



Frontier settlement and the spatial variation of civic institutions

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ABSTRACT

This article considers the “territoriality” of civic institutions. Is the “frontier thesis” – according to which areas of new settlement exhibit higher levels of individualism, political activism, and civic organisation – a description only of the western United States, or is it a manifestation of a more generalisable phenomenon found in other global frontier regions? In order to do this, we examine data on the nature of civic institutions in frontier zones in four countries: Brazil, Russia, Canada and the USA. Taking a wide range of survey items, we find that voluntary activity, social trust, tolerance of outgroups, and civic protest are not unique to the American historical experience, but generalised legacies of frontier life. We suggest that the experience of settlement is conducive to the formation of norms of community solidarity and cooperation, and this observation should encourage a new wave of comparative frontier studies.

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 ... 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 ... Little by little he transforms the wilderness, but the outcome is not the old Europe” (Turner, 2018 [1920], p. 4)

In 1491, Europeans occupied a peripheral peninsula accounting for 6.8% of the world's landmass. Four centuries later, peoples originating in the region had occupied, explored and settled lands throughout much of North America, Australasia, South America, and, via the Russian Empire, the northern third of Asia – a group of territories accounting for 45.1% of the world's land surface area (Parry, 1982, pp. 1450–1650).¹

Yet while scholars may agree regarding the devastating effects that European diseases, warfare, and coercive institutions had upon the indigenous populations of the territories they acquired (Acemoglu,

Johnson, & Robinson, 2001; Dell, 2010; Diamond, 1998), there has been less agreement concerning the effects of the colonial enterprise upon settler societies themselves. Did the settlement of new lands merely transplant European institutions to a new context (Easterly & Levine, 2016; Engerman & Sokoloff, 2002; Glaeser, La Porta, Florencio Lopez de Silanes, & Shleifer, 2004; Putterman & Weil, 2010), or was it responsible for creating new forms of political and social organisation, free of the strictures of European hierarchy and custom (Kitayama, Varnum, & Timur Sevincer, 2014, pp. 93–127; Kimmerling, 2001, 1989)?

In this paper we address this question by comparing frontier and non-frontier zones of the four territorially largest frontier states for which data is available – the United States, Brazil, Canada and the Russian Federation.² Splitting these countries internally into “frontier” and “non-frontier” regions, we test whether those areas which experienced recent settlement exhibit more affirmative belief in values of individualism and self-reliance, as well as denser social networks and voluntary activity, as hypothesized by the classic “frontier thesis” of Frederick Jackson Turner (2018 [1920]). Taking a wide range of survey items, we find that these are indeed distinctive features of frontier life, both in the western United States, and in other frontier societies.

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¹ The Americas constitute 42,549,000 km², Siberia and Central Asia 16,806,550 km², and Australasia 7,885,000 km², out of a total global landmass of 148,940,000 km². Europe's landmass, including European Russia, is 10,180,000 km².

² Some authors (e.g. Perdue, 2009) also consider China to be a frontier state, on account of the settlement of Xinjiang, Tibet, and Mongolia during and after the Qing era. While China is excluded from the present study due to the absence of sufficient survey data from the country's westernmost provinces, a replication of this study within China would present a valuable further contribution to scholarly research on this topic.

Moreover, we find that this “frontier effect” is robust to regional- and individual-level controls for such factors as income, age, ethnic fractionalisation, or urbanisation, and persists when the frontier effect is estimated as random slopes between country samples. Thus, we argue, the “frontier thesis” is true both as a description of the culture of the western United States, and of frontier zones in other settler countries. However, in accordance with comparative historical studies of frontier societies, we find large aggregate-level differences in civic values between each of these countries. We conclude that whether frontier values become socially dominant is a matter of historical contingency: in North America the frontier became the modal set of social institutions, whereas in other frontier states, such as nineteenth century Russia or Brazil, this frontier society eventually became demographically and politically marginal, as central state authority was eventually asserted over formerly peripheral zones.

2. The frontier argument

“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.” (de Tocqueville, 2018 [1835])

Since its first articulation by Frederick Jackson Turner (2018 [1920]), the “frontier thesis” has had a long and controversial trajectory in the humanities and social sciences (Ford, 1993; Adelman, 2018; Limerick, 1995). In its original formulation, Turner had argued that the unique nature of American social and political institutions – “individualism, economic equality, freedom to rise, democracy” – stemmed from the experience of settling the western frontier (Turner, 2018 [1920]). First, the availability of land meant that independent farming was widespread and exploitative relations more difficult to maintain, with people not accepting “inferior wages and a permanent position of social subordination when this promised land of freedom and equality was theirs for the taking” (Turner, 2018 [1920], p. 145). Second, the frontier generated a social selection effect, with only the most adventurous and autonomy-seeking individuals choosing a frontier life – and such attributes became generalised to frontier cultures more broadly (Varnum and Kitayama, 2010; Bazzi, Fiszbein and Gebresilas, 2018; Kitayama, Ishii, Toshie Imada, Takemura, & Ramaswamy, 2006). Third, because the frontier was distant from central government, settlers were left to organise themselves in matters of policing, relations with indigenous peoples and the provision of public goods, necessitating social institutions of collective action (Foa & Nemirovskaya, 2016). Fourth, because settlers co-operated under conditions of social egalitarianism, this facilitated bonds of social trust, with the absence of hierarchical identity distinctions serving to attenuate the level of social resentment and exclusion (Rothstein & Uslaner, 2005; Gould & Hijzen, 2016).³ Finally, more recent historians have emphasised the ways in which – not adequately addressed in Turner’s own account – frontiers featured interaction, exchange, and synthesis between diverse cultures and groups (Adelman & Aron, 1999). To the extent that frontiers are “a ‘middle ground’ where peoples following radically different ways of life adapted to one another and to

the environment,” and a “liminal space where cultural identities merged and shifted” (Perdue, 2009), this would require greater negotiation of cultural diversity and difference, and this could explain why – consistent with modern contact theory – social norms in frontier regions might include higher tolerance and openness towards individuals of other ascriptive group backgrounds (Zhou et al., 2018, pp. 1–19).

