Informal Redistricting, Petroleum Revenues, and Vote-Buying in a Rural Brazilian Town

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Abstract

Quixaba is a geographically isolated rural town whose residents depend chiefly on fishing, small-scale agriculture, and mat weaving. Although the region comprising Quixaba is located within the territory of the municipality of Campos dos Goytacazes, RJ, virtually all residents vote legally in São João da Barra, RJ, the municipality that provides all the municipal services in the region, such as schools, health clinics, garbage collection, electrical infrastructure, etc. Through ethnographic observation and interviews and the use of a focal group among Quixaba residents, the present study sought to explorethe benefits each municipality derives from the current political arrangement as well as the perspective of Quixaba residents regarding it. The results indicate that while this situation translates into financial and political gain for Campos's dos Goytacazes and São João da Barra, respectively, Quixaba residents find themselves disenfranchised of many political rights, with little recourse other than selling their votes.

Keywords: redistricting, politics, territory, conflict, clientelism, petroleum

1. Overview

The town of Quixaba extends along an unpaved road located within the municipality of Campos dos Goytacazes (Campos) in the state of Rio de Janeiro, Brazil. Quixaba comprises an isolated region of the state with a low population density; the nearest population center of over 10,000 people, the city of Campos itself, is over an hour's drive away. In addition, the nearest towns are located more than 5 kilometers from Quixaba and separated by extensive uninhabited areas. Quixaba has just over 500 total residents (Oliveira, 2012), the vast majority of whom make a living as small-scale fishers, farmers, and artisans involved in the manufacture of woven mats made exclusively of locally-gathered southern cattail plant material. Other residents work in commerce, public service jobs, and at the Açu Port Industrial Complex (APIC). Its low income and educational levels and high social vulnerability (Oliveira, 2012; Santos, Quinto, & Oliveira, 2016) set the region comprising Quixaba off from many of the other, relatively more well-off, regions of the municipality. The municipal limits between Campos and São João da Barra (SJB) are approximately 6 kilometers from the town square of Quixaba. According to federal Brazilian law, all citizens are required to vote in all elections, but they can register and do so at any nearby or convenient voting location, even if that location is across municipal lines.

Almost all eligible adults in Quixaba, therefore, have registered and regularly vote in the larger town of Açu, in the municipality of São João da Barra, about 8 kilometers from Quixaba (see Figure 1).

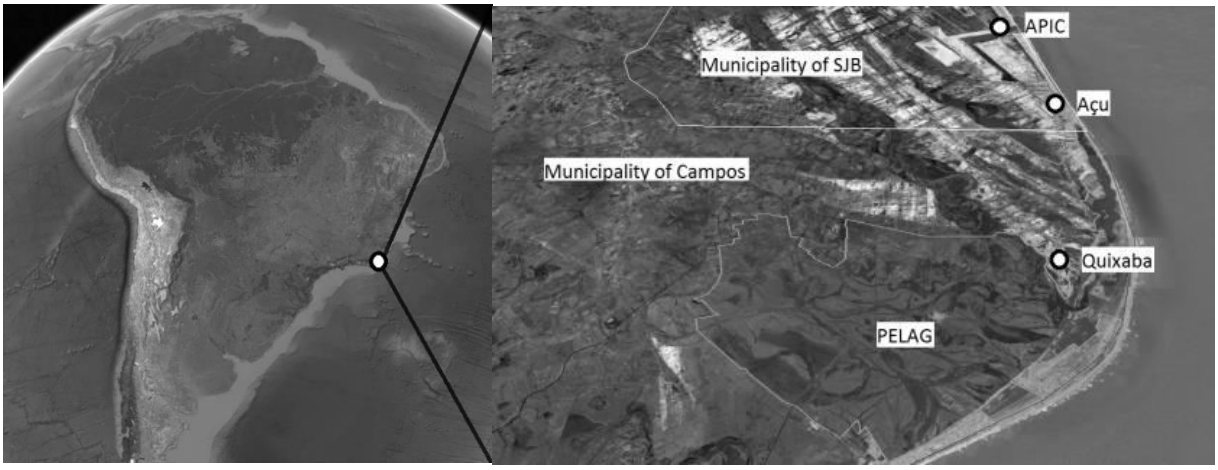

Figure 1: Map of the study area. Source: 21o57'05.85" S and 41o02'20.70" N. Google Earth. Aug. 11, 2016. Nov. 25, 2016.

