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Who Kills? Social Influence, Spatial Opportunity, and Participation in Inter-group Violence

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Abstract

In episodes of collective violence between groups, which group members participate and which do not? Extant scholarship on individual participation in inter-group violence emphasizes dispositional susceptibilities: young, male, alienated, deprived, ethnocentric. This paper, however, finds that micro-situational opportunities also mediate selection into violence. In particular it highlights spatial factors. Using data on 2557 residents from one community in Rwanda, I map the household locations of participants, non-participants, and victims of Rwanda's genocide. I test two hypotheses. First, whether 'accessibility' – the ease with which an individual could access the site of violence – shaped participation. Second, whether 'social influence' – the ability to induce an individual to join in – mattered. I find support for the influence mechanism. Specifically, participants are more likely than non-participants to live both in the same household as and within close proximity of other perpetrators. These household and neighbourhood effects point to the existence of micro-spheres of influence.

In episodes of collective violence between groups, why do certain individuals participate but others not? Sectarian violence between Muslims and Hindus in Gujarat; ethnic riots between Kyrgyz and Uzbeks in Kyrgyzstan; anti-Jewish pogroms by gentiles in the Russian Empire; lynchings of African-Americans by white mobs in the southern United States; genocidal violence by ethnic Hutu against ethnic Tutsi in Rwanda. Although these diverse forms of violence are often framed as being between particular groups, it is usually only a subset of the group's members who in fact commit the violence. Many members – often the majority – do not participate. Who then is doing the killing? In explaining why only certain individuals from the group engage in violence and others not, existing approaches emphasize either unusual dispositional susceptibilities or unusual situational factors. Disposition approaches construct profiles of participants and suggest innate distinguishing characteristics which 'push' these individuals into violence. Participants in these various forms of violence then may be young, male (Horowitz 2002), aggrieved (Gurr 1968), poor (Scacco 2009; Verwimp 2005), sadistic (Valentino 2004), or ideologically committed (Mann 2000) among other things. 'Situational' approaches in contrast emphasize the ordinariness of the participants and focus instead on the extraordinary circumstances and opportunities exogenous to these individuals that 'pull' them into violence (Browning 1992; Haney, Banks, and Zimbardo 1973; Waller 2002) .

This paper presents a test of dispositional and situational factors and finds that both matter for individual participation in such violence. An individual's particular disposition to participate in such violence is mediated by the individual's situational opportunity to participate. Micro-situational factors can both constrain and facilitate an individual's desire - or inhibition - to join in the riot or seek out the fight. In particular, the paper points to spatial factors as overlooked

determinants of an individual's situational opportunity set. It highlights two possible causal mechanisms at work in spatial factors: 'social influence' and 'accessibility'. Social influence refers to the ability to induce another individual to join the violence. 'Accessibility' refers to the ease with which an individual can access the site of violence. To test these two mechanisms, I take a micro-level look at one tragic and grisly case of inter-group violence: Rwanda's genocide of 1994. I choose one community that experienced violence and geo-code the homes of all 2557 residents to construct a map showing the spatial distribution of the killers, non-killers, and victims. I find that perpetrators are likely to live in close proximity to each other. In addition to this 'neighbourhood effect', I also find a 'household effect'. Perpetrators are also more likely to live together in the same household. These findings point to the role of neighbours and family members respectively in influencing individuals to participate in the violence. These micro-spheres of influence in turn suggest the importance of situational peer pressure in pulling certain individuals into the violence and others not.

The paper is structured as follows. In section one I review extant theories of individual participation in various forms of inter-group and other kinds of violence and set out several hypotheses based on this. In section two I present the research design, data, and methods used to test these propositions. In section three I present the results and finally I conclude with a discussion of the implications of these findings for our understanding of inter-group violence generally and for Rwanda's genocide more specifically.

Section I: Theoretical Framework

Inter-group violence affects social stability in diverse parts of the world and in diverse forms. Riots, lynchings, ethnic and sectarian killings, pogroms, communal violence, atrocities, massacres, and genocidal violence may all be instances of inter-group violence. Despite their apparent differences, these various forms of inter-group violence have features in common. Inter-group violence (i) is collective – i.e. it is not the work of individuals acting alone, but of groups of individuals acting together; (ii) involves civilians as participants i.e. it is not committed solely by security professionals or 'violence specialists' such as soldiers, militias, and policemen who have an occupational interest in the use of force; and (iii) requires the group identity of the participants and victims to be integral and not incidental to the violence i.e. the violence is not primarily political or criminal in objective. This definition is narrower than the concept of collective violence (Tilly 2003) and closer to a definition of ethnic violence (Brubaker and Laitin 1998) given the importance of group identity. However, the term 'group' is preferable to the term 'ethnic' in describing such violence as 'ethnic' in the vernacular is connoted with tribal and clan identities and does not readily suggest religious or racial identities around which inter-group violence may also occur.

No grand theory exists that explains the selection of participants across these different forms of inter-group violence. Instead existing scholarship has focused on either specific episodes or specific forms of violence. While a considerable body of early work implicitly or explicitly emphasized a dispositional susceptibility when accounting for individual participation in violence, there is now a growing consensus that participants may in fact be quite ordinary

(Browder 2003). This consensus questions the analytic bias towards 'profiling' participants and suggests that it is situational factors which pull individuals into the violence that matter more.

Research on ethnic riots and ethnic violence has focused primarily at an event-level rather than at an individual-level of analysis. Perhaps as a consequence, the limited amount that has been written on individual participation points to very simple participant profiles based on age, gender, and class. Horowitz, in his detailed and global study of ethnic riots writes that participants were usually drawn from 'something like a random sample of working-class men, in most cases with a bias towards unskilled labourers' (Horowitz 2002). Tambiah, having studied Sinhala Buddhist-Muslim riots and Sinhala-Tamil riots in Sri Lanka corroborates this, finding that riot participants were largely 'young, male members of the urban poor' (Tambiah 1996). Raper, in research on lynching, a form of racial violence, finds that unmarried young men were most likely to join the lynch mobs (Raper 1933). Weinberg, writing about pogroms, a form of anti-Semitic violence, in imperial Russia indicates that unskilled day labourers were particularly active participants in the violence (Weinberg 1991). More recent research, however, points to both dispositional and situational factors. Scacco's research on sectarian riots between Muslims and Christians in Nigeria explicitly addresses the question of individual participation. She finds that the poor who were also active in associational life were the ones more likely to be drawn into the violence (Scacco 2009). Both deprivation (disposition) and social connectedness (situational) then were important.

Research into other forms of violence – not between groups - has also suggested dispositional characteristics, albeit more sophisticated ones, as determinants of participation. Some of the

strongest support for profile-based explanations originates in criminological and psychological work into the causes of criminal violence and deviancy (Maguire, Morgan, and Reiner 2007). This thinking of violence as deviant travelled to explanations of participation in political violence. Early research on terrorism also emphasized unusual psychological profiles. Terrorists, in particular revolutionary left-wing terrorists and anarchic right-wing terrorists, were seen as mentally ill (Post 1990) or else as fanatics (Taylor and Ryan 1988). In the case of Islamist terrorism which has received more attention of late, it has been suggested that militants are most likely to be young, second-generation Muslim men marginalized within and alienated from western societies (Roy 2004). However, more recent research argues that profiling is an unreliable predictor of who becomes a terrorist. Recruits can come from quite varied educational, income, and occupational backgrounds (Krueger and Maleckova 2003). Instead it has been suggested that becoming a terrorist is rather a process or journey (Horgan 2008). The implicit corollary then is that situational factors matter in deciding who becomes a terrorist. Sageman for example has highlighted the influence of an individual's particular social network in recruiting individuals into jihadist movements (Sageman 2004).