As a result of these factors, the frontier thesis posits a range of consequences for societal norms and institutions. The first is a tendency to spontaneous social organisation that was noted by many early observers of the American frontier, fostered by the need to work collectively without central organisation. In the words of Turner, one of the things “that impressed all early travellers 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, 2018 [1920], p. 189). One such traveller was de Tocqueville, who noticed “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” (de Tocqueville, 2018 [1835]). Second, underpinning this voluntarism were the values of individualism, informality, and egalitarianism. The “democratic self-sufficing, primitive agricultural society” of the frontier was a place “in which individualism was more pronounced than the community life of the lowlands” (Turner, 2018 [1920]), and such a frontier life was “productive of individualism” because the settlers themselves were autonomous units, not dependent on government or upon feudal elites for their defense or patronage; in this way the frontier “produces antipathy to control, and particularly to any direct control” (Turner, 2018 [1920], p. 16).

What makes the frontier thesis a “thesis” – rather than a mere historical description of the United States – is the suggestion that these same traits and mechanisms could be found in other regions subject to free settlement. As Turner himself suggested, comparable outcomes should be observed in “other countries which have dealt with similar problems – such as Russia, Germany, and the English colonies in Canada, Australia, and Africa” (Turner, 1959 [1932]). Yet in the late twentieth century, scholarship on the Turner thesis has tended to dismiss the notion of a “generalised” frontier effect (Hofstadter, 1949; Hofstadter and Lipset, 1968). In the social sciences, when Hofstadter (1949), Lipset (1990), Hartz (1964) and Hofstadter and Lipset (1968) came to re-examine comparative frontiers in the postwar era, a focus was placed upon the differences rather than similarities between frontier nations, and scholars have instead asked why the experience of the American frontier was not replicated in the societies of Latin America (Engerman & Sokoloff, 2002), or why path-dependent differences in social and political institutions emerged between countries such as the United States, Canada, and Australia (Hartz, 1964; Lipset, 1990). Meanwhile among historians, the “new western history” movement has treated the original notion of the frontier with skepticism, noting the role of government in territorial expansion, the interaction between settlers and natives, and differences in the process of frontier settlement even within the United States (Adelman & Aron, 1999; Limerick, 1988, 1995; White, 1991). By consequence, as Imamura (2015) notes in a recent survey of the literature, “studies of the frontier have been in a peculiar state of stagnation for some time.”

In many ways this is unfortunate, as historians in other regions who were contemporaries of Turner did express similar ideas regarding the culture of their own frontiers. In the Latin American context, Brazilian historian João Capistrano de Abreu (1982 [1907, 1930]) emphasised the democratizing influence of Brazilian frontier settlement, while Argentinian writer Domingo Sarmiento (1999 [1868]), stressed its negative and populist aspects. And in late imperial Russia Vasily Kluchevsky (1960 [1910]), characterising Russia as “a country that colonizes itself,” noted how early settlement led to the breakdown of clan association, late medieval settlement led to the formation of assemblies, and cossack frontiersmen in the early modern era had pioneered new forms

³ While it is true that frontier culture also contributes to individualism, individualism and generalised social trust are often posited to exist in a positive rather than a negative relationship. One explanation may be that the weakening of narrow “bonding” ties based on ascriptive membership (e.g. family or social class) enhances the possibility for “bridging” ties across all members of society, regardless of ascriptive identity. Hence social trust and individualism are strongly positively correlated at a cross-country level (Realo & Allik, 2009).

of democratic association (Etkind, 2015).

Nonetheless if frontier scholarship has waned in historical studies, in recent decades it has experienced a nascent revival in the social sciences. With the benefit of subnational survey, linguistic, and official statistical data, sociologists, psychologists, economists, and political scientists have been able to return to the question of how comparative social institutions differ in frontier zones and regions, with the finding of sometimes stark differences. Kitayama, Lucian Gideon Conway, Pietromonaco, Park, and Plaut (2010), for example, have re-examined the United States frontier, arguing that “sparsely populated, novel environments that impose major threats to survival, such as the Western frontier in the United States during the 18th and 19th centuries, breed strong values of independence, which in turn guide the production of new practices that encourage self-promotion and focused, competitive work.” Cohen, Nisbett, Bowdle, and Schwarz (1996) examine cultural differences between the coastal northeast of the United States and the early midwestern and southern frontier, identifying in the latter a “culture of honour” centered upon individual pride and aggression-responsiveness that is revealed in the responses of experiment participants to aggressive cues. And Bazzi, Fiszbein and Gebresilas (2018) take geocoded data from across the United States, to show that counties with longer historical frontier experience exhibit more prevalent individualism and opposition to redistribution and regulation.

These studies have centered largely upon replicating Turner's findings subnationally within the United States, yet, more recent studies have also looked anew at whether such findings form part of a more general frontier thesis that could apply across a broader subset of countries. Garcia-Jimeno and Robinson (2011), for example, examine frontier regions from across the Americas and report a positive correlation with subsequent democratisation. Foa and Nemirovskaya (2016) examine frontier regions from a range of countries and find lower levels of public order and public goods provision, which they attribute to a “frontier culture” characterised by preferences for individual over collective provision. And finally – asking whether a “history of voluntary frontier settlement in an ecologically harsh environment characterised by low population density and high social mobility should breed an ethos of independence even in non-Western cultural contexts” – Kitayama et al. (2006) examine data from the Hokkaido region of Japan, an island that was a wilderness until 140 years ago, and find that residents express higher levels of independence and motivation by personal (rather than public) choice, similar to frontier regions of the United States.

