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Inter-Ethnic Hostility and Mobility of Political Power: Changing Influences of Perceived Horizontal Inequalities

Satoru Mikami

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Changing Influences of Perceived Horizontal Inequalities

Satoru Mikami[*]

Abstract

The purpose of this paper is to illuminate the origins of inter-ethnic hostility, which need to be addressed if the centripetalism institutions are to function properly. Using intention of ethnic voting as an indicator of inter-group discrimination, this paper tests several classic hypotheses adapted from social psychology based on the surveys conducted in 14 urban areas from six sub-Saharan African countries. Results show, among others, that horizontal inequalities, when perceived either advantageously or disadvantageously, actually increase the level of inter-group hostility, but that the malicious effect is context-dependent: a greedy tendency in terms of socio-economic group inequality is limited to non-minorities; minorities who think their own group is superior to others economically do not have stronger hostility towards others compared to those who do not see any socio-economic gap; perceived horizontal inequalities matter chiefly in the countries without any kind of political power mobility; hostility between groups is not associated with perceived horizontal inequalities in countries where experience of power sharing or change of government has convinced people that political change is not impossible.

Keywords: Horizontal inequalities, Ethnic voting, Centripetalism, Sub-Saharan Arica, Inter-group discrimination

[*] Senior Research Fellow, JICA Research Institute (Mikami.Satoru@jica.go.jp)

Introduction

Traditionally, national self-determination and consociationalism were regarded as the two most preferred strategies for the solution or settlement of ethnic conflicts. Ethnic groups who were reluctant to assimilate with other groups were supposed to have the natural right to secede from an existing state or at least to form autonomous political units within a host state. Even if territorial integrity was considered to be inalienable, groups were usually given certain distinctive shares of seats in the parliament to secure the vital interests of the group in central-level decision-making, and sent representatives from their respective ethnic parties under some version of a proportional representation system. Ethnic voting, ethnic parties, and ethnic candidates were, in this context, crucial building blocks of a peaceful coexistence mechanism for ethnically diverse societies, and hence were legitimate political rights as well as politically correct phenomena.

In recent years, however, an increasing number of countries have been adopting a centripetalist rather than a consociationalist approach to cope with ethnic conflicts and/or violence (Reilly 2006, 816). Centripetalism is conceptually the opposite of consociationalism in that institutions are designed to deter ethnic voting, ethnic parties, and ethnic candidates. Centripetalism seeks to circumvent ethnic confrontations at the macro-level at least, by dismantling, abolishing, and prohibiting ethnically-based national institutions on the one hand and by artificially reflecting ethnic diversity within each institution on the other. Ethnically-based behaviors like ethnic voting are, therefore, a "crime" in this context.

Both approaches share an ultimate goal: preventing violent conflicts between ethnic groups. The trend of the times is, however, centripetalism. What underlies this tendency is the widely recognized fact that consociationalism in developing countries does not necessarily work in the same way as in European countries; the superficially consociationalist institutions which had been introduced during the authoritarian era often brought subversive effects once the

countries underwent liberalization if not a full democratization. The conflictive dissolutions of the Soviet Union, Yugoslavia, and Czechoslovakia, for example, led to the awareness of the risk of ethno-federalism (Leff 1998; Bunce 1998), indicating that constitutional units such as local governments and regional parties should not correspond to ethnic lines (Hale 2004). Dowd and Driessen (2008) also show that ethnically-divided party systems tend to correlate with poorer democratic governance.

While the illusion of consociationalism is revealed, the efforts to construct centripetalist institutions have yet to bear fruit: Basedau and Moroff (2011) report that regulations against identity parties that were introduced in Africa in the 1990s did not reduce the incidents of violent conflict in the continent. Moroff (2011) points out that, except for the ruling party, most political parties in Tanzania and Uganda, in which regulation on ethnic parties started earlier, still rely on specific geographical support just like parties in Kenya, where the introduction of regulations lagged behind.

One of the reasons why the policy of restricting identity parties has not produced the expected change is that it cannot directly control the behavior of individual voters. Fully functioning centripetal institutions may be able to effectively contain direct confrontation between different groups at the national-level, but do not guarantee the end of ethnic conflict at the lower levels. Centripetalism needs cooperation among people at lower levels, or within political institutions such as political parties and the military. Otherwise, centripetal institutions would simply shift the loci of confrontation from the macro- to the micro-level, and internalize ethnic conflict within each institution. Therefore, understanding the sources of inter-ethnic discriminatory behavior and the feelings of ordinary people, which may manifest as ethnic voting, is fundamental to the successful functioning of centripetalism.

Given the increasing reliance by the governments of developing countries on centripetalism, and the vital importance of mass-level inter-ethnic cooperation for the functioning of their institutions, the aim of this paper is to explore the origins of inter-ethnic

hostilities using ethnic voting as an indicator, while also examining the conditions under which fledging institutions function successfully. Obviously, there can be a plethora of candidates of the determinants of between-group hostilities. This paper focuses on, among others, factors that have been established by pre-existing studies in social psychology and other disciplines: physical inter-group contact, perceived "horizontal inequality" (Stewart 2008), degree and scope of group identity, and perceived prevalence of ethnic discrimination in the society. Furthermore, this paper pays attention to the possible changes of the key determinants depending on the macro political context. Specifically, it examines whether the mobility of political power at the macro-level has any moderating influence on the causal chain surrounding people's discriminatory behavior and feelings. The results reveal the possibility that mobility can dilute the detrimental effects of perceived inter-group inequality.

The paper is structured as follows. In the next section I first distinguish the notion of ethnic voting from related terms like ethnic parties or ethnic candidates. I then clarify the reason why attitudes towards ethnic voting can be utilized to measure inter-ethnic animosity. In the third section, multiple hypotheses regarding ethnic hostility will be introduced from the work of social psychology. The estimation strategy of this paper, which employs multiple statistical modellings for robust estimation, is explained in the fourth section. In total, 48 results will be summarized in the fifth section. The final section concludes and mentions the limitations of this study.

1. Ethnic Voting and Ethnic Parties/Candidates

As mentioned above, ethnic voting, ethnic parties, and ethnic candidates are all criticized for the reason that they are obstacles to the construction of centripetal institutions, but they are neither equal to nor simple extensions of each other, although they all relate to each other. This paper uses ethnic voting – a concerted collective choice regarding the destination of their votes according to a shared ethnic affiliation– as a clue to understand the origins of inter-ethnic

hostility because it is expectedly an act of ordinary people and hence can more directly represent their attitudes toward out-groups. Before discussing the relationship between inter-ethnic hostility and ethnic voting, we distinguish this from two other related terms.

"Ethnic voting" is a term that describes a particular tendency of those who cast ballots, while both "ethnic parties" and "ethnic candidates" are terms referring to those who receive the ballots. Voters' tendencies can affect, to some extent, the character of the support base of political parties and candidates, while parties and candidates can sometimes manipulate voters' choices to a certain direction. However, these three terms are not the same. It is important to note that ethnic voting by an electorate is neither a necessary nor sufficient condition for an ethnic party. Ethnic voting by a certain group can result in diverse ethnic support bases as long as other groups also collectively vote for the same candidates/parties. On the other hand, even if votes from one ethnic group split to support various parties, some parties can end up being supported exclusively by one ethnic group (Huber 2012).