Research on others forms of political violence - revolutions, rebellions, insurgencies, and civil wars – has drawn heavily on macro-level evidence. However, scaling down the underlying causal logic to the micro-level implicitly suggests that individual participants may also have distinguishable profiles. Youth bulges – when a population comprises an unusually high proportion of 15-24 year olds - increase a country's susceptibility to revolutions and domestic armed conflicts (Cincotta et al. 2003; Urdal 2006). Rebels or revolutionaries then should fall into this age bracket. Grievance is another oft-cited dispositional causal mechanism behind

political violence. Although the evidence is mixed, macro-level analysis has suggested inequality, especially horizontal inequality between groups, is related to civil war onset (Besancon 2005; Stewart 2002). Implicitly then, those with the greatest grievance would be most likely to participate in civil wars. At the micro-level, Gurr's concept of relative deprivation provides more explicit theoretical support for grievance-centred dispositional susceptibility (Gurr 1970) . Relative deprivation arises from a discrepancy between an individual's expectations and her capabilities that induces frustration and aggression in the deprived individual. Group identity is another prominent factor in explanations of political violence, especially civil wars which fall along ethnic or sectarian boundaries. Macro-level research has provided mixed support for the role of ethnic diversity or more precisely ethnic fractionalization in civil wars (Collier and Hoeffler 2004; Fearon and Laitin 2003). Micro-level psycho-social research has suggested that strong in-group identification is tied to out-group prejudice, stereotyping, and discrimination, though there has been inadequate work to test whether for example strong ethnic identification is tied to individual-level participation in ethnic violence (Green and Seher 2003).

Disposition-centred explanations notwithstanding, other research on political violence has highlighted opportunity-side or situational factors. Macro-level analysis of civil wars has pointed to the availability of natural resources to finance violent conflict (Collier and Hoeffler 2004), the weak capacity of the state to repress violent conflict, and the physical geography favourable to violent conflict for example (Fearon and Laitin 2003). However, none of these macro-level, impersonal factors offers a causal logic for why certain individuals would participate in such violence and others not. Humphreys and Weinstein, however, do explicitly address the individual-level question of who fights in civil wars (Humphreys and Weinstein

2008). Their findings for combatants in Sierra Leone question purely grievance-based explanations of participation and instead point also to the importance of selective incentives and social sanctions. Individuals who were offered money to join and individuals who were more socially connected were more likely to voluntarily join the rebel movement.

Research on participation in mass killings, notably genocides, shows perhaps most clearly the trend away from dispositional and toward situational explanations. Early research emphasized authoritarian personality type (Adorno and Levinson 1950), sadism (Valentino 2004), ideological commitment (Mann 2000), self-interested careerism (Mildt 1996), and racism (Goldhagen 1997) among others, as possible distinguishing characteristics of the perpetrators. However, a scholarly consensus is now crystallizing that participants in this form of violence are in fact quite ordinary and that it is situational forces which bring them to commit extraordinary violence (Browder 2003). Hannah Arendt first wrote of the 'banality of evil' in 1963 in the context of the trial of Adolf Eichmann, a senior SS commander (Arendt 1963). She argued that Germans who committed extraordinary crimes in the Holocaust were not fanatics or sociopaths, but rather ordinary individuals who had accepted the forces and circumstances in effect in Germany and saw their own actions as normal. Browning's study of the 502 members of a German Police Battalion responsible for the deaths of 83,000 individuals in World War II, also concludes they too were just ordinary men shaped by particular circumstances (Browning 1992). For him these circumstances include 'traditions of racism', 'the siege mentality of war', respect for authority; and tremendous peer pressures. He concludes by asking: "If the men of Reserve Police Battalion 101 could become killers under such circumstances, what group of men cannot?' Waller has developed a generalized and sophisticated model of how ordinary people

'become evil'. He argues that there are ethnocentric instincts innate to us all but that it is situational mechanisms – particular to military or quasi-military organizations - which activate them allowing us to adapt to a 'culture of cruelty' (Waller 2002).

The growing body of micro-evidence on Rwanda's perpetrators also points to a consensus that for the most part these were ordinary killers. Straus, who interviewed 210 sentenced, self-confessed perpetrators, and who also tested numerous hypotheses on what led Rwandans to kill, concludes that 'Rwanda's killers were ordinary in all but the crimes they committed' (Straus 2006). Mironko interviewed approximately 100 self-confessed Rwandan perpetrators in their mother tongue and describes them as among the 'countless ordinary civilians – men, women, and children – who were more informally persuaded to take part in the killing, but who may in fact have killed more innocent people than all the other forces combined' (Mironko 2004). Fujii who interviewed 82 Rwandans describes those who joined in the violence as 'the lowest level participants in the genocide. They did not lead or organize the genocide; but were responsible for carrying out the majority of the violence against the Tutsi…They were, in every sense of the word, ordinary men (and women)' (Fujii 2006).

An insight into the determinants of individual-level participation in inter-group violence may also be found in much earlier research on two others types of group behaviour. Research into the civil disorder of America's turbulent 1960s and the emergence of the study of social movements have produced findings relevant to our understanding of participation in inter-group violence. The quest for particular dispositions in social movement members and in violent protesters ultimately yielded limited results. Snow et al. in their research on social movements

conclude that ‘the findings indicate that differential recruitment is not merely a function of dispositional susceptibility, but is strongly influenced by structural proximity, availability, and affective interaction with movement members’ (Snow, Zurcher, and Ekland-Olson 1980). McPhail, in a meta-review of research into participation in civil disorder concludes that individuals participate ‘not because they are "riot-prone" or because we can infer other motivational tendencies from their attributes; rather, their attributes crudely describe the presence or absence of their contacts and relationships with others which decrease or increase their availability for riot participation by virtue of the behaviors others can address to them’ (McPhail 1971). Both then have pointed to situational over dispositional factors in explaining individual participation.

Hypotheses

Several propositions worth testing emerge from this wide-ranging review of violent phenomena. First, the micro-evidence points to the importance of ‘social influence.’ The concept of social influence originates in social psychology through Kelman’s pioneering work on the topic (Kelman 1958). However, the underlying mechanism also appears in the research reviewed here in several different guises. Browning refers to ‘peer pressure’ (Browning 1992), Snow et al. highlight ‘affective interaction with others’ (Snow, Zurcher, and Ekland-Olson 1980), Scacco, Humphreys, and Weinstein underline ‘social connectedness’ or ‘social sanctions’ (Humphreys and Weinstein 2008; Scacco 2009), Fujii, citing Granovetter (Granovetter 1973) , writes of the ‘strength of weak ties’ (Fujii 2009), and Sageman points to ‘social networks’ (Sageman 2004). Kelman himself defines social influence as follows: ‘Social influence can be

said to have occurred whenever a person (P) *changes* his behaviour as a result of *induction* by another person or group (the influencing agent or O).' Kelman goes on to define induction. 'Induction may be deliberate and intentional, as in those cases where O tries to persuade, order, threaten, express expectations to, or express guidelines to P. On the other hand induction may also be unintentional to varying degrees, as in the case where O sets an example or acts as a role model for P' (Kelman 1974). This definition then may encompass a broad range of mechanisms: conformity, obedience, compliance, internalization, identification, socialization, and peer pressure. Many of these have been used to explain participation in group violence.