3. Defining the frontier

Though frontier studies has existed as a field for generations, historians, sociologists and political scientists have long struggled to specify exactly how it should be defined (Parker & Rodseth, 2005). Given the contested nature of the term, one approach taken by recent historians is to implicitly define the frontier negatively, in relation to another geographic entity from which it is territorially distinct. Setting the standard for recent historical work in the field, Adelman and Aron (1999) for example, distinguish frontiers from *borderlands*, considering borderlands as the “contested boundaries between colonial domains,” while frontiers are “a meeting place of peoples in which geographic and cultural borders were not clearly defined.” This helps to narrow down an important feature of frontier zones, in that they are spaces outside of sovereign control, either nominally under the authority of a nation state or on its periphery, yet not under the control of any other polity. Yet which areas of a state's periphery, if any, should be considered as part of a frontier area? Parker and Rodseth (2005) offer an answer by contrasting the frontier to a state's “core,” which they term a “densely populated region of concentrated wealth and political power.” This gives us two important aspects of frontier zones - that unlike the core, they are not densely populated, and situated at great distance from the capital - and also suggests a dichotomous approach, between two

distinct and opposing categories (Parker, 2002; Prescott, 1987).

Still left unstated in such definitions is what is typically understood as a central aspect of the frontier society, namely, the existence of a process of historical settlement. For some scholars, the migration of pioneers to a sparsely populated hinterland is the common element uniting historical frontiers (Wyman and Kroeber, 1957).⁴ Frontiers are not simply areas low in population density, but rather, areas that have *historically* been low in population density, but been subject to steady in-migratory flows, such that their population consists largely of settlers and their recent descendants. For this reason, attempts to operationalize the frontier empirically, such as Garcia-Jimeno and Robinson (2011) or Bazzi, Fiszbein and Gebresilas (2018), have often used historical data on population density from early censuses in order to identify frontier zones.

In this article we follow the same approach, identifying frontier regions are those territories that had a population density of less than 3 person per square mile in the late nineteenth century, yet have seen steady population inflows since. Following the dichotomous approach of Parker and Rodseth (2005) and the paired comparisons implicit in Kitayama et al. (2010) and Garcia-Jimeno and Robinson (2011), we adopt the parsimonious rule of dividing countries in to two spheres, i.e. “core” and “frontier” zones.⁵

Accordingly, Table 1 summarizes this aspect of the frontier with respect to the states and territories of the four large frontier nations under consideration. These four countries were selected for two reasons: first, they contain the frontier territories that are most easily distinguishable using subnational regional groupings, with the size of the very largest frontier states – the United States, Canada, Brazil and Russia – allowing us to place multiple regional units together within each of the frontier and non-frontier zones.⁶ Second, these four comparative frontiers most closely approximate ideal-typical criteria, being (i) subject to free settlement in the nineteenth and early twentieth centuries (rather than during earlier settlement periods), (ii) geographically distant from the core, and (iii) sufficiently large as to constitute relatively endogenous laboratories of socio-institutional change during their frontier era.

In order to identify historical frontier status, data on population were drawn from the United States (Bureau of Statistics, 1898) and Canadian Census (Canadian Board of Registration and Statistics, 1853), as well as the Russian Empire Census of 1897 (Troynitsky, 1905) and the Brazilian census of 1872. In the United States, everything West of Missouri and Arkansas counts as frontier by this measure, while in Canada the frontier covers everything west of Ontario, as well as certain remote regions of the Arctic north on the country's east coast. For Brazil, frontier areas include the Northern Amazon region, plus the vast interior of the Centre-West. In imperial Russia, settlement 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

⁴ For example neither Antarctica nor Greenland are typically considered frontiers, despite their low densities of population. However, either would readily be described as such were they to experience a significant and ongoing process of immigration.

⁵ While most studies of the frontier have generally adopted a dichotomous approach, allowing for a measure of regions with a most proximate frontier experience, the use of a continuous variable has been possible for the United States based on the degree of frontier experience over time (Bazzi, Fiszbein and Gebresilas, 2018).

⁶ By contrast, in most other frontier states the regional identifiers used in cross-national surveys coincide only weakly with the frontier/non-frontier distinction: In Australia, for example, the country's states and territories contain both coastal cities that were sites of early settlement and interior regions that can be considered as frontier zones; a useful test of the frontier thesis there would better be served by making comparisons within each federal unit, rather than between them. A similar problem exists when analysis other frontier states, including Chile, Israel, Ukraine, South Africa or New Zealand.

Table 1
Identifying frontier regions by historical population density.

Region	Population (m)	Area (Sq. Miles)	Population Density
United States^a			
New England	2.73	71,988	37.9
Middle Atlantic States	5.90	109,332	54
South Atlantic	4.68	268,760	17.4
East South Central	3.36	183,404	18.3
East North Central	4.52	301,369	15
West South Central	0.94	374,153	2.5
West North Central ^b	0.88	293,235	3
Rocky Mountain States ^b	0.07	469,050	0.16
Pacific States ^b	0.09	444,856	0.21
Canada^c			
Prince Edward Island	0.01	2190	3.3
Nova Scotia	0.28	20,441	13.5
Ontario	0.95	100,000	9.5
Quebec	0.89	206,250	4.3
Manitoba	~0.003 ^d	250,950	0
Saskatchewan	~0.004 ^d	251,700	0
Alberta	~0.003 ^d	255,541	0
British Columbia	0.06	364,764	0.2
Newfoundland	0.11	42,030	2.4
New Brunswick	0.002	28,150	0.1
Brazil^e			
Northeast	4.65	599,146	7.8
South	0.73	222,549	3.3
Southeast	4.03	357,480	11.3
West	0.22	480,100	0.5
North	0.33	1,088,204	0.3
Russia^f			
North-Western	3.51	192,497	18.3
Central	21.04	212,274	99.1
Volga	21.21	424,037	50
Urals	2.12	593,027	3.6
South	10.16	222,326	45.7
Moscow	2.60	11,642	223.6
St Petersburg	2.27	15,315	148.5
Siberia	3.85	1,717,975	2.2
Northern	0.69	314,170	2.2
Far East	0.73	2,193,423	0.3

Notes.

