

Inter-marriage, Ethnic Mixing, and Ethnic Voting in Africa*

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Abstract

Inter-marriage is rapidly altering the ethnic landscape across Africa. Estimates from the most recent Demographic and Health Surveys (DHS) show that the median country-level rate of inter-marriage is over 20% across a large sample of countries. This paper explores how the blurring of ethnic lines affects voter behavior. We focus on the electoral choices of mixed individuals who descend from parents with different ethnic backgrounds. Drawing on two large surveys from Malawi and Kenya, we find that individuals of mixed ethnic heritage are less likely to engage in ethnic voting than mono-ethnics. We explore the empirical and theoretical implications of this finding and investigate potential mechanisms.

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1 Introduction

Economic development and urbanization are changing Africa’s ethnic demography, bringing members of different ethnic groups into more frequent contact. An increasing number of Africans are marrying across ethnic lines, leading to an expanding population of mixed-ethnicity individuals. Public figures in Africa suggest that inter-ethnic marriages in Africa’s multi-ethnic societies are quite common. In Malawi, for example, the country’s four most recent presidents were married to spouses from different ethnic groups.¹ Benin also has a track record of mixed-ethnic presidents (Adida et al., 2016), and South Africa’s current opposition leader, Mmusi Maimane, whose wife, Natalie, is white, represents an increasing trend toward intermarriage in that country (Amoateng and Heaton, 2017). While cross-ethnic marriages among Kenyan presidents have been less common, incumbent president Uhuru Kenyatta’s spouse, Margaret, is of mixed parentage (her mother was German). Yet, despite the apparent prevalence of mixed marriages, standard accounts of ethnic politics, developed in a prior era when inter-marriage was less common, offer little insight into the political behavior of those who have mixed-ethnic heritage. In this paper, we ask whether inter-ethnic mixing reduces ethnic bloc voting.

Political scientists studying Africa have frequently highlighted the salience of ethnicity in elections (Horowitz, 1985, 1991; Posner and Simon, 2002; Berman et al., 2011; Posner, 2005; Ishiyama, 2011; Conroy-Krutz, 2013; Dulani and Dionne, 2014; Adida et al., 2016). However, existing studies overlook key demographic changes taking place across the continent. Our analysis of data from recent Demographic and Health Surveys (DHS) shows that the median country-level rate of ethnic inter-marriage across a sample of 23 countries is over 20%, and has increased in recent decades. The growth of inter-ethnic marriages is largely a result of urbanization and improved mobility within and across national boundaries (Jacobson et al., 2004; Kibuthu, 2016). What do these changing dynamics imply for our understanding of the link between ethnicity and politics?

In this paper we begin by presenting the first systematic, cross-national estimates of

¹Bakili Muluzi, an ethnic Yao, was married to a Chewa. Bingu wa Mutharika (Lomwe) was married to a Yao (second wife). Wa Mutharikas successor as President, Joyce Banda (Yao) is married to a Tonga. Incumbent president, Peter Mutharika, like his brother Bingu, is a Lomwe, and is married to a Yao.

inter-ethnic marriages in Africa. We then focus on the political attitudes and preferences of mixed-ethnicity individuals, the progeny of ethnic inter-marriages. We propose that mixed individuals may be less likely to engage in ethnic voting than their mono-ethnic counterparts. We draw on data from two surveys: a national population survey from Malawi and smaller urban-only survey from Kenya, two counties in which ethnicity structures the vote to a considerable extent. The results show that voters with multi-ethnic heritage are less likely to vote for the party most closely associated with their self-reported ethnic community. We propose two mechanisms to explain these findings, one linked to the reduced salience of ethnicity relative to other considerations and a second linked to the greater number of options for ethnic political affiliation available to mixed-ethnicity individuals.

The extent of ethnic inter-mixing documented here suggests that standard approaches to measuring ethnic identities (and related concepts like ethnic fractionalization) in Africa and elsewhere should be amended to better reflect the more complicated social realities that now prevail across many parts of the continent. With regard to electoral politics, understanding the attitudes and preferences of mixed individual is important for making sense of electoral dynamics. Our results suggest that ethnic inter-mixing may reduce the prevalence of bloc voting, possibly muting the divisive potential of ethnic politics and enhancing the long-term stability of democratic regimes. Regardless of the mechanisms that drive the observed effects, taking account of the rise in inter-marriage is vital to our understanding of ethnic politics and democratic consolidation.

The next section demonstrates the importance of ethnic inter-marriage and ethnic mixing across the African continent. Section 3 outlines our theoretical expectations regarding the effects of multi-ethnic heritage on vote choice. Section 4 provides background on the Kenya and Malawi cases, introduces the survey data, and describes our approach to measuring key concepts. Section 5 presents the main results, section 6 describes robustness tests, and section 7 investigates mechanisms. The final section concludes with a discussion of the theoretical and empirical implications of our results.

2 Inter-marriage in Africa

The lack of attention to ethnic inter-mixing in existing scholarship likely stems in part from the absence of consistent cross-national data. Commonly used surveys, including the Afrobarometer and the DHS, do not allow individuals to identify as belonging to more than one ethnic community or include questions on the ethnicity of respondents' parents. As a result, there is no systematic data on rates of inter-marriage or the prevalence of mixed individuals. We take a first step toward filling this gap.

To gain a sense of how ethnic inter-marriage is changing the social landscape in Africa, we turn to data from the DHS surveys. Ideally, we would like to track both the rise of inter-marriage as well as the increase of mixed-ethnicity individuals. However, because the DHS surveys do not include information on respondents' parents, we focus only on inter-marriage rates, which can be tracked by comparing the ethnicities of couples included in the studies. Nonetheless, because inter-marriage and mixed-ethnicity rates are directly related (with a time lag), the DHS data provide a useful window into the changing nature of ethnicity in Africa.

DHS surveys, which are conducted across a wide range of countries in Africa (and elsewhere), collect data from nationally representative samples of women and men of reproductive age (typically women 15-49 and men 15-59). The surveys date back to the late-1980s, making it possible to track trends in inter-marriage over time.² In most cases, the ethnicity coding schemes used in the surveys is similar to other common measures (we use the list from Fearon (2003) as a benchmark). However, in several instances the ethnicity codes were substantially more disaggregated, and we excluded those surveys that could not be aggregated to match standard convention. Additional details are provided in Appendix I. We note that our estimates may be biased upward due to the nature of the sample frame used in the surveys. Because the DHS samples include only individuals of reproductive age, older people are systematically excluded from the sample, which will likely bias our estimates of inter-marriage upward if inter-marriage is becoming more common over time. To get a sense of the size of the excluded population, the Afrobarometer round 6 surveys (conducted in 36

²Our estimates of inter-marriage rates include couples living together who are not married.

countries in 2014-2015) shows that 14.7% of the adult population (18+) falls outside of the DHS sample frame.