While it is hardly surprising that Quixaba residents should exercise their legal right to vote in the neighboring municipality, until a recent conflict with a public transportation company brought these issues into the wider public arena (see below), most citizens of Quixaba believed that the town was, in fact, located within SJB. And why wouldn't they? There are no public signs in the region that show municipal limits and virtually all public services and jobs are officially and explicitly rendered and funded under the name of the Município de São João da Barra. These include a public daycare center, an elementary school, a health care center, electrical supply infrastructure and public illumination, garbage collection, social services, pest control, road maintenance, public transportation to SJB, and improvements and maintenance of the public square. One development that has affected the socioeconomic, political, and environmental dynamics of the Quixaba region was the installation of the Açu Port Industrial Complex (APIC) on a vast parcel of land previously owned by small-scale farmers, fishers, and low-income residents, on the one hand, and a handful of wealthy landowners, on the other. This project has undergone many changes since it was first announced in 2007, including at various times an interstate iron-ore pipeline and processing facility, a shipbuilding yard, steel mills, petroleum storage and processing facilities, an automobile factory, and 17 kilometers of piers with 47 mooring berths able to transfer cargo to and from vessels of up to 400,000 tons. In addition, developers have emphasized the project's potential to create 50,000 direct and indirect jobs (Martins, 2012). Through a highly contested land acquisition process (M. A. Pedlowski, 2013), the APIC acquired 90 km 2 (Spinetto, 2015), or roughly one-fifth of the total area of SJB.

Returning to the question of municipal limits, the exact locations of these limits are not in dispute. The maps posted on the Internet sites of both municipalities and the federal Brazilian Geography and Statistics Institute (IBGE) consistently portray the municipal limits stipulated in Law 1.056 of 31 December 1943, with the Quixaba region within the municipal territory of Campos. In addition, there are other towns in the same situation in the region, including Azeitona, Capela de São Pedro, Salgado, Flecheira, and Bajuru. In 2003 a bill was introduced in the Rio de Janeiro State Legislature (ALERJ) to redraw the region's municipal limits in order to reflect "historical, social, and economic factors" (p. 1), but was never voted on (Studart, 2003).

2. Research Questions

The present work investigates two questions related to the socio-political arrangement that has developed in the Quixaba region. 1. Given that the municipal government of Campos could consider SJB's unofficial appropriation of territory as a threat to its sovereignty and that SJB is paying for expensive public services that are unrequired of it, how have decision-makers in these municipalities benefited from this arrangement? 2. Now that they have begun to realize what is happening, what perspectives do the citizens of Quixaba have on this matter?

3. Review of the Literature

In order to come to terms with the unusual socio-political arrangement that has developed in Quixaba, we will now define a few key concepts.

First, named after the then-Massachusetts Governor Elbridge Gerry, gerrymandering, or partisan redistricting, is "to divide (a state, school district, etc.) into political units that give one group an unfair advantage" (Merriam-webster.com, 2016). Scholars have identified three types: 'packing' involves concentrating a given group or party in a district, 'cracking' refers to the division of a majority group among two or more districts, and 'tacking' is when a certain group of an adjacent area is incorporated into an existing district through the modification of borders (Mann & Ornstein, 2015). Thus, because of the large number of people who vote in Campos relative to SJB, we consider the informal adoption of Quixaba by SJB as an example of tacking.

Next, related to the psychology concepts of 'self-efficacy' and 'efficacy expectations' (Bandura, 1977), the 'sense of political efficacy' is grounded in "the feeling that individual political action does have, or can have, an impact upon the political process, i.e., that it is worthwhile to perform one's civic duties" (Campbell, Gurin, & Miller, 1954, p. 187). This concept was refined during the 1970s when researchers articulated a distinction between internal political efficacy, defined as an individual's self-analysis with respect to her ability to understand and participate effectively in politics, and external political efficacy, or perceptions of the responsiveness of governmental authorities and institutions to citizens' demands (Balch, 1974). Many studies have investigated the relationship between trust, political efficacy, and political participation. Yet, because almost all citizens in Quixaba comply with Brazil's legally enforced compulsory voting requirements, the use of gerrymandering in Quixaba should not affect participation, at least in the most traditional democratic sense. One can hypothesize; however, that the tacking on of an adjacent voting district by political groups in SJB may well affect perceptions related to the external political efficacy of those living in that district and hinder effective political organization.