^a Data from the 1850 U.S. Census.

^b West North Central calculation includes Iowa, Missouri and the Minnesota Territory, which covered contemporary Minnesota and half of North and South Dakota. Pacific States estimate combines California with the Oregon Territory, covering contemporary Washington and Oregon states. Rocky Mountain States estimate is based on the Utah and New Mexico Territories, covering contemporary New Mexico, Arizona, Utah, and Nevada, as well as portions of Colorado and Wyoming.

^c Data from the 1851 Canadian Census.

^d Approximate estimates for 1851, based on population growth rates. Population for Alberta, Manitoba, and Saskatchewan (collectively, “the territories”) were returned only in 1871, at 18,000 in total.

^e Data from the Brazilian 1872 Census.

^f Data from the 1897 Russian Census.

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 were only thinly populated, while the future population centre, Murmansk, had yet to be founded (1916). The “frontier” regions of Russia thus include Siberia, the Arctic North, and the Far East.

An illustration of frontier zones identified in each of the four

country cases are illustrated in Fig. 1, also showing their geographic remoteness from centers of political power (the “core”).

4. “Least-likely” cases in detail – Russia and Brazil

While the “frontier phenomenon” existed beyond the North American context, studies of the frontier history of western societies have largely focused on northern America (Billington, 1977; Hartz, 1955; Hofstadter, 1949; Pierson, 1940; Simler, 1958). In conducting an empirical test of the frontier thesis, in this article therefore we follow the “least-likely case” version of the “crucial case method” (Eckstein, 1975; Gerring, 2007), by deliberately choosing the two geographically largest frontiers along which the “frontier thesis” might be considered the least plausible: the Russian settlement of Siberia, and the Brazilian settlement of the Amazon. The efforts of the colonial Portuguese and the imperial Russian state to govern their respective frontiers, the existence of coercive labour practises in both cases, and the intervening twentieth-century histories of authoritarian and totalitarian rule, might lead us to consider the detection of a frontier effect implausible. If, therefore, an enduring frontier effect upon social institutions were found to exist in these cases, this would represent the passing of a critical empirical threshold.

4.1. The Russian frontier

In Russia, before the nineteenth century the population was almost exclusively situated in its European portion, 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. From 1858 to 1917 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, and during this time the population boomed from 4.2 to 21.6 million inhabitants.

Before this period of settlement, Russian use of Siberia remained largely limited to military expeditions and the utilisation of the territory as a prison colony. Gagemeister (1854) reports that Siberia had a population of 0.9m in 1796–7, of which less than half were the region's indigenous peoples; meanwhile the total population of the Russian Empire counted 36 million people, making the peoples of the frontier account for only 2.6 per cent of overall population, and the settler population, just 1.6% (Gagemeister, 1854). Yet from the mid-nineteenth century onwards, a phase of free settlement began, characterised by the eastward movement of free serfs, persecuted religious minorities, and freebooters drawn by the region's abundant natural resources. Thus the population of the frontier zones almost doubled between 1858 and 1896, before increasing by half again in the two decades preceding the First World War. In total, the region received 5.5 million immigrants during this period – a figure comparable to the numbers arriving in the United States at that time. 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. Fig. 2 shows the rates and the sources of population growth in the Asian part of Russia that occurred through resettlement. During this time period, Siberia also overtook Ukraine and the Caucasus as the primary destination for internal migrants within the Russian Empire. In the period before the Peasant Reform of 1861, the main direction of migration was to the south; after the reforms, it was to 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 (see Fig. 3).

The third and final phase of the settlement of Siberia occurred under

**Fig. 1.** Frontier regions of four countries.

Notes: Frontier areas in darker shading; capital city indicated by circles. Subnational units of each country with population below 3 per square mile in the late nineteenth century; data for the Americas from 1850, and for Russia from the 1897 census, with imputation based on natural increase to 1850. In Russia, central Russian regions were already above the density threshold at this point, though the Arctic northern region remained below. For countries that have changed capital city, the city that has served as capital for a majority of the time since the late nineteenth century is used. Regional groupings are based on macroregions coded in the World Values Survey, which are larger than individual states or provinces.