Figure 1: Inter-marriage Rates, DHS Surveys (most recent years)

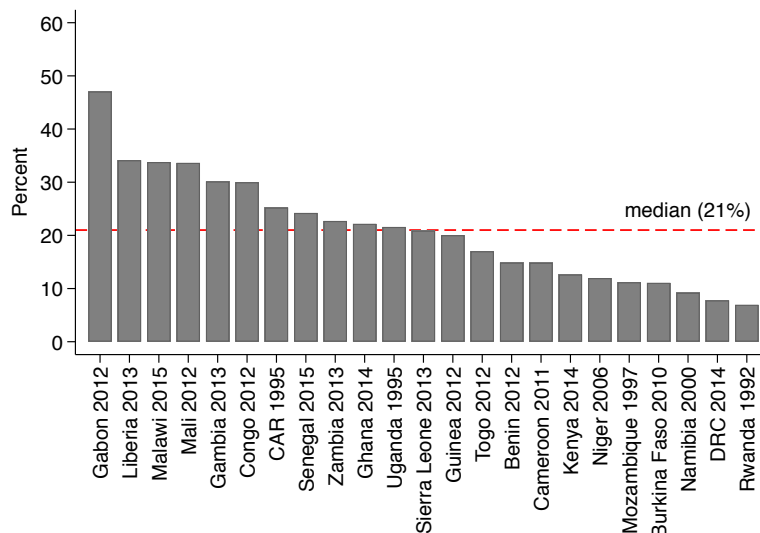
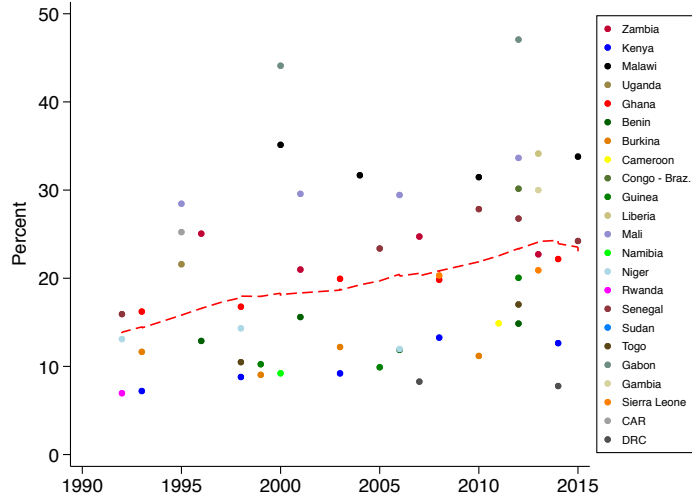


Figure 1 plots inter-marriage rates for the most recent DHS survey for 23 African countries. The median country-level inter-marriage rate is 21%, and we observe considerable variation across countries.³ On the lower end, we estimate the rate of inter-marriage in Kenya to range from 7% to 13% across the five DHS studies carried out between 1993 and 2014. At the higher end, our estimate for Malawi ranges from 31% to 36% in the four surveys conducted between 2000 and 2015. Figure 2 provides a scatterplot of all country-year observations. The trend line (estimated with a lowess smoother) indicates an upward trend in country-level inter-marriage rates for the sample. It is noteworthy that Africa continues to be characterized as a continent divided by ethnic differences though one in five marriages now bridge ethnic divides. The demographic changes we document here will likely have important implications for our theories of ethnicity in politics, society, and economics; here we focus on politics.

³Country-level estimates were weighted (using the womens weights) to account for regional oversampling within countries.

Figure 2: Scatterplot of Inter-Marriage Rates



Notes: The dashed line is based on a lowess smoother (bandwidth=.8).

3 Inter-marriage, Mixed-ethnicity, and Voter Behavior

A large body of scholarship has documented a connection between ethnicity and voter behavior in multi-ethnic settings in Africa and elsewhere (Chandra, 2004; Posner, 2005; Ferree, 2011). To account for this connection, much of the existing literature relies on an instrumental approach that traces ethnic voting to the desire to secure access to state-controlled resources coupled with the belief that co-ethnic leaders will favor one’s group in patronage allocations (Chandra, 2004; Posner, 2005; Wantchekon, 2003; Carlson, 2015). Another strand in the literature develops an expressive approach that builds on social identity theory (e.g., Tajfel and Turner (1979)) to argue that in addition to material motivations, the preference for co-ethnic leaders stems from the psychological need to affirm the value and worth of ones ethnic community (Horowitz, 1985; Dawson, 1994; Gay, 2002; Dickson and Scheve, 2006). Expressive theories rest on the assumption that individuals derive their sense of self-worth in part from where their community stands in the country’s social hierarchy. When co-ethnic leaders are elected to prominent national positions, individuals – particularly those from traditionally marginalized communities – receive a psychic benefit from affirming their group’s status (Chandra, 2004).

While there is widespread support for these approaches in the literature, it is noteworthy that much of the foundational scholarship on ethnic voting emerged at a time when ethnic inter-marriage was uncommon. As a result, the literature is largely silent on whether and how inter-mixing might affect electoral preferences and behaviors. In this paper, we focus on how mixed individuals may differ in political outlooks and behaviors from mono-ethnic citizens, focusing specifically on whether mixed individuals are likely to deviate from patterns of ethnic voting. We do not examine – theoretically or empirically – the effects of inter-marriage due to the practical challenge of disentangling selection effects (those who marry a non-co-ethnic may systematically differ from those who marry within their group) from treatment effects (how marrying someone from a different group affects one's attitudes and behaviors). For mixed individuals, by contrast, we can be more confident that because parents' ethnicity precedes that of their children, the effects of parentage can be treated as causally prior to political attitudes and behaviors (Davenport, 2016).

How might electoral decisions differ for mixed individuals relative to mono-ethnics? We propose three possibilities. First, ethnically mixed individuals may be less likely to vote along ethnic lines because ethnicity will matter less. Instrumental approaches suggest that voters seek to elect the candidate or party that will best represent the interests of their ethnic community, relying on candidate ethnicity and the broader ethnic profile of parties as cues that signal likely future behavior – which groups will be favored and which will be neglected (Chandra, 2004; Posner, 2005; Ferree, 2011; Carlson, 2015; Chauchard, 2016). For mixed people, however, ethnicity may serve as a weak signal, since individuals may have a foot in two different communities. For example, a Luo-Luhya person in Kenya may see Raila Odinga, the long-time Luo opposition leader, as a less faithful representative of her group's "ethnic interests" than someone with two Luo parents. These internal divisions may weaken attachments to the leaders associated with either side of one's family. For expressive reasons, too, mixed individuals may have weaker ties to parties associated with either parent's ethnic group: by aligning with one parent, the individual denies the other part of her identity associated with the other parent. For mixed individuals, then, ethnicity might exert a less powerful influence on voting decisions, leading mixed individuals to give greater weight to other considerations and to deviate from ethnic bloc voting patterns more

often than mono-ethnics.

Support for the idea that mixed people may hold more progressive views on the role of ethnicity in politics is found in recent work by Davenport (2016, 2018) on the political preferences of bi-racial Americans. Davenport notes that the decision to enter into a mixed-race marriage likely reflects a degree of social progressivism, implying that for individuals who choose such marriages, racial identifications and attachments may be less salient. As a result, children of bi-racial families may come to adopt, through family socialization, a progressive orientation toward the place of race or ethnicity in society and politics. Bi-racial couples may also come into conflict with societal prejudices by virtue of being in a mixed marriage, experiences that could lead to rejection of prejudicial views. Consistent with this literature, we hypothesize that mixed-ethnicity individuals in Africa may attach less weight to ethnic considerations when making electoral decisions.