Also, factors that could influence each of the three phenomena should naturally differ from each other. An electoral system that would discourage parties and candidates from utilizing ethnic issues as a campaign tool, for example, would be expected to have no effect on voters, because even if parties and candidates failed to use ethnic problems as a campaign issue, it would remain possible for voters to continue to vote for candidates/parties with the same ethnicity, believing there would be some benefit from their shared ethnic affiliation. For example, repeated multiparty elections in ethnically highly diverse counties,[1] as Cheeseman and Ford (2007) rightly point out, can induce parties and candidates to form a multi-ethnic union for the sake of the acquisition or retention of power. However, this system works only for the logic of the rulers; the ruled have no direct incentive to refrain from voting along ethnic lines. Regardless of the campaign strategies of parties and candidates, voters can vote as they like.

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1. In countries with lower ethnic fractionalization, relative majority groups would have no incentive to form a multi-ethnic electoral union if the system of government was: (1) parliamentary based on a first-past-the-post (FPTP) system, or (2) a presidential system based on plurality presidential elections.

Direct restriction of ethnic voting, as opposed to that of ethnic parties/candidates, is also impossible without contaminating democratic principles, because, by definition, it would deprive voters of alternative choices. For parliamentary elections, one possibility would be to impose a certain ethnic composition on the lists of candidates and use a "party block vote" or closed-list proportional representation system (Reilly 2006, 819). For presidential elections, one possibility would be to adopt a collective presidency and let the electorate choose from lists with a fixed proportion of representatives from each ethnic group. Another possibility would be to allow only ethnically neutral candidates such as creoles or foreigners to run for office, although this option is highly unrealistic.

Ethnic voting and ethnic parties/candidates also differ in terms of their appropriate measurement strategies. The degree to which parties are ethnic can be measured with objective criteria.[2] By contrast, measuring ethnic voting with objective indicators is more problematic. However, all pre-existing formulae (Cheeseman and Ford 2007; Huber 2011; Moroff 2011; Dowd and Driessen 2008) rely on the relationship between voters' linguistic affiliations and the parties for which they voted or intend to vote for. The reason why these approaches cannot measure ethnic voting correctly becomes evident by imagining a simple hypothetical situation where only two groups (A and B) exist.

Imagine a district where only members of group A reside. Imagine further that candidates/parties running for seats in the district all belong to group A. Voters in the district have only two options: either abstain from voting or vote for the co-ethnic candidates/parties running for office. Abstentions in this case, regardless of the true reasons for them, can be safely regarded as "non-ethnic voting" because the voters were *not* mobilized to vote despite the shared ethnic affiliation with the candidates/parties. On the other hand, voting in this situation can be classified as ethnic voting if and only if voters consciously chose a candidate/party based on its ethnic affiliation. Voting without an explicit ethnic reason is "non-ethnic voting" despite the fact

2. See, for example, Chandra (2011) for measurement in detail.

that the ethnicity of the voters and that of the candidates/parties is coincidentally the same. However, the difference in intention cannot be observed from outside. If we calculate the degree of ethnic voting based solely on what is observable, that is, the percentage of voters who voted or the percentage of voters who abstained, the figures overestimate (in the case of "ethnic voting" rates) or underestimate (in the case of "non-ethnic voting" rates) the true percentages.

Next, imagine a district where members of both groups A and B reside. Imagine further, again, that the candidates/parties running for seats in the district all belong to group A. The interpretation of the behavior of members of group A is the same as the situation above. Voting by members of group B for a candidate/party whose ethnicity is A is apparently "non-ethnic voting." Abstention by members of group B, however, can connote either a standard abstention or an ethnicity-conscious abstention, and the latter can be called "ethnic non-voting." The "ethnic non-voting" by members of group B augments the discrepancy between the true rate and the calculated figure based solely on what is observable.

These simple examples show how difficult it is to measure the degree of ethnic voting on the basis of objective indicators, in contrast to the fact that measurement of ethnic parties is amenable to objective criteria. In measuring the degree of ethnic voting, voters' perception must somehow be taken into consideration. First of all, the ethnic affiliation of voters should be based on self-reported ethnicity rather than a more objective indicator such as mother tongue. The following question from Afrobarometer provides a good example:[3]

Question: What is your tribe? You know, your ethnic or cultural group.

Because this question asks about respondents' perceptions, it can invite responses such as "no ethnic identification, only national identification" or outright refusal to answer the question.

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3. This question has been used since the round three survey except for the round three survey in Zimbabwe.

However, these seemingly "missing values" can be an important source of information in understanding the tendencies of people who deny ethnic affiliation. Also, we should respect self-reported categorizations rather than defining people's identity by simple linguistic or anthropological traits.[4]

The motivation of voting should also be judged on the basis of voters' perceptions (either ethnic or non-ethnic), rather than objective indicators of the ethnicity of political parties. This is because ordinary people are unlikely to be aware of the true ethnic composition of the country as a whole, of supporters/members of each party, and the relative scale of discrepancies between the two, on the basis of which these ethnic party indexes are constructed.[5] What is more important in ethnic voting is the perceived degrees of ethnic specialization of each party.

If these arguments are valid, we should directly ask respondents to what extent they value the ethnic affiliation of candidates/parties in elections, rather than asking them the subjective degree of ethnic affiliation of each party/candidate. This approach, however, has its own problem: a tendency to under-report due to the "social desirability effect." Respondents may hesitate to admit that their voting is motivated by ethnic differences in the counties where such voting behavior is generally regarded as socially undesirable.

2. Ethnic Voting as an Indicator of Inter-Ethnic Hostilities

There are several factors that drive people to vote on the basis of ethnic affiliation, one of which is the effect of agitation by candidates/parties. As mentioned above, although people do not necessarily vote in the ways candidates/parties want, they are affected to some degree by political agitation. Candidates/parties tend to resort to ethnic differences to explain economic or diplomatic hardships, especially when there is no restriction of ethnic parties/candidates and the

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4. Examples include merging Hausa and Fulani in Nigeria and including Kalanga and Zezuru in Shona in Zimbabwe.
5. Systematically collecting information on ethnic affiliation of candidates is extremely difficult compared to other demographic information such as gender, age, and highest educational achievement.

degree of the ethnic fractionalization is relatively low and hence it is easy to blame a specific ethnic group. If ethnicity-based emotional appeal is strong enough, voters may vote for candidates/parties who share the same ethnic affiliation.

Related to the effect of agitation is the level of voters' capacity to digesting information. Even if candidates/parties refrain from resorting to ethnic discourses, ethnic affiliation can be one of the simplest selection criteria for voters, especially when their capacity to absorb and analyze election-related information is low. It is easy to imagine a situation in which a lack of particularly attractive candidates/parties prompts a voter to cast his/her ballot for a co-ethnic candidate/party as a mental shortcut to escape from the cumbersome selection process. This possibility seems to be high in developing countries, which are usually characterized by lower educational levels and underdeveloped mass media (Norris and Mattes 2003, 3).

In addition to its utility as a mental shortcut, Carlson (2011) emphasizes the rational-choice aspect of ethnic voting. She insists that ethnic voting is part of a retrospective voting process in which ethnic affiliation helps narrow down the candidates. Ethnic voting as the result of ethnic filtering is practiced as long as voters benefit from the politicians belonging to their ethnic group. The validity of this interpretation is verified, she maintains, by the fact that members of ethnic groups that have never benefitted from co-ethnic politicians and have rather benefitted from the co-optation policy by politicians from different groups do not show any tendency toward ethnic voting. For them the ethnic filtering works in the opposite direction.

Kimenyi and Romero (2008) also observe "rational choice" behind the ethnic voting. Their focus is, however, on the cost rather than the benefit: voters engage in ethnic voting not because they can benefit from a situation in which politicians from the same group hold office but because they could suffer from a situation in which their group is excluded from political power. Ethnic voting is, in short, a minimax-regret strategy. They show a positive correlation between distrust in other groups and ethnic voting as the evidence for their thesis; they, however, fail to show the sources of the distrust in other groups.