Second, the micro-evidence alludes to the importance of spatial opportunity. Horowitz writes of 'proximity' (Horowitz 2002), Snow et al. also mention what they term 'structural proximity', Humphreys and Weinstein test for 'isolation' (Humphreys and Weinstein 2008; Snow, Zurcher, and Ekland-Olson 1980), and McPhail points to 'availability and general proximity' (McPhail 1971). Clearly, however, proximity may be related to influence. The closer you live to someone, the more likely you are to be influenced by them. For this reason I prefer the broader concept of spatial opportunity. The mechanism it highlights is 'accessibility'. I aim to measure how difficult or how easy it was for an individual to access the site of violence and thus participate in it.

Finally, the most robust albeit also very simple profile that emerges of a participant across the diverse forms of inter-group violence reviewed here is that of the young male. Several causal mechanisms have been suggested for why young men may be most likely to be drawn to such violence. Young men may be less constrained by family and career responsibilities and can

afford the opportunity costs of participating in such time-consuming and risky activities (Collier and Hoeffler 2004). Alternatively young men experience frustration most acutely when deprived of opportunities for social and economic advancement, especially if their expectations have been raised from receiving education (Choucri 1974; Goldstone 2002; Kahl 1998). Young men may also be more likely to identify with groups that bestow them with honour, status, and purpose and participation in violence seduces through the sense of power over others that it creates (Keen 2005).

I set out then to test the following three main propositions in relation to individual participation in inter-group violence in general. I also include several more specific sub-propositions.

H1. Young men aged 15-24 years old are the gender and age group most likely to join in the violence.

H2. The greater the opportunity for social influence, the more likely an individual is to be drawn into the violence.

2a. Individuals who live close to other participants in the violence are more likely to be drawn into the violence.

2b. Individuals who live in the same household as other perpetrators are more likely to be drawn into the violence.

2c. Individuals who live close to the mobilizing agents in the community are more likely to be drawn into the violence.

2d. Individuals who live close to the symbols of state authority are more likely to be drawn into the violence.

H3. The less accessible or more isolated an individual, the less likely the individual is to be drawn into the violence.

3a. The further the individual is from the site of violence, the less likely s/he is to be drawn into the violence.

3b. The further the individual is from the site of group mobilization, the less likely s/he is to be drawn into the violence.

3c. The further the individual is from the location of the out-group target's home, the less likely s/he is to be drawn into the violence.

3d. The further the individual is from a roadway, the less likely s/he is to be drawn into the violence.

3e. The steeper and higher the location of an individual's home, the less likely s/he is to be drawn into the violence.

Proposition 3c may also work in the reverse direction using the 'influence' rationale. Individuals who are close neighbours of the out-group targets may be less inclined to participate in violence against them as they may have developed neighbourly bonds to each other.

Section II: Case Study, Data, and Methods

To answer the question of who kills in episodes of inter-group violence, I present data from one community which experienced violence during Rwanda's genocide of 1994. I start by giving a brief macro-history of the genocide and then an account of how the genocide played out in the chosen community. I then describe the collection and analysis of the data and finally present the dependent and independent variables used.

A Brief History of Rwanda's Genocide

In 1994 and still today, Rwanda comprised an overwhelming ethnic Hutu majority, an ethnic Tutsi minority, and an even smaller ethnic minority of Twa. A Tutsi monarchy had ruled this tiny kingdom for some time before European colonization. Both the Germans from 1897, and then the Belgians from 1916 continued to rule indirectly through the native Tutsi king, the *Mwami*. The Belgians had seen the Tutsi as racially superior, privileged them, and amplified the differences between them and Hutu. Then, shortly before Rwanda's independence in 1962, a Hutu revolution overthrew this monarchy. The revolutionaries, led by Grégoire Kayibanda, proclaimed Rwanda's first Republic, controlled by a new Hutu elite. This historic event also triggered the exodus of tens of thousands of Tutsi civilians. Despite several armed attempts over the next few years, the exiles failed to return, and the attacks instead sparked violence against the Tutsi population that had remained within Rwanda. In 1973, in a coup d'état a small group of northern Hutu wrested power from Kayibanda. A young Juvénal Habyarimana became President of Rwanda's Second Republic. He ruled unchallenged until October 1990 when the Rwandan Patriotic Front (RPF), composed primarily of the descendants of the Tutsi exiles, invaded from across the Ugandan border to the north. This began Rwanda's civil war. In August 1993

Habyarimana accepted internationally-brokered power-sharing deal with the RPF and the main domestic opposition parties. A UN peacekeeping mission, UNAMIR, was fielded to monitor the agreement. However, there was intense opposition to the peace agreement from hardliners at home, and Rwandan politics grew increasingly tense.

On April 6th 1994 a plane coming in to land at Rwanda's main airport was shot down, by assassins still unknown, killing all aboard including President Habyarimana. Almost immediately a small group of Hutu extremists seized the opportunity to establish itself as the new government and eliminated the moderate opposition. Once they had captured the state, they used its considerable resources and authority to implement a genocidal program. They deployed the state's civilian and military apparatus, and mobilized ordinary Rwandans against the Tutsi civilian population. At the same time, government forces and the rebel RPF army re-engaged in combat. The international community failed to intervene to stop the slaughter. Instead it moved to evacuate foreign nationals and to draw down the 2700-strong UN peacekeeping force on the ground. In the end only 450 blue helmets remained. Some one hundred days later, the rebels emerged victorious. They had defeated the Rwandan army and militia, who escaped to the west into neighbouring Zaire, behind a humanitarian screen established by the French. About two million Hutu civilians followed them over the border. However, in those same 100 days, about three-quarters of Rwanda's Tutsi population were brutally murdered.

Rwanda's genocide is shocking for several reasons. The characteristics of the violence impress themselves upon your mind. First, the intensity leaves little doubt as to whether the intent was genocidal. As mentioned nearly three-quarters of Rwanda's minority Tutsi population

were exterminated, along with several tens of thousands moderates of the Hutu majority (McDoom 2009). Then there is the sheer speed of the violence. These people were killed in little over one hundred days, and there is evidence to suggest the majority of the victims perished in the first two to three weeks (Verwimp 2004). The nature of the violence is also distressing to learn. It was collective, crude, and highly intimate. Killers wielded agricultural implements - machetes, forks, and hoes – as well as traditional weapons - nail-studded clubs, knives, bows and arrows, and spears. They confronted their victims face-to-face and overwhelmingly in groups. However, one of the most controversial and distinctive aspects of the violence is the scale of civilian involvement. In practically every community where the Tutsi 'enemy' lived, there were Hutu (and also Twa) who mobilized against them. Their victims were often people known to them personally.

Rwanda's genocide then was the result of a civilian mobilization remarkable for both its scale and its speed. By one calculation approximately one in four Hutu men committed at least one act of violence during the genocide (McDoom 2009). This is an astounding statistic. However, high as the figure is, it still means that three in four Hutu men did not participate in the violence. To reiterate the research question, what then explains why some participated and so many did not?

To answer this question I collected data on participants and non-participants in Rwanda's violence from one community or 'sector' that experienced violence during the genocide. Sector

Tare is located in south-west Rwanda in what was at the time of the genocide Butare prefecture.[1] It was in several respects quite a typical community for Rwanda. In 1994 sector Tare comprised 714 households, in line with the national average, and was home to 2557 Rwandans. Of these 215 or 8.4% were ethnic Tutsi, again in line with the national proportion reported in the 1991 Population Census. I summarize these demographic data in Table 1. I selected Tare because extensive micro-data for it were available through its participation as a pilot community in Rwanda's experiment in community justice, truth and reconciliation known as *gacaca*. The *gacaca* pilot program involved 118 of Rwanda's 1545 sectors in 2002 when I first began research in Rwanda. I ultimately chose Tare from among these sectors as it was the community which kept the best written *gacaca* records on the violence.