Second, mixed individuals may be less likely to vote with their self-reported identity group not because ethnicity matters less, but because such individuals have a wider array of options for ethnic voting. Here, we draw upon the notion of identity repertoires developed by Posner (2005), which argues that voters in multiethnic settings have incentives to coordinate political action around the identity dimension that will be most advantageous for gaining access to power and resources. While Posner's formulation of identity repertoires focuses on the idea that individuals commonly identify in multiple ways (e.g., along tribal and linguistic lines in Zambia), we extend the framework by noting that mixed-ethnicity individuals likewise may be able to choose the ethnic affiliation (mother's group or father's group) that is more advantageous in terms of maximizing electoral benefits. By this logic, we might expect that mixed-ethnicity individuals will be less likely to vote with their primary identity group (the one with which they identify most closely) because they have the option of throwing their lot in with the other side of the family. We emphasize that by this account ethnicity is no less salient politically for mixed-ethnicity people than for others; what differs is merely that mixed-ethnicity individuals have a wider menu of options for political affiliation when it comes to ethnic voting. Thus, for example, a Luo-Luhya woman in Kenya's 2013 presidential election may be able to vote ethnically by supporting either Raila Odinga (a Luo) or Musalia Mudavadi (a Luhya). For mono-ethnics, the choice set is more limited.

Finally, mixed ethnic individuals may behave just like mono-ethnics. Many mixed people may identify more strongly with one of the communities to which they belong, due to stronger ties to one side of their extended family, matrilineal/patrilineal descent rules that privilege identification with one side of the family, or other idiosyncratic factors that affect one's sense of self. Thus, a Luo-Luhya woman in Kenya may feel herself to be a Luo first and foremost despite having one parent who is not Luo. In politics, she may view Odinga as the best representative of her ethnic group, may receive the same psychic rewards associated with supporting Odinga as mono-ethnic Luos, and may therefore make political choices that mirror those of mono-ethnics.

4 Context and Data

4.1 Ethnicity in Malawi and Kenya

To test if those with mixed ethnic heritage are less likely to vote with the group with which they identify, we employ data from Malawi and Kenya. These countries provide useful cases for exploring the potential effects of ethnic inter-mixing on political behavior due to the presence of multiple ethnic groups (that are often clustered by region), and also due to ethnic block voting patterns that follow linguistic, tribal, and regional lines (Tsoka, 2009; Ferree and Horowitz, 2010; Dulani and Dionne, 2014; Gibson and Long, 2009). Moreover, as shown in the DHS data above, Kenya and Malawi represent different levels of ethnic inter-marriage (Malawi has the third-highest inter-marriage rate while Kenya has the seventh lowest rate of the 23 countries in our sample), which increases the likelihood that our findings will generalize to countries at varying levels of ethnic inter-marriage.

Malawi is a country of ethnic minorities, with no single group making up more than about a third of the population. Most groups, as in other parts of Africa, are geographically concentrated in distinct parts of the country, the main exception being the Ngoni who are found in all regions. Most groups in the northern region and the southern tip of the country follow patrilineal customs, with ethnic identity and property rights inherited through the male line. In these systems, wives typically move to live in the husband's community

following the payment of a bride price by the groom’s family. Ethnic groups based in the central and southern regions mostly follow matrilineal customs, in which identity and property passes through the female line and husbands commonly move to live in the wife’s community. The Ngoni who live in northern Malawi, have maintained the patrilineal customs of their Zulu ancestors while the Ngoni of the central and southern regions have assimilated the matrilineal customs of their ethnic neighbors. Like Malawi, Kenya is highly diverse with no single group that makes up a majority of the population. As in Malawi, groups in Kenya remain geographically concentrated, particularly in rural areas. In Kenya, however, there is no variation with regard to patrilineal and matrilineal descent, as all groups are patrilineal.

The analysis that follows draws on data from two large-scale surveys. The Malawi data comes from a nationally-representative survey conducted by the Governance and Local Development (GLD) program in March-April 2016 (Lust et al., 2016). The sample size is 8,100 (of which 7,491 have parentage data) and covers 15 of Malawi’s 28 districts in all three of Malawi’s regions. The data for Kenya come from a more limited survey conducted in Nairobi County, the area that contains the nations capital city, in June-July 2016 (N=2,203). Details on sampling can be found in Appendix B.

4.2 Mixed Respondents in the Survey Data

We define mixed individuals as respondents who report parents of different ethnicities. While the data does not allow us to explore whether respondents who report two same-ethnic parents have more diverse lineages further back in their family trees, our approach provides a useful way of differentiating respondents in terms of more proximate descent. Table 1 reports the share of mixed individuals overall in each sample and disaggregates results by ethnic group (mixed respondents are categorized based on self-reported ethnicity) for ethnic communities for which we have a sufficiently large sample in each survey. It shows that 20% of respondents in the Malawi sample are from mixed-ethnicity families, and the prevalence of mixed individuals ranges from 14% for those who self-identify as Tumbuka to 33.2% for those who self-identify as Manganja. The Kenya sample shows that 13.7% of respondents in Nairobi County are from mixed backgrounds, with a range from 7.9% for those who self-identify as Kamba to 21.4% for those who self-identify as Luo.

Table 1: Mixed-ethnicity Respondents by Self-Reported Ethnicity (percentages)

Malawi		Kenya	
Chewa	18.3	Kikuyu	11.7
Lomwe	24.0	Luo	21.4
Yao	15.6	Kamba	7.9
Ngoni	28.1	Kisii	12.7
Tumbuka	14.0	Luhya	12.4
Mang'anja	33.2	Kalenjin	17.5
Sena	15.4	Meru	15.4
Tonga	16.6		
Lambya	26.1		
Nyanja	16.9		
TOTAL	20.0	TOTAL	13.7

The data suggests that there is a considerable amount of choice regarding how mixed individuals self-identify. In Malawi, 46% of mixed respondents identify with their father's ethnic group, and 49% identify with their mother's ethnic group (5% identify with neither). A substantial share of respondents in the data deviate from convention implied by matrilineal and patrilineal descent rules. Tradition dictates that individuals whose parents are both from patrilineal ethnic groups should identify as members of their father's ethnic group, while those whose parents are both from matrilineal groups should identify as members of their mother's group. While we do observe a large difference (72% of mixed respondents whose parents are both from patrilineal groups identify with their father's ethnic group while only 28% of those whose parents are both from matrilineal groups do so), we also note that a substantial share of each group does not self-identify as predicted by convention. For mixed individuals with one parent from a matrilineal group and another from a patrilineal group convention is more ambiguous, and self-identification is usually driven by the dominant practice in the locality. We observe that about two-thirds of those with one matrilineal and one patrilineal parent identify with their father's ethnic group (the off-diagonal cells in Table 2). Anecdotal evidence suggests that in Malawi, where it is nearly impossible to determine an individual's ethnic identity based on name, mixed individuals have considerable latitude over identity choices. In Kenya, where all groups are patrilineal, mixed individuals tend to self-identify with their father's ethnic group (73% of respondents in our sample do so). We also observe that gender matters in both countries. In Malawi, mixed male respondents are

10 percentage points more likely to identify with their father’s ethnic group (52% v 42%, $p=.000$), and in Kenya mixed men are about 8 points more likely to self-identify with their father’s ethnic group than mixed women (77% vs. 69%; $p=.14$).