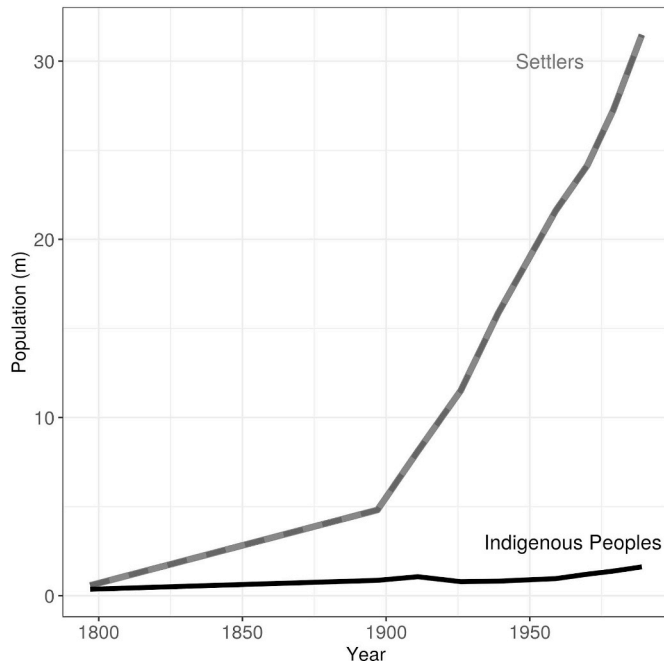
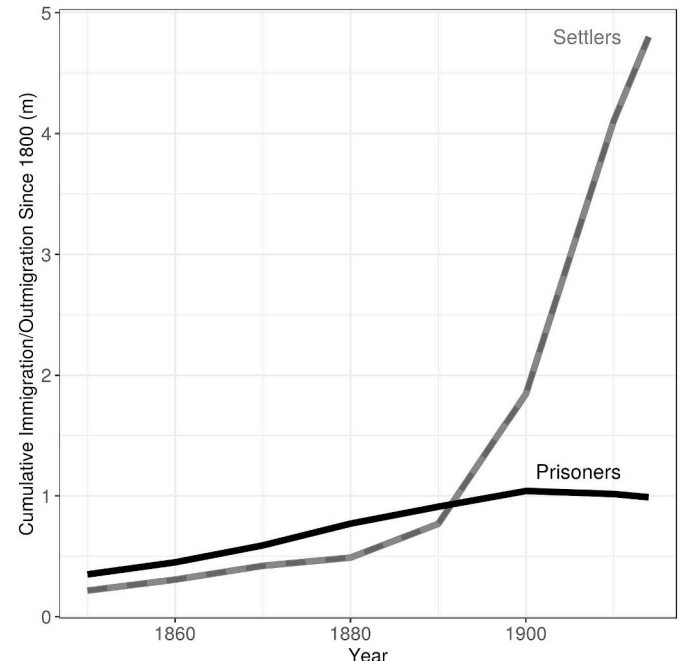


Fig. 2. Indigenous and non-Indigenous Population of Siberia, 1796–1989. Sources: 1796–1897 data from [Gagemeister \(1854\)](#). Subsequent data cited in ([Forsyth, 1992](#), p. 405). Calculated from *Aziatskaya Rossiya*, vol. I, pp. 82–5; V.I. Kozlov, *Natsionalnosti SSSR*, 2nd edn, 1982, pp. 285–7; *Narody Sibiri*; and the USSR Census, including preliminary data for 1989 published in the Report on the USSR, 1990, no. 201, pp. 15–19.

**Fig. 3.** Free vs. Coerced Settlement in the Asian Part of Russia, 1801–1914.

Notes: Figure shows the cumulative total of settlers/prisoners in the Asian regions of Russia from 1801 to 1914. These figures only include registered arrivals and departures, and exclude natural increase arising from births and deaths. Source: ([Obolenskiy, 1928](#), p. 84).

the Soviet Union, and 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 is sometimes portrayed, to view the region as a mere “industrialised prison camp” – as the expansion of the civilian sector also formed an important contribution to the region's growth, and generous subsidies and benefits were offered to encourage migration to the region, which is characterised by its multi-ethnic composition (Kravchenko, 1946; Nemirovskiy, 2011; Zaslavskaya, Kalmyk and Khakhulina, 1983).

4.2. The Brazilian frontier

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, with the interior still sparsely populated by indigenous peoples. Following estimates published by Alden (1963), by the late eighteenth century less than 10 per cent of Brazil's population of settlers and “domesticated slaves” resided in frontier areas, leaving the vast majority among the coastal regions.⁷ Despite incursions by Europeans for the purpose of taking indigenous slaves for plantation labour, it was only after 1850, during the first Amazon rubber boom, that substantial inland migration and settlement began. This was characterised by the adoption of intensive plantation agriculture, followed by land-intensive ranching among individual settlers, as well as territorial consolidation by a Brazilian state seeking to render its interior territories “governable” though road infrastructure, military expenditure, and the relocation of its own capital inland. 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. 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.

5. Empirical analysis

How do these frontier regions compare to the non-frontier areas in their respective societies? In this section, we begin by defining four aspects of “civic culture” highlighted in the literature: voluntary association; social trust; intergroup tolerance; and civic activism (Dulal & Foa, 2011; Foa, 2011a, b). After presenting descriptive statistics that show frontier region higher in such norms than non-frontier zones within their country, we estimate 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

Early studies in the political behaviour tradition have lain emphasis on the role of voluntary organisations in generating civic norms (Almond & Verba, 1963). Putnam (2000), one of the leading advocates of this approach, refers to such groups as “schools of democracy” in which participants learn the values of cooperation, equality, and responsibility for decision-making. The first dimension of civic norms which we investigate is the extent of voluntary association, measured 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 (including religious, cultural, and professional groups) whether they are an “active member,” an “inactive” member, or “not a member” at all.

ii) Social Trust

A related literature in the study of civic norms has placed emphasis on the importance of generalised norms of “trust”, which it is argued functions to reduce the transaction costs involved in collective action, thereby facilitating the organisation of social actors (Fukuyama, 1995; Ostrom, 1990). These arguments are not necessarily opposed to arguments focussing upon civic association, as generalised trust is widely posited to make possible “bridging” ties between groups (Delhey, Newton, & Welzel, 2011; Putnam, 2000). One of the most commonly 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,” and we therefore use this item in order to capture the social trust dimension of civil society.

iii) Outgroup Tolerance

In contrast to a “social capital” approach to the study of civil society emphasizing voluntary association and trust, a significant body of political science literature in the normative tradition lays emphasis upon the importance of values, and in particular the role of what have been termed “postmaterial” (Inglehart, 1977), “self-expressive” (Inglehart & Welzel, 2005) or “emancipative” (Sokolov, 2018) beliefs. At the core of such values are the acceptance of liberal norms of tolerance, expression, and association, including the acceptance of other groups in society with different lifestyles and backgrounds. As a measure of outgroup tolerance, we therefore report two items: 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.”