Last but not least, institutions also matter. Huber (2012) points out that decentralization and a proportional representation system would dampen ethnic voting. His reasoning is closely related to the effect of agitation by politicians, which we have already examined. On the one hand, decentralization is supposed to create a political environment in which the difference in ethnicity is less likely to become a political issue at the central level due to the autonomy given to each political unit. On the other hand, a proportional representation system tends to make entry into the political arena easy for new parties, which in turn creates a situation in which a variety of issues other than ethnic problems can be the main focus of elections.

In addition to the abovementioned factors, pure hostility towards or discrimination against the members of a different group can, of course, be a source of ethnic voting. However, such behavior is hard to be legitimatized even in the case where victims of ethnic violence are the protagonists. A low level of information-handling capacity, which is the reason why ethnic filtering seems useful to many people, is also awkward to admit openly. As a consequence, if we ask people directly about their voting criteria (including ethnic affiliation), they could underreport their habit of ethnic voting due to the so-called "social desirability" effect.

However, there still remain people who explicitly admit their tendency or intention to vote on the basis of shared ethnic affiliation with the candidates, as shown later. These respondents seem to have a strong reason for inter-ethnic hostility and hence are expected to have a lower threshold for committing ethnic violence, compared to people who engage in ethnic voting but are vulnerable to the social desirability effect.

In short, by carefully measuring ethnic voting and inter-ethnic hostility, we will be able to shed light on the causal chains of inter-ethnic hostility that underlie dysfunctionality of newly-introduced centripetalist institutions. In what follows, this paper will explore the origins of inter-ethnic hostility by using a questionnaire survey on ethnic voting.

3. Hypotheses

Inter-group discriminatory feelings and behavior is one of the central themes of Social Psychology, and hence we have several hypotheses tested mostly by laboratory experiments. These hypotheses can be roughly divided into three groups: the hypotheses on the effect of inter-group contacts, on the effect of self-identification, and on the effect of social pressure from others' behavior.

The contact hypotheses started from the classical idea that infrequent contact between the groups reproduces stereotypes of others, which in turn leads to hostility based on exaggerated differences between groups. Accumulated evidence has already revealed that a simple increase in the frequency of contact cannot reduce the level of hostility towards out-groups. The reduction of hostility through contacts requires one of the following conditions: (1) the contact is officially supported; (2) contact is between equal partners, such as in neighborhoods, rather than in the workplace or at school; (3) contact is private and longitudinal; (4) contact generates accurate information on out-groups; or (5) contact requires mutual cooperation (Brewer and Gaertner 2004, 303–304). Furthermore, even if contact satisfying one of the above conditions actually has a hostility-reducing effect, the possibility remains that the mutual understanding will be limited to the person who actually experienced the interaction and will not be generalized throughout the group. Therefore, I do not expect that frequency of contact with other groups has any explanatory power.

Second, how people identify themselves with one particular group can have an effect on their attitudes towards "other" groups. What is already known about this point is that (1) similarity between groups does not prevent inter-group discrimination, and (2) intensity of discrimination and the direction of discrimination can change depending on the relationships (inequality) between groups and on the cost and benefit of discrimination. Human beings have a natural tendency to be satisfied with their identity by favoring their own group over others. This

causes people to seek out any hint of difference between groups, even if there is no real difference between them, in order to be satisfied with their own identity. This psychological mechanism was verified by experiments in which people who were essentially the same were randomly categorized into two different groups. The experiments demonstrated that discriminatory behaviors were observed between the two groups (Tajfel et al. 1971; Billig and Tajfel 1973). In addition, an asymmetric structure between the groups matters because it can justify aggression against the other group. According to a laboratory experiment, discrimination in the distribution of benefits was observed even between equal groups but aggression (infliction of costs) was observed only among members of the inferior group (Mummendey et al. 1992). Aggressive behavior is also found among people who identify themselves only with an overarching category and not with one of the constituent categories. This is because the identification with an overarching category justifies the sanction against the constituent groups which diverge from the "ideal" overarching category. This is called the self-categorization theory (Mummendey and Wenzel 1999).

Lastly, the way one perceives the behavior of other groups can affect his/her discriminatory behavior. The emulation effect is the case in point: the observation of discrimination by other groups can justify and encourage discrimination by one's own group (Halevy et al. 2010).[6] Based on these preceding studies, we can posit the following five hypotheses:

> **H1:** *The frequency of contact with other groups has no impact on inter-ethnic hostility because its impact depends on the local context in which interactions occur (Contact Hypothesis).*

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6. See Granovetter (1978) for the threshold model.

H2: The more strongly a person perceives relative group inferiority, the more likely he/she has inter-ethnic hostility (Retaliation Hypothesis).

Ethnic voting based on inter-ethnic hostility is a form of aggression in the sense that it increases the probability of the exclusion of politicians and their supporters from power. As long as such exclusion is not socially legitimate, it will be justified only by those who themselves suffer from inequality.

There is a possibility, however, that human beings in the real world may not be so modest as in the experimental laboratory. They may not need any justification to express hostility towards other groups. Moreover, those who perceive relative group superiority may feel an urgent need of a preemptive attack against other groups to maintain the status quo, or may feel a strong desire to further advance their superiority at the expense of other groups. Given the solid but artificial nature of the experimental approach in Social Psychology, it is worth testing the following hypothesis, together with the previous one, by looking at real life.

H2': The more strongly a person perceives relative group superiority, the more likely they have inter-ethnic hostility (Greed Hypothesis).

The following hypothesis is based on the self-categorization theory, according to which people who have a national identity tend to be less tolerant to members of ethnic groups because the former perceive the latter group as deviating from the ideal of "the nation."

H3: *The more strongly a person identifies him/herselfes with an overarching nationality than with their respective ethnic groups, the more likely he/she is to dislike other groups (Self-categorization Theory).*

By contrast, the "multiple-identity" theory of Linz and Stepan (1996) insists that the multiplicity of identities is the key to lowering ethnic animosity. This hypothesis, however, has never been tested by laboratory experiments to the best of the author's knowledge.

H3': *Respondents who identify themselves equally with nation and ethnicity are less likely to hate other groups than those who identify more strongly with ethnicity (Multiple-identity Hypothesis).*

The last hypothesis is based on the "threshold model," which posits that everyone has his/her own psychological threshold beyond which he/she tends to assimilate the behavior of the people around.

H4: *The more strongly a person believes that ethnicity-based discrimination is rampant, the more likely he/she is to have hostility towards other groups (Threshold Hypothesis).*

Using the survey data collected in six sub-Saharan African countries, this author tested the above mentioned six hypotheses, controlling for gender, age, living standard, education, traumatic experience, place of origin, relative size of the in-group, and the mobility of political power at the macro-level. The next section describes the data and the estimation strategy in more detail.

4. Data, Operationalization, and Estimation Strategy

The following analysis used survey data on political attitudes of people in 14 urban areas from six sub-Saharan African countries,[7] collected during the period from March 2010 to April 2011 as a part of a research project "Preventing Violent Conflict in Africa" jointly conducted by JICA-RI and CRISE (Centre for Research on Inequality, Human Security, and Ethnicity). Neither the questionnaire nor the survey-site selection were designed for this paper, but rather were designed to supplement qualitative comparative studies of the said countries.[8] However, all six countries are former British colonies and share political institutions such as multiple parties, the presidential system, and the FPTP-based parliamentary elections.

