

# MASS RESETTLEMENT AND POLITICAL VIOLENCE

## Evidence From Rwanda

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### INTRODUCTION

IN the decades following Rwandan independence in 1962, the Rwandan state resettled some 450,000 persons to new farms called *paysan-nats*. This case of mass rural-to-rural migration is anomalous insofar as it contrasts with the rural-to-urban migration typical of developing countries, and cannot be explained by the movement of farmers to less densely populated areas of Rwanda.<sup>1</sup> More notoriously, postindependence Rwanda is also an anomalous case of mass political violence. In the weeks following the assassination of President Juvénal Habyarimana on April 6, 1994, approximately 600,000 members of the Tutsi ethnic minority were killed in genocidal violence.<sup>2</sup> Although the violence was organized and encouraged by the Rwandan state, the killings were perpetrated in large part by ordinary Hutus at close range.<sup>3</sup>

In this article, I contend that Rwanda's rural resettlement program and subsequent patterns of political violence are connected and generalizable phenomena. I theorize that when facing a military threat, mass resettlement is a tool that states can use to extend control over contested frontiers. An influx of new settlers can effectively secure a border against external incursions, change the demographic "facts on the

\* The author would like to acknowledge the valuable comments and data provided by Michael Albertus, Catherine Boone, Gary Cox, David Laitin, Scott Newman, Jonathan Rodden, Aliya Saperstein, Marijke Verpoorten, Jeremy Weinstein, and David Yanagizawa-Drott; conference participants at UCLA COMPASS; and the Migration, Ethnicity, Race, and Nation and Comparative Politics seminars at Stanford University. The author would also like to thank the three anonymous reviewers and the editors of *World Politics* for their incisive and constructive comments that much improved the paper.

Replication materials are available at McNamee 2018a.

<sup>1</sup> Cambrezy 1984.

<sup>2</sup> Two hundred thousand Hutus were also reportedly killed in reprisals by Tutsi militias and the victorious Rwandan Patriotic Front (RPF), although estimates differ more sharply. Lemarchand 1998; Davenport and Stam 2007.

<sup>3</sup> Mamdani 2001.

*World Politics* 70, no. 4 (October 2018), 595–644

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doi: 10.1017/S0043887118000138

ground,” and create a client landholding class dependent on the incumbent regime. Landed settlers, newly endowed with possession of an immobile asset by the state, are then invested in the political survival of the regime as long as their land allocation remains insecure and subject to political contestation. When a state-sponsored land allocation is contested by an external or nonstate actor and states seek to mobilize violence against out-group members ostensibly supporting that actor, we should correspondingly expect that settlers will disproportionately elect to participate in costly violence against the out-group.

I use this theory to make sense of otherwise puzzling variation in the incidence of the *paysannat* resettlement scheme in Rwanda and mass Hutu participation in violence in 1994. The prevailing understanding of rural resettlement schemes in the Global South, whether the *paysannat* scheme in Rwanda, the transmigration scheme in Indonesia, or state-sponsored Sinhala resettlement in Sri Lanka, tends to be that such policies are designed to correct imbalances in population pressure and land scarcity.<sup>4</sup> This article proposes and substantiates an alternative theoretical rationale: that resettlement can be used to extend a state's control over a contested area. In this respect, the Rwandan state faced a persistent and existential threat from armed Tutsi groups who attacked Rwanda periodically from 1961 to 1971. Compiling new quantitative evidence on the incidence of state-sponsored resettlement and adjudicating between different theorized predictors, I show that the Rwandan state targeted the resettlement of Hutus not at less densely populated areas, but rather at frontier and Tutsi-dominated areas. As such, this article provides evidence that mass resettlement was a tool used by the Rwandan state not to correct imbalances in population, but to defend itself against an external threat.

The study demonstrates how the incidence of resettlement can help us understand the significant spatial variation in participation in state-sponsored violence in Rwanda in 1994. In so doing, it substantiates the theorized link between geopolitical insecurity and land insecurity. Genocide is often driven by regimes seeking to purge their territories of “fifth column” minorities ostensibly supporting a hostile external power.<sup>5</sup> In this vein, leading scholars have contended that the insecurity wrought by the invasion of the Tutsi-dominated Rwandan Patriotic Front (RPF) in the early 1990s was the key motivation for Hutu participation in the Rwandan genocide, as violence was directed against

<sup>4</sup> E.g., Prioul 1981; Fearon and Laitin 2011; Bazzi et al. 2016.

<sup>5</sup> Mylonas 2012.

perceived Tutsi collaborators with the RPF.<sup>6</sup> Yet despite facing a shared threat of regime change from the RPF, ordinary Hutus had incentives to shirk costly participation in violence—it is far from the case that all Hutus participated in the genocide. To understand variation in participation in the genocide, we need to better understand why individuals in some localities had more to lose from the adverse regime change posed by the RPF than did others.

Consistent with the general theory, I contend that it is necessary to appreciate how the *conjunction* of an external threat and land insecurity produced political violence in some localities of Rwanda. A conflict in which a state-sponsored land allocation is contested by an external or nonstate actor raises the personal stakes of a wider conflict for settlers, and can incentivize reactionary violence against an out-group.<sup>7</sup> In this sense, in the lead-up to the Rwandan genocide, the land rights in resettled localities were explicitly contested by the RPF, which sought to repatriate former Tutsi landholders to their “lost” homelands now settled with new migrants. The fear of large-scale expropriation by the RPF created a situation of great political and economic uncertainty that the Rwandan state then exploited in mobilizing the settler peasantry toward violence in 1994.<sup>8</sup> Given the conjunction of the personal and political stakes of the civil war against the RPF, we should correspondingly expect that Hutu participation in violence against Tutsis was significantly greater in resettled localities.<sup>9</sup>

This article substantiates this hypothesis using highly disaggregated data on Hutu participation in the genocide measured through the number of prosecutions for participation in it in each locality after the genocide.<sup>10</sup> Exploiting the geographic boundaries of the paysannat scheme and employing a geographic regression discontinuity design (RDD) to gain identification, I show that mass violence was indeed greater in resettled localities and that approximately 10 percent of all prosecutions in Rwanda can be attributed to the paysannat scheme. This result is robust to the inclusion of a battery of potentially important controls and to conducting a number of checks for confounders. A qualitative process tracing of the Rusumo commune is then shown to support the hypothesized causal sequence connecting Tutsi militia threat, mass resettlement, and settler violence in 1994.

By offering a novel framework for understanding the connection be-

<sup>6</sup> Straus 2006; Fujii 2009; McDoom 2012; Guichaoua 2017.

<sup>7</sup> Boone 2014.

<sup>8</sup> Des Forges 1999.

<sup>9</sup> Boone 2014.

<sup>10</sup> Yanagizawa-Drott 2014.

tween political conflict and mass resettlement, my research makes two key interventions in the broader comparative literature. First, it refocuses attention on the external determinants of domestic ethnic demography. This article is the first to use subnational evidence to test competing predictors of mass resettlement and finds that the Rwandan state radically reshaped the demography of frontier and formerly Tutsi-dominated areas in response to the threat posed by external Tutsi militias. Moreover, the evidence I present supports the view that the killing of Rwandan Tutsis in 1994 was shaped by the RPF invasion.<sup>11</sup> Hence, Rwandan ethnic demography is shown to have been historically highly patterned by international conflict. Yet the quantitative study of demography and conflict in general and in sub-Saharan Africa in particular tends to treat ethnic demography as static and implicitly exogenous to conflict.<sup>12</sup> The theory and results of this article therefore suggest the need to more closely attend to and model the dialectical relationship linking international conflict and ethnic demography.

Second, the results indicate that the large literature suggesting that wealthier individuals are less likely to participate in violence due to fewer grievances or higher opportunity costs should be revised to take into account the material stakes of political conflict.<sup>13</sup> This article builds on existing work to provide the first well-identified evidence linking state-sponsored resettlement and reactionary violence when settler land rights are politically contested. To understand participation in state-sponsored—as opposed to revolutionary—violence, I contend that it is key to attend to the threat posed by regime change to individual livelihoods. In essence, the findings suggest that the widespread nature of participation in violence in resettled localities of Rwanda in 1994 should be considered an instance of a broader and generalizable phenomenon: reactionary violence committed by materially insecure individuals facing an adverse regime change.

The article is structured as follows: first, the puzzle of mass resettlement and participation in the Rwandan genocide is framed in light of prior literature; second, a theory connecting geopolitical threat, mass resettlement, and reactionary violence is outlined; third, the Rwanda section provides historical context; fourth, the empirics section details the data and results regarding both the incidence of the *paysannat* scheme and its effects on subsequent state-sponsored violence; fifth, a

<sup>11</sup> Straus 2006; Fujii 2009; McDoom 2014.

<sup>12</sup> E.g., Toft 2003; Weidmann 2009; Cederman, Girardin and Gleditsch 2009; Michalopoulos and Papaioannou 2013; Reynal-Querol and Besley 2014.

<sup>13</sup> E.g., Collier and Hoeffler 2004; Humphreys and Weinstein 2008; Blattman and Miguel 2010; Dube and Vargas 2013; Dasgupta, Gawande, and Kapur 2017.

brief process tracing of the Rusumo commune supports the hypothesized causal sequence; and last, the conclusion draws out the broader comparative implications of these findings for our understanding of the relationship between geopolitics, demography, and political violence.

### THE PUZZLE OF RESETTLEMENT AND VIOLENCE IN RWANDA

First-generation theories of the Rwandan genocide typically either conceptualized it as an instance of an ethnic security dilemma<sup>14</sup> engendered by state collapse<sup>15</sup> or as a culmination of meticulous planning by a genocidal state.<sup>16</sup> But these theoretical perspectives struggle to account for the fact that Rwandan state did not collapse during the genocide and that the vast bulk of the violence was not committed or organized by state-trained militias, but by ordinary Rwandans.<sup>17</sup>

To understand the logic of mass violence against Tutsis, there is growing consensus among scholars that the dynamics of the 1990–1994 civil war between the Rwandan state and the Tutsi-backed RPF must be better understood.<sup>18</sup> Scott Straus's interviews with perpetrators demonstrate that many saw participation in the killings and participation in the broader war against the RPF as inseparable—Tutsis were viewed as accomplices of the RPF and were blamed for Habyarimana's assassination.<sup>19</sup> Fear of the RPF rather than ethnic hatred of Tutsis constitutes the primarily cited motivation by perpetrators for their participation in the genocide.<sup>20</sup> Insecurity wrought by the rise of the RPF motivated widespread reactionary political violence against an ostensible Tutsi fifth column that was designed to shore up the Rwandan state.<sup>21</sup> Straus predicts that for Hutus, "the greater the perception of insecurity, the greater the intensity of violence"<sup>22</sup> against Tutsis.<sup>23</sup> In other words, we should expect mass participation to be greatest in localities in which individuals had the most to lose from an adverse regime change. But scholars have

<sup>14</sup> Posen, 1993.

<sup>15</sup> E.g., Diamond 2005; Rose 2000.

<sup>16</sup> E.g., Gourevitch 1998; Power 2002.

<sup>17</sup> Longman 2004; Straus 2008.

<sup>18</sup> E.g., Kuperman 2003; Mann 2005; Straus 2006; Fujii 2009; McDoom 2012; Guichaoua 2017.

<sup>19</sup> Straus 2006.

<sup>20</sup> Fujii 2009; Straus 2006; McDoom 2012 argues that this fear operated through three distinct causal mechanisms: ethnic boundary activation, out-group negativity toward Tutsis as a group, and out-group homogenization of Tutsis as a whole.

<sup>21</sup> As Guichaoua 2017, 211, puts it, the "primary objective [of the genocide] was to exterminate the potential political base for the RPF and its allies."

<sup>22</sup> Straus 2006, 199.

<sup>23</sup> An increase in fear provides one way of understanding the relationship between the incidence of RTLM radio reception and participation in the genocide (Yanagizawa-Drott 2014), as state propaganda overwhelmingly focused on warning of the consequences of an RPF victory.

not yet managed to credibly bridge the micro- and mesolevels of analysis and empirically show that variation in attachment to the revolutionary regime can account for spatial variation in genocidal violence.

While the threat of the RPF may have generally motivated Hutu violence against Tutsis inside Rwanda, local political dynamics were often critical in determining the extent of the violence that ensued.<sup>24</sup> In particular, it is necessary to appreciate how the threat of regime change was accentuated by land insecurity. It has long been hypothesized that conflict over land exacerbated violence during the genocide.<sup>25</sup> Immediately prior to 1994, Rwanda was characterized by a rapidly growing rural population, falling agricultural productivity, and rising land inequality.<sup>26</sup> Furthermore, during the genocide, a number of local leaders sought to incentivize Hutu participation by promising the lands of killed Tutsis to participants.<sup>27</sup> But systematic evidence in support of the importance of land scarcity in the genocide has proven mixed. Although more densely populated areas did tend to experience more violence,<sup>28</sup> pre-genocide population growth tends not to be significantly associated with violence on average,<sup>29</sup> and only 5.2 percent of perpetrators in Straus's interview sample nominated material gain as a motivating factor for participation.<sup>30</sup> Separate surveys also suggest that it was not the poorest or landless Hutus who disproportionately participated in the violence; these surveys show that landed elites—those whom Marijke Verpoorten suggests plausibly feared losing their privileged status in the wake of an RPF victory—appear to have played a particularly important role in the genocide.<sup>31</sup> In this vein, Catherine Boone argues that Hutus possessing state-sponsored land in Rwanda were particularly threatened by the RPF and disproportionately participated in violence.<sup>32</sup> But scholars have not yet used disaggregated data to test whether participation in violence was indeed greater in areas where Hutus faced land insecurity from the RPF.