iv) Civic Activism and Protest Activity

In addition to focussing on norms of tolerance and free expression, a more recent scholarship on unconventional participation and on social movements highlights the importance of direct political behaviour and in particular “contentious” civic activism in holding elites accountable (Dalton, 2002, 2004; McAdam, Tarrow, & Tilly, 2001; Norris, 2002; Tarrow, 1994). By engaging in elite-challenging activities, it is argued that citizens are able to ensure the accountability of politicians and public officials in a manner more effective than through non-confrontational activism (Ekiert & Kubik, 1999; Welzel, Inglehart and Deutsch, 2005). The fourth dimension of civic culture which we examine for frontier and non-frontier regions, therefore, is the tendency of citizens to mobilise in civic activism, such as protest or petition. We use 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.

v) Beliefs Regarding Individual Responsibility and Collective Action

Finally, a central feature of “frontier culture” emphasised by the classical literature on the topic is a propensity to belief in self-reliance, individual agency, and the ability of communities to resolve collective action dilemmas on their own, without central government intervention (Turner, 2018 [1920]; de Tocqueville, 2018 [1835]). The fifth dimension of civic life for which we compare frontier and non-frontier regions is the expressed attitude of survey respondents regarding individual versus government responsibility, in the form of the percentage of respondents who reply “1” to a 10-point value scale asking whether “people should take more responsibility to provide for themselves” (1) or whether “the government should take more responsibility to ensure

⁷ Estimates from a wider range of sources compiled by Alden (1987) arrive at a yet lower figure, at 7.6% of total population.

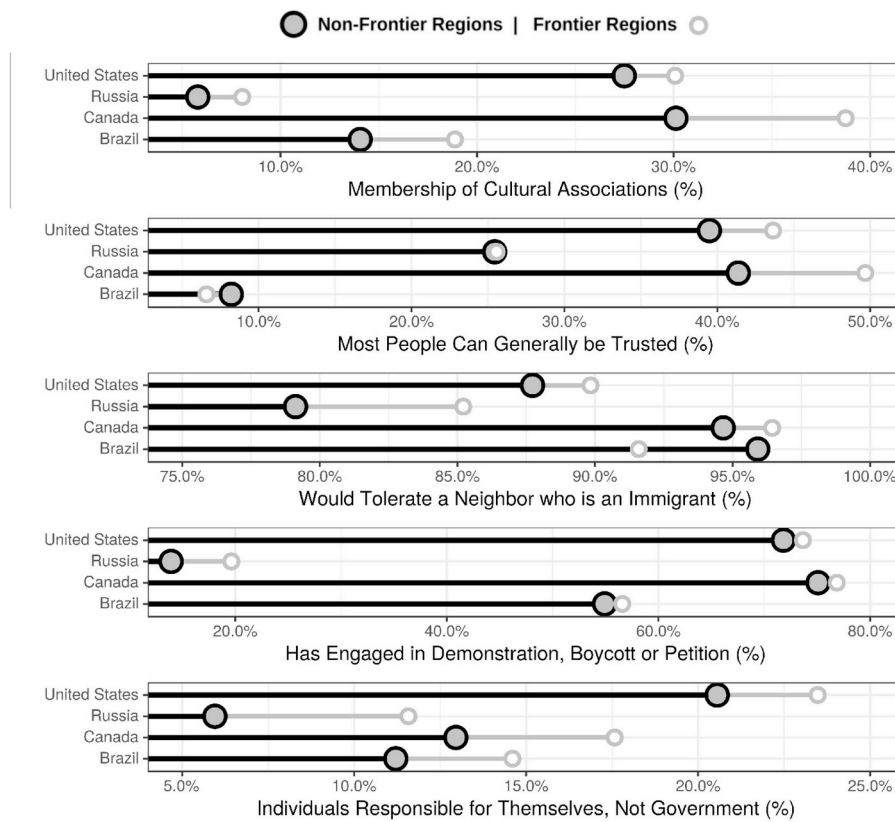


Fig. 4. Civic Norms: Frontier and Non-Frontier Regions Compared.

Notes: Data from the [World Values Survey \(1981–2014\)](#), average of regional subunits within “frontier” and “non-frontier” zones respectively.

that everyone is provided for” (10).

Basic descriptive statistics comparing frontier and non-frontier regions are shown in [Fig. 4](#).

With only a few exceptions, frontier regions in Canada, the United States, Brazil and Russia are higher on voluntary association, general social trust, tolerance of outgroups, civic activism, and belief in individual responsibility than non-frontier regions. Average membership of cultural associations, for example, is universally higher in frontier than non-frontier zones, with an average difference of 4.6 percentage points, and larger gaps in Canada and Brazil (+8.6 and +4.8 per cent) than in the United States and Russia (+2.8 and +2.3 per cent). In addition, generalised social trust is 2.7 per cent higher on average in frontier than non-frontier zones, with large gaps in Canada and the United States (+8.3 and +4.2 per cent), despite a negative difference in one case (−1.6 per cent in Brazil), and frontier zones are also characterised by greater tolerance for outgroups, and higher civic activism, as measured by willingness to protest. With regard to belief in individual rather than government responsibility, the difference between frontier and non-frontier regions is most pronounced: while the average rate of respondents across subnational regions stating that “people should take more responsibility” for themselves is 14.9 per cent, in frontier regions the average response is +4.6 percentage points higher than non-frontier regions, and this gap is similar within each country. The attributes of frontier society, including individualism and civic engagement, are not unique attributes to the western frontier but part of a generalised phenomenon found globally in frontier zones.

6. Multilevel regression models

We may be concerned that the descriptive associations illustrated in [Fig. 2](#) do not reflect a result of the frontier experience, but instead reflect covariant attributes of frontier areas, for example that they have

disproportionately smaller towns, or more older and settled residents, or perhaps lower levels of educational attainment. In order to rule out the possibility that these descriptive associations simply reflect covariant attributes of frontier areas, this section establishes an independent association between frontier zones and higher levels of “social capital” by estimating a series of multilevel regressions on the country samples, controlling for a combination of individual-level factors (age, gender, income, education, and the size of the town or city) and regional-level variables (regional income per capita, infant mortality rates, and ethnic fractionalisation). Responses are grouped by the year and country of the survey.

