brazil's regions to his government (Strangford to Wellesley: PRO, FO 63/84/ERD/2255); these data allow us to calculate a preliminary assessment the ethnic composition of frontier and non-frontier regions of this time. Strangford's figures imply that 14 per cent of the interior regions were 'white,' while 12 per cent were indigenous (with the remainder either of mixed or African descent); this compares against 29 per cent 'white' and only 3 per cent indigenous in the non-frontier territories. Already from this survey it is clear that the ratio of Europeans to non-Europeans in the frontier zones at this stage was massively skewed towards non-Europeans. Yet it is probable that Strangford's estimates vastly understate the size of the indigenous population: the census data upon which he would have relied accounted only for those Indians who lived in villages (*aldeias*) established by the missionaries, and could not have made any reasonable guess as to the number that continued to live deep within the interior. If we attempt to account for these 'landed' Indians, we come to a very different estimate. The scholar and geographer John Hemming (1987) has stated that the pre-colonial indigenous population of Brazil of 2.5 million people had probably been reduced by three-quarters, or approximately 625,000 people, by the end of the eighteenth century. Following a reasonable assumption that at least nine-tenths of this residual population lived in the inland provinces, we come to the conclusion that the proportion of Indians living within the frontier zone was not 12 per cent, but rather, closer to 78 per cent. While there is obviously a large margin of error around Hemming's and similar such estimates, it suffices to demonstrate that in spite of a phenomenal population collapse, the Brazilian frontier was in all likelihood overwhelmingly peopled by its indigenous population until a very recent point in the country's history.

Because of the predominance of 'Indians' in the Brazilian interior, the activities of the advancing frontiersmen were defined largely by their relationship with the indigenous

population. Or, in the curt estimate of Hemming, ‘the Brazilian interior had only one commodity of interest to Europeans: its native inhabitants’ (Hemming 1987: 147). Royal edicts against the use of indigenous slaves, in 1570, 1595, 1609, 1655 and 1680, were largely disregarded by the settler population, such that ‘Indian slaves acquired legally or illegally were used everywhere,’ and ‘could be found in the governor’s household, on the plantations of the Jesuits, and on the estates of the settlers’ (Schwartz 1987: 125). A loophole in the colonial prohibition on enslavement allowed for Indians to be taken if they were *indios de corda*, prisoners of intertribal disputes, or members of tribes that challenged Portuguese rule. Such clauses were grossly abused, though the conditions of frontier life furnished ample opportunities for ‘legal’ enslavement, for indigenous uprisings against Portuguese rule occurred with increasing frequency, reaching a high point with the battle against the Manau in 1723, and the Ge uprising led by Mandu Ladino from 1712-9.

Parallel to the economic inequality between settler and native peoples, the political institutions of the frontier were similarly exclusive. The basic unit of urban governance, the *senado da camera*, was elected based on a complicated franchise which ensured the exclusion of those of ‘ethnic impurity’ (Schwartz 1987: 130). As a consequence of the interests they represented, these local democratic councils lobbied extensively for greater leeway to enslave the Indian populus, rather than rely on more expensive imported slaves (Schwartz 1987: 130). The high point of such lobbying efforts was their successful appeal to expulse the Jesuit orders from their territories, who had from the start mobilised against the exploitation of the Indian population. ‘A campaign of vilification and complaint against them was mounted that eventually contributed to their ultimate expulsion from Brazil’ (Schwartz 1987: 121); ‘the virulence of the struggle between the colonists and the missionary orders sprang ultimately from the economy and the central role of Indian labour within it’ (Schwartz 1987: 121).

After the colonists had succeeded in removing the Jesuits, abuse of the native population increased; this culminated in a further 1755 royal edict proclaiming the manumission of those indigenous peoples held in bondage. However, even after this supposed emancipation, it is notable how economic institutions based on exploitative relations managed to persist despite a change in the formal rules. Nominally ‘free’

Indians were still ‘forced to do very heavy labour such as making tobacco, in which they work for seven or eight months on end by day and night’ (Hemming 1987: 174). For this they would receive payment in cloth, ‘almost valueless as an item of barter’ which ‘could not purchase the tools or fish-hooks needed by the Indians’ (Hemming 1987: 179). Moreover, the conditions imposed on the indigenous villages remained penurious, with all Indian males aged 13-60 required to work on ‘public works’ and to spend half of each year working for the colonists.