In a more general sense, local land tenure arrangements and demography should be viewed not as fixed, but as endogenous products of

<sup>24</sup> For example, local officials often had significant autonomy in deciding how to respond to the “script” of violence from above (Fujii 2009), and so variation in the political orientation of local leadership can explain part of the variation in genocidal violence. Straus 2006; McDoom 2014.

<sup>25</sup> Prunier 1995; André and Platteau 1998; Des Forges 1999; Verpoorten 2012; Boone 2014.

<sup>26</sup> André and Platteau 1998.

<sup>27</sup> Des Forges 1999.

<sup>28</sup> Verpoorten 2012.

<sup>29</sup> Verpoorten 2012.

<sup>30</sup> Straus 2006.

<sup>31</sup> André and Platteau 1998; Verwimp 2005; Verpoorten 2012.

<sup>32</sup> Boone 2014.

state policy. Rwanda's policy of mass rural resettlement in the late twentieth century substantially changed the land rights and demography of targeted areas. Scholars have largely taken at face value the officially stated rationale that Rwanda's mass resettlement programs were designed to correct imbalances in population density.<sup>33</sup> But when turning to the data, historical migration in Rwanda does not tend to mechanically follow variation in population density.<sup>34</sup> As Luc Cambrezy concludes after a comprehensive quantitative study of population density and internal migration in late twentieth-century Rwanda, "density and immigration appear to be two separate variables, resulting from a distinct logic."<sup>35</sup>

As such, the literature presents us with two seemingly distinct, but interrelated puzzles: Why did the Rwandan state foster mass rural-to-rural resettlement in its post-independence period, and why did the extent of reactionary violence differ so greatly across the country in 1994? This article seeks to connect and jointly make sense of these questions by theorizing the geopolitical logic and consequences of mass resettlement. The RPF was not the first external challenge presented to the Rwandan state—the Hutu-dominated Rwandan regime faced persistent and often existential threats from armed Tutsi groups that attacked periodically between 1961 and 1971. Less is known about the ways in which the Rwandan state sought to secure its frontier against the threat posed by external Tutsi militias by providing land on its frontier to Hutu settlers, and how the threat posed by the RPF to the newly landed Hutu population can help us understand spatial variation in participation in the 1994 genocide. It is toward a theoretical discussion of such resettlement policies that I now turn.

### A THEORY OF MASS RESETTLEMENT

How do states extend control over contested frontiers? One way is to foster the mass resettlement of individuals from the core of the state to a contested area.<sup>36</sup> For example, the Roman Empire granted the lands of defeated enemies on the Roman frontier to former legionnaires to provide an effective line of defense against barbarian incursions, the English provided land formerly held by Catholic lords to tens of thousands of Protestant settlers in Ulster to secure the north of Ireland against

<sup>33</sup> Prioul 1981; Bart 1993; Olson 1990.

<sup>34</sup> Cambrezy 1984.

<sup>35</sup> Cambrezy 1984, 177–78.

<sup>36</sup> McNamee and Zhang 2018.

Catholic Spain beginning in the sixteenth century, and in America, colonial Georgia granted land to any settlers from England to more effectively secure the frontier against the Native Americans—a phenomenon repeated in various forms throughout the nineteenth-century American West.<sup>37</sup> More recently, the Israeli government has provided significant financial incentives for Jewish settlers to move to parts of its occupied territories and, as will be discussed and analyzed in greater detail below, the Hutu-dominated Rwandan government after 1959 resettled some 450,000 peasants (approximately one-tenth of its population in 1975) to land that had been largely controlled by Tutsi landlords who had been expelled after the Rwandan Revolution of 1959–1962.<sup>38</sup>

Why, in attempting to expand or secure their territorial remit, do states simply not try to garner the loyalty of existing populations in frontier areas? The answer is that ethnic minorities in frontier areas are often coethnics with those in a hostile external power, and their loyalty to the state is suspect.<sup>39</sup> For example, Catholics in Ireland were tainted by association with Catholic Spain in the eyes of the English, given that the defining geopolitical cleavage in sixteenth-century Europe was between Catholic and Protestant powers. Similarly, the Russians in Xinjiang were not trusted to remain loyal to the Chinese state given their ties to coethnics in the USSR and so, after the Sino-Soviet split in 1959, the Chinese state resettled Han Chinese to Russian areas of Xinjiang.<sup>40</sup> I argue that after the Rwandan Revolution, Tutsis were regarded with suspicion by the Rwandan state (given their potential ties to external Tutsi militias), so the Hutu-dominated Rwandan state used resettlement of Hutus as a means of extending its control over Tutsi-dominated areas in central and eastern Rwanda.<sup>41</sup>

Why would the allocation of land alter the political behavior of the settler population? Specifically, why wouldn't new settlers simply free ride or shirk on any costly obligations to the regime that granted them such land in the first place?<sup>42</sup> All else equal, individuals have incentives to free ride and, in the event of a call to war as in Rwanda in 1994, to

<sup>37</sup> For example, to secure the American frontier, the 1861 United States Homestead Act provided for any adult citizen to secure the rights to 160 acres of unclaimed public land if the citizen built a house, a well, and lived on the unclaimed land for five years (Frymer 2014).

<sup>38</sup> Bart 1993; Verwimp 2013.

<sup>39</sup> Mylonas 2012.

<sup>40</sup> McNamee and Zhang 2018.

<sup>41</sup> The creation of a client landholding class between the 1960s and 1980s to shore up control against external Tutsi militias should be distinguished from the planning of an eventual genocide. The Rwandan state only became genocidal after an elite struggle in the days after the death of President Habyarimana; Guichaoua 2017.

<sup>42</sup> Frymer 2014; Lustick 2015.

avoid paying the cost of mobilizing in defense of the state. Moreover, wealthy individuals may be less likely to mobilize due to the higher opportunity costs of fighting.<sup>43</sup>

Yet wealth can also incentivize participation in state-sponsored violence when an individual's future wealth depends upon the preservation of an incumbent regime. As land is an immobile asset, its distribution can be radically altered by conflict in a manner akin to the distribution of government office, but distinct from other assets. Indeed, the desire to regain lost land and expel "illegitimate" settlers has historically proven a central goal for revanchist forces in civil conflicts.<sup>44</sup> The fear of mass expropriation in the event of an adverse regime change creates a settler "siege mentality"<sup>45</sup>—a sense of vulnerability to the political winds—that can incentivize reactionary political violence by raising the personal stakes of a wider conflict. One key situation in which settlers will disproportionately engage in costly reactionary political activities is when a state-sponsored land allocation is subject to contestation by an external or nonstate actor and its distribution becomes a function of a wider conflict.<sup>46</sup>

Thus, there is reason to expect a close link between resettlement and reactionary political violence, particularly in the context of a conflict with a revanchist actor, as in Rwanda in 1994. The state-sponsored component of mass resettlement provides explicit political linkage between an incumbent regime and the new settler community that is distinct from customary or more long-standing landholders.<sup>47</sup> Moreover, a conflict in which the settlers' land rights are contested by a nonstate actor provides ample opportunities for political leaders to persuasively frame upcoming junctures as threats to the land security of those settlers and to incentivize reactionary violence.<sup>48</sup> For example, facing demands of restitution of property by refugees and indigenous insurgents, colonial settlers whose property rights are highly politically contested in places such as the Israeli-occupied territories, Algeria, Northern Ireland, or South Africa have historically proven more uncompromising,

<sup>43</sup> E.g., Collier and Hoeffler 2004; Blattman and Miguel 2010; Dasgupta, Gawande, and Kapur 2017.

<sup>44</sup> Malkki 1992.

<sup>45</sup> Mitchell 2000.

<sup>46</sup> For this mechanism to operate, it is only necessary that the distribution of assets is plausibly a function of the outcome of the conflict. For example, Hall, Huff, and Kuriwaki 2018 find that Confederate slaveowners disproportionately participated in the American Civil War; they argue that this is because the slaveholders' assets were directly a function of the outcome of the conflict.

<sup>47</sup> Boone 2014.

<sup>48</sup> Indeed, when political leaders are able to persuasively frame upcoming elections as threats to the land security of their supporters, they can effectively organize preemptive electoral violence against out-group members. Klaus and Mitchell 2015.

violent, and politically active in supporting the existing regime and in forestalling political change.<sup>49</sup> In the context of an ongoing conflict, the presence of a visible threat to settler livelihoods is a key factor that can overcome the incentives to free ride and motivate settlers to engage in reactionary violence against out-group members to shore up a political regime.<sup>50</sup>

The logic of mass resettlement and reactionary settler violence can help to explain why the Rwandan state sought to foster mass rural resettlement and why the extent of violence differed so dramatically across the country in 1994. In particular, I theorize that (1) the Rwandan state resettled its formerly Tutsi-dominated and frontier areas to shore up control against external Tutsi militias, and that (2) genocidal violence was more intense in these areas of postindependence resettlement. As I argue in the discussion of the Rwandan context below, a key reason why Rwandan settlers were more likely to participate in state-sponsored political violence in the 1990s is because these settlers were particularly threatened by the potential political changes wrought by the RPF.

#### RWANDAN CONTEXT

This section provides historical context for understanding the posited theoretical relationship linking geopolitical threat, mass resettlement, and spatial variation in violence in Rwanda. Rwanda is a densely populated country in central Africa; approximately 85 percent of its people are classified as Hutu, 14 percent are classified as Tutsi, and 1 percent are classified as Twa.<sup>51</sup> The country was not always marred by ethnic violence between Tutsis and Hutus. Regional and lineage-based divisions were more politically salient for much of Rwanda's precolonial history, and precolonial ethnic differences between Tutsis and Hutus largely corresponded to a distinction between cattle-based pastoralists and agriculturalists.<sup>52</sup> In the nineteenth century and after World War I, German and Belgian colonial authorities, respectively, operating with tribal conceptions of African social organization and a need to create a dominant indigenous class as part of indirect rule, hardened ethnic

<sup>49</sup> Lustick 1993; Higginson 2014.

<sup>50</sup> Landholders who were not resettled for geopolitical reasons, but rather for economic or demographic reasons, would likely also disproportionately participate in reactionary violence if leaders could persuasively link land rights and regime survival. But resettlement driven by political conflict plausibly provides more opportunities to compellingly link the outcome of that same conflict and settler land rights, as in the cases of Rwanda, Israel, and Ireland. As such, resettlement driven by political conflict will be more closely associated with political violence than will resettlement for apolitical reasons because the state-sponsored land allocation itself is a function of a wider and unresolved conflict.

<sup>51</sup> Uvin 1998.

<sup>52</sup> Mamdani, 2001; Newbury 1988.

boundaries by classifying all Rwandans as Tutsi, Hutu, or Twa, and by rigidly structuring Rwandan institutions on a basis that privileged an ostensibly Hamitic Tutsi elite.<sup>53</sup>

Between 1959 and 1962, Rwanda experienced a period of prolonged social upheaval during which it transitioned from a Belgian colony primarily staffed by Tutsi elites and led by a Tutsi monarchy to an independent Hutu-dominated republic. In early 1959, Belgian authorities called for elections as a prelude to independence. The resulting political vacuum was quickly filled by a number of parties that took opposing stances on the nature of an independent Rwanda. Of particular note were two predominantly Hutu parties, the Association pour la Promotion Sociale de la Masse (APROSOMA) and Parti du Mouvement de l'Emancipation Hutu (PARMEHUTU), which sought a wholesale destruction of the monarchy and the associated system of Tutsi-dominated chieftaincies.<sup>54</sup> Following an attack on a PARMEHUTU activist in November 1959, Rwanda was wracked with bloody clashes between militant Hutu and Tutsi groups for several months in anticipation of pivotal elections. In the elections called for June/July 1960, the two Hutu parties won in a landslide, capturing approximately 84 percent of seats and effecting a revolutionary shift in power from Tutsi to Hutu.

Importantly, there was striking spatial variation in support for the revolutionary Hutu parties in the 1960 election. In western and northern Rwanda, almost every seat was won by either PARMEHUTU or APROSOMA. But in central and eastern Rwanda, abstention rates were puzzlingly high and support for the Hutu parties was weak despite the areas' similar ethnic demography to the rest of the country, with both parties notably failing to win even a single seat in the Bugesera chieftaincy. Marcel d'Hertefeldt and Catherine Newbury both suggest that the high rates of Hutu abstention and correspondingly low support for the revolutionary parties in central and eastern Rwanda reflect variation in the capacity of Tutsi patrons to coercively direct the votes of their clients.<sup>55</sup> Tutsi pastoralism was most developed in the relatively flat grasslands of central and eastern Rwanda—reaching its zenith in Bugesera<sup>56</sup>—and access to pasturage was tightly controlled by Tutsi elites.<sup>57</sup> Given the greater

<sup>53</sup> Lemarchand 2009; Prunier 1995; Mamdani 2001; Straus 2006.

<sup>54</sup> Lemarchand 1970. APROSOMA initially sought support from poor Tutsis but became increasingly pro-Hutu over time; Newbury 1983.

<sup>55</sup> d'Hertefeldt 1960 and Newbury 1983.

<sup>56</sup> The chieftaincy of Bugesera had the highest number of cattle per one hundred persons in Rwanda in the early 1950s; Gourou 1953.