On the other hand, these countries have shown variations in terms of the mobility of political power since the introduction of multi-party elections: while Ghana and Kenya have experienced changes of power through elections, Tanzania, Uganda, Nigeria, and Zimbabwe continue to be ruled by the same party just as they were during the preceding one-party authoritarian era. Furthermore, only Zimbabwe and Kenya have introduced power sharing schemes covering competing political elites, while Nigeria, Uganda, Ghana, and Tanzania are under the single party government. I exploited these commonalities and differences to investigate the origins of inter-ethnic hostility under various conditions.

In principle, the sample selection followed the stratified multi-stage random sampling approach. We first divided Harare, for example, into three areas corresponding to the Harare area, Chitungwiza area, and Epworth area; from each stratum we chose, respectively, 19, 4, and 2 wards randomly according to the population sizes of the areas; starting from the randomly chosen points in each ward, 12 households were systematically selected alternately using 5 and

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7. Harare and Bulawayo in Zimbabwe; Lagos in Nigeria; Accra in Ghana; Nairobi, Nakuru, and Mombasa in Kenya; Kampala, Gulu, Mbarara, and Hoima in Uganda; and Dar es Salaam, Unguja, and Pemba in Tanzania.
8. The project also conducted a survey in Cape Town, South Africa, as a counterpart of Zimbabwe, but that survey is not used here because it uses not ethnic categories but racial categories. Surveys were not conducted in Ivory Coast (a counterpart of Ghana), Rwanda, and Burundi for political and social reasons.

10 intervals; respondents from the chosen households were selected using the Kish method alternately targeting male and female citizens age 18 or over.[9]

Dependent variable: Inter-ethnic Hostility

The dependent variable in this study is inter-ethnic hostility, which was measured by the self-reported habit of ethnic voting by respondents. Specifically, interviewees were asked about the relative importance of the ethnic affiliation of the candidate in their voting for presidential elections. Criteria to be compared with the ethnic affiliation included the candidate's (1) qualifications, (2) program, (3) character, and (4) past record as shown below.

Q: How important are the following considerations when you vote in the presidential elections? Would you say very important, somewhat important, not very important, or not important at all?

A Qualifications and competence of candidate

B Candidate's religion

C Pol. program, proposed actions or ideology

D Candidate's ethnic identity

E Political party

F Personal characteristics

G Past record

H Candidate's gender

9. Interviews were conducted by staff of the Mass Public Opinion Institute in Zimbabwe, Practical Sampling International in Nigeria, Institute of Statistical, Social and Economic Research (ISSER) in Ghana, Institute for Development Studies of University of Nairobi in Kenya, Faculty of Agriculture, Makerere University in Uganda, and Synovate Tanzania in Tanzania.

Focusing on the four items noted in the previous paragraph, I compared the separately answered ordinal values for each item with the value given to ethnic affiliation. I assigned 1 for respondents who valued ethnic affiliation equal to or more than other attributes and 0 for those who valued other criteria more than ethnic affiliation. To create a more robust index of inter-ethnic hostility, I combined these four indicators in the following three methods:[10] (1) *simplesum*, a simple sum of the four variables, ranging from 0 to 4; (2) *standardizedsum*, a standardized sum of the four variables weighted downwardly by the relative frequency of 1 in each survey site;[11] and (3) *redichotomizedsum*, a re-dichotomized dummy variable based on the preceding two indexes assigning 1 for all values other than 0 because both include high rates of 0. Higher values always indicate that respondents did not hesitate to express their habit of ethnic voting, which implies they possess stronger hostility toward other ethnic groups. Figure 1, 2, and 3 show the distribution of the dependent variable (ethnic hostility) measured by the three different methods of aggregation.

These three versions of dependent variables were analyzed by appropriate models. Specifically, I applied ordered logit, Poisson regression and negative binominal regression to "simplesum," ordinary least squares and a tobit model to "standardizedsum," and a probit model to "redichotomizedsum."

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10. Multi-population structured means with categorical scale including missing values failed to converge.

11. When the answer is 1, unity minus the relative frequency of 1 is multiplied to reflect the significance of valuing ethnic affiliation equal to or more than the other attributes. All correlation coefficients between this standardized sum and the first principal component scores based on a tetrachoric correlation matrix were over 0.99.

Figure 1. Distribution of dependent variable at each survey site: *simplesum*
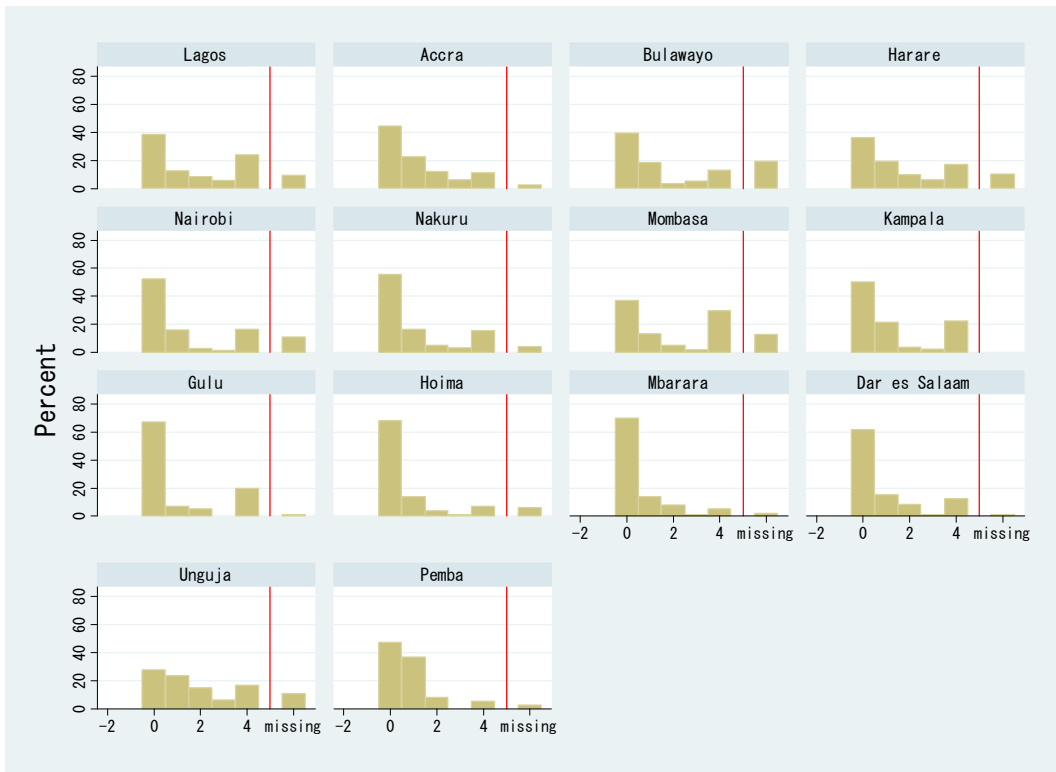
Figure 2. Distribution of dependent variable at each survey site: *standardizedsum*
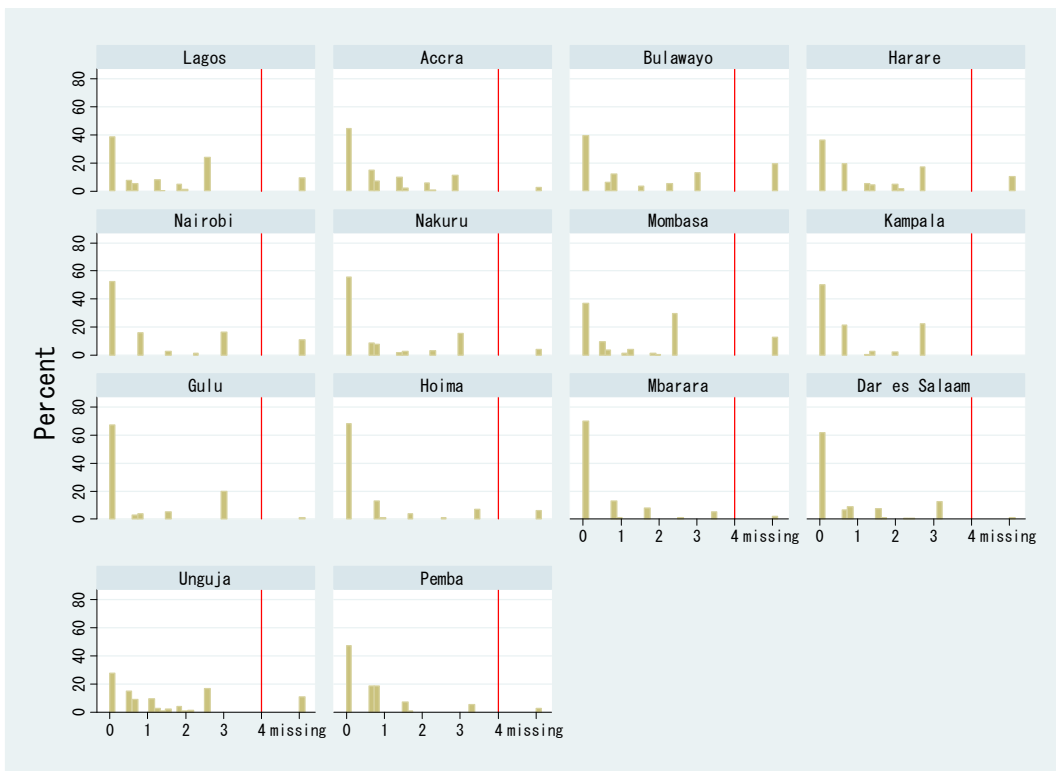
Figure 3. Distribution of dependent variable at each survey site: *redichotomizedsum*