(Table 1 about here)

[1] In April 1994 Rwanda comprised 11 prefectures, 145 communes, 1545 sectors, and 9000+ cells. A sector was home on average to about 800 households. In addition, in some places there was a fifth layer. The *nyumbakumi* were unpaid individuals representing a collective of ten households.

Table 1: Profile of Tare Sector, Rwanda

Surface area (population density)	5.62 km^2 (455 persons/$km^{2)}$
Population (households)	2557 (717)
Ethnic Hutu & Ethnic Twa	2342 (91.6%)
Ethnic Tutsi	215 (8.4%)
All inter-ethnic unions	38
Hutu man-Tutsi woman	27
Tutsi man-Hutu woman	11
All suspects	194
Convicted suspects	95
All victims	136 (63.3%)
Killed inside Tare	10 (7.4%)
Killed outside Tare	126 (92.6%)
All survivors	79 (36.7%)
Male survivors	18 (22.8%)
Female survivors	61 (77.2%)

A Brief History of the Genocide in Sector Tare

Before the genocide, inter-ethnic relations in sector Tare were good. The Hutu-Tutsi marriage rate was high: 38 such unions representing 37.2% of all Tutsi, most of them between Hutu men and Tutsi women. When Rwanda's President was assassinated on April 6th 1994, the event that triggered the genocide, Tare did not immediately explode into violence as some other communities in Rwanda did. There was instead uncertainty as to what was happening and as to what to do. For the first two weeks the residents of Tare worked together – both Hutu and Tutsi – to secure their community. They manned checkpoints and organized night patrols together in their community. The reason for this initial inter-ethnic collaboration had to do with local leadership. The Prefect of Butare prefecture, in which sector Tare was located, was in fact a Tutsi himself. Jean-Baptiste Habyalimana had resisted orders from the new extremist central government in the capital Kigali to organize the 'self-defense' of the prefecture - by which it meant the elimination of the Tutsi civilian 'threat'. However, things changed in Butare on Monday, April 18th 1994. Rwanda's new, extremist President, Sindikubwabo, visited the prefecture's capital to replace (and assassinate) its rebellious Prefect. President Sindikubwabo also travelled outside of the prefecture's capital to a Parish church at Simbi where a large number of Tutsi had sought refuge. Simbi is located in Maraba commune where sector Tare is also located. There he addressed the crowd of Hutu gathered and exhorted them to rise up and 'work' to protect themselves. Immediately thereafter the massacre at Simbi began. Sindikubwabo's intervention also signalled a turning point in sector Tare.

Having learned of the events in Butare's capital and at Simbi, the majority of Tare's Tutsi community left their homes that same Monday evening, April 18th. The vast majority gathered at Rugango Parish church, just outside the eastern boundary of sector Tare and a few gathered at Gihindamuyaga monastery a little further east of Rugango along with Tutsi refugees from other communities. The following day, Tuesday April 19th 1994, a group of Hutu from Tare assembled where the main road first intersects Tare to attack the enclave of Tutsi living on Sovu hill, just south of Tare. However, this initial attack was repelled by the Tutsi living there and failed. On Wednesday April 20th, a meeting was held in Tare and plan of attack was made. On Thursday morning, April 21st, a group of Hutu men assembled again in the same location to execute it. This time they attacked the Tutsi who had sought refuge in the Rugango Parish church. The attack was successful this time and emboldened by this the group continued to Gihindamuyaga monastery in the afternoon and attacked the Tutsi who had gathered there. On Friday April 22nd, the group then returned to Sovu to finish what they had started two days earlier and successfully attacked the Sovu health centre where the Sovu Tutsi had now gathered. Having now killed most of Tare's Tutsi community, the hunt for surviving Tutsi hiding in the vicinity continued over the next two and half months. The killing did not stop until the arrival of the rebel RPF army on July 2nd 1994 which caused most of Tare's residents to flee across the border of what was then Zaire. In two days then, April 21st and 22nd 1994, having gathered in just two principal locations, Tare's Tutsi community was practically exterminated.

Data Collection and Analysis

The difficulties of doing research on participation in these types of violence should be acknowledged. It is not always easy to gain access to the site of violence, to differentiate killers from non-killers, or to collect data on participants using techniques or on a scale that addresses methodological issues such as selection bias, efficiency, and representativity. Existing data on participants often come from archival material, purposive interviews, and to a far lesser extent surveys. Good micro-data on individual participants are precious. Much of what we do know about such violence then often draws on macro-level analysis using events and countries as units of analysis rather than individuals. It is perhaps unsurprising then that there is often a disjunction between macro- and micro-level findings. The 'ecological fallacy' may explain for example why there is limited micro-level support for cross-national findings on the importance of low GDP per capita, ethnic diversity, and natural resource dependence in civil wars for example. Population or 'ecological' level data can provide misleading inferences about micro-level phenomena as the causal logic may differ between levels of analysis (Robinson 1950). Kalyvas has already noted the macro-micro disjunction in explanations of violence in civil wars (Kalyvas 2006). However, the precious individual-level data we do have on participants in such violence sometimes raise another methodological issue: no variation on the dependent variable. The methodological bias is towards looking at the perpetrators alone rather than alongside those who do not participate in the violence. We have few systematic comparisons of participants against non-participants which would allow more robust inferences about why certain individuals engage in violence and others not. This certainly does not mean these findings are

wrong, but it does mean we should exercise caution in interpreting data based exclusively on research involving perpetrators alone.