<sup>57</sup> Although cattle clientship (*ubuhake*) was abolished in the 1950s, which meant that clients retained some rights to ownership over cattle, pasturage was still controlled by Tutsi chiefs until the revolution, which meant that in practice one could not own cattle without submitting to a Tutsi patron (Newbury 1988, 146–47).

coercive capacity of Tutsi elites to punish Hutu clients in pastoral areas, Hutu parties were unable to effectively organize prior to the elections and Tutsis were able to sustain their political hegemony. Nevertheless, the overall success of the Hutu parties in this election heralded the end of Tutsi-dominated chieftain governance, and the associated violence caused 250,000 Tutsis to flee the country, primarily to neighboring Burundi, Tanzania, and Uganda.<sup>58</sup>

In 1962, the newly independent Rwandan Republic was thus a state in which Hutu political consolidation varied strikingly across the country and one that faced an ongoing geopolitical threat in the form of a large, well-resourced exiled Tutsi community on its borders. The large refugee Tutsi communities in Tanzania, Uganda, and Burundi continuously agitated for a return to power.<sup>59</sup> Tutsi armed groups, pejoratively called *inyezi* (cockroaches), launched over ten separate invasions of Rwanda between 1961 and 1971, including a surprise attack from Burundi in 1963 that almost succeeded in capturing the capital, Kigali.<sup>60</sup> These armed groups actively sought to recruit Tutsis inside Rwanda in their efforts to recapture control over the Rwandan state.<sup>61</sup>

Reflecting the logic of mass resettlement as outlined in this article, in response to the threat of invasion and distrust of the threatening power's coethnics, the Rwandan state scaled up an ambitious resettlement program that aimed to consolidate its control by resettling approximately 450,000 people—overwhelmingly Hutu—over the next two decades into frontier areas previously dominated by Tutsi pastoralists. The popular refrain of the settlers at the time was, “We have come to block the route of the *inyezi*,”<sup>62</sup> as vacant Tutsi pastoral lands and forests had proved effective bases for Tutsi fighters. Interpreting this refrain, Victor Silvestre aptly asks, “Who better than these rugged mountaineers [from the west of Rwanda] ... to constitute a bulwark against the invader?”<sup>63</sup> Although the official rationale for the resettlement scheme was that it was designed to correct imbalances in overpopulation and land scarcity, local Tutsi residents could clearly see how the influx of new settlers forestalled illicit cross-border activity. As one resident of Rusumo put it, “By installing individuals along the Akagera,<sup>64</sup> the settlers were used to prevent refugees from returning and to discourage those in Rusumo who would flee.”<sup>65</sup>

<sup>58</sup> Lemarchand 2009.

<sup>59</sup> Mamdani 2001.

<sup>60</sup> Kuperman 2003.

<sup>61</sup> Des Forges 1999.

<sup>62</sup> All translations from French by the author.

<sup>63</sup> Silvestre 1974b, 77.

<sup>64</sup> The river that constitutes the southern boundary of Rusumo with Tanzania.

<sup>65</sup> Group discussion in Nyarutunga, October 28, 2006, Rutazibwa and Rutayisire 2007, 33.

These paysannat resettlement schemes completely changed the demographics of the targeted regions. For example, there were 16,000 inhabitants of Bugesera in 1962; by 1978 the number had grown to 155,000.<sup>66</sup> After Habyarimana took power in a military coup in 1973, the paysannat schemes were expanded over the next five years and relocated approximately 200,000 more Hutus to Mukingo in Ruhengeri, Byumba on the Ugandan border, and various areas in the former Gisaka and easternmost province of Kibungo. Whereas previously Hutu political control had been limited in parts of central and eastern Rwanda and in geopolitically important prefectures on the border with Tanzania, Burundi, and Uganda, by the late 1970s such areas had been comprehensively settled by new migrants integrated into the revolutionary state. Areas of in settlement, such as Rusumo, quickly became new heartlands of regime support.<sup>67</sup>

Individual selection into the settlement program was primarily driven by three factors: ethnicity and region of prior residence, socioeconomic status, and whether an individual had brothers. For clientelistic reasons, the regime disproportionately offered land to Hutus from the west—the regional power base of the government.<sup>68</sup> But the individual decision to take up the offer or not was structured by socioeconomic status or family composition. To receive a moderate two-hectare parcel of land<sup>69</sup> as part of a paysannat, one would have to renounce ownership of all prior landholdings, and so the scheme naturally attracted landless peasants.<sup>70</sup> Moreover, as part of his examination of the resettlement process, Silvestre describes in detail the histories of four different individuals who opted to resettle in the east. A common characteristic that emerges from these biographies is that each settler had a brother and felt that any residual parcel of land that they would inherit in the northwest would be inadequate to sustain a family.<sup>71</sup> We can infer that it is likely that individuals with many brothers tended to be most attracted by state propaganda promising a significant parcel of fertile, unoccupied agricultural land elsewhere in the country.

<sup>66</sup> Spanneut, Sawadogo, and Trincaz 1981.

<sup>67</sup> Although in 1960 resettled areas were far less likely to support Hutu revolutionary parties and more likely to support Tutsi monarchist parties, by the early 1990s, areas with paysannats were significantly more likely to have elected a local government controlled by the Hutu-dominated National Republican Movement on Democracy and Development ( $p < 0.01$ ).

<sup>68</sup> Spanneut, Sawadogo, and Trincaz 1981.

<sup>69</sup> Approximately the size of two athletic fields.

<sup>70</sup> Spanneut, Sawadogo, and Trincaz 1981; Bart 1993.

<sup>71</sup> Silvestre 1974a. Banzi complained that with his brother inheriting part of the land, the portion of his father's plot that he would inherit was "small and unproductive" (p. 123). Kakize stated straightforwardly that with three brothers, his own plot was "insufficient" (p. 126). Maliza left his father's plot to his brother because it was "small and almost barren" (p. 129). Zaneza states that as the youngest of five boys, he opted to relocate "because his own plot may have been too small" (p. 132).

This policy of internal colonialism simultaneously achieved a number of political objectives for the Rwandan government. It not only increased Hutu control over the contested eastern frontier, but also created a client landholding class. Paysannat settlers were obliged to grow export-oriented crops on a certain proportion of their newly demarcated land and to sell the produce to official agricultural bodies at a fixed price below the market rate, which allowed the government to collect hard currency through the state export of subsidized agriculture.<sup>72</sup> Settler compliance was maintained under threat of fines, land confiscation, or denial of credit, and settlers were regularly monitored by government agronomists.<sup>73</sup>

State-sponsored resettlement was also used to make the Tutsi population more dependent on the state. Tutsi pastoralists, such as the Bagogwe of the northwest or the Hima of northern Byumba, were forced to convert their pastoral lands to paysannats and to coexist with a large number of new Hutu settlers. In addition, there are instances in which internally displaced Tutsis and Hutus were relocated to paysannats in Bugesera or Kibungo.<sup>74</sup> Although we lack hard data on the number of displaced Tutsis resettled to paysannat areas, the proportion is likely small. For example, the commune of Ngenda in Bugesera is recorded as receiving a particularly large number of relocated Tutsi refugees after the revolution,<sup>75</sup> but even so, this new community was swamped by the extremely high number of Hutus resettled to the local paysannat. Ngenda had the highest population density growth in Rwanda between 1948 and 1978,<sup>76</sup> receiving ten thousand new settlers in 1970 alone.<sup>77</sup> By 1991, the proportion Tutsi inhabitants was only 2.4 percent—substantially lower than both the country and the surrounding region on average<sup>78</sup>—indicating that the demographic profile of the new settlers was overwhelmingly Hutu. As such, the historical record suggests that under pervasive geopolitical insecurity, mass Hutu resettlement was used by the Rwandan state in the postindependence period to simultaneously shore up its control over its contested frontier

<sup>72</sup> Bart 1993.

<sup>73</sup> Verwimp 2013.

<sup>74</sup> Verwimp 2013 suggests that Tutsi resettlement reflected the ambivalent relationship of the post-revolutionary state to its Tutsi population because “in times of civil war, the Tutsi need not be re-settled, there is no space for them anyway, they can be killed” (p. 137). For example, a number of Tutsi refugees were relocated to Kibungo after clashes in Uganda in 1982, and this community was later targeted for killings by the Rwandan state in the civil war of the early 1990s (ADL 1992, 137).

<sup>75</sup> Havugimana 2009, 34.

<sup>76</sup> Prioul 1981, 77.

<sup>77</sup> Olson 1990, 63.

<sup>78</sup> Davenport and Stam 2007.

and to restructure Rwandan society to become more dependent on the incumbent regime.

The immediacy of the threat of invasion from Tutsi militias died out in the early 1970s,<sup>79</sup> leading to a reduction in internal ethnic violence against Tutsis. Ethnic tensions were particularly low throughout the 1980s as Rwanda experienced a decade of relative peace and prosperity.<sup>80</sup> This politically benign period came to an abrupt end in the early 1990s after the RPF—a well-organized and well-funded military operation based among the Tutsi refugee community in Uganda and led by Paul Kagame, who is currently President of Rwanda—launched a surprise attack from Uganda on October 1, 1990.<sup>81</sup> An explicit purpose of this campaign was to radically restructure the property rights allocated over the previous forty years by resettling the large Tutsi diaspora back onto historically Tutsi land.<sup>82</sup> At the time, the number of Tutsi refugees represented almost 7 percent of Rwanda's population (480,000), and the Rwandan state had consistently refused to countenance their return to their former landholdings on the basis of land scarcity.<sup>83</sup>

The initial drive by the RPF in 1990 was quickly repelled and an ensuing civil war dragged on for the next three years, punctuated by a number of tenuous ceasefires. The most substantive peace agreement was the Arusha Accords signed on August 4, 1993, by the Rwandan government and the RPF. This agreement provided for the return of all Tutsi refugees and guaranteed substantial Tutsi representation in key state institutions, but remained equivocal on the issue of property restitution and resettlement. Reflecting the political sensitivity and fractious nature of negotiations on this issue, the agreement stated, "All refugees shall ... have the right to repossess their property on return. The two parties recommend, however, that to promote social harmony and national reconciliation, refugees who left the country more than 10 years ago should not reclaim their properties, which might have been occupied by other people."<sup>84</sup> It is also clear from an earlier protocol that demands for repatriation and resettlement on the part of Tutsis were focused on historically Tutsi-dominated communes containing extensive *paysannats*,<sup>85</sup> reflecting the revanchist desire among the Tutsi

<sup>79</sup> Jefremovas 2002.

<sup>80</sup> Reyntjens 1994; Mamdani 2001.

<sup>81</sup> Kagame became commander of the RPF army following the death of Fred Rwigyema in the early days of the invasion.

<sup>82</sup> Boone 2014.

<sup>83</sup> Mamdani 2001.

<sup>84</sup> Government of the Republic of Rwanda and Rwanda Patriotic Front 1993, Article 4.

<sup>85</sup> Reyntjens 1994.

refugee population and the RPF to reclaim lost homelands.<sup>86</sup> Thus, the issue of refugee repatriation and restitution of land was an important cause of the sustained failure to reach a peaceful bargain between the Rwandan state and exiled Tutsis between 1961 and 1994.

The fear of large-scale expropriation and reprisal among the resettled Hutu peasantry in the wake of a potential RPF victory provided a powerful tool for the Rwandan government to exploit between 1990 and 1994, and it did so opportunistically. The state mobilized support for the genocide by using its media channels to emphasize the potential threat that the RPF posed to existing social, political, and economic arrangements. As the comprehensive report on the genocide released by Human Rights Watch in 1999 highlights, a core message of the regime's propaganda was, "Should the Tutsi win, they would not just reverse the political changes of the 1959–62 revolution but would also reclaim all the property that had once been theirs, leaving many Hutu destitute."<sup>87</sup> Emphasis was explicitly placed on the potential for a wholesale reversal of the gains of the 1959 Hutu revolution and the potential reintroduction of feudalistic Tutsi-Hutu relations dominated by large-scale Tutsi pastoralists.<sup>88</sup>

As theorized, this fear of expropriation in the wake of regime change had particular immediacy for those on *paysannats* whose land rights were threatened by the RPF. As Human Rights Watch puts it, the propaganda from the Habyarimana regime "carried great weight with cultivators who were working lands received after the expulsion of the Tutsi and who feared above all being reduced to landless labourers."<sup>89</sup> And as Boone puts it, "both settlers in the *paysannats* and Tutsi exiles had good reason to think that their land rights would be affected by the outcome of the struggle for control over the state."<sup>90</sup> The Rwandan state and its clients began to once again view Tutsis inside Rwanda as potential collaborators with a hostile external power, and state propaganda depicted them as a fifth column aiding and abetting the RPF.

Reflecting the heightened sense of threat from the RPF in the years between 1990 and 1994, relations between Tutsis and Hutus were particularly tense in *paysannat* areas. For example, in Mutara in October 1990, an on-site Belgian journalist reported that Rwandan soldiers and Hutu settlers in the local *paysannat* had killed scores of Tutsis and that

<sup>86</sup> Guichaoua 2017.

<sup>87</sup> Des Forges 1999, 77–78.

<sup>88</sup> Mamdani 2001.

<sup>89</sup> Des Forges 1999. Here, Human Rights Watch refers to all Hutus who were in possession of formerly Tutsi land after the revolution.