There have been many academic investigations into the effects of redistricting, polarization, political efficacy, and participation. Attempts to untangle possible causality among these factors, however, have not achieved wide consensus. Another difficulty for understanding the informal gerrymander that occurred in SJB is that the scholarship has focused its attention on newly redistricted areas. In contrast, the situation in SJB is the result of an extended process in which almost all Quixaba area residents have voted their entire lives for SJB candidates and have been unaware that their community was even in Campos. One resident, for example, stated that, just as her parents before her, she had been voting in SJB since first registering in 1958. In addition, few scholarly investigations have studied these questions in a context in which voting were a legally binding and enforced requirement, as it is in this case.

Finally, the installation of a very large industrial port complex near Quixaba has created disruptions in the region's socioeconomic and ecological networks. The decision-making process that authorized and managed the implementation of the APIC was a highly political one involving democratically elected officials. Because of the APIC's large requirements for area and resources together with it high potential for producing air, land, and water pollution (Associação dos Geógrafos Brasileiros, 2011; Ecologus, 2011), the environmental justice (EJ) framework provides a useful lens for observing this political process. EJ states that, largely as a result of inadequate political participation and organization, certain disadvantaged social groups have less access to valuable natural resources while bearing a disproportionately large portion of pollution and environmental risks (Bullard & Johnson, 2000).

In order to gain insight into factors affecting the election of public officials in Brazil, we must discuss certain historical and present-day features germane to the Brazilian context. In a landmark study, Faoro (2001) asserts that during the colonial period Portugal transferred to Brazil a pre-existing political and bureaucratic structure promoting the interests of oligarchs and that these mechanisms carried over into the Old Republic, when the Constitution of 1891 established for the first time some important but rudimentary democratic procedures. One important feature of this period was the use of powerful rural landowners called coroneis (colonels) who distributed favors and physical threats in areas under their control, known as currais eletorais, in exchange for political influence and votes, a practice made more effective by the open nature the period's electoral laws, which failed to protect the secrecy of votes. This system of vote manipulation is known as the cabresto vote, a term still in use today.

However, even after the important institutional changes that took place in 1928 and the establishment of a full democratic rule of law by the Constitution of 1988, Barreira (1999)attributed modern-day electoral abuses to cultural expectations bearing the legacy of Old Republic patterns. Kenny (2002) emphasized the historical roots of political clientelism and authoritarian patronage systems in her investigation into the politics of drought in Northeastern Brazil.

For his part, Ames (1995) identified a strong tendency among successful Brazilian congresspersons to consolidate a local base, often through clientelism, that took precedent over ideological or nationwide concerns. In addition, Ames identified other features of Brazilian political processes consistent with those of the coronel era, including a preponderance of powerful local leaders in rural areas, the extensive use of local political brokers for the distribution of favors, and systematic efforts to limit the entry of political rivals. In addition, the dynamics of Brazil's open-list proportional representation (PR) ballot structure may contribute to coronelismo and cabresto vote practices. Chang (2005) asserts that open-list PR makes use of intra-party competition, which encourages candidates to assemble a "personal [as opposed to a party platform or reputation] vote mobilization mechanism and to attract personal votes by delivering constituency services and personal favors" (p. 720). In addition, the high campaign costs associated with the need to secure personal votes, characteristic of open-list PR, may lead many candidates to engage in corruption, especially in the case of incumbents (Chang, 2005; Hiroi, 2009).

According to Hiroi (2009), candidates may have diverse motives for desiring election to a political position, including programmatic agendas, geographically grounded motivations, political career goals, or the opportunity to seek private gains. While one can only speculate as to the true motivations of any given candidate, some electorates seem more conducive to corrupt practices resulting from a personal gain motive. One study of electoral rules in eighty countries, for example, found that because they tend to reduce the entry of other candidates, there is a strong correlation between smaller voting districts and corruption. According to Tullock (1959), the reciprocal trading of votes known as "logrolling" occurs only in representative assemblies and very small direct democracy electorates in which politicians can monitor the deals made. Ames (1995) performed extensive analysis of the cost-benefit calculations undertaken by Brazilian politicians before deciding whether to target certain areas. He cites bailiwick factors that help minimize the cost of vote mobilization such as entry-barriers against other candidates and vote brokers, small and highly integrated communities, the potential for geographically separable benefits, and areas that lack economic opportunity, have common politicized identities or grievances, occupational groups, and community identification.