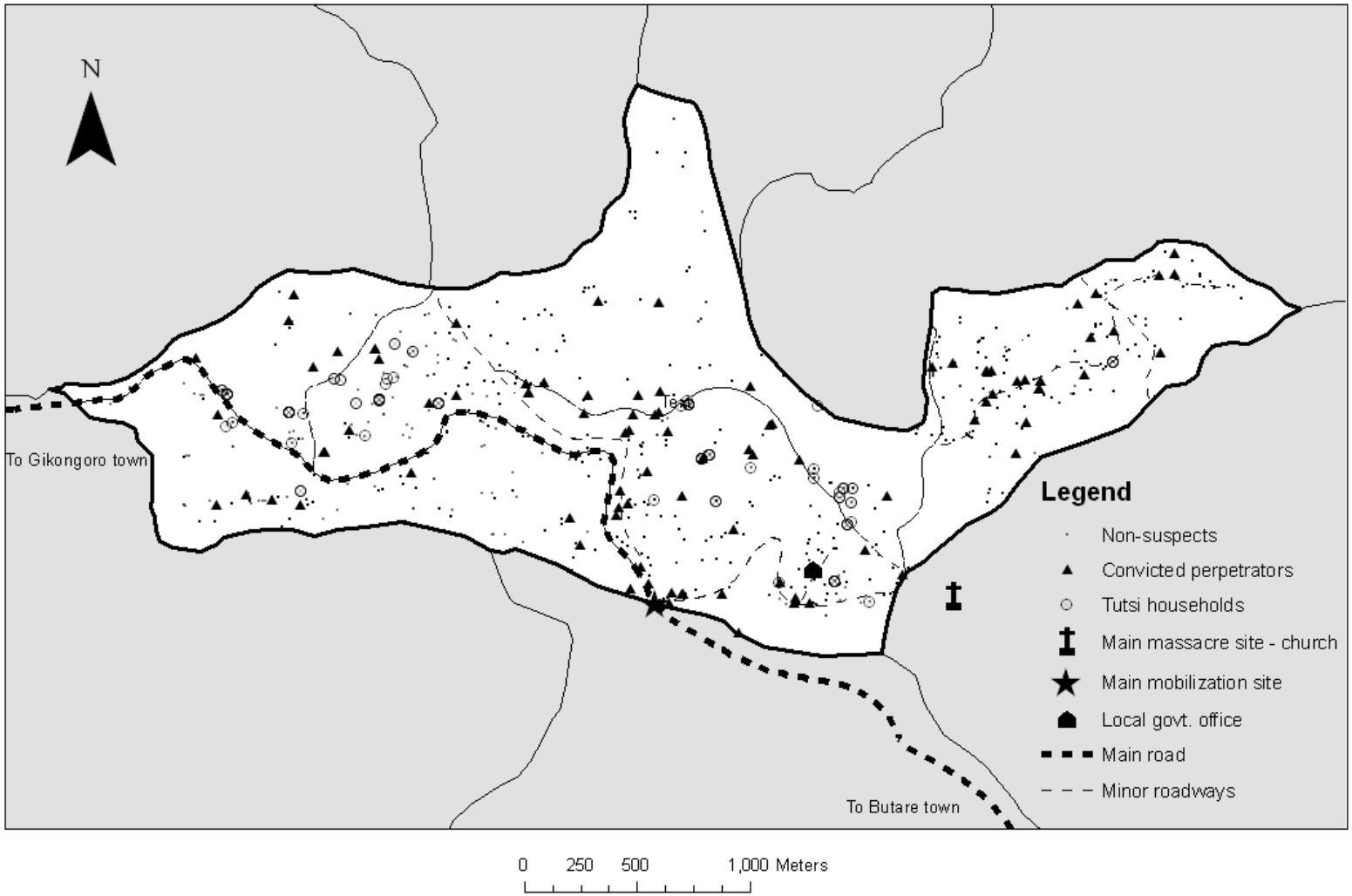
In recognition of these methodological issues in this area of research, I chose (i) to conduct a micro-level study using individuals as the unit of analysis; (ii) to collect data on the population rather than on a sample; and (iii) to systematically compare participants against non-participants in the violence. The goal was to collect data on every individual resident in sector Tare in 1994. In particular I wanted to know exactly where every individual lived, with whom they lived, their basic demographic profile (age, sex, ethnicity), whether they were mobilizing agents in the community or not, whether they participated in the violence or not, and whether they were the targets of violence or not.

The collection of these data was facilitated by the *gacaca* process ongoing at the time. Gacaca is an innovative indigenous institution of transitional justice adapted to deal with the extraordinary scale of violence committed during Rwanda's genocide. It empowers local communities to adjudicate on many of the perpetrators' crimes themselves. It also aims to promote reconciliation between Hutu and Tutsi. One of the first tasks required by *gacaca* is for the community to conduct a census of all individuals who lived there in April 1994 just before the genocide began. In practice, each of Tare's *nyumbakumi*, a person given responsibility for blocs of ten households in Rwanda, prepared lists for their areas which were then compiled into a single master list for the whole community. It was this list that I then used to undertake a mapping of every household in Tare. With two local research assistants using handheld Global Positioning System (GPS) units I collected the geographic coordinates for all of Tare's 2557

residents and was able to construct a map of Tare showing the spatial distribution of households in the sector alongside other important topographical features such as roads, waterways, buildings, administrative boundaries as well as variation in the elevation and slope for the 5.62 square kilometres which define the community. This can be seen in Figure I.

(Figure I about here)

Figure 1: Map of Tare sector, southern Rwanda, 1994



Dependent Variable

I used a binary dependent variable for individual participation in the violence. I defined a participant as any individual who joined at least one attack group which killed at least one individual. Participation in Rwanda's genocide of course involved many forms of action other than actual violence: the looting of property, the organization of checkpoints, participation in night patrols, the denunciation of individuals, and the provision of moral and emotional support to the killers among others. However, an act of violence remains an important threshold in any spectrum of anti-social behaviour and we still need to explain why one quarter crossed this threshold and three-quarters did not.

I took as participants those individuals *convicted* of violent genocide-related crimes through the gacaca, which had been completed in Tare. Rwanda's gacaca law ultimately established three categories of genocide crime. Category I crimes covered the most serious perpetrators such as the organizers of the genocide and sexual offenders. These individuals were not tried by local communities and only one person fell into this category in sector Tare. Category II crimes covered individuals who had committed violence against the person with or without the intention to kill. Category III crimes covered offenses against property, most commonly looting. I took as participants all those convicted of category II crimes. The project then purposively focused on low-level perpetrators and not the elite who planned and led the violence.

I did not rely solely on gacaca convictions to identify participants. Subversion of the gacaca process could have led to the acquittal of the guilty and to the conviction of the innocent. The

possibility of false accusations, the cooptation of judges, and spurious confessions to secure lesser sentences could not be discounted. I also relied then on a list of *suspected* participants. I took the list of gacaca suspects (those who stood trial) and verified these names against a second list of suspects established by a lesser-known and informal *gacaca* process involving self-confessed perpetrators within the prison system. Only if a name appeared on both lists was s/he counted as a suspected participant. Ultimately in Tare these two lists proved to contain the same names. In short, I had two dependent variables - convicts and suspects – to minimize the risk of selection bias.

Independent variables

For hypothesis I on the demographic profile of a participant, I used the data on age and gender collected in the local census conducted by Tare's nyumbakumi representatives. My research team then corroborated these data at the same time as they collected the geographic coordinates for all Tare's households.

For hypothesis II on 'social influence', I used several spatial measures to estimate the opportunity for participants to be inducted into the violence as a result of several possible forms of influence. All distances measured were 'as the crow flies' using Geographic Information Science (GIS) software to calculate them precisely. To measure 'horizontal influence' or peer pressure I compared the number of perpetrators who lived in the vicinity or 'neighbourhoods' of participants against the number who lived in the 'neighbourhoods' of non-participants. I established a 'neighbourhood' by drawing circular perimeters or 'buffers' of increasing radiuses

around an individual's home: 50m, 100m, 150m, 200m, 300m, 400m, and 500m. I controlled for population density in the neighbourhood by expressing the number of participants as a proportion of all persons who lived in these neighbourhoods.

To measure 'vertical influence' I measured the distance between an individual's home and the home of the nearest mobilizing agent. To be classified as a mobilizing agent or violence entrepreneur an individual had to have either (i) participated in one of the local 'security meetings' which planned the attacks in Tare; (ii) acted to mobilize a group of people through face-to-face contact with them; or (iii) personally led an attack group. To establish the identity of mobilizing agents in Tare, I conducted two focused group interviews. The first involved official members of the gacaca committee for Tare and the second involved self-confessed perpetrators in the prison system. I compared the lists of names which emerged from both interviews and only if a name appeared on both lists was this individual counted as a mobilizing agent.

I also sought to measure another form of 'vertical influence', that of the state. The state's authority to legitimize violence against out-groups is well-established in the literature on genocide. It accounts for obedience-oriented explanations of participation in Rwanda's genocide (Prunier 1998). To capture this I measured the distance between an individual's home and the local government office for the sector, the local representation of the Rwandan state's power.