<sup>90</sup> Boone 2014, 283.

the local community believed that these attacks were designed to punish those who had aided the RPF invasion.<sup>91</sup> The nature of these attacks preconfigured the manner in which the Rwandan state ultimately mobilized the Hutu peasantry for the 1994 genocide. As Philip Verwimp summarizes, "First, attacks were fabricated and stories were spread to allow the regime to rally support, undertake an operation and incite the population to kill Tutsi civilians; second, the authorities (national or local) took the lead; third, these same authorities lied about the nature of the operation."<sup>92</sup> Moreover, there is a substantively significant association between the presence of *paysannats* and violence against Tutsis in Rwanda between 1990 and 1993.<sup>93</sup> In this sense, although the state certainly played a central role in authorizing and organizing pre-genocidal violence,<sup>94</sup> the mass component of this violence was being driven by a desire among Hutus to root out local Tutsi accomplices of the RPF. Moreover, mass violence was greatest in areas with *paysannats* presumably in part because the threat of dramatic political change wrought by the RPF for such settlers was particularly salient.

Ultimately, in the wake of the RPF victory after the genocide in 1994, the worst fears of Hutu settlers were borne out. The hundreds of thousands of returning Tutsi refugees with implicit RPF backing evicted Hutu from many properties in the eastern plains and in the southeast, the location of many *paysannats* that the Tutsis claimed had been abandoned by their parents decades earlier,<sup>95</sup> and Hutu landholders were disproportionately likely to die in this violent process of repatriation and expropriation.<sup>96</sup>

Thus, reflecting the logic of resettlement as outlined in this article, Hutu settlers in *paysannats* were far more integrated into and invested in the success or failure of the Hutu-dominated regime, and so we should expect them to have been more active in participating in state-sponsored activities designed to stave off the threat posed by the RPF. Critically, such activities included participation in the genocide because, as Straus points out, violence during the Rwandan genocide was not driven by the absence of order, but was rather the order of the day.<sup>97</sup> Genocide of all Tutsis in Rwanda was seen by Hutu extremists as a final

<sup>91</sup> Verwimp 2013, 129. Similarly, in response to a March 1992 report from Radio Rwanda that under the direction of the RPF, Tutsi were planning on killing Hutu leaders in Bugesera, Hutu farmers killed over three hundred local Tutsis in widespread massacres that lasted for days; Des Forges 1999.

<sup>92</sup> Verwimp 2013, 130.

<sup>93</sup> Verwimp 2011.

<sup>94</sup> E.g., ADL 1993.

<sup>95</sup> Uvin 1998; Newbury 2005.

<sup>96</sup> Verwimp 2003.

<sup>97</sup> Straus 2008.

solution to the threat posed to the postindependence Rwandan political order by the exiled Tutsi population and the RPF.<sup>98</sup> Once the Rwandan state began the call<sup>99</sup> to eliminate “accomplices of the enemy”<sup>100</sup> after Habyarimana’s assassination and localities began to mobilize individuals for participation in mass violence, we should expect areas with the greatest amount of violence against Tutsis to be areas where the RPF threat to the existing economic order was particularly salient.

I next demonstrate that the quantitative data support these expectations. Mass resettlement was targeted by the postindependence Rwandan state in areas that were either close to a foreign border or in which colonial Tutsi political dominance was more consolidated. Moreover, there is a significant discontinuity in mass-participation in the 1994 Rwandan genocide across adjacent resettled and nonresettled villages.

### EMPIRICS

In measuring individual participation in the genocide, I use the village-level<sup>101</sup> data set employed by David Yanagizawa-Drott that is based on data from the Rwandan National Service of Gacaca Jurisdictions.<sup>102</sup> The almost 12,000 Gacaca community courts across the country were tasked in 2001 by the Kagame-led Rwandan government to prosecute individuals for crimes committed during the genocide. The data set includes the number of Category 1 and Category 2 prosecutions. Category 1 cases are primarily prosecutions of militia members, officials, and leaders who helped to plan or incite violence, or of participants who committed extreme sexual violence. Category 2 cases are prosecutions of those individuals who were not members of the army, government, or militia, but who participated or were accomplices to violence that caused serious injury or death during the genocide.<sup>103</sup> Ordinary individuals carried out the vast bulk of violence; the number of Category 1 prosecutions was approximately 77,000, while the number of Category 2 prosecutions was approximately 433,000.

Although some measurement error is inevitable, a key assumption underpinning the empirical strategy of this article is that the number

<sup>98</sup> Kuperman 2003; Guichaoua 2017.

<sup>99</sup> By treating the central state as a unitary actor, I abstract away from the important elite political divisions in the days after Habyarimana’s assassination; for a recent compelling analysis of these dynamics, see Guichaoua 2017.

<sup>100</sup> Des Forges 1999.

<sup>101</sup> The proper administrative term for this unit is a sector (*umurenge*), but to minimize confusion I follow Yanagizawa-Drott 2014 by using the term “village.”

<sup>102</sup> Yanagizawa-Drott 2014.

<sup>103</sup> Brehm, Uggen, and Gasanabo 2014.

of prosecutions can be used as a valid proxy for the number of actual participants in the genocide. This assumption is reasonable given that all the prosecutions occurred after the new Tutsi-led Rwandan regime took power and had strong political incentives to prosecute all culpable individuals.<sup>104</sup> The advantages of using the total number of prosecutions as the main outcome measure are (1) this data are available at a very low level of disaggregation, and (2) prosecution is a more direct measure of mass participation in the genocide than is the number of Tutsi deaths, given that the Tutsi death toll was affected by a variety of factors beyond the extent of mass participation. In particular, the Rwandan army and paramilitary organizations were far more efficient at killing than ordinary civilians and, in some areas, much of the killing of Tutsis was conducted by militias from outside the village.<sup>105</sup> As such, the number of deaths may be a particularly problematic proxy for the extent of mass, rather than militia, participation in a locality. I will show that the significant association between paysannats and violence is robust to using estimates of Tutsi deaths during the genocide as provided by Verpoorten.<sup>106</sup> Data on the location of paysannats in Rwanda were digitized from Boone and the *Atlas of Rwanda*, and I calculated the percentage of each village that is covered by a paysannat as well as the geodesic distance of the centroid of each village to a paysannat border.<sup>107</sup> Demographic data were retrieved from the 1991 census and geographic data were retrieved from Africover via the data set provided by Yanagizawa-Drott.<sup>108</sup> Commune-level Tutsi proportions, correcting for the underreporting of Tutsis in the 1991 census, was taken from Verpoorten.<sup>109</sup> Data on violence between 1959 and 1962 was taken from Bernard Lugan.<sup>110</sup> A binary indicator of whether a commune was controlled by the National Republican Movement for Democracy and Development (MRND) in 1994 was taken from Omar McDoom.<sup>111</sup>

<sup>104</sup> There is substantial scholarly debate over the Gacaca process. Gacaca falls well short of legal best practice due to the lack of legal counsel for defendants, low levels of legal training for officials, and periodic government interference in process (e.g., Waldorf 2009; Ingelaere 2016). But scholars point out that the high acquittal rate (approximately 30 percent), general proportionality of punishment to crime, availability of appeal, and requirement for consensus in Gacaca mean that Gacaca still has significant virtues as a justice system (e.g., Clark 2010; Bornkamm 2012; Brehm, Ugeen, and Gasanabo 2014).

<sup>105</sup> Newbury 1995; Des Forges 1999.

<sup>106</sup> Verpoorten 2012.

<sup>107</sup> Boone 2014; Prioul and Sirven 1981. The advantage of using geodesic distance over Euclidean distance is that it accounts for curvature in the earth's surface.

<sup>108</sup> Yanagizawa-Drott 2014.

<sup>109</sup> Verpoorten 2012.

<sup>110</sup> Lugan 1975.

<sup>111</sup> McDoom 2014. Approximately thirty-five villages out of 1,065 in the Yanagizawa-Drott 2014 data set on village-level prosecutions are missing data on one or more covariates due to new villages being created postindependence (i.e., they are missing data on preindependence measures) and differences in coding of the 1991 census used to merge Verpoorten 2012 and Yanagizawa-Drott.

To adjudicate between theories of assignment to resettlement, I compiled a number of predictors of village-level assignment to a *pay-sannat*. I proxy threat from external Tutsi militias through the log distance of each village to a foreign border. I also compile novel measures of colonial Tutsi political dominance at the chieftaincy level. Colonial Rwanda was principally organized into fifty-six chieftaincies that were nested within eight territories (see appendix Figure A1). Digitizing chieftaincy boundaries from Pierre Gourou, I proxy the precolonial political dominance of Tutsis in Rwanda using two variables.<sup>112</sup> First, the extent of Tutsi pastoral dominance is measured by the number of cattle per one hundred inhabitants in 1949, also from Gourou. Second, I proxy colonial Tutsi political dominance through the proportion of seats won by the revolutionary Hutu parties, PARMEHUTU and APROSOMA, in a chieftaincy in the 1960 elections. As outlined in the historical context section above, these elections spelled the end of Tutsi political hegemony in Rwanda, and the large spatial variation in the support for revolutionary Hutu parties has been viewed as reflecting variation in the power of Tutsi landholders in the late-colonial era to direct the votes of their clients.<sup>113</sup> These data are taken from d’Hertefeldt.<sup>114</sup>

The leading alternative hypothesis is that Rwanda’s resettlement scheme was designed to move people from more to less densely populated areas.<sup>115</sup> To test this hypothesis, I compiled new data on chieftaincy population density in the late-colonial era from Gourou.<sup>116</sup> As a control, I measure the colonial-era proportion of the population that is Tutsi at the territory level in 1956 from the Office de l’information et des relations publiques pour le Congo belge et le Ruanda-Urundi.<sup>117</sup> The proportion of Tutsi in a locality should be distinguished from Tutsi political dominance because only a small proportion of Tutsi in the preindependence period were members of the landholding elite. Tutsis were instead most prevalent in areas proximate to Nyanza—the capital of the precolonial Tutsi monarchy whose political importance faded during the colonial period.<sup>118</sup> A map representing Tutsi proportions across Rwanda in 1956 is provided (see appendix Figure A2). The

<sup>112</sup> Gourou 1953.

<sup>113</sup> Newbury 1983.

<sup>114</sup> As the data is grouped by d’Hertefeldt 1960, we cannot distinguish between seats won by PARMEHUTU or APROSOMA, but PARMEHUTU won 2,390 councillors compared to APROSOMA’s 233, so this measure primarily captures support for the more radical Hutu revolutionary party.

<sup>115</sup> Prioul 1981; Bart 1993; Olson 1990.

<sup>116</sup> Gourou 1953.

<sup>117</sup> Office de l’information et des relations publiques pour le Congo belge et le Ruanda-Urundi 1960.

<sup>118</sup> Serneels and Verpoorten 2015.

figure demonstrates that areas in which Tutsis were demographically significant (Kibuye, Nyanza, and Astrida/Butare) were not necessarily those in which Tutsi political dominance was most consolidated. In the late-colonial period, Tutsi political dominance varied according to the incidence of cattle-based patronage.<sup>119</sup>

Figures 1 and 2, representing spatial variation in the share of seats won by Hutu revolutionary parties in 1960, the postindependence paysannat resettlement scheme, and category 1 and 2 genocide prosecutions, are provided below.

### PREDICTORS OF RESETTLEMENT

To test whether resettlement was indeed targeted at frontier and relatively Tutsi-dominated areas and to facilitate interpretation of effect size, I employ a linear probability model in which a binary indicator of village-level assignment to paysannat is the dependent variable of interest. Consistent with my theory, I find that two consistently significant predictors of whether a village (sector) was settled with a paysannat are (1) proximity to a foreign border, and (2) measure of colonial Tutsi political dominance (see Table 1).

The significant negative association ( $p < 0.01$ ) between both distance to a foreign border and Hutu party vote share and the presence of paysannats holds whether we control for the confounders of population density and proportion Tutsi or whether we examine variation within territories or across the country as a whole.<sup>120</sup> It also holds if we proxy colonial Tutsi political dominance through cattle density rather than political party vote share,<sup>121</sup> or if we use a logistic model to capture the nonlinearity of the dependent variable.<sup>122</sup> Interpreting the coefficients, the odds of a village being resettled is approximately halved in a chiefdom with 10 percentage points higher electoral support for the Hutu revolutionary parties in 1960 relative to other villages.

Moreover, contrary to the expectations of the prior literature and reflecting the surprisingly weak association between population density and migration in Rwanda found by Cambrezy, low colonial-era population density is not significantly associated with postindependence

<sup>119</sup> Newbury 1988.

<sup>120</sup> This result also holds when using the share of the Tutsi-oriented parties UNAR and RADER in 1960 as a predictor of resettlement (available from the author on request). UNAR, RADER, and the two Hutu revolutionary parties together obtained the vast bulk of seats in the 1960 elections (92.77 percent), so using vote share for either grouping effectively captures the same empirical variation.

<sup>121</sup> See Table 1 in the supplementary material; McNamee 2018b.

<sup>122</sup> See tables 2 and 3 in the supplementary material; McNamee 2018b.