Pork barrel politics, i.e. the tendency or attempt to direct public spending for local constituencies, is widespread in many political systems worldwide, and many authors believe pork barrel practices can influence electoral outcomes (Bickers, Evans, Stein, & Wrinkle, 2007; Mayhew, 1974). In a study comparing broad policy messages with clientelist messages used by presidential candidates in Benin, Wantchekon (2003) found significant political payoffs for those promising pork. In a study of 14 countries, Manzetti and Wilson (2007) found that the distribution of government resources in clientelistic contexts promotes the political success of corrupt leaders. Related to the use of public investments as a way to garner votes, many politicians in Brazil make illegal direct cash payments to voters, also a holdout from the Old Republic era when votes were considered "exchange goods" (Barreira, 1999, p. 38). This practice is widespread. There are estimates that 8.3 million Brazilians, or 8% of voters in the country, received offers of vote buying in 2006 (Abramo, 2007); in another year the percentage of voters may have been 13.9% (Speck, 2003).

Candidates also use many other goods and services as enticements for votes. In one case during the elections of 2016, a city council candidate was accused of moving patients up on a waiting list and performing surgeries in a public hospital in exchange for votes in the city of Rio de Janeiro (Araújo, 2016b). For its part, a pro-democracy citizens group in São Paulo State felt compelled to compose a list of practices that constitute illegal vote buying, including offers ofgroceries, dentures, eyeglasses, shoes, clothes, the expedition of documents, bail payments, cement, sand, bricks and other construction materials, tools, sports club uniforms, balls and nets, medicine, wheelchairs, the payment of bills, coffins and funeral services, ambulance services, PA systems for parties, academic grants, the payment of graduation ceremonies, birthday parties, baptism or wedding celebrations, [and] church pews or steeples (Rede de Controle Social da Administração Pública Municipal, 2016).In the 2016 municipal elections of Magé, Rio de Janeiro, the Regional Electoral Tribunal (TRE) investigated accusations of free wi-fi signals, pizzas, and male impotency drugs that were in violation of Article 299 of the country's Electoral Code (Araújo, 2016a).

Job offers have become another effective method for mobilizing votes. Perhaps because candidates never know what voters who sold their votes will actually do once at the electronic ballot machine, political campaigns pay large groups of people to distribute flyers, hold campaign flags on busy streets, and compile lists of supporters during elections with the tacit or overt promise of a permanent job once they win.

Over half a million people were officially employed in this way in 2016, 94% of whom received payments of less than 3,000 reals (Sanches, Vasconcellos, Lima, & Herdy, 2016). In addition, because of the highly personalized nature of Brazilian politics, many civil servants know that a change of administration could cause them to lose their jobs. For this reason, public workers, their family members, and those seeking such employment compose organized and pre-existing voting blocs whose economic interests compel them to engage in public expressions of support for specific candidates and to vote accordingly.

Finally, despite voters giving relatively low importance to political party affiliation when deciding how to vote, it is important to recognize the high stakes that mayoral contests represent for those parties, even when they involve relatively sparsely-populated municipalities. Political scientists in Brazil have demonstrated that the number of mayoral positions won by a given party in an election directly affects the number of seats obtained in the Chamber of Deputies two years later (Sanches et al., 2016). The number of these seats, then, determines the share of Fundo Público Partidário money the party will receive as well as its allotment of free TV advertising time. Parties can then convert acquired political influence into other forms of political currency, such as powerful municipal and state secretary and federal ministry positions and the chance to insert party members into higher public office positions. Together these features have created a dynamic political cycle. Studies have shown that public expenditures rise dramatically in Brazil during election years (Bittencourt & Hillbrecht, 2003; Nakaguma & Bender, 2006). In addition, Nakaguma and Bender (2010) conducted a study showing a rise in pre-electoral public spending accompanied by a significant post-election drop in expenditures, while concluding that voters generally reward such spending patterns at the ballot machine.

4. Methods

In order to answer the research questions, the first author conducted ethnographic research in Quixaba over the 12-month period that preceded the mayoral and city council elections of October 2, 2016. The researcher observed the daily social interactions of the community and carried out extensive interviews with its members for 1-2 days per week for one year and during the entire month of January 2016. This author was working 'overtly' as a doctoral researcher who openly stated an intention to study possible changes in the community. Qualitative data were registered in a research journal during or immediately after each interaction.

Moreover, a focal group composed of 5 male and 5 female Quixaba residents ranging in age from 34 to 78 years was held on August 5, 2016. The group members answered open-ended questions. The first author was the moderator, an observer was present, and the event was recorded. All procedures were consistent with those recommended by Ressel et tal. (2008).

In addition, the authors made use of secondary documental evidence related to the research questions studied.