Contact Hypothesis

Independent variables were operationalized as follows. First, frequency of contact with other groups (*contact hypothesis*) was measured by the response to the following questions:

Q: How often do you have contact with people from other ethnic groups (in your neighborhood/locality)?[12]

A: 0 = hardly ever or never, 1 = a few times a month, 2 = a few times a week, 3 = daily or almost daily, 99999 = not applicable/don't know.

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12. Responses in the case of workplace and social life do not differ from response in the case of neighborhood in Ghana, Nigeria, and Zimbabwe.

I created a series of dummies by treating the most frequent contact (*3 = daily or almost daily*) as a reference category. Therefore, if contacts among equal partners have a dampening impact on ethnic hostility as the Contact Hypothesis insists, I should observe positive signs in the dummies indicating less frequent contact. Such expectations, however, may not be satisfied if other conditions affect the perception to the opposite direction.

Retaliation Hypothesis vs. Greed Hypothesis

To test the contrasting hypotheses -- *Retaliation Hypothesis* and *Greed Hypothesis* -- I used the perception of socio-economic horizontal inequality (PSEHI), tapped by the following question.

> *Q: Is the socio-economic situation of your ethnic group worse, the same as, or better than that of other ethnic groups in this country?*
>
> *A: -2 = much better, -1 = better, 0 = the same, 1 = worse, 2 = much worse, 99999 = don't know/refused to answer.*

Again, I constructed a series of dummies including NA, by using the neutral answer, "the same," as a reference category. If the *Retaliation Hypothesis* is correct, we expect negative signs (which mean less hostility) for "much better" and "better" but positive signs (which mean more hostility) for "worse" and "much worse". The reverse pattern of signs is expected if the *greed hypothesis* is correct.

I also used the perceived horizontal inequality (PPHI) of political power distribution as another independent variable (see next Question). Since Pearson's product-moment correlation coefficient between the perceptions of socio-economic and political horizontal inequality is positive ($r = .2188$), I used these two variables interchangeably.

Q : Do you feel your ethnic group is currently over-, under- or about right represented in the National government?

A: -2 = seriously overrepresented, -1 = somewhat overrepresented, 0 = about right represented, 1 = somewhat underrepresented, 2 = seriously underrepresented, 99999 = don't know/refused to answer.13

Self-categorization Hypothesis vs. Multiple-identity Hypothesis

The effect of self-identification was tested using the answer to the following question.

Q: Let us suppose that you had to choose between being a [R's NATIONALITY] and being a [R's ETHNIC GROUP]. Which of the following statements best expresses your feelings?

A: -2 = only ethnicity, -1 = more ethnicity than nationality, 0 = equally ethnicity and nationality, 1 = more nationality than ethnicity, 2 = only nationality, 99999 = don't know/refused to answer.

Using a dummy with "equally ethnicity and nationality" as a reference category, I tested which hypothesis, *self-categorization theory* or the *multiple identity hypothesis*, fit the data better. If the former is correct, we expect positive signs for "more nationality than ethnicity" and "only nationality;" if the *multiple identity hypothesis* is correct, positive signs are expected for "more ethnicity than nationality" and "ethnicity only"

Threshold Hypothesis

Lastly, the level of belief in the prevalence of ethnic discrimination in the society, which affects hostility against other groups if the *threshold hypothesis* is correct, was measured in two ways.

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13. The wording of the question in Tanzania is different from the others: *How much do you feel that your ethnic (racial) group has proper influence in the Unity government? -2 = very much, -1 = somewhat, 1 = not very much, 2 = not at all.*

First, from the responses to the following seven questions I calculated a standardized sum (*Threshold1*), giving heavier weights to the items which elicited "yes" less frequently.

> **Q:** *Do you think that someone's ethnic group or identity affects their chances of getting:*
>
>   ➢ *government jobs?*
>   ➢ *government contracts?*
>   ➢ *private sector formal jobs?*
>   ➢ *public housing?*
>   ➢ *educational opportunities at the pre-university level?*
>   ➢ *educational opportunities at the university level?*
>   ➢ *private loans?*

Another indicator (*Threshold2*) is the response to the question about changes in the societal importance of ethnicity:

> **Q:** *Generally speaking, do you think ethnicity has become more important or less important in the public sphere in the past ten years? Or has there been no change in the situation?*
>
> **A:** *-2 = much less important, -1 = less important, 0 = no change, 1 = more important, 2 = much more important, 99999 = don't know/refused to answer.*

"No change" was set to the reference category. If the *threshold hypothesis* is correct, we expect to observe positive signs for "more important" and "much more important," but negative signs for "much less important" and "less important." Pearson's product-moment correlation coefficient between the two indicators (Threshold1 and Threshold2) is 0.1197, and I used these variables interchangeably.

Control variables include: gender (female = 1), age (deviation from the means in each survey site), education (9 to 12-point ordinal scale treated as an interval scale), indigeneity

(indigene = 1), traumatic experience (those who have experienced a violation of physical safety in the past year = 1), survey sites (a series of dummy variables), and living standards. The last was measured in two ways. First, I calculated the standardized sum of the responses to the questions on seven assets:

Q: Which of the following things do you own or have in your household?: (a) Radio, (b) Bicycle, (c) Television, (d) Mobile phone, (e) Refrigerator, (f) Flush toilet, (g) Car.

Another indicator was constructed on the basis of 5-point ordinal scale responses to the following questions on basic human needs:

Q: Over the past year, how often, if ever, have you or anyone in your family gone without: (a) enough food to eat; (b) enough clean water for home use; (c) medicines or medical treatment; (d) enough gas or kerosene to cook your food; (e) a cash income?