Lastly I sought to measure the influence of other family members for and against participation in the violence. I simply counted then the number of perpetrators in the household of every Tare resident.

For hypothesis III on 'spatial opportunity, I again used several spatial measures to estimate how difficult or how it was easy for an individual to participate in the violence. The underlying rationale was 'accessibility'. I measured first the distances between an individual's home and the sites of violence. I counted the distance to the nearest Tutsi household as well as the distance to Rugango Parish church, the main massacre site. To establish the identity of Tutsi households I relied first on the list of victims that the gacaca was officially required to prepare. I then cross-checked this list in an interview with the head of the Tutsi survivors' association in Tare and added all the other surviving Tutsi to the list. I also measured the distance to the main site of mobilization where groups gathered before heading out on a hunting raid. This was the area where the main road first intersects Tare and is also the commercial centre for the sector with numerous local shops, bars, and a marketplace. I then measured the distance to the nearest roadway, paved and unpaved, as this would obviously facilitate the movement of individuals through the sector. Finally I measured the elevation and slope of an individual's home. Rwanda is known as the land of a thousand hills and its hilly terrain constrained mobility. I obtained raster data with a spatial resolution of 90m x 90m from the National University of Rwanda which gave the elevation (in metres) and slope (in degrees) for each cell. Elevation ranged from 1647m to 1914m and slope ranged 1 to 51 degrees in steepness.

I constructed models of participation which estimated the power of the dispositional variables and situational variables separately and then together using multivariate logistic regression. Logistic regression is a probabilistic technique which in this case measured the odds of an individual being a participant in the violence. I ran all models with both dependent variables, convicts and suspects, and report the results in Table 2. Finally I should say that while all these data are available to researchers, I have removed names to protect individual privacy. Researchers then are not allowed to match names to the location of particular households. Obviously the data do allow researchers to identify the location of participants and non-participants in the violence. However, I allow this only for convicted perpetrators whose crimes are a matter of public record, but not for individuals merely suspected of participation.

Table 2: Multivariate Models of Individual Participation in Inter-Group Violence

	Profile Model		Situational Model				Profile & Situational Model			
Dependent variable	**All suspects**	**Convicted only**	**All suspects**	**Convicted only**	**All suspects**	**Convicted only**	**All suspects**	**Convicted only**	**All suspects**	**Convicted only**
Independent variable	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**
Gender	46.30***	90.16***					49.94***	90.76***	48.71***	90.15***
	(23.53)	(90.75)					(25.61)	(91.50)	(24.94)	(90.86)
Age Squared	1.02***	1.01*					1.02***	1.01	1.02***	1.01*
	(0.01)	(0.01)					(0.01)	(0.01)	(0.01)	(0.01)
Neighborhood effect (100m)			1.03***	1.07***			1.04***	1.06***		
			(0.01)	(0.02)			(0.01)	(0.02)		
Neighborhood effect (200m)					1.03**	1.01**			1.05***	1.03**
					(0.02)	(0.04)			(0.02)	(0.04)
Household effect			5.70***	8.01***	5.78***	9.29***	6.02***	6.81**	5.77***	7.38 **
			(2.05)	(6.24)	(2.09)	(7.26)	(2.61)	(6.05)	(2.53)	(6.55)
Distance to nearest mobilizing agent			0.12***	0.27 (0.24)	0.11***	0.17*	0.17**	0.39	0.18**	0.29
			(0.08)		(0.07)	(0.16)	(0.13)	(0.36)	(0.13)	(0.27)
Distance to local government office			2.25	3.55	2.03	4.14	3.91	4.54	3.32	5.11
			(2.37)	(5.26)	(2.14)	(6.18)	(4.46)	(6.82)	(3.78)	(7.72)
Distance to nearest Tutsi household			0.54	0.68	0.58	0.60	0.59	0.93	0.70	0.87
			(0.27)	(0.48)	(0.29)	(0.42)	(0.34)	(0.69)	(0.41)	(0.65)
Distance to mobilization site			0.94	0.72	0.98	0.73	0.54	0.52	0.57	0.52
			(0.48)	(0.51)	(0.50)	(0.53)	(0.30)	(0.37)	(0.31)	(0.38)
Distance to massacre site			0.70	0.48	0.73	0.45	0.51	0.39	0.54	0.38
			(0.49)	(0.47)	(0.51)	(0.45)	(0.39)	(0.39)	(0.41)	(0.38)
Distance to nearest roadway			1.64	0.25	1.50	0.16	1.31	0.30	1.04	0.18
			(1.40)	(0.33)	(1.29)	(0.22)	(1.26)	(0.41)	(1.00)	(0.25)
Elevation of household			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
			(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Slope of household			1.01	1.02	1.01	1.02	1.00	1.01	1.00	1.01
			(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)
N	2098	2080	2409	2381	2409	2478	2018	2000	2018	2080

Logistic regressions. Odds ratio reported with standard errors in parentheses.
//*** indicate statistical significance at 10%, 5%, and 1% levels respectively*

Section III: Results

(Table 2 about here)

I find support for the general proposition that micro-situational factors do matter for differential selection into group violence. Specifically, I find support for hypothesis II and the causal mechanism of 'social influence'. Perpetrators do live within a sphere of influence of other perpetrators. The logistic 'situational' models (models 3,4,5 and 6) shows that perpetrators are more likely than non-perpetrators to have other perpetrators resident in their neighbourhood. The finding is statistically significant at the 1% threshold for a 100m neighbourhood and robust for neighbourhoods defined at varying radiuses. At 50m, 100m, 150m, and 200m the existence of a 'neighbourhood effect' is strong, though for space reasons I report results only for 100m and 200m neighbourhoods in Table 2. The effect, as one would expect, tapers off as the neighbourhood widens. At 300m the effect is no longer evident. This finding holds true for both suspected and convicted perpetrators, the two dependent variables in the logistic model, though the effect is stronger for those convicted and tapers off sooner than for suspected perpetrators. To express this in probabilistic terms, the odds of an individual becoming a convicted perpetrator increase by 7% for every additional convicted perpetrator living within 100m of this first individual. The odds increase by 4% for every additional suspected perpetrator in the same neighbourhood. The neighbourhood influence can also be seen in the descriptive statistics in Table 3. As the number of perpetrators in the neighbourhood increases, there is a higher percentage of all perpetrators who live in that neighbourhood relative to the percentage of all

non-perpetrators. This neighbourhood effect suggests the importance of horizontal influence or 'peer pressure' in drawing individuals into the violence.

(Table 3 about here)

Table 3: Neighbourhood Effects on Individual Participation in Violence (100m radius)

Number of perpetrators in neighbourhood	Non-suspects		Suspects		Non-convicts		Convicts	
	N	%	N	%	N	%	N	%
0	625	27.0	46	23.7	646	27.1	19	20.0
1	622	26.9	50	25.8	640	26.9	26	27.4
2	439	19.0	28	14.4	451	18.9	9	9.5
3	232	10.0	16	8.3	236	9.9	8	8.4
4	84	3.6	18	9.3	89	3.7	11	11.6
5	122	5.3	18	9.3	128	5.4	12	12.6
6	109	4.7	2	1.0	110	4.6	1	1.1
7	18	0.8	5	2.6	20	0.8	3	3.2
8	29	1.3	4	2.1	30	1.3	1	1.1
9	18	0.8	0	0	18	0.8	0	0
10	8	0.4	5	2.6	8	0.3	5	5.3
11	5	0.2	2	1.0	6	0.3	0	0.0
12	1	0	0	0	1	0	0	0
Total	**2312**	**100**	**194**	**100**	**2383**	**100**	**95**	**100**

The results also point to a second source of 'influence': a household effect. Individuals who live in households which contain at least one perpetrator are also more likely to be pulled into the violence than individuals who live in households where no-one else participates in the violence. The influence of other family members is statistically and substantively significant. In Model 6 for example, having a perpetrator in your household increases the odds of becoming a perpetrator yourself just over nine times. This finding is robust across all the 8 models reported which test for the impact of situational factors and at either the 1% or 5% significance levels.