Table 2: Percent Who Identify with Their Fathers Ethnic Group (Malawi)

	Patrilineal Mother	Matrilineal Mother
Patrilineal Father	72%	62%
Matrilineal Father	64%	28%

4.3 Measuring Identities and Group-Party Linkages

Our goal is to test whether mixed individuals are less likely to engage in ethnic voting than mono-ethnics. We conceptualize ethnic voting in the way proposed by Horowitz (1985), which argues that ethnic voting ”means simply voting for the party identified with the voter’s own ethnic group, no matter who the individual candidates happen to be” (p. 320) and is therefore not limited solely to voting for co-ethnic candidates (see also Huber (2012) and Nathan (2016)). Operationalizing the test, however, is not a straightforward task, since by definition mixed-ethnics belong to more than one ethnic community. The approach we take is to code mixed individuals by their *self-reported ethnic identity*, which we treat as their *primary identity* (we empirically investigate the robustness of this assumption below). Because the surveys did not encourage mixed respondents to provide more than one response to the ethnicity question, they likely encouraged mixed respondents to reveal the main identity with which they identify. Consistent with prior research on mixed-race individuals in the U.S., we assume that respondents’ answers reflect the strength of identity attachments (Davenport, 2016). We use data on the reported ethnicity of respondents’ parents to identify mixed individuals. Our key test, therefore, compares electoral preferences for mixed individuals of each ethnic group relative to mono-ethnic respondents from the same group. For example, we examine whether mixed individuals who self-identify as Chewa in Malawi or Kikuyu in Kenya hold different electoral preferences than mono-ethnic Chewas and Kikuyus, respectively.

We match groups to parties in order to identify the party or candidate supported by the

largest share of each ethnic community. We define the leading party for an ethnic group as the one that enjoyed the most support from the members of that group at the time of the survey. Our tests, thus, ask whether mixed members of each group are more likely to deviate from group norms by supporting a party other than the one supported by the plurality of the group. Group-party associations are reported in Tables 3 and 4 for Malawi and Kenya, respectively. The leading party for each group is shown in bold. In Malawi, we measure electoral preferences using a retrospective question on vote choice in the 2014 presidential elections (“for whom did you vote for president in the 2014 presidential elections?”). In Kenya, we measure electoral preferences using a question about the coming 2017 presidential election (“who would you vote for in the next election if it were held now?”).

Table 3: Malawi: Electoral Preferences by Ethnic Group

	N	DPP	PP	MCP	UDF	Other	DK/RA
Chewa	902	32.3	9.4	50.1	2.2	0.3	5.7
Lomwe	685	84.7	6.7	2.6	4.4	0.3	1.3
Yao	837	33.2	11.4	2.6	46.2	0.1	6.5
Ngoni	712	61.2	13.3	17.7	4.8	0.7	2.3
Tumbuka	1,353	40	43.1	12.7	0.7	0.5	3
Mang’anja	538	84.4	8.9	0.9	4.8	0.2	0.7
Sena	498	83.3	9.2	1.4	3.8	1.2	1
Tonga	223	25.1	61.4	9	2.2	0.9	1.4
Lambya	201	49.3	41.8	7.5	0	0	1.5
Nyanja	136	66.2	23.5	0.7	9.6	0	0

Table 4: Kenya (Nairobi): Electoral Preferences by Ethnic Group

	N	Jubilee	CORD	Other	None	DK	RA
Kikuyu	541	71.2	1.7	4.8	7.4	6.9	8
Luo	404	16.3	45.3	10.1	14.4	7.2	6.7
Kamba	291	37.5	19.9	18.4	8.3	10.7	5.2
Kisii	162	27.2	31.5	9.9	11.7	8	11.7
Luhya	398	27.6	28.9	14.6	11.6	10.3	7
Kalenjin	62	53.2	8.1	14.5	12.9	6.5	4.8
Meru	55	50.9	3.6	9.1	10.9	10.9	14.6

In Malawi (Table 3), most groups expressed a clear first preference (50% or more) at the time of the survey, the exceptions being the Yao, Tumbuka, and Lambya. In Kenya

(Table 4), bloc voting is less common in the survey data, likely because the question used to measure electoral preferences was prospective rather than retrospective and because some ethnic alliances were in flux at the time of the Kenya survey.⁴

Preferences were less than uniform within ethnic groups in both surveys: a single party received majority support among only seven of the ten groups in Malawi and among only three of seven in Kenya. Our tests below include all ethnic groups, since the theories do not predict that the effects of mixed ethnicity should be observed only when the base rate of ethnic bloc voting is high. As a robustness test, we exclude groups with a weak first preference - i.e., those for which the most-preferred party is supported by less than 50% of the group (results reported in Appendix F). Also, for several groups the most-preferred party is somewhat ambiguous since the gap between the most-preferred and second-preferred party is small and in some cases not significant (e.g., the Tumbuka in the Malawi sample and the Kisii and Luhya in the Kenya sample). For groups that do not have a clear first preference, we might not expect to observe a difference in voting behavior between mixed respondents and mono-ethnics. Including these groups in the main tests reported below likely biases the results toward a null finding. As a robustness test we re-run the main models without ethnic groups for which the gap between the most preferred and second party is less than 10% (results reported in Appendix E).

5 Results

Our measure of vote choice comes from the questions used above in Tables 3 and 4 (question wording for all items is in Appendix A). Based on the ethnic group-party matching routine described above, we create a dichotomous measure that takes a value of 1 for respondents who reported voting for (or, in Kenya, intending to vote for) the party most favored by respondents from the group with which each respondent self-identifies.

Table 5 shows that mixed respondents in both Malawi and Kenya (Nairobi) are more likely

⁴We code respondents who indicated an intention to vote for Uhuru Kenyatta as Jubilee supporters, and those who indicated an intention to vote for either Raila Odinga or Kalonzo Musyoka (CORDs top two leaders at the time of survey) as supporters of CORD. The measure of electoral preferences for Kenya shows higher rates of uncertainty, no preference, and refused to answer than the Malawi data, likely due to differences in question wording.

to deviate from their group than individuals from single-ethnicity families. In Malawi multi-ethnics are 5.9 percentage points less likely to support the party associated with their group, and in Kenya (Nairobi) multi-ethnics are 8.3 points less likely to do so. Given differences in the sampling, it is difficult to directly compare the results from the two countries. We therefore also report results for Malawi’s urban areas in Table 5 to allow for a more direct comparison with the Nairobi sample, and we find that the results are stronger than those for Nairobi with those of mixed ethnic heritage in urban Malawi being 13.1 points less likely to vote with their self-identified ethnic group. All differences are significant at the 5% level when estimating two-tailed difference of means tests.

Table 5: Electoral Preferences (% voting for group’s most-preferred party)

	Malawi (full sample)	Malawi (urban only)	Kenya (Nairobi)
Mono-ethnics	51.5	45.6	52.9
Mixed	45.6	32.5	44.6
Difference	-5.9***	-13.1***	-8.3**

Two-sided t-tests. *.10, **.05, ***.01

To explore these results more rigorously, we estimate a linear probability model that controls for a variety of potential confounds. A particular concern is the challenge of disentangling the effects of ethnic inter-mixing from local ethnic geography. Recent work by Ichino and Nathan (2013) and Nathan (2016) from Ghana shows that individuals in both urban and rural areas are more likely to deviate from their communities with regard to vote choice when they live in more diverse areas in which their own community makes up a smaller share of the local population. This poses a challenge for the relationship we seek to estimate since multi-ethnics in both Malawi and Kenya disproportionately reside in diverse localities.⁵ Including controls for local ethnic geography, however, runs the risk of soaking up variation in the dependent variable that might be due to the effects of ethnic inter-mixing.