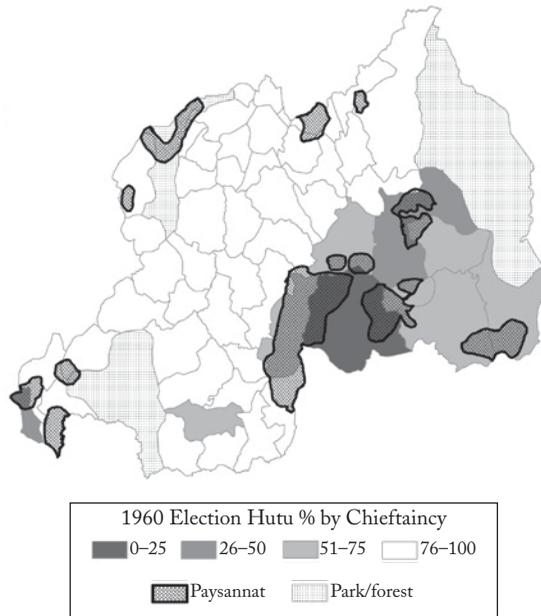


FIGURE 1  
SEAT SHARE OF HUTU REVOLUTIONARY PARTIES (PARMEHUTU/  
APROSOMA) IN 1960 ELECTIONS<sup>a</sup>

<sup>a</sup> Measured at the chieftaincy level and the paysannat resettlement scheme.

state-sponsored resettlement.<sup>123</sup> The effect of colonial-era population density on the location of state-sponsored resettlement schemes in Rwanda is precisely estimated at zero. Rather, settlers in Rwanda tended to be installed in areas either formerly dominated by Tutsi pastoralists (for example, the Mayaga in the central plateau and Bugesera) or close to vulnerable frontiers like northern Byumba on the Ugandan border and the far-flung Rusumo area in Kibungo on the Tanzanian border. As such, mass resettlement in postindependence Rwanda had a distinctly political, rather than demographic, logic. Facing an acute geopolitical threat from external Tutsi militias, the evidence suggests that mass resettlement was used by the Rwandan state to shore up its vulnerable frontier and to consolidate control over formerly Tutsi-dominated pastoral areas.

<sup>123</sup> Cambrezy 1984.

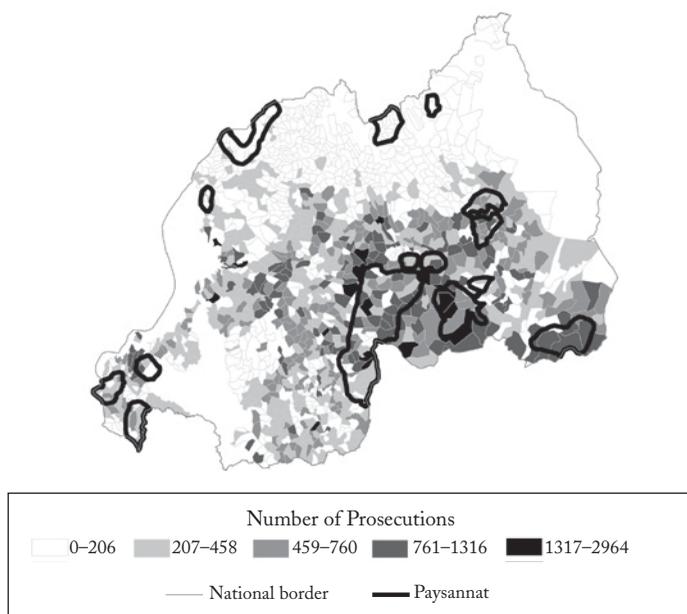


FIGURE 2  
 CATEGORY 1 AND 2 PROSECUTIONS AND THE LOCATION OF THE PAYSANNAT  
 RESETTLEMENT SCHEME<sup>a</sup>

<sup>a</sup>Areas with no color or pattern are missing data due to being part of a national park (in the north-west and southwest) or otherwise lack prosecution data that can be matched to a village.

TABLE 1  
 LINEAR PROBABILITY MODEL:  
 DETERMINANTS OF POSTINDEPENDENCE PAYSANNAT SETTLEMENT<sup>a</sup>

	(1)	(2)	(3)	(4)	(5)	(6)
Hutu parties (1960) vote %	-0.79 (0.12)	-0.74 (0.12)	-0.73 (0.18)	-0.76 (0.19)	-0.72 (0.18)	-0.74 (0.19)
Distance to border, log	-0.15 (0.04)	-0.18 (0.05)	-0.15 (0.04)	-0.17 (0.05)	-0.15 (0.04)	-0.17 (0.05)
Log pop. density (1949)			-0.03 (0.07)	0.006 (0.07)	-0.03 (0.07)	-0.05 (0.07)
Tutsi percentage (1956)					-0.005 (0.003)	-0.006 (0.004)
Observations	1046	1046	1046	1046	1046	1046
Territory FE	no	yes	no	yes	no	yes
Clustered SE	yes	yes	yes	yes	yes	yes

<sup>a</sup>As population density and Hutu party vote share are measured at the chieftaincy level, standard errors are clustered at this level.

## RDD: EFFECT ON GENOCIDAL VIOLENCE

The endogeneity of village resettlement presents challenges for identifying the effect of resettlement on genocidal violence in 1994. One means of potentially identifying the effect of paysannat is through a regression discontinuity design. An RD model tests whether there is a significant difference in prosecutions for violence during the Rwandan genocide between villages close to either side of a paysannat border. Treatment to resettlement  $D_i$  is a deterministic and discontinuous function of distance from the border of a paysannat, which we can denote as  $x_i$ :

$$\begin{aligned} D &= 1 \text{ if } x_i \geq 0 \\ D &= 0 \text{ if } x_i < 0. \end{aligned}$$

We model potential outcomes with a linear, constant effects model:

$$\begin{aligned} E[Y_{0i} | X_i] &= \alpha + \beta X_i + \theta Z_i \\ Y_{1i} &= Y_{0i} + \theta Z_i + \delta, \end{aligned}$$

where  $Y$  is the number of total category 1 and 2 prosecutions in each village,  $Z$  is a vector of village-level covariates, and  $\delta$  is the difference in prosecutions between resettled and nonresettled villages that we seek to estimate.<sup>124</sup> We can then estimate a local linear regression model,

$$Y_i = \alpha + \delta D_i + \beta_0 \hat{x}_i + \beta_1 D_i \hat{x}_i + \theta Z_i + e_i,$$

where  $\hat{x}_i = X_i - X_0$ , which is geodesic distance from a paysannat border and is the estimand of interest.

The identifying assumption is that all other unobservable factors are continuously related to distance to a paysannat border. The conditions for this assumption to hold are relatively weak, which is a key advantage of the RDD over other identification strategies, such as instrumenting, which requires a completely exogenous instrument. As formally shown by David Lee, some degree of endogeneity of the forcing variable, that is, the placement of the paysannat borders, does not invalidate local randomization of the treatment as long as the placement of the border is somewhat imprecise because then the ex ante density of assignment

<sup>124</sup> For discussion of why using total prosecutions controlling for total population is an improvement on using the rate of prosecutions per population as a dependent variable, see the section Ratio Correction in the supplementary material. This section also shows that using the rate of prosecutions does not change the results; McNamee 2018b.

to resettlement will still be continuous.<sup>125</sup> For example, as shown above, *paysannats* tended to be targeted in areas controlled by Tutsi pastoralists prior to the revolution. But as long as the location of *paysannats* was not always chosen to be precisely in Tutsi-dominated areas in a locality, then local randomization will still hold. As in a randomized experiment, this assumption implies a testable implication that all observable baseline covariates will have a continuous distribution across *paysannat* borders. This is indeed the case: all covariates including colonial-era population density; vote share for political parties in 1960; village mean altitude; altitude variance; radio reception; mean log distance to the nearest major town, the Rwandan border, the Congo, and major roads; total population; population density; proportion Tutsi in 1956 and 1990; MRND control; literacy; income and education levels for Hutus; and the presence of violence during the Rwandan Revolution, do not jump discontinuously at the border of *paysannats* at the 5 percent significance level (see Table 2).

This placebo test of continuity of observed covariates suggests that the identifying assumption of continuity in all other factors across *paysannat* borders is likely to hold and that the RDD is a valid one.<sup>126</sup> Nevertheless, I also include controls for relevant covariates. As in a randomized experiment, the inclusion of controls in an RDD can reduce bias and improve estimate precision.<sup>127</sup> The controls are village log population; log population density in both 1949 and 1991; vote share for the revolutionary Tutsi parties in 1960; proportion Tutsi in 1956 and 1991; MRND control; Radio Télévision Libre des Mille Collines (RTL) radio reception; and mean log distance to the nearest major town, the Rwandan border, and major roads. I include specifications with and without controls that are measured posttreatment to address the issue of post-treatment control bias.

As the historical context section makes clear, settler selection into resettlement was clearly nonrandom. This endogeneity is a question of mechanism—whether settler possession of threatened land is driving the violence—rather than a question of whether the effect of state-sponsored resettlement on locality violence as theorized in this article is identified. Although the state indeed did not resettle people randomly but specifically encouraged Hutus from the regime's power base to resettle in the east, the decision of Hutus about whether to take up the offer was structured by family characteristics that can be reasonably

<sup>125</sup> Lee 2008.

<sup>126</sup> Lee and Lemieux 2010.

<sup>127</sup> Imbens and Lemieux 2008.

TABLE 2  
LOCAL LINEAR REGRESSION DISCONTINUITY ON THE SPECIFIED  
DEPENDENT VARIABLE<sup>a</sup>

<i>Dependent Variable</i>	<i>Tests for Confounding Discontinuities</i>		
	<i>Effect of Paysannat</i>	<i>Standard Error</i>	<i>p-value</i>
Mean altitude	-0.05	0.05	0.25
Altitude variance	1508	1098.1	0.17
1959–62 violence	-0.0007	0.0008	0.34
Hutu parties vote % (1960)	0.001	0.11	0.99
Cattle per 100 persons (1949)	0.14	1.22	0.91
ln(Pop. density 1949)	-0.13	0.29	0.65
Proportion Tutsi (1956)	-1.09	2.93	0.71
ln(Population 1991)	.096	.08	0.23
ln(Pop. density 1991)	-0.15	0.11	0.15
Proportion Tutsi (1991)	-0.07	0.05	0.19
Cement floor (Hutu)	0.01	0.01	0.57
Education (Hutu)	0.13	2.12	0.95
Literacy (Hutu)	1.28	1.89	0.498
RTLTM reception	0.06	0.04	0.12
MRND control	0.08	0.15	0.60
ln(Town distance)	0.16	0.13	0.21
ln(Road distance)	0.32	0.19	0.098
ln(Border distance)	0.05	0.23	0.83
ln(Congo distance)	0.32	0.37	0.38

<sup>a</sup> Each row represents a local linear regression discontinuity on the specified dependent variable, where village distance to a paysannat border is the forcing variable. Kernel type is triangular and bandwidth type is mean square optimal common to both sides of the discontinuity. Standard errors are clustered at the commune, chieftaincy, or territory level, respectively, for those covariates measured at levels higher than a village.

considered orthogonal to the participation of the next generation in violence in 1994 (historical as opposed to socioeconomic status in 1994, and having brothers). To control for any lingering differences in socioeconomic status in 1994, I include specifications with and without controls for Hutu education, income, and literacy measures.

Standard errors are clustered at the district level to account for spatial autocorrelation in violence across nearby villages. A map of the districts is provided in appendix Figure A3. The model was estimated using the *rdrobust* package.<sup>128</sup> The choice of bandwidth parameter for

<sup>128</sup> Calonico et al. 2015.

the nonparametric kernel is the standard mean-square-error-optimal bandwidth common to both sides of the cutoff.<sup>129</sup>

The results of the estimated model support the hypothesis that violence was greater in resettled villages than in nonresettled villages (Table 3). Villages with a *paysannat* are estimated to have approximately 155 more category 1 and 2 prosecutions for violence during the genocide (column 1,  $p < 0.01$ ), which at half a standard deviation would approximately move a village from the 25th to the 50th percentile in terms of total prosecutions. Of the approximately 400,000 prosecutions in the sample, nearly 110,000, or 27 percent of all prosecutions, occurred in areas with *paysannats*. Using the estimate of the marginal effect of resettlement, approximately 40,000 prosecutions, or 10 percent of all participation in the Rwandan genocide, can be attributed to Rwanda's state-sponsored resettlement policies.<sup>130</sup>

The discontinuity in total prosecutions among villages on either side of a *paysannat* border is evident when looking at the RD plot (Figure 3). The *paysannat* borders are the location of the only obvious geographic discontinuity in violence, lending credence to the continuity of unobservables assumption. This result is robust insofar as it already takes into account relevant observed confounders and spatial autocorrelation in violence across villages in the same district. The results are unchanged when using a uniform kernel function in the local linear regression (column 2), a coverage-error-rate optimal bandwidth (column 3), or a local quadratic rather than a local linear regression discontinuity (column 4).

When dropping all controls measured posttreatment, the results tend to strengthen (see appendix Table A1). These results are also unchanged when controlling for Hutu income, education, and literacy.<sup>131</sup> This suggests that the greater violence in resettled localities is not being driven by general socioeconomic differences between resettled and nonresettled localities. Moreover, disaggregating Category 1 and Category 2 prosecutions, the difference in violence is primarily driven by the significantly higher Category 2 prosecutions in resettled villages (column 5), as there is no significant discontinuity in Category 1 prosecutions in resettled and nonresettled villages (column 4). This result

<sup>129</sup>The results are similar when, rather than use a polynomial of distance to the *paysannat* borders, one uses a multidimensional geographic RDD by controlling for latitude and longitude, as introduced by Dell 2010; available from on request.

<sup>130</sup>This figure is a back-of-the-envelope calculation based on the marginal effect of *paysannats* multiplied by the number of resettled localities in Rwanda.