These are reported in [Table 2](#). 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 34,401 respondents. As dependent variables we use each of the social capital indicators: a combined index of membership of voluntary associations (*voluntary*),⁸ 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*), whether the respondent would be willing to have neighbours who are immigrants or foreign workers (*tolerate immigrant*), and whether a respondent expressed strong belief in personal rather than government responsibility (*individual responsibility*).

The models suggest a number of socio-demographic attributes, in particular income and education, that are strongly associated with civic institutions; these are predictive of higher trust, tolerance of outgroups, and civic activism ([Inglehart, 1990](#)). The period effect, as measured by

⁸ 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.

Table 2
Multilevel regression results: Frontier zones and civic institutions.

	<i>Dependent variable:</i>					
	General/Trust	Tolerate/other Race	Tolerate/Immigrant	Civic/Activism	Voluntary/Memberships	Individual/Responsibility
	(1)	(2)	(3)	(4)	(5)	(6)
Frontier Zone (1/0)	0.024*** (0.007)	0.013*** (0.004)	0.014*** (0.005)	0.012* (0.007)	0.027*** (0.005)	0.027*** (0.005)
<i>Individual-Level Variables:</i>						
Age	0.002*** (0.0002)	– 0.0002** (0.0001)	– 0.001*** (0.0001)	0.001*** (0.0002)	0.001*** (0.0001)	0.001*** (0.0001)
Gender (1 = male) (2 = female)	0.011* (0.006)	0.012*** (0.003)	0.005 (0.004)	0.006 (0.006)	0.003 (0.004)	– 0.018*** (0.005)
Year	– 0.00005** (0.00002)	0.0005*** (0.00001)	0.0004*** (0.00002)	0.0001*** (0.00003)	0.0001*** (0.00003)	0.0001*** (0.00002)
Education, Years	0.006*** (0.001)	0.002*** (0.0004)	0.003*** (0.0005)	0.011*** (0.001)	0.002*** (0.0005)	– 0.001** (0.001)
Income Scale (1–10)	0.022*** (0.001)	0.002** (0.001)	0.002** (0.001)	0.017*** (0.001)	0.010*** (0.001)	0.003*** (0.001)
Town/Village Size	– 0.001 (0.001)	0.0002 (0.001)	– 0.0002 (0.001)	0.002 (0.001)	– 0.0001 (0.001)	– 0.004*** (0.001)
<i>Regional-Level Variables:</i>						
GDP per Capita, nominal \$US (1,000s)	0.002*** (0.001)	– 0.0004 (0.0003)	– 0.0003 (0.0004)	0.0004 (0.0005)	0.001* (0.0004)	– 0.001** (0.0004)
Infant Mortality Rate	– 0.003** (0.001)	– 0.003*** (0.001)	– 0.002** (0.001)	– 0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Ethnic Fractionalisation	0.078*** (0.030)	0.039** (0.017)	0.019 (0.021)	– 0.056* (0.030)	0.090*** (0.022)	– 0.034 (0.024)
Observations	21,680	22,173	22,174	21,804	22,187	21,891
Log Likelihood	– 12,813.750	– 1177.307	– 5699.618	– 12,402.080	– 6264.200	– 7908.911
Akaike Inf. Crit.	25,651.500	2378.614	11,423.240	24,828.150	12,552.400	15,841.820
Bayesian Inf. Crit.	25,747.310	2474.693	11,519.320	24,924.030	12,648.490	15,937.750

Notes: Random intercepts grouped by country and year of survey; standard errors in parentheses. *p<0.1; **p<0.05; ***p<0.01.

the year of the survey, suggests that social trust, voluntary association, and belief in personal responsibility 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 indicate 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 2.4 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, 1.4 per cent more will tolerate a neighbour who is an immigrant or guest worker, and all else equal, an estimated +2.7 per cent of respondents in frontier zones express a belief in personal over government responsibility.

7. A global frontier effect

From 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 (de Tocqueville, 2018 [1835]; Putnam, 2000). Meanwhile, a number of scholars have questioned the extension of the frontier hypothesis more broadly, and even de Tocqueville contrasted the manner of settlement of the United States with that in Russia (Garcia-Jimeno & Robinson, 2011). A natural question arises therefore as to whether the coefficients observed in Table 2 reflect only the influence of U.S. observations in the sample, or whether the frontier effect can still be observed independent of this sample. For that reason, we conduct a second set of multilevel models as in Table 2, but this time allowing the “frontier” coefficient to

vary by country. A resultant plot of the frontier coefficients, by country and dependent variable, is shown in Fig. 5, together with their 95% confidence intervals based on the slope standard errors.

Even when estimating each country's frontier zone coefficient separately, a “frontier effect” remains evident in the data, with 21 of 24 coefficients signed positively, and the majority of these significant at the $\alpha = 0.05$ level. 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.

8. When do frontier “zones” produce frontier nations?

If the frontier effect exists at a global level, an ecological paradox remains. Despite the existence of stronger civic norms across frontier zones in all countries, relative to non-frontier zones, as a group “frontier countries” – i.e. those countries that have developed by settling a frontier, such as Brazil, Canada, and Russia – do not individually 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 universally have stronger civic institutions than those without. Indeed, among these frontier cases between-country country differences often outweigh the within-country difference between core and frontier areas.