⁵In the Malawi survey sample, 28% of those living in more diverse areas (localities with village-level ELF scores above the median) are mixed compared to only 14% in less diverse areas ($p < 0.000$). In the Kenya survey the association is more muted since the data come only from an urban area: in more diverse parts of Nairobi County (above the median), 15.8% of respondents are mixed, relative to 12.1% in less diverse areas ($p < .05$).

Nonetheless, we opt to include measures of local ethnic composition because we view this as a more conservative approach.

In Malawi, we use census data to estimate the ethnic composition of localities. Following the approach used by Ichino and Nathan (2013), we measure local ethnic geography as the spatially weighted proportion of each respondent’s ethnic group in a 30km radius around the respondent’s enumeration area (EA) in rural areas and 0.5km in urban areas.⁶ The results are robust to using alternative measures of ethnic composition: dummy variables indicating whether or not the respondent’s group is an ethnic minority in the enumeration area, Traditional Authority area, or district based on the census data, and a local (village/neighborhood) measure of ELF based on the survey data (results are available upon request). In Kenya, where disaggregated census data is not available, we generate estimates for local ethnic composition using survey data. Because the Kenya sample is from a densely populated urban area, we measure co-ethnic share within relatively small circles (.5km) around each respondent. Given that random selection was used to identify households within clusters, we expect that these estimates should be noisy but not biased.⁷ The results for both countries are robust to alternative measures of local ethnic geography estimated with different sized radii (not shown).

Models include standard demographic factors: age, education, gender, and wealth (measured with similar asset indices in both countries, see Appendix A). We also include a set of country-specific controls. For Malawi, we include a measure of whether respondents live in urban areas and a measure of whether respondents’ self-identified ethnic group is matrilineal.⁸ The Kenya model includes a control for whether respondents were affected by inter-ethnic violence related to elections in 1992, 1997, and 2007. In both samples, we control for the length of time respondents have lived in their current location (measured in years). We include ethnic group fixed effects to account for different base rates of ethnic

⁶Using this measure reduces the sample size because we are only able to estimate ethnic proportions for the 12 ethnic groups that are included in the census.

⁷The median number of respondents used to estimate local ethnic geography for the Kenyan survey was 17.

⁸The matrilineal nature of ethnic groups is determined by secondary sources (Berge et al., 2014; Peters, 1997). The results are robust to a measure of matrilineal heritage based on the survey question, “If you have children, would your children belong to the mother’s side or the father’s side?”

bloc voting across communities, and we control for whether the respondent was interviewed by a co-ethnic enumerator (Adida et al., 2016).

Table 6 reports the results. The estimates are nearly identical to the uncontrolled results in Table 5. Mixed-ethnicity individuals in Malawi are 4.6 percentage points less likely to support their group’s most-favored candidate, and in Kenya (Nairobi), they are 8.1 points less likely to do so, similar to the results for Malawi’s urban sample (8.9 points). Notably, in Malawi the effects of mixed ethnicity are substantially larger than the effects of local ethnic geography. While we find that the share of co-ethnics in one’s locality increases the probability of voting with one’s group, this effect is close to zero (an increase from the minimum to the maximum, 0 to 1, is associated with a 0.3% increase in the likelihood of voting with one’s group). The results are thus in line with Ichino and Nathan (2013) but suggest that mixed ethnicity has a much larger effect in Malawi. In Kenya, where our estimates of local ethnic geography are less precise and the sample is confined to an urban population, the magnitude of the effect of mixed ethnicity is similar to that for local ethnic geography.

We expect that the effect of mixed ethnicity should be stronger for mixed individuals whose parents’ ethnic groups are aligned with different political parties – i.e., for mixed individuals whose lineage cuts across the ethno-partisan divide. Thus, for example, we expect that a Lomwe-Yao respondent in Malawi should be more likely to deviate from bloc voting patterns than a Sena-Mang’anja person because the Lomwe and Yao were aligned with different parties (DPP and UDF) at the time of the survey while the Sena and Mang’anja were both aligned with the DPP. Likewise, in Kenya the effects should be stronger for Kikuyu-Luo respondents, for example, than for Kikuyu-Kalenjin individuals. Results reported in Appendix C indicate that in both countries mixed individuals whose parents’ come from ethnic groups that support different parties are in fact significantly more likely to deviate from group preferences than those whose parents’ ethnic groups are associated with the same party. However, we find that in one of Malawi’s three regions (the South) mixed individuals whose parents support the same party are *more* likely to vote with the group than mono-ethnics; in Appendix C, we speculate on why the South might be different than other regions.

Table 6: Models of vote Choice

	Malawi (full sample)	Malawi (urban only)	Kenya (Nairobi)
Mixed Ethnicity	-0.046*** (0.014)	-0.089** (0.021)	-0.081** (0.035)
Time lived in area (years)	0.023** (0.008)	0.001 (0.015)	-0.004*** (0.001)
Age	0.002*** (0.001)	0.005** (0.001)	0.006*** (0.002)
Education	-0.001 (0.008)	0.008 (0.006)	-0.005 (0.006)
Male	-0.028 (0.019)	-0.065 (0.040)	-0.014 (0.024)
Wealth (asset index)	-0.161 (0.373)	0.123 (2.153)	0.012 (0.009)
Co-ethnic share 30km/.5km (census data)	0.003*** (0.000)	0.003* (0.001)	
Co-ethnic share .5km (survey data)			0.106* (0.059)
Non-co-ethnic Interviewer	0.012 (0.017)	0.008 (0.027)	-0.067** (0.030)
Urban	-0.026 (0.016)		
Constant	0.125 (0.076)	0.231 (0.131)	0.520*** (0.092)
Country-specific controls	yes	yes	yes
Ethnic group fixed effects	yes	yes	yes
Region fixed effects	yes	yes	n/a
R^2	0.10	0.09	0.15
N	7,093	992	1,542

Standard Errors in parentheses. ***.01, **.05, *.10

6 Robustness

We address several concerns in the Appendix. First and foremost is the worry that our assumption that self-reported ethnicities reflect the strength of identity attachments may be wrong. It may be that mixed individuals select a response to survey questions about ethnicity essentially at random or by convention, not in a way, as we assume, that reflects the strength of their ethnic attachments to the respective communities to which they belong. Thus, for example, a Chewa-Lomwe person in Malawi may identify as Chewa simply because

that’s the local custom, because she is being interviewed by a Chewa enumerator, or by performing a mental “coin flip” between her two possible answer options – even if she holds little attachment to the broader Chewa community and does not expect that her fate is linked to the group in any meaningful way. If true, we would not expect this respondent to vote for the Chewa-aligned party, the MCP, at election time, and by definition we would find that mixed respondents will be less likely to vote with their self-reported identity group, not for the reasons we propose, but instead due to how mixed respondents answer the survey question.

While we are unable to address this concern fully without additional data that would allow us to test the assumption that self-reported identities reflect the strength of ethnic attachments, we report results from additional tests that support our main findings. We do so by employing a different operationalization of the dependent variable. Rather than asking whether mixed individuals are less likely to vote for the party linked to their self-reported ethnic group, we ask whether mixed individuals are less likely to vote with their father’s and mother’s ethnic communities, relative to mono-ethnic members of those groups. This approach sidesteps the self-identification problem by instead relying on non-subjective measures. If we find that mixed individuals are less likely to vote with their fathers’ and their mothers’ ethnic group, then our conclusion that ethnic mixing weakens identity voting will be strengthened. The results in Appendix G are largely robust to this alternative coding. The coefficients are always negative and fail to reach conventional levels of significance in only one of the four models (voting with father’s group in Malawi).