<sup>131</sup>See Table 6 in the supplementary material; McNamee 2018b.

TABLE 3  
 GEOGRAPHIC REGRESSION DISCONTINUITY OF TOTAL NUMBER OF VILLAGE-  
 LEVEL PROSECUTIONS FOR PARTICIPATION IN THE RWANDAN GENOCIDE<sup>a</sup>

	<i>Total Prosecutions Regression Discontinuity at Paysannat Border</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
Coefficient	154.91 (49.39)	181.59 (45.52)	155.12 (56.59)	159.42 (65.65)	22.15 (15.61)	131.44 (46.06)
Observations	1031	1031	1031	1031	1031	1031
Kernel type	triangular	uniform	triangular	triangular	triangular	triangular
Polynomial	linear	linear	linear	quadratic	linear	linear
Bandwidth type	MSE	MSE	CER	MSE	MSE	MSE
Eff. # of treated obs.	55	48	48	56	53	56
Eff. # of untreated obs.	278	255	255	279	270	280
Gacaca category	1 & 2	1 & 2	1 & 2	1 & 2	1	2
Cluster std. error	yes	yes	yes	yes	yes	yes

<sup>a</sup> Forcing variable is geodesic distance of each village to the nearest paysannat border. Standard errors clustered at the district level.

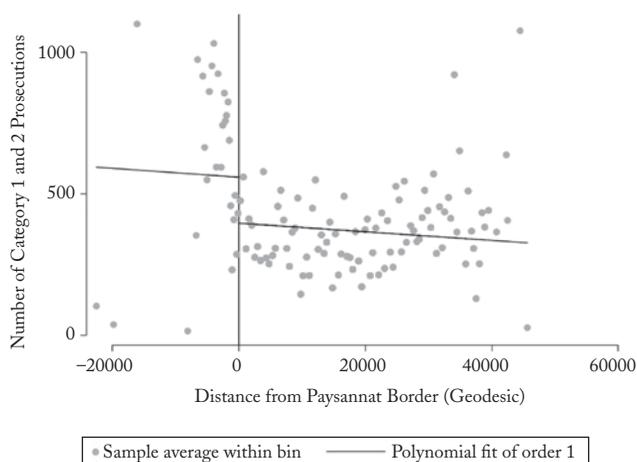


FIGURE 3  
 REGRESSION DISCONTINUITY GENOCIDE PROSECUTIONS<sup>a</sup>

<sup>a</sup> Local linear regression discontinuity of total village prosecutions on geodesic distance to nearest paysannat border. Negative distance implies that a village is surrounded by other paysannat villages so it is distant from a nonpaysannat village.

suggests that the higher number of prosecutions in resettled villages is largely driven by greater mass participation in the Rwandan genocide rather than by greater militia, military, or official participation.

#### OLS: EFFECT ON GENOCIDAL VIOLENCE

Although the results above provide this article's strongest evidence of a causal relationship between paysannats and genocidal violence, RDDs can be sensitive to functional form assumptions, so it is best practice to test the robustness of results to other identification strategies. This section attempts to identify the effect of paysannat on village-level genocidal participation via selection on observables using ordinary least squares (OLS).

The OLS specification is

$$y_{ij} = \alpha + \beta \text{Paysannat}_{ij} + \theta X'_{ij} + \sigma_j + e_{ij},$$

where  $y_{ij}$  is the number of individuals prosecuted for category 1 and 2 crimes in village  $i$  in district  $j$ ,  $\text{Paysannat}_{ij}$  is the percentage of the village covered by a paysannat,  $X'_{ij}$  is a vector of relevant village level controls,  $\sigma_j$  is the district fixed effects, and  $e_{ij}$  is the error term. The set of village-level controls in the full OLS specification is the same as that in the local linear regression discontinuity specification. As before, I also include specifications without controls measured posttreatment. Standard errors are clustered conservatively at the district level to account for spatial autocorrelation in violence across villages in the same district.

The reported results of this model specification show that villages that are covered by more paysannats experienced significantly higher Hutu participation in genocidal violence than other villages in Rwanda (Table 4). This correlation is evident from the raw data (column 1), and the estimated coefficient is largely unchanged when including all pre-treatment controls and district fixed effects (column 2), and when adding a battery of other partially posttreatment demographic and political controls from the early 1990s (column 3). Clearly, figures 1 and 2 demonstrate that the association between paysannats on violence is largely driven by those paysannats located in the southern half of Rwanda. The lack of variation across the north makes sense given that the genocide was relatively quickly curtailed there when the RPF successfully invaded from Uganda in the early days of the genocide, whereas more heterogeneous local dynamics of violence developed over April and May 1994 across the southern half of Rwanda, where the Rwandan government still maintained military control.<sup>132</sup>

<sup>132</sup>This variation is not driven by where MRND controlled the local government; the interaction of paysannat with MRND is insignificant. Result available on request.

TABLE 4  
 OLS: THE EFFECT OF RESETTLEMENT ON NUMBER OF VILLAGE-LEVEL  
 PROSECUTIONS FOR PARTICIPATION IN THE RWANDAN GENOCIDE <sup>a</sup>

	(1)	(2)	(3)	(4)	(5)
Paysannat %	1.75 (0.86)	0.65 (0.33)	0.72 (0.26)	0.23 (0.08)	0.49 (0.19)
Observations	1065	1046	1031	1031	1031
Controls	no	yes	yes	yes	yes
District FE	no	yes	yes	yes	yes
Clustered FE	yes	yes	yes	yes	yes
Gacaca category	1 & 2	1 & 2	1 & 2	1	2

<sup>a</sup> OLS regression with dependent variable as the total number of category 1 or 2 village-level prosecutions with standard errors clustered at the district level. Covariate coefficients reported in Table 4 of the supplementary material (McNamee 2018b).

That I only compare villages within the same district helps to allay concerns that other factors, such as the length of time the genocide was conducted or where the RPF was able to invade and control during the genocide, are driving these results, given that these factors do not vary significantly within districts. The specification of the model thus differs from that in Yanagizawa-Drott because it employs district fixed effects rather than commune fixed effects; communes are much smaller administrative areas than districts, and employing commune fixed effects does not tend to leave enough power to find significant effects of paysannat on violence given that assignment to resettlement does not tend to vary at a highly local level.<sup>133</sup> Reassuringly, the reported results are robust to employing fixed effects at a number of different administrative levels above communes, including across villages in the same district and prefecture (province), and across the country as a whole.<sup>134</sup> On average, a 10 percentage point increase in the area of a village covered by a paysannat is expected to lead to an additional seven prosecutions (or a 2 percent average increase) after the genocide.<sup>135</sup> But unlike in the regression discontinuity estimate, both Category 1 and Category 2 prosecutions are significantly higher in villages covered by more paysannats (columns 5 and 6).

<sup>133</sup> Yanagizawa-Drott 2014.

<sup>134</sup> Results available on request.

<sup>135</sup> The covariate coefficients are reported in Table 4 of the supplementary material; total population and proportion Tutsi (1956) are positively correlated with violence, and distance from a major road is significantly negatively correlated with violence, while other covariates tend to be insignificant; McNamee 2018b.

## ROBUSTNESS CHECKS

Although the results in this article suggest a causal relationship between paysannats and genocidal violence, there may be concerns that certain spatial characteristics associated with the chosen locations of paysannats may also affect the likelihood of political and ethnic violence. One way to test whether it is likely that unobservable confounders are driving the observed relationship between paysannats and genocidal prosecutions is to follow Emily Oster's method, which uses information about the magnitude of selection on observables. In essence, if the inclusion of observed covariates that explain a great deal of variation in the dependent variable does not change the coefficient on an independent variable of interest, then not only is there less unexplained and potentially confounding variation remaining, but it is also less likely that the introduction of a covariate picking up an unobserved variable would explain away the estimated effect.<sup>136</sup> Operationalizing this logic, the package *psacalc* allows us to calculate the degree of unobserved relative to observed selection (termed  $\delta$ ) that would need to exist to explain away an observed effect (for a coefficient to be zero).<sup>137</sup> I find that  $\delta = 1.50$ —the amount of selection on unobservables in the full OLS model (Table 4, column 3) would need to be more than 50 percent greater than the amount of selection on observables beyond the fixed effects to explain away the effect of paysannats, which exceeds the heuristic upper bound of equal degrees of selection. Hence, although we cannot rule out every alternative explanation, it is quite unlikely that unobserved confounders could account for the estimated effects of paysannats on prosecutions in the Rwandan genocide.

We can conduct a further placebo check for unobserved selection by examining whether resettled areas experienced greater violence during the 1959–61 revolution in which the Hutu peasantry expelled the elite Tutsi landholding class, which was *before* the Rwandan resettlement program began en masse. Yet areas with paysannats were actually less likely to experience violence during the 1959–62 revolution than other areas of the country as a whole and within the same district.<sup>138</sup> This out-of-sample test helps to reassure that large-scale resettlement and the presence of paysannats after 1962 led to greater violence during the 1994 genocide rather than other time-invariant observables, such as greater ethnic hatred in resettled areas.

An important question is how the violence within paysannats relates

<sup>136</sup> Oster 2014.

<sup>137</sup> Oster 2014.

<sup>138</sup> See Table 5 in the supplementary material; McNamee 2018b.

to the broader issue of land scarcity and demographic change in Rwanda prior to the genocide. It is certainly not the case that all rural migration or pastoral land redistribution to Hutu was state-sponsored in Rwanda prior to the genocide. François Bart estimates that after independence, approximately half of all rural migration was organized through *paysannats* and half was spontaneous or unorganized, while Cambrezy puts the ratio at approximately 2:3.<sup>139</sup> Christian Prioul suggests that with the establishment of *paysannats*, the first wave of significant land redistribution in Rwanda was state-organized and a second wave resulted from unofficial migrants occupying remaining free land proximate to the *paysannats*.<sup>140</sup> Whether these unofficial Hutu migrants occupying land previously controlled by Tutsi pastoralists would have felt equally threatened by the political changes wrought by the RPF, and consequently disproportionately participated in reactionary violence to shore up the Rwandan state in 1994, is an open question that deserves detailed further research using survey data. At the present, we are limited by a lack of data on land tenure changes outside the *paysannats*.

It is worth noting that if unofficial migrants indeed tended to occupy land proximate to official resettlement schemes and also disproportionately participated in violence, then the RDD estimate that uses villages immediately outside official resettlement schemes as a control group would likely underestimate the true effect of *paysannats* on genocidal violence. Moreover, as a first-cut test of differential effects of unofficial and official land redistribution, we can also examine whether the effect of overall population growth between 1978 and 1991—a proxy for general land pressure compiled by Verpoorten that would pick up migration flows—on genocidal violence differs across villages covered and not covered by an official *paysannat*.<sup>141</sup> The results of OLS specifications adding an interaction between *paysannat* and pre-genocide population growth suggest that this is indeed the case. While population growth in nonresettled villages has no significant effect on prosecutions for participation in violence, the interaction between the percentage of a village covered by a *paysannat* and population growth is positive and significant.<sup>142</sup> Although further research in the area is warranted, these results suggest it was new Hutu settlers who received land through official resettlement schemes rather than Hutu migrants in general who were

<sup>139</sup> Bart 1993, 397; Cambrezy 1984, 156.

<sup>140</sup> Prioul 1989, 414.

<sup>141</sup> Verpoorten 2012.

<sup>142</sup> See Table 8 in the supplementary material. Intuitively, these results also show that the effect of *paysannat* on villages where pre-genocide population growth is negligible—unsuccessful resettlement schemes—is close to zero and insignificant; McNamee 2018b.

particularly active in seeking to forestall the potential political changes wrought by the RPF.

Alternatively, it is likely that Hutu refugees from Burundi and internally displaced persons (IDPs) from the civil war in northern Rwanda disproportionately participated in the genocide. There is evidence that Hutu refugees from the violence in Burundi in 1988 in particular were actively recruited and trained as paramilitary units in camps, such as Gabiro in the northeast, prior to the genocide. But it is unlikely that refugee resettlement into *paysannats* explains the documented results of this article because refugees have been highlighted as particularly significant militia participants, acting as “shock troops” for state militias.<sup>143</sup> As such, if refugees and IDPs tended to be disproportionately resettled into *paysannat* villages, we should expect a discontinuity in prosecutions for militia but not in unofficial participation activity during the genocide. However, the RDD results show that there is a significant difference in Category 2 (unofficial participation) prosecutions, but not in Category 1 (militia, rape, and other official participation) across resettled and nonresettled localities. Although data on this front are limited, any differential rate of Hutu refugee resettlement would struggle as an explanation for the observed discontinuity in mass, rather than militia, participation in resettled localities.

A separate concern relates to how post-1994 events affected the number of prosecutions in a village. For example, villages closer to the Democratic Republic of the Congo, to which many Hutus fled in the wake of the RPF victory, could have had more perpetrators successfully escape prosecution. Yet recall that the RDD compares only numbers of prosecutions across adjacent villages, and distance to the Congo—the best proxy for ease of escape—does not differ discontinuously across adjacent *paysannat* and non-*paysannat* villages (Table 2). Moreover, the inclusion of village-level distance to the Congo as a covariate does not change the results.<sup>144</sup> Thus, although there is no disaggregated data available on the rates of Hutu escape to the Congo and this confounder cannot be entirely ruled out, it is nevertheless unlikely that this effect alone explains the significant difference in violence across adjacent resettled and nonresettled villages.