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 (Garcia-Jimeno & Robinson, 2011). This was, of course, part of the original “frontier thesis” of Frederick Jackson Turner (2018 [1920]), who argued that the more individualistic and egalitarian institutions of the American west

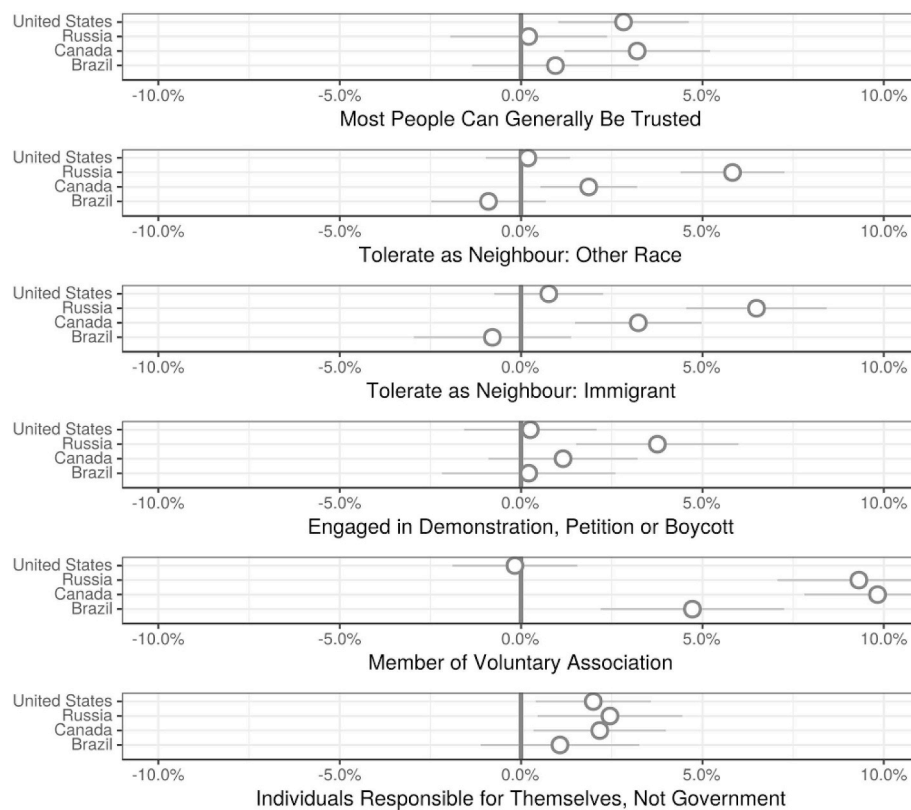


Fig. 5. Random slope coefficients for frontier variable, by country.

Random slope coefficients for the “frontier zone” variable in multilevel models, with 95% confidence intervals indicated.

eventually became generalised to the country as a whole; as well as a concern of later comparative studies, such as Lipset (1990), whose comparison of the U.S. and Canada argued that in the latter case a patrician culture in the country's eastern cities retained dominance over national institutions and values. But under what conditions does the culture of the “frontier zone” become dominant with society as a whole, producing a “frontier nation”?

A complete answer to this question goes beyond the empirical analysis of this article. Yet, a possible precondition could include whether the frontier itself was 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, and with relatively egalitarian and decentralised institutions, but their numbers were dramatically fewer.

In this regard, the United States and Russia 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 (Billington, 1993; Billington & Ridge, 2001). 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 (Bassin, 1993). 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, leading to a “constrained” frontier culture (Lipset, 1990). Likewise, in Brazil the population of the interior remains very scattered and scarce even today. The United States as a whole became a frontier nation, because the country was eventually defined by the new territories on its frontier; whereas Russia is Russia despite of its frontier, having contained the potential for a very different path of social and political development – a result of successive attempts by the central state to make its frontier “legible” and “governable,” attempts which continue until the present day.⁹

9. Conclusion

Sociologists and political scientists have long been concerned with the origins of voluntary participation, social trust, and political engagement, which have been associated with beneficial effects including

⁹ In this regard, the late imperial writings of Russian historians such as Soloviev and Kluchevsky are pertinent, with both having described Russia as a country that “colonises itself” but which at every stage, saw the central state eventually re-asserting control over its wayward boundaries.

reduced corruption, and successful democratic consolidation (Putnam, 1993; Welzel, Inglehart and Deutsch, 2005). However, the literature on the origins of civic norms and behaviour has tended to focus on either proximate institutional causes, such as the legacies of authoritarian rule, or long-term “cultural” causes such as religious institutions or social heterogeneity (Bernhard & Karakoç, 2007; Greif, 1994; Inglehart & Baker, 2000). In this article, we have examined a neglected historical basis for the emergence of civic norms: namely, the settlement of new societies. Comparing frontier regions of Brazil, Russia, Canada and the United States, we find that in regions where communities have historically been self-governing and distant from central political authority, today there are higher levels of voluntary activity, social trust, tolerance of outgroups, and greater willingness to engage in civic protest.

In so doing, we have examined data from two “least likely” cases, Brazil and Russia, in addition to two high income frontier societies, in the form of Canada and the United States. We find that areas of frontier settlement are characterised by higher levels of autonomous social organisation and greater norms of collective action - and that these differences are robust to a series of controls and to the exclusion of the U.S. case. Thus taking a wide range of survey items, we find that higher levels of voluntary activity and civic engagement are distinctive features of frontier life more generally, and not simply a feature of the American historical experience. In addition, we find that where frontier societies are composed largely of freely settled migrants, as in Canada, Russia, and the United States, “bridging ties” such as social trust and tolerance of outgroups are also greater. This research, we suggest, should not be seen as definitive, but rather as opening a door to a wider revival of “frontier studies.” Until recently, studies of the frontier and legacies of frontier settlement had become marginal within political geography, but in recent years are seeing a comparative revival, aided by the benefit of new statistical techniques and georeferenced data (Kitayama et al., 2006, 2010), multi-regional experimental data, use of new measures such as name records (Bazzi, Fiszbein and Gebresilassee, 2018), and subnational data from multi-country comparative survey projects (Foa & Nemirovskaya, 2016; Garcia-Jimeno & Robinson, 2011). Far from being settled, therefore, the study of the frontier remains open to further exploration.

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