Such informal norms of exploitation persisted through to the post-colonial era; during the rubber boom of the late nineteenth to early twentieth centuries, the Amazonian indigenous population was employed in the extraction of latex under what has been described as ‘a regime of slave labour’ (Lourenço 2009). Moreover, even in the present day, along the frontier territories ranchers and mineral prospectors continue to run into land conflicts with indigenous peoples. Plain Indians have experienced frequent encroachment by squatter pastoralists, while forest Indians contend with the arrival of prospectors. There is perhaps a great deal of continuity between the contemporary plight of frontier Indians, and the travails of their distant ancestors. The following statement by a chief of a frontier tribe is illustrative: ‘The prospectors have for the past two years been invading Yanomami lands, extracting our gold, bringing diseases, coveting and taking our women, and pillaging our plantations’ (CEDI 1985). Such a complaint seems entirely parallel to the complaints one reads among the reports of the Jesuit orders of the seventeenth century; at face value, there is nothing here that indicates that this statement is not from 1685, when in fact, it dates to 1985.

In the case of Brazil, a ‘reverse’ frontier hypothesis applies. The further one penetrated to the Brazilian frontier, the greater the availability of slave labour, and the lesser proportion of free men; thus the more pernicious the social divide and exploitative the structure of economic institutions. If the conditions of the American frontier accentuated the egalitarian and democratic attributes of American political and social institutions, due to the availability of open land, then the conditions of the Brazilian frontier, accentuated the exclusive and hierarchical attributes of colonial life, due to the greater accessibility of indigeneous peoples as a reserve of coerced labour.

Conclusion

The results of the regressions in Tables 6.1 and 6.2 demonstrate that the frontier effect exists at a global level, and is not simply a peculiarity of the societal trajectory of the United States. Meanwhile, the apparent Brazilian exception supports the root hypothesis that the ratio of land and labour patterns the nature of economic, and consequently political and social institutions in the frontier.

Nonetheless, an ecological paradox remains. Despite the existence of higher social capital in frontier *zones* in all countries, relative to non-frontier zones, as a group ‘frontier countries’ – i.e. those countries that have a frontier, such as Brazil, Canada, Russia and so on – do *not* themselves exhibit uniformly higher social trust, tolerance, or civic activism, relative to non-frontier countries. Thus while the effect of the frontier is present within all countries, this does not, by consequence, mean ‘frontier’ countries have universally higher levels of social capital than those without. Indeed, the country fixed effects reported in the regression show that among these frontier cases individual country effects can be large and negative, and often outweigh the effect of the frontier per se. In this respect, we can make a ‘conditional’ frontier hypothesis, to the effect that while many countries have a geographical frontier, only under certain very specific conditions does the frontier culture become entrenched at the national level (Robinson and Garcia-Jimeno 2011). A perhaps obvious precondition, for example, includes the fact that the frontier itself must have been settled by a significant proportion of that country’s population, and not simply left as barren terrain. This is more likely in those instances where population movement is unrestrained and land is made readily available to newcomers, as was the case for the emerging United States; but has been less true historically of Canada, Brazil, and Russia, where settlement of the frontier was a more centralised and a more controlled process. In all of these countries, until very recently the vast majority of the population has lived not along the ‘frontier’ but rather in the territories of the Atlantic coast, or in the case of Russia, along the European waterways, the Volga, Don and Neva. Those who made it to the frontier of Canada, or Brazil, may have lived much as their counterparts have done in the United States, autonomous and self-reliant, with relatively egalitarian and decentralised institutions, only that their numbers were remarkably fewer.

In this regard, the United States and Russia do constitute two different ends of the frontier spectrum. The United States, above all, is a country defined by its frontier; at its outset the entirety of the Americas was a frontier zone, and from an early stage in the history of the United States a large proportion of the incoming population settled out on the western expanses, in which land was made freely available to oncoming settlers. At the opposite extreme, Russia began its life as an independent nation from the principality of Muscovy, which conquered other, surrounding fiefdoms, such as Novgorod, Pskov, and the Khanates of Kazan or Astrakhan, in which institutions of serfdom and even slavery were well-entrenched. There was certainly a frontier phenomenon for Russia, and its imperial years had no shortage of gold speculators, runaways, and of course the Cossacks, with their experiments in collective self-government, yet these were merely an effervescence at the edge of a polity which at its core remained rigid and autocratic. Though all of Siberia was charted by 1743, settlement of the East remained very slow, and most of the inhabitants of that region trace their descent to those who arrived only in the second half of the twentieth century. Inbetween, we can place Canada and Brazil; in Canada, migration was more restricted than in the United States, and the western provinces accounted for a relatively small proportion of the country's overall population until recent decades, when net migration to the region accelerated. Likewise, in Brazil the population of the interior remains very scattered and scarce even today. One may say therefore that the United States is a frontier nation, the country is as it is because of its frontier; whereas Russia is Russia despite of its frontier, having contained the potential for a very different path of social and political development.

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