We provide additional results from three additional robustness tests in the Appendix. First, we re-estimate the results by ethnic group in each sample (Appendix D) and show that the negative effect of mixed-ethnicity holds across most of the larger communities in each country sample, confirming that the results are not driven by any one group in either country. Second, we exclude groups that have an ambiguous first preference (<10% gap between the most-preferred and second party) from each country sample and find that the results are robust to this exclusion (Appendix E). Third, we exclude groups that do not have a clear first preference (those in which there is no majority favorite at the time of the survey), and find that the main results hold (Appendix F). Finally, in Appendix H, we also

probe further the conditioning role of matrilineality in the observed relationships in Malawi.⁹ Results indicate that the effects in Malawi are driven by mixed individuals who self-identify with matrilineal groups, though in urban areas the results hold for mixed respondents who self-identify with both matrilineal and patrilineal groups.

7 Mechanisms

What accounts for the greater propensity of mixed individuals to deviate from ethnic voting patterns? To probe the potential mechanisms, we draw on data from focus groups conducted in 2017 and 2018 in Malawi, and also on the Malawi survey data, which offers a richer set of secondary questions than the Kenya survey. While only suggestive, these results confirm that mixed respondents perceive themselves to straddle multiple identities and suggest that both mechanisms – reduced salience and a wider array of strategic options – may be at play.

Ethnically mixed participants in the focus groups described themselves as “in between” two cultural communities. The following quotes, both from mixed-ethnic respondents, illustrate these perceptions:

“Each parent in the house, they mind about their cultural heritage; in so [doing], leaving the children divided. The parents try to raise the children in one cultural heritage, but it is hard for them both to do this. The children are like in between there.” (Participant 2, Zomba)

“Each cultural heritage is of importance because when the father is telling the children [about his ethnic heritage], he is sure that he is doing the right thing; same with the mother that she is telling the children the right thing [when she emphasizes her ethnic heritage]. So we cannot say that one is [more] important than the other. All is equal.” (Participant 1, Zomba)

⁹Results (not shown) from models that interact mixed-ethnicity with gender (based on the specifications in Table 6) indicate that the effects hold for both mixed men and women. In Malawi, the estimated effect of mixed-ethnicity is -3.3 percentage points for men and -5.4 points for women, though the coefficient for women is not significant (nor is the difference between mixed men and women). In Kenya, the equivalent estimate is -10.6 percentage points for men and -5.4 points for women. The coefficient for mixed women is not statistically significant, nor is the difference between mixed men and mixed women.

Respondents also suggested that these dual identities can have political implications. As one mixed-ethnic participant put it:

“... the child has been raised under two forces...this puts the child in between. It is hard [for the child] to feel belonging to a certain ethnic group. Because of this, they never mind of whom they are voting into power by considering the tribe. They go to matrilineal and they are Yao there. The other day they go to patrilineal and they are Lomwe there. When growing up, the child feels in between two identities.” (Participant 1, Zomba).

This quote suggests a greater flexibility with regard to voting options but tells us little about whether such flexibility stems from a wider options set and/or from attaching less weight to ethnic considerations.¹⁰

The survey data suggests that both mechanisms may be at work. Consistent with the proposition that mixed individuals are less likely to abide by group norms because ethnicity matters less, the survey data from Malawi shows that those of mixed ethnic heritage are less likely to attach political importance to ethnicity. We use two indicators that measure beliefs about how important it is that 1) co-ethnics vote together and 2) one’s ethnic group elects one of their own to office. A difference of means test between those of mono- and mixed-ethnic heritage indicates that those of mixed heritage are about 5.5 percentage points less likely to feel that it is important for co-ethnics to vote together ($p < .05$) and are about 6.2 points less likely to believe it is important that the ethnic group elects one of their own to office ($p < .000$).

The survey data also suggest that those of mixed heritage may deviate from group voting norms because they have a wider set of political options. Mixed respondents who reported voting for the party aligned with one or both parents’ ethnic groups (79% of the Malawi sample) were substantially more likely to have voted for the party that won the 2014 election, the DPP, than for other parties (44% of such respondents voted for the DPP compared to 20%

¹⁰Sanctioning may also play a role in the strategic calculations of mixed individuals. In contexts where voters are expected to vote along ethnic lines, mixed individuals may have the option of crossing over to another side with less worry of being socially sanctioned. While the focus groups do not suggest evidence for the importance of sanctioning, this possibility is worth further exploration in future work.

of those who did not vote for the party associated with either parents' group). One plausible explanation is that mixed people who vote with a parent's group may do so strategically by aligning with the group that supports the party with the greatest likelihood of winning. This point is further supported by looking at mixed respondents who self-identify as Yao. In the 2014 election the Yao were associated with the UDF, a relatively minor party at the time of our field work (the UDF came in fourth in the 2014 elections, last among the four main parties). Thus, for mixed Yaos, it may have been clear that the UDF was not going to win in 2014, and as a result mixed Yaos should have been especially likely to defect from the UDF if their other parent's group is linked to a more viable party. This is precisely what we observe: as shown in Table 8 in Appendix D, mixed Yaos were substantially more likely to deviate from their group relative to mixed respondents whose ethnic communities were aligned with relatively more viable parties.

8 Conclusion

This paper documents the widespread prevalence of ethnic inter-marriage across Africa. We explore one implication of the blurring of ethnic lines by investigating whether ethnic mixing limits ethnic block voting. Using survey data from Malawi and Kenya, we show that mixed individuals are more likely to hold electoral preferences that deviate from group norms than mono-ethnics. Though our ability to probe the mechanisms at work is limited, we offer suggestive evidence that ethnicity matters less to mixed individuals and that mixed people have a wider array of options for ethnic voting.

These results suggest several implications. First, with regard to measurement, scholars of ethnic politics should amend standard practices used to measure ethnicity on surveys. At a minimum, it would be useful to include questions regarding the ethnicity of respondents' parents that will allow one to distinguish mixed respondents from mono-ethnics (and to test whether theories apply equally well to both). Additionally, future research could profitably explore alternative ways to measure ethnicity, for example, by adopting ethnicity questions that encourage multiple responses in place of the common practice of encouraging only a single response. In addition, there is a great deal of work to be done on understanding

identity choices for mixed respondents across Africa's many diverse contexts. Our limited exploration suggests that tradition (particularly the matrilineal/patrilineal distinction) likely plays a role. But we also find that these factors leave much unexplained. As a result, we know very little about what drives mixed respondents to provide the answers they do to identity questions. Do such answers reflect the strength of individuals' self conceptions, social norms governing identification, social context, or something else entirely? Relatedly, the trends documented here pose a number of potential challenges for standard measures of social diversity – e.g., ethno-linguistic fractionalization, politically-relevant ethnic groups, and ethnic segregation – that are used throughout the ethnic politics literature. Should such measures be amended in the face of growing mixed populations? If so, what coding procedures are appropriate? In addition, these findings suggest that it will be important to control for the mixed population in a variety of research agendas. For example, Ichino and Nathan's (2013) work has recently drawn attention to the importance of local ethnic geography. Given that ethnic diversity is associated with ethnic inter-mixing, future work on ethnic geography should strive to disentangle these factors.