A: 0 = always, 1 = many times, 2 = several times, 3 = just once or twice, 4 = never.

The average of the five scores served as a proxy for the level of satisfaction of basic human needs with a higher value indicating a less vulnerable situation. Pearson's product-moment correlation coefficient between the two indicators (assets and BHN) is 0.1826, and these two variables were also used interchangeably in the analysis.

To summarize, Table 1 shows the descriptive statistics of independent and control variables discussed above.

Table 1. Descriptive statistics of independent and control variables

Variable	Obs	Mean	Std. Dev.	Min	Max
Contact	3060	2.790	0.575	0	3
PSEHI	3056	−0.234	0.983	−2	2
PPHI	2963	0.234	1.103	−2	2
Identity	3118	0.645	1.082	−2	2
Threshold1	2772	1.406	1.230	0	6.316
Threshold2	2973	0.661	1.225	−2	2
Female	3145	0.516	0.500	0	1
Age	3136	0.000	12.160	−20.77	65.21
Education	3138	3.932	2.037	0	11
BHN	3082	2.633	1.128	0	4
Assets	3097	1.097	0.792	0	3.88
Traumatic experience	3121	0.361	0.480	0	1
Indigene	3126	0.363	0.481	0	1

Estimation Strategy

To begin with, I applied five different statistical models to the pooled sample to see if any hint of a causal relationship predicted by the hypotheses could be observed. Then I repeated the same procedure, dividing the samples into minority groups whose relative sizes at national-level are less than 10% and non-minority groups (beyond 10% of the population) to examine the possibility that causal relationship changes depending on the size of the group to which respondents belong.[14]

Next, to examine the possibility of change of causal relations due to the macro political environment, I divided the countries by two simple dimensions: (1) whether the country has experienced, since the introduction of multi-party elections, a change of power by the time of the survey, and (2) whether the country has adopted a power sharing governance scheme by the time of the survey. Subsequently, I reclassified the samples into two groups: (1) respondents who live in the countries that have experienced neither a change of power nor power sharing (Uganda,

14. Relative sizes at national level of each ethnic group are based on the nation-wide samples of Afrobarometer Round IV. However, the Ghana Afrobarometer dataset consolidates various groups into Akan (resulting in an absolute majority). Therefore, I classified Akan, Ewe, and Ga/Dangwe as non-minorities. A 10% cutoff point was chosen because even major ethnic groups in the targeted counties usually amount to only about 10% of the population.

Tanzania, and Nigeria), and (2) respondents who live in the countries that have experienced at least some kind of mobility in political power (Kenya, Ghana, and Zimbabwe).

Table 2 shows how ethnic groups living in the survey sites were classified according to the two dimensions just mentioned: macro political contexts and the minority status.

Table 2. Macro political contexts and sub-samples

		Non-minority	N	Minority	N	
Change of power	Power sharing	Kalenjin, Kamba, Kikuyu, Luhya, Luo	649	Other minorities living in Nairobi, Nakuru, or Mombasa	258	Sample in countries with some kind of mobility in political power： N=1633
	No power sharing	Agona, Ahafo, Akuapen, Akwamu, Akyem, Asante, Asen, Bron, Dangme, Ewe, Fante, Ga, Kwahu, Nzema, Wasa	251	Other minorities living in Accra	73	
No change of power	Power sharing	Karanga, Zezuru, Ndebele, Shona	349	Other minorities living in Harare or Bulawayo	53	
	No power sharing	Hausa, Sukuma, Baganda, Banyankole, Basoga, Igbo, Yoruba	563	Other minorities living in Lagos, Kampala, Gulu, Hoima, Mbarara, Dar es Salaam, Unguja, or Pemba	949	Sample in countries without any mobility in political power： N=1512
		Non-minority sample: N=1812		Minority sample: N=1333		Pooled sample N=3145

5. Results

In this section, six statistical models were applied to three differently-operationalized dependent variables. These were regressed on eight combinations of independent variables. I focused exclusively on the impacts of factors that were statistically significant at the 5% level. By considering 48 results, it should be possible to reach a robust conclusion regarding causal relations concerning ethnic hostility.

The Pooled Sample

Table 3 shows results from the pooled sample. As the *contact hypothesis* predicts, respondents who had everyday contact with members of other groups (reference category) exhibited a lower

level of hostility compared to those who had contact only several times per week, although the difference disappeared when compared with people who had even less frequent contact with other groups, which implies a reversed U-shape relationship between hostility and contact frequency.

Perceived socio-economic horizontal inequality increased inter-ethnic hostility. This applied both to those who regarded their own group as being inferior to others and to those who regarded their own group as superior. Again, a non-linear relationship is suggested here with regard to both the *retaliation hypothesis* and the *greed hypothesis*.

On the other hand, perceived political horizontal inequality increased inter-ethnic hostility only when the disparity was advantageous for the respondents. This result supports the prediction of the *greed hypothesis*.

How a respondent identified him/herself influenced the level of his/her hostility towards other groups. But the prediction of *self-categorization theory* contradicted the results: those who identified themselves only with nationality were less likely to have inter-ethnic hostility. The *multiple-identity hypothesis* fit better: those who identified themselves more strongly with ethnicity than nationality tended to have hostility towards other groups.

Finally, the perceived prevalence of ethnic discrimination exerted an influence on ethnic hostility as the *threshold hypothesis* predicts: people who perceived that ethnic discrimination was prevalent in the society tended to have inter-ethnic hostility themselves.

Table 3. Factors affecting inter-ethnic hostility (pooled sample)

	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit
Control variables																																																
Female	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Age	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Education		+						+						+						+						+						+						+						+				
BHN																																																
Assets																																																
Traumatic experience																																																
Indigene																																																
Contact hypothesis (ref.=every day)																																																
Never																																																
A few times a month																																																
A few times a week	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Retaliation vs. Greed hypothesis (ref.= the same)																																																
Socio-economic: much better	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Socio-economic: better	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Socio-economic: worse																									+	+	+	+	+	+							+	+	+	+	+	+	+	+	+	+	+	+
Socio-economic: much worse	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Political: seriously over													+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Political: somewhat over													+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Political: somewhat under																			–		–				–						–																	
Political: seriously under																																																
Self-categorization vs. Multiple identity hypothesis (ref. = equally both)																																																
Nationality only		–	–	–	–	–		–	–	–	–	–		–	–	–	–	–		–	–	–	–	–		–	–	–	–	–		–	–	–	–	–		–	–	–	–	–		–	–	–	–	–
Nationality>Ethnicity	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Ethnicity>Nationality																																																
Ethnicity only							+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Prevalence of discrimination	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Threshold hypothesis (ref. = no change)																																																
Much less important																																																
Less important																										+	+	+	+	+		+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+
More important							+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Much more important	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Note. Ordered: ordered logit; Poisson: Poisson regression; Negative: negative binomial regression; Tobit: tobit regression; Ordinary: ordinary least squares; Probit: probit regression. +: positive influence; –: negative influence. Only impacts with statistical significance less than 5% are reported. Dummies for missing values and for survey sites are omitted from the table.

The Minority and Non-minority Samples

Table 4 reports the results for the separate samples: one for non-minorities and the other for minorities. For non-minorities, the influence of contact did not differ much from the pooled sample results. For minorities, on the other hand, the impact was unstable and became statistically significant only when the Poisson model was used.