5. Results and Discussion

5.1 What's in it for Campos?

The municipality of Camposdos Goytacazes comprises 4,826,696 square kilometers with a population of approximately 480,000. Under Federal Law 9478 of 1997, municipalities with shorelines adjacent to offshore petroleum reserves receive royalty payments and 'special participation' revenues that vary from month to month depending on oil yields and international crude oil prices. These payments represent a significant part of Campos's annual budget. In 2014, for example, these revenues comprised 46.9% of the annual budget of Campos of 2.5 billion reals (just over US $ 1 billion) (Villela, 2015). However, if municipal limits were altered to allow SJB to claim the region surrounding Quixaba, Campos would most likely see a reduction in petroleum royalty payments to reflect a reduced shoreline (Netto & Corrêa, 2011). This is especially true because the curved shape of the São Tomé Cape currently increases the angle of the orthogonal geodesic lines by which Campos's municipal petroleum revenues are calculated (Presidência da República, 1986).

All the residents of Quixaba contacted stated that they have no recollection of candidates or elected officials from the municipality of Campos ever visiting their town, including during the elections of 2016. Field research carried out in the area failed to register evidence of public investments in this region paid for by Campos. Again, residents have no knowledge of such expenditures. Finally, the residents spoken to know of only two residents of Quixaba who chose to vote in the municipality of Campos; all the others voted in SJB. Several factors help explain Campos's indifference to the informal adoption of the Quixaba region by SJB. First, because of the Quixaba region's low income levels, public expenditures would almost certainly surpass tax revenues.

Second, although the region is largely composed of voters with common interests, the low population of less than 3,000 represents a relatively insignificant segment of the electorate considering the vast numbers of voters in the municipality of Campos. Finally, while Campos's mayor has declared her opposition to the formal redrawing of municipal lines (Netto & Corrêa, 2011), there is no evidence that Campos contests the current informal arrangement.

5.2 SJB's Ulterior Motives

SJB, however, with only 458,611 square kilometers, has an area less than one-tenth that of Campos. Therefore, the desire to acquire additional area for SJB may be stronger than Campos's desire to retain it, especially after the APIC took control of 90 square kilometers in a project that has potential to stimulate the economy, but which required the authorization of policy-makers. In addition, SJB voter demographics are quite different from those of Campos. Because the municipality of SJB has a population of just fewer than 40,000, the number of voters in the Quixaba region may represent close to 10% of SJB voters. Although the scholarly literature has not achieved consensus on the effects of gerrymandering, and has often found them to be highly complex (Yoshinaka & Murphy, 2011), over a number of decades SJB office holders made multiple decisions calling for public investments in Quixaba, effectively tacking this region onto SJB in an unofficial gerrymander. Thus, because we agree with Ames (1995) that cost-benefit analyses inform such political choices, it is likely that the sitting mayors and city councilpersons shaping policy perceived the potential for political advantage in doing so.

This perception may be based on the features of the electorate in Quixaba. As mentioned, the town is geographically isolated from the rest of the municipality. The creation of the APIC in 2008 exacerbated this isolation through the removal of thousands of other rural residents who shared many social and economic practices with those of Quixaba and by creating a large geographic barrier separating Quixaba from the municipal center and the north of the municipality, where agriculture, continental fishery, and mat-weaving are either non-existent or much less economically important (Associação dos Geógrafos Brasileiros, 2011).

In addition, with a population slightly over 500, the town's residents have a high degree of social interaction and, because there are only three major extended families in the town, consanguinity. Therefore, residents are easily able to identify "outsiders," thus limiting the entry of other candidates and political brokers and reducing the costs for candidates to harvest votes. As mentioned, there are few economic activities practiced in Quixaba. According to one resident of 43 years of age, "80% of the population here lives from the lake – processing the fish, fishing, collecting cattail, and making mats." The other residents almost all work in small-scale agriculture, local commerce, or services; only about 6 still work at the APIC. Thus, all the residents in Quixaba either directly or indirectly depend on these activities or have family members who do. As we saw, scholars maintain that isolated, integrated social groups sharing common identities and well-defined interests provide ideal conditions for the cabresto vote and corrupt political practices.

This study found evidence of such tactics in Quixaba. One 36-year-old female resident said, "Our community is known like this: The politicians say, 'Forget about them. When it's election time, we'll go there and buy their votes.' It has always been like this! It has never been different." A fisherman of 43 said, "Of every hundred people in Quixaba, 98 sell their votes." Many others openly spoke of money being offered, sought, and accepted in exchange for votes during the first author's ethnographic research in the town. In the months preceding the election of 2016, expectations were high regarding cash payments for votes. Upon hearing the amount offered to voters in a recent election in Campos, a 53-year-old Quixaba woman exclaimed, "60 reals? If a politician here offered me that, I'd laugh in his face! I want at least 500." According to various informants in Quixaba, payments of from 200 to 600 reals, or about half of a minimum monthly salary, were the norm during typical elections. Although residents reported after the election of 2016 that the direct payments that year varied between 200 and 300 reals, one city councilman in Campos had reportedly paid voters 100 reals.