In addition to the neighbourhood and household effects, the results suggest a third, albeit more uncertain, source of influence: vertical pressure from above. Individuals who lived closer to a mobilizing agent in the community were more likely to be drawn into the violence than those who lived further away. Mobilizing agents were individuals who either organized or led attack groups in the community, that is they played local leadership roles during the violence. However, there is greater uncertainty regarding this effect as its significance is apparent for only one of the two dependent variables tested. Thus in model 5 for example I find that for every 100m further an individual lived from a mobilizing agent, it decreased the odds of this individual becoming a suspected perpetrator by 8.9%. However, the statistical significance of this effect disappears altogether in model 6 where I switch the dependent variable from suspected to convicted perpetrators. We must exercise greater caution then in assuming the importance of vertical influence compared with peer and family pressures. I did not find support for the vertical influence or symbolic authority of the state. Perpetrators did not live closer to the local government office than non-perpetrators. However, this might be because the sector office is a

far less significant institution than the higher-level commune or prefecture offices which have decision-making and revenue-generating powers in the Rwandan state apparatus.

In contrast with the 'influence' mechanism, I did not find support for any of the situational factors based on the 'accessibility' mechanism and tested in hypothesis III. Individuals who were more isolated – measured in terms of their distance from a roadway, their distance from the main mobilization site, their distance from the main massacre site, as well as the steepness and elevation of their home - were not less likely to be drawn into the violence than individuals who had greater accessibility. I had also looked at the distance to the target victim's home (Tutsi households) – which as mentioned earlier is arguably a measure of both influence and accessibility – but once again find no support for this factor either.

I had also tested, in hypothesis I, for the importance of dispositional susceptibility for violence using a very basic demographic profile: the young male. In Table 4, I divided the population first by gender and then by age bracket (I created 7 age brackets altogether) and counted the relative frequency of perpetrators and non-perpetrators in each of these categories. As is most evident, men are much more likely than women to participate in the violence. Over 95% of both suspected and convicted perpetrators were men. Logistic models 1 and 2, both 'profile-only' models which test the importance of age and gender, show that being male increases the odds of being a perpetrator 46 times for suspected perpetrators and 90 times for convicted perpetrators respectively. The significance of gender is robust across all 10 models reported. The findings for age were more surprising. While there does appear to be an age profile, it is not the young male. Men aged 15-24 years, the age bracket that theory suggests as

the most likely to participate in such violence, are not the most over-represented group among perpetrators. The most likely age bracket to participate in the violence is in fact the group aged 25-34 years old. 37.8% of all convicted perpetrators fall into this age bracket compared with only 13.7% of non-perpetrators, making perpetrators nearly three times as likely to come from this age group as non-perpetrators. Table 4 also shows that the relationship between age and participation in the violence is not linear. The very young (less than 15 years old) and the very old (greater than 64 years old) did not commit acts of violence during the genocide suggesting the relationship is curvilinear and more precisely an inverted 'U' shape. To capture this relationship in the logistic models I included then a quadratic term which squared the age variable.

(Table 4 about here)

Table 4: Age Profiles of Participants and Non-Participants in the Violence

	Non-suspects (n)	All suspects (n)	Non-convicts	Convicted only (n)
Male	48.0% (1110)	96.9% (188)	49.5% (1179)	96.8% (92)
Female	52.0% (1200)	3.1% (6)	50.5% (1202)	3.2% (3)
Total	100% (2310)	100% (194)	100% (2381)	100% (95)
0-14 years	40.7% (783)	0	39.4% (783)	0
15-24 years	17.9% (345)	23.0% (40)	18.2% (363)	22.2% (20)
25-34 years	13.8% (265)	26.4% (46)	13.7% (272)	37.8% (34)
35-44 years	11.9% (228)	27.6% (48)	12.4% (246)	27.8% (25)
45-54 years	6.9% (132)	13.8% (24)	7.5% (149)	3.3% (3)
55-64 years	4.9% (95)	9.2% (16)	5.1% (101)	8.9% (8)
65+ years	3.9% (76)	0	3.8% (76)	0
Total	100% (1924)	100% (174)	100% (1990)	100% (90)

I did assess the relative power of dispositional and situational factors in explaining differential selection into violence. As mentioned, models 1 and 2 are very simple dispositional or profile models, models 3, 4, 5, and 6 are situational models, and models 7, 8, 9, and 10 are combined dispositional and situational models. Both the disposition-only and situational-only models are statistically significant and have independent explanatory power. However, using Likelihood ratio and Wald tests none of these models can be rejected in favour of the combined dispositional and situational model. Of the 4 such combined models reported, model 7 is the best fit where the dependent variable is the suspected perpetrator and the neighbourhood is defined at 100m. In other words the data provide support for the view that both dispositional and situational factors matter in explaining individual participation in violence.

Lastly the data also allow some simple inferences to be drawn about perpetration and survival rates during the genocide. Table 1 reports descriptive statistics on the population, perpetrators, and survivors. As can be seen the perpetration or mobilization rate is high. If measured as a proportion of adult Hutu males (defined as aged 15 and older), there were 853 such individuals living in the community in 1994 at the time of the genocide. Of these, 188 or 22.0% were suspected perpetrators, and 92 or 10.8% were convicted perpetrators. In Tare sector then just over 1 in 5 Hutu men are suspected of committing an act of violence during the genocide, slightly lower than my national estimate of 1 in 4 Hutu men. Consistent with the widely-held view on Rwanda's genocide, it was an extraordinary civilian mobilization. The survival rates tell an equally chilling story. Of the 215 Tutsi who lived in Tare at that time, 136 or 63.6% were killed during the genocide. Nearly two-thirds of this ethnic group then were exterminated, consistent with my national estimate. We can also describe a basic profile of the

survivors. Of the 79 Tutsi survivors, 61 or 77.2% were female and only 18 or 22.8% were male. All of them were children under the age of 15. Girls then were much more likely to survive than boys. Finally, we see that the vast majority of the victims were not killed in their homes in Tare but rather outside of the borders of the community. In fact 92.6% were killed in places they had gathered together to seek refuge. The largest massacre site was the Rugango Parish church followed by the Gihindamuyaga monastery and the Sovu Health centre all located just outside of Tare. Your chances of survival then were much higher if you were alone and if you stayed away from places of collective refuge.