Perceived socio-economic disparity also seemed to have different impacts on inter-ethnic hostility depending on whether respondents belonged to minorities or non-minorities: the *greed hypothesis* fit better for non-minorities while the *retaliation hypothesis* fit better for minorities. Minorities could get along with other groups when they felt relative superiority in terms of socio-economic status; they became antagonistic towards other groups only when they felt relative socio-economic deprivation. Meanwhile, non-minorities became hostile to other groups only when they felt socio-economic advantages over other groups.

The *greed hypothesis* applied, as was the case with the pooled sample, more clearly when it came to perceived political horizontal inequality: both minorities and non-minorities tended to dislike other groups when they felt that they had the political upper hand over other groups.

The validity of the *multiple-identity hypothesis*, which was observed in the pooled sample results, was also confirmed in both minorities and non-minorities. But the negative impact of national identity was only observed in the minority sample. Among non-minority groups, the national identity did not significantly reduce the ethnic hostility.

Lastly, the *threshold hypothesis* applied only to non-minorities. Among non-minorities, but not among minorities, the social prevalence of ethnic discrimination tended to heighten the hostility against other groups.

<u>Samples with or without Power Mobility</u>

Finally, I compared the results for respondents who live in countries where no mobility of political power has ever been observed and for those who live in countries where some kind of mobility has occurred (Table 5). What stands out first is that the *contact hypothesis* held only for respondents in the countries where neither power sharing nor a change of power has ever occurred since the introduction of multi-party elections; the level of hostility towards other groups in countries that have experienced some kind of mobility in political power was not affected by contact frequency.

The effect of ethnic identity was observed in respondents under the both political contexts. However, the hostility-reduction power of the national identity was valid only for those who live in the countries without mobility in political power.

The prediction of the *threshold hypothesis* held for both samples although some irregularities were detected among respondents who live in the countries with some kind of mobility in power.

What is more noteworthy is the contrasting effect of perceived horizontal inequality: the hostility-enhancing impact of the inequality (both socio-economic and political), which was observed in the analysis of the pooled sample, was no longer detected in the sample of the respondents living in the countries with political power mobility, while it persisted among those who live in countries without any political power mobility. This means that the leveling of PHI to ameliorate inter-ethnic hostility is especially important in the countries that have never experienced any actual political power mobility other than periodic elections as demanded by the international community. It also suggests the possibility that the experience of an actual change of government, whether through a change of power or through power sharing, can defuse the devastating effect of PHI. As no easy method to manipulate PHI is available, increasing the mobility of political power can be a more realistic solution.

Table 4. Factors affecting inter-ethnic hostility (non-minority sample)

		Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit
Control variables	Female			+					+	+					+	+					+	+					+	+					+	+		+	+
	Age	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
	Education	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
	BHN	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
	Assets	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
	Traumatic experience																																				
	Indigene		+	+					+	+					+	+					+	+					+	+					+	+		+	+
Contact hypothesis (ref.=every day)	Never																															−	−				
	A few times a month																																				
	A few times a week	+	+	+	+	+		+	+	+	+	+		+	+	+	+	+		+	+	+	+	+		+	+	+	+	+		+	+	+	+	+	
Retaliation vs. Greed hypothesis	Socio-economic: much better	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	Socio-economic: better	+	+	+	+	+		+	+	+	+	+		+	+	+	+	+		+	+	+	+	+		+	+	+	+	+		+	+	+	+	+	
	Socio-economic: worse																																				
	Socio-economic: much worse								+	+					+	+					+	+					+	+					+	+			
	Political: seriously over																																				
	Political: somewhat over													+	+	+	+	+		+	+	+	+	+		+	+	+	+	+		+	+	+	+	+	+
	Political: somewhat under																																				
	Political: seriously under																																				
Self-categorization vs. Multiple identity hypothesis (ref.= equally both)	Ethnicity only																																				
	Ethnicity>Nationality	+	+	+	+	+		+	+	+	+	+		+	+	+	+	+		+	+	+	+	+		+	+	+	+	+		+	+	+	+	+	+
	Nationality>Ethnicity		+	+					+	+																											
	Nationality only																																				
Threshold hypothesis (ref. = no change)	Prevalence of discrimination	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	Much less important	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	Less important																																				
	More important																										+	+	+	+	+		+	+	+	+	+
	Much more important																															+	+	+	+	+	+

Note. Ordered: ordered logit; Poisson: Poisson regression; Negative: negative binomial regression; Tobit: tobit regression; Ordinary: ordinary least squares; Probit: probit regression. +: positive influence; −: negative influence. Only impacts with statistical significance less than 5% are reported. Dummies for missing values and for survey sites are omitted from the table.

Table 4 (cont.). Factors affecting inter-ethnic hostility (minority sample)

	Model	G1						G2						G3						G4						G5						G6						G7					
		Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit
Control variables	Female	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Age																																										
	Education																																										
	BHN																																										
	Assets																																					+	+			+	
	Traumatic experience							+																								+											
	Indigene			+					+																								+										
Contact hypothesis (ref.=every day)	Never																																										
	A few times a month		+						+						+						+						+						+						+				
	A few times a week	+		+					+	+	+					+		+			+	+	+			+	+					+	+	+	+		+	+	+	+	+	
Retaliation vs. Greed hypothesis (ref.= the same)	Socio-economic: much better																																										
	Socio-economic: better															+						+					+																
	Socio-economic: worse																																										
	Socio-economic: much worse	+		+		+		+		+		+		+		+		+		+		+	+	+	–	+	+					+		+	+			+		+	+	+	
	Political: seriously over																									+		+	+		–												
	Political: somewhat over																									+		+	+														
	Political: somewhat under																																										
	Political: seriously under																					–																					
Self-categorization vs. Ethnicity only (ref. = equally both)	Nationality only			–	–		–		–						–						–						–												–	–	–		–
	Nationality>Ethnicity	+	+																		–						–	+														
	Multiple identity hypothesis: Ethnicity>Nationality	+	+	+		+			+	+	+	+	+		+		+			+	+	+	+	+	+		+						+			+			+	+	+	+	
	Prevalence of discrimination															+		+				+	+	+	–																		
Threshold hypothesis (ref. = no change)	Much less important																																										
	Less important					+		+	+	+				+						+	+	+	+	+	–							+	+	+				+	+	+	+	+	+
	More important																																										
	Much more important																																										–

Note. Ordered: ordered logit; Poisson: Poisson regression; Negative: negative binomial regression; Tobit: tobit regression; Ordinary: ordinary least squares; Probit: probit regression. +: positive influence; –: negative influence. Only impacts with statistical significance less than 5% are reported. Dummies for missing values and for survey sites are omitted from the table.

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Table 5. Factors affecting inter-ethnic hostility (sample without any political power mobility)

		Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit
Control variables	Female	+	+					+	+	+	+	+	+		+			+			+			+			+			+	
	Age																														
	Education																														
	BHN	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
	Assets																														
	Traumatic experience							+	+	+	+	+			+	+	+	+			+	+	+	+	+		+			+	
	Indigene																														
Contact hypothesis (ref.=every day)	Never																														
	A few times a month																														
	A few times a week	+	+	+		+		+	+	+	+	+		+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+
Retaliation vs. Greed hypothesis (ref.= the same)	Socio-economic: much better																			+	+	+	+	+	+	+	+	+	+	+	+
	Socio-economic: better	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+
	Socio-economic: worse	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+
	Socio-economic: much worse	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	Political: seriously over	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	Political: somewhat over													+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	Political: somewhat under													+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+
	Political: seriously under													+	+	+	+	+		+	+	+	+	+		+	+	+	+	+	+
Self-categorization vs. hypothesis (ref. = equally both)	Ethnicity only													+	+	+	+	+								+				
	Multiple identity		+												+												+			+	
	Ethnicity>Nationality							+	+	+	+	+		+	+	+	+	+	+	+										
	Nationality>Ethnicity				−		−							−	−	−	−	−	−	−	−	−	−	−	−						
	Nationality only	−					−													−	−	−	−	−	−	−					−
	Prevalence of discrimination	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Threshold hypothesis (ref. = no change)	Much less important																														
	Less important																														
	More important	+	+	+	+	+		+	+	+	+	+		+	+	+	+	+		+	+	+	+	+		+	+	+	+	+	
	Much more important	+	+	+	+	+		+	+	+	+	+		+	+	+	+	+		+	+	+	+	+		+	+	+	+	+	

Note. Ordered: ordered logit; Poisson: Poisson regression; Negative: negative binomial regression; Tobit: tobit regression; Ordinary: ordinary least squares; Probit: probit regression. +: positive influence; −: negative influence. Only impacts with statistical significance less than 5% are reported. Dummies for missing values and for survey sites are omitted from the table.