In Quixaba and elsewhere, welfare payments have become an important method for buying and securing political support. In October 2016, for example, the Federal Police arrested municipal officials in Campos, charging political motives for a 150% increase in the number of welfare payment recipients that occurred during the two months preceding the elections (Freitas, 2016). SJB had its own welfare debit card, called "Viver Melhor." Despite the rules requiring proven financial vulnerability in order to receive this benefit, according to some residents in Quixaba, in practice during the early months of 2016 one only needed to declare support for Neco, the incumbent mayoral candidate.

Political promises relating to public resources and investments also represent a form of currency in Quixaba. During the focal group, for example, members were discussing the need to dredge a river overgrown with vegetation. A woman proposed approaching a candidate and saying, "I want this [dredging]. I'll give you my vote but I don't want a thousand, two thousand, or three thousand reals because money won't last. If everyone here did that, some city councilperson would have to become interested." She also said, "This is a period when we're being visited by city councilpersons almost every day. We go 4 years without seeing anyone! Now, two months before the election, every day a councilperson knocks on your door and says, 'What do you want? How much do you want to work for me and how many votes can you get me?'"

5.3 The Perception of Political Inefficacy

The results of this study indicate widespread dissatisfaction regarding the political status quo among the residents of Quixaba. The perception among the populace is that politicians only appear during the election season and that the town is "forgotten" or "abandoned" during the interim years. The residents of Quixaba complain, foremost, of a need to pave the main road, as well as a lack of public water supply system, an athletic court, soccer field, leisure area, post office, vocational courses, and expanded medical care services. For one woman, the lack of recreational and career opportunities in the town may be associated with larger social problems. Speaking about the use of drugs by some of Quixaba's youth, she said, "It's very possible that this is the only route they find. Why? Because they don't have a vocational course. We can't afford to pay for them to study in Campos. Nobody here can. Plus we went 6 or 7 months without a bus to Campos. How can you send your son to a technical course if there's no transportation?" While the group praised the quality of education at the middle school in Quixaba, the woman emphasized the lack of educational opportunities for her generation, stating, "Many of us here didn't study. Was that our choice? No, it wasn't."

The low educational levels of Quixaba residents may factor into the political dynamics of the region. According to the results of two recent studies (Oliveira, 2012; Santos et al., 2016), none of the 171 people interviewed in Quixaba had completed high school and 86% of the population in the area comprising Quixaba did not finish high school. Moreover, only 9 of 171 people surveyed in Quixaba reported a monthly household income of more than two minimum salaries, or approximately US $484 (Santos, Quinto, & Oliveira, 2016).

The suspension of public transportation between Quixaba and Campos in an impasse that lasted for 7 months became emblematic of the "adopted child" status residents say they have acquired. In November of 2015, the private company operating the Campos-Quixaba route changed its bus destination signs from "Quixaba" to "Marrecas" and began using the bridge over the Rio Doce River, 5 kilometers from Quixaba, as the final stop before returning to Campos. Company employees alleged that buses would no longer provide service to the town because "Quixaba is in São João da Barra." A month later citizens of Quixaba burned tires on the Rio Doce Bridge in protest, blocking a bus's return to Campos. Local newspaper headlines incorrectly reported the location of the protest as "São João da Barra," stating in the text that the bridge where it had occurred "is located on the municipal limits between the municipality [SJB] and Campos" (G1 Norte Fluminense, 2015). The incorrect location of the protest was also reported in other newspapers (Jornal Terceira Via, 2015; Notícia Urbana, 2015), with only one making reference to the territorial "adoption" which has occurred in the region and its connection to the dispute (Parahybano, 2015). Although photographic evidence proved that the Municipal Institute of Transit and Transport (IMTT) of Campos had formally notified the company of the illegality of its actions on December 8, 2015 (M. Pedlowski, 2016), only after residents submitted a petition with 400 signatures and official maps settling the question of territorial status did the company finally agree to restore service, in late May of 2016.