More fundamentally, the high rates of inter-marriage and ethnic mixing we observe raise a series of deeper questions for theories of ethnic politics. Africa is often described as a continent where ethnicity reduces cooperation, entrenches political rivalries, and breeds distrust and conflict. As ethnic mixing continues, scholars would do well to consider its effects on the relationships they seek to explain. If ethnic diversity undermines public goods provision, can barriers to cooperation be overcome by blurring ethnic lines? More directly for this study, if more people are of mixed ethnic heritage, should we see a general decrease in ethnic bloc voting over time as ethnic-based political rivalries are bridged or because mixed individuals are less linked to a single ethnic identity? Will patterns of ethnic voting and political mobilization continue relatively unchanged as these trends continue, or will basic political dynamics shift in more fundamental ways as the lines between ethnic groups blur? Do mixed-ethnics constitute a politically distinct social or political force, or will they engage in politics in the same ways as their mono-ethnic brethren? These questions will only grow in importance in coming years, as urbanization and development continue to fuel inter-group contact.

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Appendices

A Survey Questions

Vote choice:

Kenya: Who would you vote for in the next election if it were held now?

Malawi: Whom did you vote for president in the 2014 presidential elections?

Mixed ethnicity: Coded as 1 for respondents who report that their parents are from different ethnic groups. We exclude respondents who did not know (or did not report) the ethnicity of one or both parents.

Matrilineal: a respondent was coded as matrilineal if her/his mother come from a matrilineal ethnic group (regardless of the fathers heritage) and as patrilineal otherwise. The following groups are identified as matrilineal: Chewa, Lomwe, Yao, Ngoni (patrilineal in Mzimba), Nyanja (Nyanja in Likoma (Northern district) are patrilineal but Likoma is not in our sample), Mang'anja. The following groups are identified as patrilineal: Tumbuka, Sena, Tonga, Lambya.

Time Living in Current Location:

Kenya: How long have your lived in Nairobi?. Responses were coded in years.

Malawi: How long have you lived in [village/neighborhood name]? Answer options ranged from 3 months to ones whole live. We therefore recoded the variable into the following categories: 1 = 1 year of less; 2 = more than 1 year up to five 5 years; 3 = more than 5 years up to 20 years; 4 = more than 20 years; 5 = ones entire life.

Urban: a dummy variable coded by enumerator (small towns are considered urban)

Age: How old are you?

Education:

Kenya: What is the highest level of education you have completed? Answer options: 1) no formal school; 2) standard 1; 3) standard 2; 4) standard 3;5) standard 4;6) standard 5;7) standard 6;8) standard 7;9) standard 8;10) form 1; 11) form 2; 12) form 3; 13) form 4; 14) college; 15) some university; 16) university completed; 17) graduate degree.

Malawi: What is your highest level of education? Answer options: 1) no formal schooling; 2) informal schooling only (including Koranic schooling); 3) some primary school completed; 4) primary school completed; 5) intermediate school or some secondary school/high school; 6) secondary school/high school completed; 7) post-secondary qualifications other than university (e.g. a diploma or degree from a polytechnic or college); 8) some university; 9) university completed; 10) post-graduate.

Male: Coded by enumerator.

Wealth (asset index):

Kenya: Based on principal component analysis of questions [yes/no] regarding household ownership of: mobile phone, gas cooker, radio, television, bicycle, motorcycle, car, computer.

Malawi: Based on principal component analysis of questions [yes/no] regarding household ownership of: mobile phone, radio, bicycle, motor vehicle.

Affected by violence: Coded as 1 for respondents who were individually affected or whose family was affected by violence related to the 1992, 1997, or 2007 elections. Based on questions that asked: Were you or any members of your family affected by the violence [that followed the 2007 election / before the 1997 election / before the 1992 election]?

Non-co-ethnic interviewer:

Kenya: Based on enumerators self-reported ethnicity.

Malawi: The question What ethnic group do you believe I am from? was the very last question in the survey. Interviewer is coded as non-co-ethnic if the respondent did not perceive the interviewer to be from her/his same ethnic group.

B Sampling

The Malawi survey is a highly locally clustered (an average of 31 respondents per village across 261 villages), nationally representative survey of Malawi. The random sample was stratified on population size and the presence of matrilineal and patrilineal ethnic groups. Households were chosen to participate by a standard random walk procedure whose starting point was the center of the village, and individuals within households were chosen using the Kish Grid. Because patrilineal groups are less common in Malawi, to ensure variation in heritage, we stratified on matrilineality. The survey team sampled 22 Traditional Authorities (TA). Within each TA, we sampled four enumeration areas (EAs; census tracts). Within each EA, we sampled four villages (Lust et al. 2016).

The Kenya sample was stratified by parliamentary constituency, according to population size, and starting points (usually polling places) were chosen randomly. Enumerators were instructed to follow a standard random-walk procedure to select households. Within households, respondents were randomly selected from among those who were home at the time of the initial visit. We use data only from the seven largest ethnic groups in the sample for which we have sufficiently large sub-samples to estimate group preferences at the time of the survey.

C Differential Effects among Those Whose Parents' Groups Cross the Partisan Divide

The results in Table 7 bear out the expectation that the negative effects should be stronger among those who are mixed and whose parents groups support different parties. Models 1 and 4 estimate the effect of mixed ethnicity for those whose lineage does not cut across the partisan divide relative to mono-ethnics by excluding mixed respondents whose lineage does cut across partisan lines from each country sample.¹¹ Models 2 and 5 estimate the effect of mixed ethnicity for those whose lineage cuts across the partisan divide (relative to mono-ethnics) by excluding mixed respondents whose lineage does not cut across partisan lines from the sample. Results are as expected: in both countries, the size of the mixed-ethnicity effect is larger for respondents whose lineage cuts across partisan lines. In Malawi, mixed people are 10 percentage points less likely to engage in bloc voting than mono-ethnics if their parents' ethnic groups are aligned with different parties and are 6.7 points more likely to do so otherwise (this effect is significant at the .05 level, $p = 0.049$, but is only significant at the .10 level if we exclude from the analysis respondents who have one parent from a group that has ambiguous preferences). In Kenya (Nairobi), the effect is a 17 point reduction for those whose lineage crosses the partisan divide, relative to 4.4 points otherwise.

Models 3 and 6 test whether these differences are significant by limiting the samples to mixed respondents. The coefficients for mixed respondents whose parents' groups are associated with different parties – lineage crosses party lines – show that the differences are large (21 and 13 percentage points in Malawi and Kenya respectively) and significant, though the results for Kenya are imprecisely estimated due to the smaller sample of mixed respondents.

The positive effects for Model 1 in Malawi are unexpected given our theoretical framework. Additional tests show that the positive effects are largely driven by mixed individuals in the Southern region whose parents support the same party (result available upon request); we also find that the expected negative effect obtains in the Central and Northern regions, although the effect is not significant in the Northern region. Therefore, given that this result is not present in the Kenya analysis and that the result only holds in one region of Malawi, the result is not likely to be generalizable.

While a full investigation of the positive effect in Malawi's Southern region is beyond the scope of this article, we speculate that those in the Southern region who are mixed and whose parents' groups support the same party can use voting with the group as a way to simultaneously identify with both parts of their heritage. Many mixed individuals face the dilemma of deciding which parent to identify with and the associated fear that identifying with one rejects the part of their heritage that comes from the other parent (Davenport, 2018). In such a context, voting with both groups is a way to identify with both simultaneously (see Jung (2000) for examples of instances in which vote choice is closely tied to ethnic identity). Those of mono-ethnic heritage do not face this same identity

¹¹We use this estimation strategy in place of a more standard approach that would interact mixed ethnicity with a measure of whether one's parents' groups are aligned with different parties because our data provide no observations who are not mixed and do have parents whose groups cut across the political divide, making it impossible to estimate an interaction effect.

dilemma and thus voting is not a way to solve that problem. While this is not the case in our main results, this does suggest that in some localities mixed-heritage may work differently than the general trends observed in our analysis. An investigation into why and under what conditions this is the case are fruitful lines of questioning for future research.