Section IV: Discussion and Conclusion

At a theoretical level, the data provide support for the view that differential selection into such violence is a function of both dispositional and situational factors. Why certain individuals come to participate and others not has to do with both characteristics innate to the individual ('push' factors) as well as situational factors exogenous to the individual ('pull' factors). Research and policy premised on 'profiling' individuals then need also to consider the opportunity set an individual faces in assessing the chances that s/he would engage in such violence. Space (and arguably time - though I did not have the data to test temporal factors here) is an important factor that defines an individual's opportunity set. Being at the wrong place at the wrong time I believe may go some way to explaining why one person became a perpetrator and another not in the Rwandan context. If you happened to be at home at the time your perpetrator neighbour came to look for you, the chances of your being inducted into the violence increased. At the same time it is going too far to suggest that the killers are entirely 'ordinary'

and that anyone could commit such atrocities when faced with extraordinary circumstances. Such an approach cannot explain the many heroic acts of resistance and assistance during Rwanda's genocide. Although it is a very crude profile, the data point to men belonging to a certain age bracket as being the group most likely to participate in the violence. However, it is important to acknowledge that the models I have reported here certainly do not explain everyone's participation (or non-participation) in the violence. There are likely to be other distinguishing characteristics and situational factors which may mediate why certain individuals came to kill and others not. Moreover, 'push' and 'pull' factors may interact in complex ways which quantitative data of the kind presented here may not readily disambiguate – especially in the case of more subjective dispositional characteristics such as those tied to grievances, fears, and prejudices. It may be for example that an individual lives close to another individual because they share some similar attitudes or beliefs or it may that they developed such similar dispositions as a result of living close together. More qualitative research would afford us a better insight into such complex interactions if they exist.

This project has also suggested social influence as the causal mechanism behind the situational fact that killers live within close spatial proximity to each other. In particular it has identified independent and robust household and neighbourhood effects. Individuals who live either in the same household or within a 200m neighbourhood of a perpetrator are more likely to be inducted into the violence than individuals who do not. Violence then is contagious and one mechanism behind contagion, at least at the micro-level, appears to be social influence. These 'micro-spheres of influence' also give us some insight into one of the more disturbing and distinguishing aspects of Rwanda's genocidal violence: its extraordinary level of civilian

participation. Rwanda had and still has the highest population density of all countries in Africa. Just before the genocide there were on average 422 Rwandans living in every square kilometre of this tiny nation. In Tare the population density was even slightly higher with 455 persons per square kilometre. This has led to suggestions that Rwanda's violence had some sort of Malthusian mechanism behind it: too many people, too little land. However, I believe that the violence was more sociological than ecological. In densely-populated communities where people live in close proximity to each other, the opportunity to observe and interact face-to-face with neighbours is high. Privacy and the opportunity for 'exit' in contrast are limited. Rwanda's extraordinarily high population density amplified peer pressures within communities and I believe accounts for the extraordinarily high civilian mobilization seen during the genocide. It may also account for the extraordinary speed of Rwanda's violence. Rwanda's Tutsi were almost exterminated in 100 days. Contagion may spread more quickly in communities with high population densities.

It is worth also discussing the negative finding with respect to the other mechanism postulated as being behind differential selection into the violence: 'accessibility'. I did not find that living within easy access of the site of mobilization or the site of violence mattered in explaining why certain individuals came to kill and others not. However, this is perhaps unsurprising given that the distances involved are relatively small. The distance from the most westerly point to the most easterly point of Tare sector is approximately 4km. I believe that if one were to consider participation of Tare residents in violence in other communities further away one would see a decline in the number of Tare participants the further from Tare the site of the violence. I also did not find that the Hutu neighbours of the Tutsi victims were more likely

(as the accessibility rationale would suggest) or less likely (as the social influence rationale would suggest) to be drawn into violence against them. However, this negative finding was moderated by the particularity in this case that most of Tare's Tutsi did not remain in their homes but in fact sought refuge in a nearby church and in a nearby monastery. Given this fact, we cannot reliably state that Hutu living close to Tutsi developed either neighbourly bonds which influenced these individuals against violence towards their neighbours or made it easier for them to be drawn into violence against the Tutsi.

The data on balance then point to 'social influence' as being a better explanation of individual participation in group violence than 'accessibility', which in turns suggests a profitable avenue for further research may be the role of social networks. Individuals who live within close proximity to each other are likely to have social ties to each other - kinship, economic, religious, or political – and certain ties may be more influential than others in drawing individuals into violence. In the Rwandan socio-cultural context for example, family members are likely to live close together as sons are given land from their fathers' landholdings when they marry and as a consequence often build their homes close to their parents. Are fathers and sons then more likely to join in the violence if one or the other has already been mobilized? It is this type of question which reinforces the need for more micro-level research into the dynamics of group violence to refine the more extensive work produced at the meso- and macro-levels of analysis.

The finding that differential selection into the violence is in part a function of where you live (and the opportunity to be influenced as a result) also suggests that we should think more

about the process of mobilization in group violence. 'How' individuals come to participate may be as important as 'why' in understanding the causes of inter-group violence. Yet the mobilizational process is still largely a blackbox. This paper suggests spatial factors – that is factors exogenous to the individual – do seem to matter. It is possible then that the question of 'how' may precede the question of 'why'. Individuals may first be mobilized – as a result of situational peer pressure for example - and once mobilized then generate *ex-post* stated motivations for their participation in the violence. Explanations such as 'we were defending ourselves' or 'we were following the orders of the high authorities' – narratives commonly heard in interviews with Rwandan genocidaires - may be rationalizations which perpetrators provide for themselves without fully recognizing the deeper structural factors at work in their mobilization.

Moving from the situational to the dispositional findings, the research casts doubt on the established belief that young men (defined as those aged 15-24 years) are the demographic group most likely to engage in such violence. Young men, it has been argued, are less constrained by family and occupational responsibilities and the opportunity cost then for them to participate in high risk activities such as violence is consequently much lower than for older age groups. In short they are structurally available to be mobilized. Yet the data here unambiguously show that it was men in the age brackets of 25-34 and 35-44 who were most likely to join in the violence. In the Rwandan rural context, at this age these would be individuals who are married with wives and children. Contrary to the argument then that it is those without responsibilities, it was precisely those individuals with the greatest obligations who answered the call to arms and mobilized against the Tutsi enemy. This finding lends some credibility to the view of Rwanda's

violence as organized by the state authorities and to the framing of anti-Tutsi action as a duty incumbent on all responsible Rwandans.

Finally, the data on perpetration and survival rates suggest several interesting inferences about Rwanda's extraordinary violence. Clearly the mobilization was remarkable for its scale and I have suggested this is tied to Rwanda's remarkable population density. Yet, when the remarkable scale of the violence is also considered, it is apparent that it does not take an enormous number of people to carry out an extermination campaign. The Tutsi community outnumbered their attackers, yet they were unable to defend themselves against relatively few individuals who were equipped, at least in Tare, with the same rudimentary weapons which would have been available to the Tutsi themselves: machetes, hoes, and clubs. It suggests that the symbolic power of the state and either the tacit support or at least indifference of the majority lends an advantage that simple, physical, numerical strength cannot. The role of Rwanda's remarkable population density in the violence also suggests there may be grounds to refine further our understanding of Allport's 'contact hypothesis' (Allport 1958). Allport argued that under certain conditions inter-group prejudice, discrimination, and stereotyping may be reduced if the groups have higher levels of contact. However, absent those conditions, this article suggests it is important to recognize that this increased contact may also have a darker side. It makes the identification and targeting of out-group members by the in-group much easier. With respect to the victims, the very low survival rate leaves little doubt that the intent of the violence was genocidal. This view is reinforced when one considers the gender and age bias in the survival rate as well. The survivors were overwhelmingly female and minors. In Rwandan culture it is said women do not have ethnicity. They and their children assume the ethnic identity

of their husband. Thus by targeting males, they were effectively eliminating the ethnic group. The data also showed that the chances of survival were higher if you did not gather with others in one place. The refuge Tutsi sought in churches, schools, health centres and many similar such places tragically facilitated the work of their killers. Contrary to the popular belief then, there was sadly little safety in numbers in Rwanda.

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