Quixaba residents feel that their uncertain status hurts them in other ways as well. One leader of the Association of Fishers and Residents of Quixaba said that the SJB municipality had agreed to allocate 2 million reals for the dredging of a river that would allow needed freshwater to enter the watershed, but that they couldn't do so because much of the area was in Campos. Residents also claimed to have heard on various occasions that law or convention prevented the municipality of SJB from making improvements such as asphalting the road in Quixaba because it belonged to Campos. As a 55-year-old woman said, "They're always pushing the responsibility to the other side. They don't do it because it belongs to Campos." Community grievances include several proven and potential ecosystem alterations in the area which most residents associate with the creation of the APIC. Seawater was used to transport and deposit 44 million cubic meters of sand in the construction area of the APIC (Ecologus, 2011), while the excavation of the TX 2 terminal, a 3.5 km navigation canal allowing the inland mooring of large ocean-going ships, further displaced very large quantities of earth and sand.

In 2012 scientists discovered elevated salt levels in the region's hydric resources, leading the Rio de Janeiro State Environmental Secretariat to impose a fine of 1.3 million reals on the APIC's corporate controller (Hoffmann, 2013) and the Federal Public Ministry to demand the interruption of the APIC's construction (G1 Norte Fluminense, 2013). Residents contacted in this study stated that crop yields began to diminish after the construction of the APIC and that increased salt levels in the region's lakes has reduced the geographic distribution of cattail and fish.

Moreover, soon after the construction of the TX 1 terminal, a 3 km pier, and the TX 2 inlet breakwaters of the APIC, accelerated erosion occurred on the downstream side of the barriers, while accelerated deposition occurred before the breakwaters interrupted long shore drift. The resulting beach width reduction, consistent with the effects of terminal groin construction put forth in Goudie (1990), has caused negative impact to tourism and led to the destruction of buildings and an asphalted street in the town of Açu. Because this erosive process has taken place within only 200 meters of the beach barrier protecting the Açu Lake lagoon-type estuary, residents are concerned as to the future of the entire Açu Lake ecosystem. Those interviewed confirm a past seasonal process described by Lamego (2007) and Soffiati (2009) in which large quantities of freshwater entered this ecosystem, causing a breach of the beach spit every rainy season, followed by its restoration due to ocean wave action during the dry months. According to those with extensive local ecological knowledge of this estuary, this seasonal opening of the barrier beach was important for its overall health. However, residents report that because insufficient freshwater has flowed into the estuary, the last shoal opening occurred in 2011.

Finally, as a compensatory measure stipulated during concession of its environmental license (Associação dos Geógrafos Brasileiros, 2011), the corporate controller of the APIC, the EBX holding company, agreed to fund the March 2012 creation of the Açu Lake State Park (PELAG), an 8,251 ha conservation unit comprising all of the fishing areas used by Quixaba residents. According to an officer of the Rio de Janeiro State Environmental Institute (INEA), which manages the area, a one-time-only issuance of permits needed for fishery and the harvesting of cattails will gradually curtail those activities. In addition, the state plans to use eminent domain laws to acquire a 100-meter buffer area around the park's lakes and rivers. Therefore, although most residents remain unaware of the state park's existence, some have begun to question whose interests its creation has served, seeing a parallel between the measure and the forced removal of thousands of small-scale farmers in 2011 (Associação dos Geógrafos Brasileiros, 2011).

Together these factors have had a negative impact on the livelihood of Quixaba residents. "Three years from now we won't be able to fish here," predicted a 47-year-old fisherman, a view shared by most at the focal group. Fishers report that many fish species have disappeared from the estuary and that those still present are smaller in size and quantity. "There used to be tilapia and discus," said one. According to a retired fisherman, in the past the estuary was also plentiful in bass (robalo), trahira (traíra), jumbiá, several kinds of shrimp, blue crab (siri), ducks, caimans, guinea pigs, and capybara. "The only fish we get anymore are catfish," said another.

Because of this, in 2011 at least 12 fishermen from Quixaba began commuting 100 km daily to fish in the Imboassica Lake in the municipality of Macaé. They continue to do so despite the conflicts that have arisen with Macaé fishers and the apprehension of equipment and the levying of fines by Macaé's municipal environmental authorities. "We lost two boats and 60 nets in one day," said one. Many in Quixaba avoid buying and consuming fish "from Macaé" because of the presence of raw sewage in the Imboassica Lake, an aversion that increased when a Quixaba fisherman discovered a partially-decomposed human body there in 2015. "But today if we only fished in Quixaba, we'd go hungry," a 47-year-old said, adding, "We have families to support." People report that the water table on which all Quixaba residents are directly dependent for their domestic needs is lower than in the past. "Before, you drilled down 3 meters and the pump would pull water. Now you have to go down 7, 8, 9 meters," said one man. "The way things are, in about a year, saltwater is going to show up here. Then it'll all be over, it will kill," said another. "What can you do with saltwater? Quixaba won't exist anymore," agreed a third. Residents complain that people have selectively burned cattail groves in order to hunt animals, but relate this activity to water shortage. "Cattail only burns because there's no water!" said one man.