Alternatively, violence could actually have had a dampening effect on prosecutions insofar as villages with few survivors would have few witnesses available for the Gacaca process. We can try to address this concern in two ways. To begin, the Gacaca process actually recorded

<sup>143</sup> Newbury 1995, 16.

<sup>144</sup> See Table 9 in the supplementary material; McNamee 2018b.

the number of Tutsi survivors in each village, so we can see whether the effect of *paysannat* on prosecutions disappears once controlling for this proxy for the number of potential witnesses. Controlling for the number of survivors,<sup>145</sup> the estimated effect of *paysannat* on total prosecutions is still statistically significant and similar in magnitude.<sup>146</sup> Although this estimate has no causal interpretation given that *paysannat* is negatively associated with genocide survivorship, it suggests that the estimated effect of *paysannat* on prosecutions is not simply a function of different numbers of postgenocide witnesses in resettled villages.

Nevertheless, Gacaca prosecutions may still be an imperfect measure of local participation, particularly if the heightened land conflict in resettled localities after the genocide led to greater interest on the part of local Tutsis in prosecuting neighboring Hutus. On this front, it is worth noting that the land conflict in resettled localities postgenocide was primarily between landed Hutus and Tutsi refugees returning from abroad after the RPF victory.<sup>147</sup> The new Tutsi residents would not have been witnesses to the genocide and thus would not have participated in the Gacaca process. Second, to redress the concern that Gacaca prosecution is still an imperfect proxy for participation, we can instead use the total number of deaths in each locality as a dependent variable. Specifically, we can test whether those areas with *paysannats* also had discontinuously greater Tutsi death tolls during the genocide. The difficulties faced in seeking to estimate Tutsi deaths in a locality during the genocide are that the 1991 census only reported ethnic proportions at the commune level rather than village level, there is evidence of systematic underreporting of Tutsis in the same census,<sup>148</sup> and the 2002 census does not report ethnicity at all. Verpoorten nonetheless makes a significant contribution by estimating the Tutsi death toll during the genocide using the village-level number of genocide survivors reported in the Gacaca process and by estimating the baseline Tutsi population in 1991 using ethnic proportions at the commune level.<sup>149</sup>

Using Verpoorten's village-level estimates of the total number of Tutsi deaths as a dependent variable,<sup>150</sup> I find evidence that the Tutsi death toll was discontinuously greater in resettled localities. Resettled

<sup>145</sup> This data is taken from the Gacaca process as reported in Verpoorten 2012.

<sup>146</sup> See Table 8 in the supplementary material; McNamee 2018b.

<sup>147</sup> Leegwater 2015.

<sup>148</sup> Verpoorten 2005.

<sup>149</sup> Verpoorten 2012.

<sup>150</sup> I use the estimate that seeks to correct for underreporting in the 1991 census by inflating Tutsi proportions. For further details see Verpoorten 2012. Results are unchanged when using the uninflated death toll rate or the estimates provided by Verpoorten 2012 that seek to remove anomalies or death toll estimates above 100 percent; results available on request.

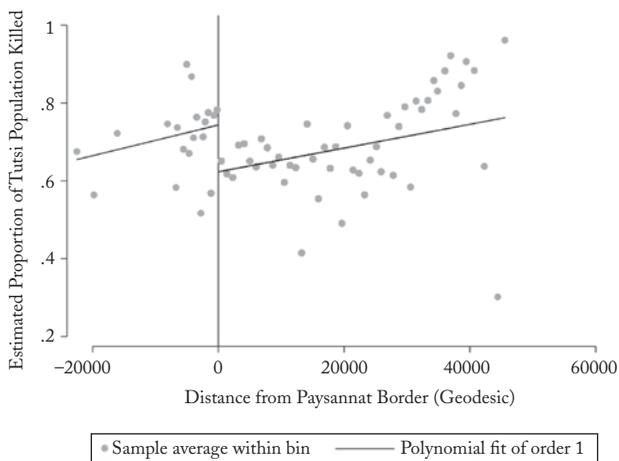


FIGURE 4  
REGRESSION DISCONTINUITY TUTSI DEATH TOLL<sup>a</sup>

<sup>a</sup> Local linear regression discontinuity of estimated Tutsi death toll (proportion 0–1 killed), where distance to nearest paysannat border is the forcing variable. Negative distance implies that a village is surrounded by other paysannat villages, so it is distant from a nonpaysannat village.

localities are estimated to have an approximately 7 to 11 percentage point difference in the Tutsi death toll relative to adjacent nonresettled localities, although the statistical significance varies across specifications.<sup>151</sup> The RD plot corroborates the presence of a geographic discontinuity in the Tutsi death toll at the paysannat borders (Figure 4). The large standard errors likely reflect the greater measurement error in seeking to compare death rates across adjacent communities that are dependent on estimates of the pre-genocide Tutsi community using aggregated commune-level ethnic proportions. Hence, although the extent of ordinary Hutu participation in the Rwandan genocide and the ultimate Tutsi death toll in any particular locality are imperfectly related—and these results should be interpreted as only suggestive—the RD plots suggest that total prosecutions and the Tutsi death toll were greater in resettled localities.<sup>152</sup>

<sup>151</sup> See Table 10 in the supplementary material; McNamee 2018b.

<sup>152</sup> As further reason for caution, the multidimensional RDD and OLS results inserting the Verpoorten 2012 estimates of the Tutsi death toll tend to be insignificant, unlike the results when using prosecutions as the outcome. But they are significant when using the commune-level data on Tutsi deaths compiled separately by Davenport and Stam 2007 from documentary sources. Thus, unlike prosecutions, the estimated effects on the death toll are mixed and only suggestive.

## QUALITATIVE ANALYSIS: RUSUMO COMMUNE

Although aggregate patterns of violence in Rwanda in 1994 fit the hypothesized patterns of this study, process tracing can allow an assessment of the validity of a particular theorized causal sequence connecting two variables in a regression.<sup>153</sup> In this section, I engage in a within-case process tracing of demographic change and violence in a most likely case—the commune of Rusumo on the Tanzanian border (appendix Figure A3)—to test whether my theory captures the process connecting the incidence of state-sponsored resettlement and genocidal violence in Rwanda.

Rusumo occupies a particularly notorious place in the historiography of the Rwandan genocide. Western journalists writing early accounts of the genocide were horrified by the massacre of thousands of Tutsis who had gathered for protection at the Nyarubuye Roman Catholic Church there,<sup>154</sup> a site that is now one of only five official memorials of the genocide in Rwanda today. What has been less well understood is the role that Rwanda's paysannat scheme played in generating the infamous violence in Rusumo.<sup>155</sup>

Rusumo is located in the ancient region of Gisaka, an area in the extreme southeastern corner of Rwanda that was incorporated into the Rwandan state in the 1850s. The Rwandan Revolution of 1959–62 and the mass expulsion of Tutsi landholders led to a marked deterioration in Tutsi-Hutu relations in the area.<sup>156</sup> The presence of a large number of armed Tutsi refugees immediately across the border in Tanzania presented a grave threat to the state's control of Rusumo, and the government suspected local Tutsis of aiding and joining the exiled militias. In response, the border zone was targeted for mass Hutu resettlement. As Sylvestre Gacumbitsi, *burgomestre* (mayor) of Rusumo in 1994, said, "In 1967–68, somewhere there about, the state created what they called 'paysanat' small holdings ... People from other prefectures were brought and settled in those small holdings."<sup>157</sup> Constituting a

<sup>153</sup> Gerring 2004; Bennett 2010.

<sup>154</sup> For example, Philip Gourevitch (1998) begins his well-known account of the Rwandan genocide with a discussion of Nyarubuye. The gruesome events at Nyarubuye also feature prominently in other popular journalistic accounts of the genocide, such as Peterson 2001 and Ignatieff 1998.

<sup>155</sup> In this section, I primarily draw my data from the excellent interviews that Rwandan academics, Rutazibwa and Rutayisire 2007, conducted with residents of Rusumo in the mid-2000s and the interviews separately conducted in the course of the International Criminal Tribunal for Rwanda's trial of the *burgomestre* of Rusumo, Sylvestre Gacumbitsi.

<sup>156</sup> Interviews in Nyarutunga, October 21–27, 2006, and Bukamba Bernard, October 22, 2006; Rutazibwa and Rutayisire 2007, 10–11.

<sup>157</sup> ICTR 2003, 9.

smoking gun,<sup>158</sup> locals indeed contended that the installation of settlers along the border was designed to forestall cross-border activity and Tutsi refugee incursions.<sup>159</sup>

The influx of new settlers changed the social, ecological, and political dynamics of the commune. Residents bitterly noted that by clearing the forests for sorghum production, settlers destroyed much of the local pastoral grazing fields.<sup>160</sup> This process engendered substantial land conflict between the politically connected settlers and dispossessed locals.<sup>161</sup> Reflecting the neocolonial nature of the resettlement program, the settlers also contentiously renamed the localities in the region to reflect those from where they had originated.<sup>162</sup> The resettlement process overall led to an extraordinary expansion in Rusumo's population, which rose from approximately 44,000 to 120,000 between the 1970s and 1990s—the fastest growth of any commune in Rwanda in the period immediately before the genocide.<sup>163</sup>

Although conflict over land between new settlers and indigenes marked Rusumo in the years prior to 1990, relations between Tutsis and Hutus were relatively benign in the 1980s. A number of individuals in Rusumo attest that prior to the RPF invasion in 1990, Tutsis and Hutus would freely intermarry, exchange gifts, and socialize with one another.<sup>164</sup> But as theorized, the RPF invasion in 1990 led to a break in cross-ethnic relations. After 1990, Tutsis were arrested and killed under the slightest suspicion of providing support to their coethnics in the RPF across the border.<sup>165</sup> Reflecting the vehement anti-Tutsi environment in the years prior to the genocide, local officials turned a blind eye to the deaths, torture, and disappearance of hundreds of Tutsis who were suspected of aiding the RPF in the Nasho area of Rusumo.<sup>166</sup> In this way, one resident blamed the pre-genocidal turn against Tutsis in Rusumo both on the Hutu politicians who fostered suspicion of the Tutsis and

<sup>158</sup> Smoking-gun tests are sufficient but not necessary to confirm a hypothesis in process tracing, whereas hoop tests are necessary but not sufficient; Bennett 2010.

<sup>159</sup> Group discussion in Nyarutunga, October 28, 2006; Rutazibwa and Rutayisire 2007, 33.

<sup>160</sup> Group discussion in Nyarutunga, October 28, 2006; Rutazibwa and Rutayisire 2007, 32.

<sup>161</sup> For example, one resident, confronting a new settler who had begun to cultivate his pastoral land, was told "Don't you know who I am? Habyarimana (President of Rwanda) and Ndeze (prefecture head of Kibungo) are my parents." Group discussion in Nyarutunga, October 28, 2006; Rutazibwa and Rutayisire 2007, 33.

<sup>162</sup> Group discussion in Nyarutunga, October 28, 2006; Rutazibwa and Rutayisire 2007, 33.

<sup>163</sup> Davenport and Stam 2007.

<sup>164</sup> For example, interviews with Uwimana Philibert, October 27, 2006, and Barabwiriza Vincent, October 25, 2006; Rutazibwa and Rutayisire 2007, 29–30.

<sup>165</sup> For example, interview with Mareba, October 22, 2006; group discussion in Nyarutunga, October 28, 2006; interview with Sinamenye Ostase, October 24, 2006; and interview with Ndemezo Norbert, October 19, 2006; Rutazibwa and Rutayisire 2007, 44–47.

<sup>166</sup> ADL 1992, 135–46.

on the settlers or migrants from the paysannats who were particularly active in policing the local Tutsi population.<sup>167</sup>

After the assassination of Habyarimana, the fate of the Tutsi community in Rusumo was uncertain for some time. Reflecting the general importance of local leadership in shaping genocidal dynamics, violence did not immediately break out in Rusumo because Gacumbitsi initially delayed its onset.<sup>168</sup> Over time, however, Gacumbitsi came under increasing pressure from below to openly authorize violence against Tutsis. According to defense witnesses, after a number of Hutu “hooligans” threatened to attack the burgomestre on April 13, 1994, accusing him of being an accomplice of the RPF, Gacumbitsi openly toured the commune distributing weaponry and calling for violence against Tutsis.<sup>169</sup>

After April 13th and until the RPF took control of Rusumo toward the end of the month, Rusumo was wracked with mass violence against its Tutsi population. Approximately 16,000 individuals were killed in just six days between the 13th and 19th—more than the entire pre-genocide Tutsi population in Rusumo.<sup>170</sup> As the theoretical framework of this article predicts, it was the paysannat settlers who proved pivotal in generating this extreme level of violence. Reflecting their material motivation and high degree of attachment to the existing regime, the settlers formed a critical mass of early participants in the violence. This critical mass was able to coerce even nonsettler Hutus into participating in the genocide under pain of death.<sup>171</sup> As such, participation in the genocide was effectively universal in some villages of Rusumo. One survivor stated that out of the entire male Hutu population in his village, only two did not participate in the killings—and both of these individuals were physically incapacitated at the time.<sup>172</sup> For this reason, and constituting a smoking gun, in Rusumo “many witnesses underscore that [the settlers’] participation was decisive in the genocide.”<sup>173</sup>

<sup>167</sup> Interview with Karambizi Theogene, October 24, 2006; Rutazibwa and Rutayisire 2007, 48

<sup>168</sup> ICTR 2004, 22.