Table 5 (cont.). Factors affecting inter-ethnic hostility (sample with political power mobility)

		Spec 1						Spec 2						Spec 3						Spec 4						Spec 5						Spec 6					
		Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit	Ordered	Poisson	Negative	Tobit	Ordinary	Probit
Control variables	Female	−	+	−	−	−	−																														
	Age	−	−	−	−	−	−																														
	Education	−	−	−	−	−	−																														
	BHN	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
	Assets	−	−	−	−	−	−																														
	Traumatic experience	+	+	+	+	+	+		+						+																						
	Indigene																																				
Contact hypothesis (ref.=every day)	Never																																				
	A few times a month																																				
	A few times a week																																				
Retaliation vs. Greed hypothesis	Socio-economic: much better																																				
	Socio-economic: better																																				
	Socio-economic: worse	−	−	−	−	−					−									−	−	−	−	−													
	Socio-economic: much worse																																				
(ref.= the same)	Political: seriously over													−	−	−	−	−							+												+
	Political: somewhat over																																				
	Political: somewhat under													−		−	−			−	−	−	−	−			−						−				−
	Political: seriously under																																				
Self-categorization vs. (ref. = equally both)	Ethnicy only																																				
	Nationality>Ethnicity	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	Ethnicity>Nationality																																				
Multiple identity hypothesis	Nationality only																																				
	Much less important	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+		+	+	+	+	+	
Threshold hypothesis (ref. = no change)	Less important							+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	More important																																				
	Much more important																																				

Note. Ordered: ordered logit; Poisson: Poisson regression; Negative: negative binomial regression; Tobit: tobit regression; Ordinary: ordinary least squares; Probit: probit regression. +: positive influence; −: negative influence. Only impacts with statistical significance less than 5% are reported.

Dummies for missing values and for survey sites are omitted from the table.

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6. Concluding Remarks

This paper has explored the origins of inter-ethnic hostility among ordinary people, which need to be addressed if centripetal institutions are to work effectively. To measure accurately the level of hostility perceived by individuals, I used attitudes toward ethnic voting detected by face-to-face interviews. The targeted interviewees were people in sub-Saharan Africa, where inter-ethnic peace at the micro-level is urgently needed as a prerequisite for social stability and economic development. The hypotheses tested here were the *contact hypothesis*, the *retaliation hypothesis*, the *greed hypothesis*, the *self-categorization hypothesis*, the *multiple-identity hypothesis*, and the *threshold hypothesis*.

When examined on the basis of a pooled sample, people who had everyday contact with members of other groups turned out to be less likely to have ethnic hostility compared to those who had such encounters only a few times a week. Perceived political inequality among groups increased hostility only among those who felt superiority over others. Perceived socio-economic horizontal inequality, on the other hand, worsened inter-ethnic relations regardless whether it was perceived as an advantage or disadvantage. Thus, in the real world, it seems that those who have hostility against other groups are not limited to the marginalized groups: those who perceive advantages over others equally tend to dislike other groups compared to those who do not recognize any horizontal inequality.

Excessive ethnic identity worsened inter-group relations while exclusive identification with nationality reduced inter-ethnic hostility, contrary to the prediction of the *self-categorization theory*.

People tended to have hostility against other groups if they believed that ethnic discrimination was prevalent in the society. That is, one's belief that other groups commit ethnic discrimination and one's own hostility against other groups reinforce each other.

These causal relationships, however, turned out to be at least partially context-dependent. More frequent contact could reduce hostility only among non-minorities or those who live in the countries where no political power mobility has ever occurred. The hostility-reduction effect of exclusive national identity was limited to minorities or to those who live in the countries without political power mobility. The *threshold hypothesis* did not apply to minorities and fit better in the countries where no political power mobility has been observed since the introduction of multi-party elections.

The most striking difference that depends on the context is the effect of perceived horizontal inequality. A greedy tendency in terms of socio-economic group inequality was limited to non-minorities; minorities who thought their own group was economically superior to others did not have stronger hostility towards others compared to those who did not see any socio-economic gap. Similarly, PHI mattered chiefly in the countries without any kind of political power mobility; hostility between groups was not associated with PHI in countries where experience of power sharing or change of government has convinced people that political change is not impossible.

The research design employed in this paper is not without limitations. Since the number of surveyed countries is small, classifying the sample in accordance with the macro political contexts makes it difficult to fully differentiate the effect of the contexts from the effect of other country-specific attributes. Furthermore, combining the macro political context and group status (minority or non-minority) to see if any interaction effects exist will be analytically more interesting than just examining causal relationships separately in each dimension. However, considering the size disparity among sub-samples and the resulting inequality in the statistical power, this paper made estimations separately.

Another problem is that the analyses above ignored differences in the structure of group composition in each survey site. Completely fractionalized situations (Dar es Salaam and Accra), multi-polar situations with several equivalent groups plus many minorities (Lagos, Harare,

Bulawayo, Nairobi, Nakuru, Mombasa), or unipolar situations (Kampala, Gulu, Hoima, Mbarara, Unguja, and Pemba) can shape the perception of inter-ethnic relations differently.

The selection bias caused by sensitive questionnaire content can also be analyzed better by using a more appropriate method like Heckman's sample selected model (Heckman 1979).

Lastly, as self-reported behavior and real behavior may be different, the relationship between the two must be addressed so that our research contributes to actual conflict prevention.

Despite these limitations, this study still has relevance to real-world politics and policies. Given the recent mainstreaming of centripetalism in macro-level institutional engineering, the focus of the conflict study should also be shifted from the inter-elite settlement to the inter-ethnic perceptions of ordinary people at the micro-level, who can decisively affect the success of failure of the new centripetal institutions. In this sense, the origins of micro-level hostility warrant serious attention.

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Abstract (in Japanese)

要約

本稿は求心主義的制度が適切に機能するためには対処する必要のある民族間敵意の起源を明らかにすることにある。民族投票する意思を指標として、社会心理学から援用した集団間差別の起源に関する主要な諸仮説を、サブサハラ・アフリカ 6 か国の 14 都市で行った意識調査に基づいて検証する。分析の結果、いわゆる「水平的不平等」は、それが有利に認識されている場合も不利に認識されている場合でも、実際に民族間敵意のレベルを上げているが、この効果は文脈（所属する民族が 10%以下のマイノリティか否か、国レベルで複数政党制選挙が導入されてから実際に政権交代ないし権力分有を経験しているか否か）に依存していることが判明する。具体的には、社会経済的に有利に感じている民族が他民族を敵視する傾向はマイノリティには該当しないこと、そして、水平的不平等の認識が民族間敵意を助長する関係性自体が、政権交代や権力分有が行われた国では見られないことが明らかにされる。