Compounding residents' frustration is the perception that many of the problems registered are reversible. They argue that the INEA could use the floodgates in the extensive system of artificial canals and dikes regulating the Açu Lake drainage basin to divert more water into the estuary. "They just let the water go to the sea," said one woman, referring to the use of the Canal das Flechas and floodgates at Barra do Furado, whose construction effectively transformed the Açu estuary from a mountain-fed river into a lake.

While the creation of these waterworks did partially compensate the estuary by allowing water to flow in from the Paraíba River, in recent years this process has slowed due to sedimentation and water hyacinth proliferation. "You have to clear the canals. If you do that, water will come," said a 78-year-old woman. A fisherman of 47 agreed, "[If] you send good water in the Canal das Flechas our way, [and] you open the shoal, it will clean the river." The first author spoke to many residents who remember positive effects on the ecosystem from past canal dredging interventions. Almost everyone in Quixaba agrees that the region's most immediate environmental problem is a lack of freshwater.

Thus, the community finds itself within a complex territorial mosaic affected by decisions involving federal, state, and municipal actors. While residents have been able to participate in the political process of SJB, the municipality ultimately responsible for the management of the APIC, they question why they have received none of the compensatory measures planned for affected citizens of the municipality, such as an expensive fish processing facility, technical support for farmers, and free dental care, vocational courses, and computer labs (Prumo, 2013).

Residents say that the APIC "brought no benefit at all, only destruction. Before there were thick forests and a lake," said one man, referring to Iquipari Lake. Because the company controlling the APIC has closed public access to that lake, many believe that APIC's activities have contaminated it, citing rumors that it no longer has fish or other fauna. "They promised jobs only for the community. Now the only ones with jobs are people who moved here…We don't have any."Former employees of companies with operations at the APIC report that all job openings currently require a high school diploma, thus excluding virtually all Quixaba residents from employment opportunities.

These conditions may help explain the low perception of political efficacy registered in the town. Eight of the ten members in the focal group said they would "prefer to be a part of Campos," and not SJB. In addition, in a move that may signal both frustration with and the ability to influence "the system," in interviews many Quixaba residents expressed considerable dissatisfaction regarding the performance of the two incumbent SJB city councilmen who live in Quixaba and failed to vote for their re-election on October 2, 2016. Finally, while no one voiced this opinion, frustration with SJB may be related to the fact that it is the municipality that receives higher petroleum payments per capita than any other in Brazil, totaling 12,000 reals (approximately US $ 5,000) per person in 2014 (Villela, 2015).

6. Conclusion

The results of this investigation indicate that the current informal gerrymander allows the municipality of Campos dos Goytacazes to retain important petroleum royalty revenues without obligation to make public expenditures in the study area. Although the region's geographic isolation, small population, high degree of social cohesion, and limited economic opportunities offer ideal conditions for political advantage, there are no recent records of Campos lawmakers visiting the area or proposing policy for it, probably due to the relatively low number of voters there compared with the overall population of Campos.

In SJB, however, the electorate in the Quixaba region could represent close to 10% of total SJB voters, making it a politically important constituency. In addition, the social, geographic, and economic conditions of this electorate, along with the Brazil's open-list PR ballot system, are highly consistent with those cited in the academic literature as conducive to political manipulation. These facts, together with ongoing and widespread reports of electoral abuse, such as varied forms of vote-buying and brokering, systematic rumor mongering, and illegal election-day voter transport, can help explain SJB lawmakers' continued interest and investment in the region.

Finally, even though lawmakers in both Campos and SJB may be content with the status quo, Quixaba residents voice frustration with their "adopted child" status. The situation has caused them to go to great lengths to claim rights territorially guaranteed of them, in the case of Campos, while their elected political representatives in SJB allege that municipal lines limit favorable courses of action. Because they hold real votes that could define an election while residing in a region whose location precludes expensive infrastructural improvements and measures designed to mitigate effects of the APIC, Quixaba residents are reduced to selling their votes once every four years, a situation that contributes toward a low perception of political efficacy.

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