<sup>169</sup> After April 14th, Gacumbitsi was a leading proponent of the genocide in Rusumo, most notoriously leading the attack against Nyarubuye church on April 15th. Gacumbitsi was ultimately convicted by the ICTR for crimes against humanity; ICTR 2004, 18.

<sup>170</sup> This estimate is based on data from Davenport and Stam 2007. This extreme death toll makes sense given that Hutus who resisted joining the violence were also killed, and that prior to April 13th, Rusumo had received a substantial number of Tutsi refugees from neighboring communes who were seeking refuge and passage to Tanzania.

<sup>171</sup> For example, interview with Habimana Emmanuel, January 8–9, 2007; and Mutwarisibo Leonidas October 28, 2006; Rutazibwa and Rutayisire 2007, 113, 118.

<sup>172</sup> Interview with Federinand Rwakayigamba, October 28, 2006; Rutazibwa and Rutayisire 2007, 119.

<sup>173</sup> “... ces nouveaux migrants Hutu ont occupé les terres en friche le long de l’Akagera à travers des vagues successives; beaucoup de témoignages soulignent que leur participation a été décisive dans le génocide.” Rutazibwa and Rutayisire 2007, 18.

After the RPF took control of Rusumo, tens of thousands of Tutsi refugees began to stream into the area with their cattle and many Hutus fled the country in the wake of RPF reprisals.<sup>174</sup> Since Hutu refugees began to return to Rwanda in 1997, they have been forcibly installed in cohabitation villages with the new Tutsi population—where 90 percent of the population in the area now lives.<sup>175</sup> Hutu settlers in Rusumo have had their plots divided between themselves and the new residents.

Hence, a process tracing of Rusumo commune supports the hypothesized causal sequence connecting Tutsi militia threat in the 1960s, subsequent Hutu resettlement, and mass violence in 1994 driven by the settler population in Rwanda.

### CONCLUSIONS

Why did the Rwandan state foster rural-to-rural resettlement in its postindependence period, and why did some localities experience mass participation in violence during the Rwandan genocide whereas others did not? This article has demonstrated that these questions are interrelated by uncovering the geopolitical logic and consequences of mass resettlement. Compiling new data on the predictors and incidence of resettlement and adjudicating between competing rationales, I have shown that mass resettlement of the Rwandan population was used by the state in its postindependence period to shore up its contested frontier against external Tutsi militias and to make formerly Tutsi-dominated sections of Rwandan society dependent upon the new Hutu revolutionary regime. In the lead-up to the genocide, the livelihood of these settlers was explicitly contested by an external actor representing historical Tutsi landholder interests, creating a situation of great political and economic uncertainty among individuals. The Rwandan state exacerbated this uncertainty and exploited it opportunistically to mobilize the Hutu peasantry for violence against a Tutsi fifth column ostensibly supporting the RPF. Exploiting highly local variation in the incidence of the paysannat scheme and identifying the effect of resettlement via both RDD and OLS, participation in the Rwandan genocide is shown to have been significantly greater in areas of postindependence state-sponsored resettlement.

The generality of the theoretical framework of mass resettlement advanced in this study suggests that the connection between geopolitical threat, internal demographic change, and political violence is not

<sup>174</sup> Human Rights Watch 2001.

<sup>175</sup> Havugimana 2009; Leegwater 2015.

limited to Rwanda. Theoretically, the creation of a client landholding class has historically been an effective strategy deployed by a great number of states to consolidate a contested frontier. Yet, as I contend in earlier work with Anna Zhang, despite the ongoing importance of mass resettlement in contemporary conflicts—whether in Rakhine state in Myanmar, Thailand's deep south, Indonesia's outer islands, or Casamance in Senegal—the manner in which international conflict shapes demographic change remains a relatively neglected topic in social science.<sup>176</sup> Moreover, the study of demography and conflict both in general and in sub-Saharan Africa tends to treat ethnic demography as static and implicitly exogenous to conflict.<sup>177</sup> This article is the first to exploit subnational variation in the incidence of resettlement and finds evidence that in Rwanda, mass Hutu resettlement drastically changed the demography of frontier and Tutsi-dominated areas in response to the threat posed by external Tutsi militias. As such, the results of the study caution against the current tendency to treat ethnic demography in sub-Saharan Africa as exogenous to conflict. There is moreover, great scope for further research to better understand the theoretical conditions under which states seek to coercively change their demography, and to uncover the dynamic relationship linking demography and conflict.

Further comparative research on state-sponsored demographic change is also warranted given the effects of mass resettlement on political behavior. The historiography of violent conflicts in settings like Rhodesia, Sri Lanka, and Northern Ireland suggest that where the livelihoods of settlers have been threatened by irredentist or revanchist actors, whether by local autochthones in a sons-of-the-soil conflict or by hostile external powers, settlers have historically proven extremely violent in trying to prevent political change.<sup>178</sup> To my knowledge, no other study has tried to quantitatively identify the effect of resettlement on political violence. There is thus great scope for further empirical work in this area given that state-sponsored demographic change has played a key role in shaping the political history of almost every region of the world. Ideally, such work would help redress the limitations of this article by testing the precise causal mechanisms at work using individual-level data and exploiting quasi random variation in individual rather than locality resettlement.

This article nonetheless advances a promising new literature on the

<sup>176</sup> McNamee and Zhang 2018.

<sup>177</sup> E.g., Toft 2003; Weidmann 2009; Cederman, Girardin, and Gleditsch 2009; Michalopoulos and Papaioannou 2013; Reynal-Querol and Besley 2014.

<sup>178</sup> Lustick 1993; Higginson 2014; Boone 2014.

determinants of ethnic conflict that focuses less on domestic institutional, historical, and cultural factors<sup>179</sup> and instead refocuses attention on the external determinants of domestic conflict. Ethnic diversity only appears to matter in driving conflict when ethnicity has been used as a basis for political exclusion.<sup>180</sup> The extent to which an internal ethnic division is isomorphic with a wider geopolitical conflict is a key determinant of whether an ethnic minority is targeted for exclusion or ethnic cleansing.<sup>181</sup> In this vein, it is the changing geopolitical context in the Great Lakes region that best explains why so many Hutus began in 1994 to rapidly slaughter the Tutsi neighbors with whom they had otherwise lived peacefully for a generation. It was only in the early 1990s when an effective external Tutsi militia based in Uganda engaged in an ultimately successful war with the Rwandan state that the Tutsi-Hutu distinction became again highly politically salient, and potential Tutsi collaborators were targeted for elimination by the state.<sup>182</sup>

But while external context can account for the state-sponsored violence directed against Rwandan Tutsis in 1994, it is quite another thing to account for variation in Hutu participation in that same violence. I have theorized that state-sponsored settlers whose land allocation is subject to political contestation will disproportionately elect to participate in costly state-sponsored violence and have substantiated this prediction by showing that the violence in 1994 was more intense in resettled areas of Rwanda where the interests of the population were more threatened by the RPF. As such, this article suggests that the large literature proposing that wealthier individuals are less likely to participate in violence<sup>183</sup> should be revised to take into account the material stakes of conflict for individuals in possession of contested assets. Specifically, to better understand why some individuals participate in state-sponsored as opposed to revolutionary violence, future work should further theorize and model the threat posed by regime change to individual livelihoods.<sup>184</sup>

Although this article has stressed the theoretical generalizability of the Rwandan case, the *paysannat* scheme and the Rwandan genocide admittedly represent an extreme case of mass resettlement and

<sup>179</sup> E.g., Horowitz 1985; Varshney 2003; Wilkinson 2006; Reynal-Querol and Besley 2014; Jha 2013.

<sup>180</sup> Fearon and Laitin 2003; Cederman, Min, and Wimmer 2010.

<sup>181</sup> Mann 2005; Mylonas 2012; Bulutgil 2016.

<sup>182</sup> Straus 2006; Fujii 2009.

<sup>183</sup> E.g., Collier and Hoeffler 2004; Humphreys and Weinstein 2008; Blattman and Miguel 2010; Dube and Vargas 2013; Dasgupta, Gawande, and Kapur 2017.

<sup>184</sup> For an exemplary working paper in this regard, see Hall, Huff, and Kuriwaki 2018.

state-sponsored violence. There is great potential for future work that can help us to better understand the dialectical relationship between state-sponsored demographic change and political conflict.

### APPENDIX

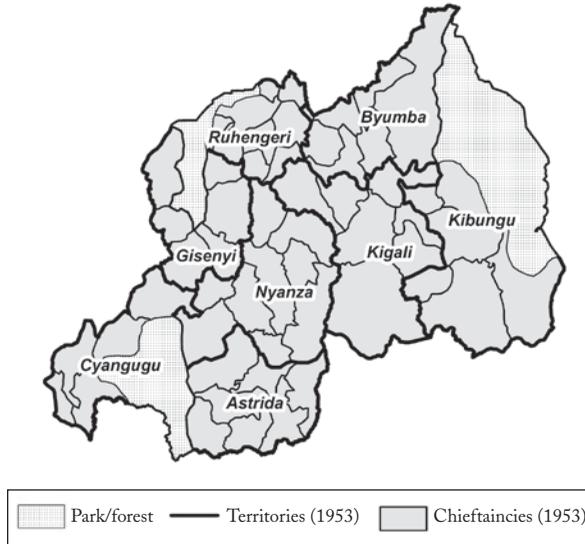


FIGURE A1  
CHIEFTAINCIES AND TERRITORIES IN COLONIAL RWANDA

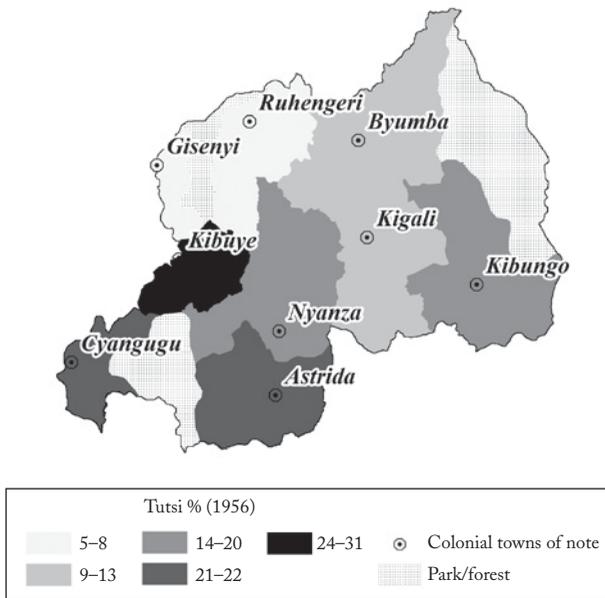


FIGURE A2  
TUTSI PROPORTIONS ACROSS RWANDA IN 1956

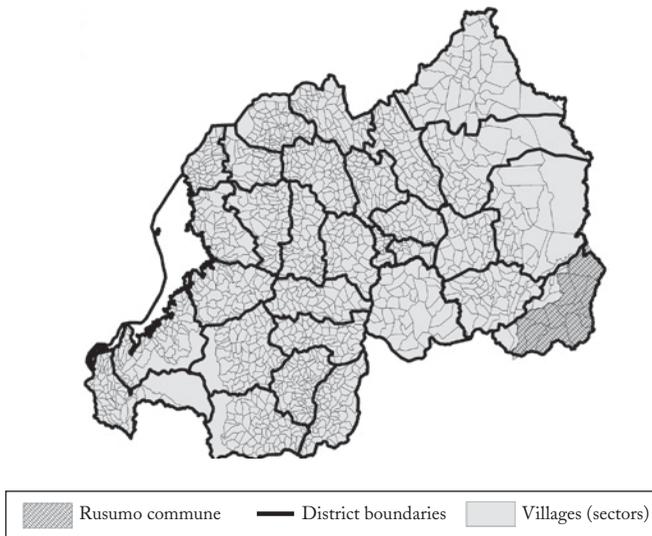


FIGURE A3  
RWANDAN DISTRICTS IN 1994

TABLE A1  
 REPLICATION OF TABLE 2, DROPPING ALL POTENTIAL  
 POSTTREATMENT CONTROLS<sup>a</sup>

	<i>Prosecutions RDD Dropping All Posttreatment Controls</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
Coefficient	160.23 (53.12)	199.99 (42.84)	166.15 (55.81)	159.93 (66.51)	26.23 (15.86)	133.01 (53.45)
Observations	1046	1046	1046	1046	1046	1046
Kernel type	triangular	uniform	triangular	triangular	triangular	triangular
Polynomial	linear	linear	linear	quadratic	linear	linear
Bandwidth type	MSE	MSE	CER	MSE	MSE	MSE
Eff. # of treated obs.	56	49	50	56	55	57
Eff. # of untreated obs.	300	259	265	296	280	308
Cluster std. error	yes	yes	yes	yes	yes	yes
Gacaca category	1 & 2	1& 2	1& 2	1& 2	1	2

<sup>a</sup> Geographic regression discontinuity of total number of village-level prosecutions for participation in the Rwandan genocide, where the forcing variable is geodesic distance of each village to the nearest paysannat border. The controls are pretreatment variables and those hypothesized to shape paysannat settlement: log distance to border, town, and road; log colonial population density (1949); vote share for the Hutu revolutionary parties (1960); Tutsi percentage (1956); and cattle per one hundred residents (1949). Standard errors clustered at the district level.

### SUPPLEMENTARY MATERIAL

Supplementary material for this article can be found at <https://doi.org/10.1017/S0043887118000138>.

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