Table 7: Testing Differences Based on the Ethno-Political Divide

	Mixed (no cross) & mono-ethnics	Mixed (cross) & mono-ethnics	Mixed Only
Malawi			
Mixed Ethnicity	0.067** (0.031)	-0.100*** (0.021)	
Lineage Crosses Party Lines			-0.212*** (0.051)
N	5,671	6,086	1,221
R ²	0.09	0.10	0.16
Kenya			
Mixed Ethnicity	-0.044 (0.046)	-0.170*** (0.063)	
Lineage Crosses Party Lines			-0.134* (0.078)
N	1,571	1,518	171
R ²	0.14	0.14	0.22

Models 1 and 4 exclude mixed respondents whose parents ethnic groups are aligned with different parties. Models 2 and 5 exclude mixed respondents whose parents ethnic groups are aligned with the same party. Models 3 and 6 include only mixed respondents. All models include the covariates in from the main analysis, country-specific controls, and ethnic group fixed effects. Models 1-3 include regional fixed effects. Standard errors in parentheses. ***.01, **.05, *.10

D Results by Ethnic Group

The analysis by groups shows that in most groups, mixed-ethnicity respondents are less likely to express an intention to vote for the party associated with their community. The small group-level samples, however, mean that we do not have sufficient power to estimate these differences for smaller ethnic groups. The models in Table 8 below are OLS models. In Kenya, they include controls for length of time in Nairobi, age, education, gender, wealth, exposure to prior election violence, local ethnic diversity, and non-co-ethnic interviewer. In Malawi, the models include controls for time lived in the area, age, education, gender, wealth (asset index), urban/rural, matrilineal, diversity, co-ethnic interviewer, and region fixed effects.

Table 8: Sub-Group Analysis of Vote Choice

Kenya (Nairobi)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Kikuyu	Luo	Luhya	Kamba	Kisii	Meru	Kalenjin
Mixed	-0.08	-0.11*	-0.05	-0.07	0.02	0.35	-0.26
Ethnicity	(0.21)	(0.09)	(0.53)	(0.55)	(0.89)	(0.17)	(0.27)
N	444	322	314	247	132	42	41
R ²	0.03	0.10	0.05	0.07	0.09	0.24	0.08

Malawi	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Chewa	Lomwe	Yao	Ngoni	Tumbuka	Sena	Tonga	Lambya	Nyanja
Mixed	-0.07*	-0.11**	-0.17***	-0.05*	0.00	-0.03	-0.08*	-0.03	0.07
Ethnicity	(0.09)	(0.03)	(0.00)	(0.07)	(0.95)	(0.40)	(0.03)	(0.53)	(0.54)
N	1,123	841	927	853	1,512	584	274	217	158
R ²	0.15	0.08	0.05	0.12	0.05	0.09	0.10	0.03	0.06

P-values in parentheses. ***.01, **.05, *.10

E Excluding Groups With Ambiguous First Preferences

We identify groups that do not have a “clear preference” as those group’s whose most preferred party receives less than 10% more support than the next most favored party. In Malawi, these are the Tumbuka and Lambya, and in Kenya, these are the Kamba, Kisii and Luhya. The results are robust to the exclusion of these groups in both countries (see table below).the exclusion of these groups in both countries (see table below). The Malawi models in Table 9 include an indicator variable for whether respondents ethnic groups are matrilineal. The Kenya models include an indicator variable for respondents who were affected by prior election violence.

Table 9: Models of Vote Choice Excluding Groups with Ambiguous First Preference

	Malawi	Kenya
Mixed ethnicity	-0.06*** (0.010)	-0.109** (0.042)
Time lived in area (years)	0.02** (0.010)	-0.003* (0.002)
Age	0.002** (0.001)	0.005** (0.002)
Education	-0.01 (0.010)	-0.02*** (0.008)
Male	-0.01 (0.02)	-0.013 (0.032)
Wealth (asset index)	-0.32 (0.28)	-0.002 (0.012)
Coethnic share 30km/0.5km (census data)	0.003*** (0.001)	
Coethnic share .5km (survey data)		0.188*** (0.07)
Non-co-ethnic interviewer	0.01 (0.02)	-0.064* (0.033)
Urban	-0.040** (0.01)	
Constant	0.20** (0.07)	0.84*** (0.12)
Country-specific controls	yes	yes
Ethnic group fixed effects	yes	yes
Region fixed effects	yes	n/a
N	4760.	849
R ²	0.11	0.13

P-values in parentheses. ***.01, **.05, *.10

F Excluding Groups with Weak First Preference

We exclude groups with a weak first preference (groups for which no single party enjoyed 50% or more support at the time of the survey (Table 10). In Malawi, these groups are the Yao, Tumbuka and Lambya, and in Kenya, these are the Luo, Kamba, Kisii and Luhya. The results are robust to the exclusion of these groups in both countries (see table below). The Malawi results are largely unchanged. For Kenya, the coefficient on mixed ethnicity (-0.084) is nearly identical to that for the full sample reported in the main text (-0.081), it is less precisely estimated due to the smaller sample size in this test (p-value=0.13). As in the main models, the Malawi models include an indicator variable for whether respondents' ethnic groups are matrilineal. Kenya models include an indicator variable for respondents who were affected by prior election violence.

Table 10: Models of Vote Choice Excluding Groups with Weak First Preference

	Malawi	Kenya
Mixed Ethnicity	-0.038** (0.017)	-0.084 (0.055)
Time lived in area (years)	0.017 (0.012)	-0.001 (0.002)
Age	0.003*** (0.001)	0.005* (0.002)
Education	-0.009 (0.007)	-0.021** (0.009)
Male	-0.013 (0.027)	-0.004 (0.039)
Wealth (asset index)	0.334 (0.424)	0.013 (0.014)
Coethnic share 30km/0.5km (census data)	0.003*** (0.001)	
Coethnic share 0.5km (survey data)		0.064 (0.083)
Non-co-ethnic Interviewer	0.022 (0.022)	-0.005 (0.040)
Urban	-0.024 (0.018)	
Constant	0.130* (0.066)	0.921*** (0.146)
Country-specific controls	yes	yes
Ethnic group fixed effects	yes	yes
Region fixed effects	yes	n/a
N	3833	527
R^2	0.118	0.054

Standard errors in parentheses. ***.01, **.05, *.10

G Voting with Mother and Father's Ethnic Group

Table 11: Voting with Father's Ethnic Group and Mother's Ethnic Group

	Malawi		Kenya	
	w/Dad	w/Mom	w/Dad	w/Mom
Mixed Ethnicity	-0.021 (0.017)	-0.070*** (0.019)	-0.139*** (0.035)	-0.124*** (0.036)
Time lived in area (years)	0.026*** (0.008)	0.025*** (0.008)	-0.004*** (0.001)	-0.003* (0.001)
Age	0.002*** (0.000)	0.002*** (0.000)	0.006*** (0.002)	0.004** (0.002)
Education	0.002 (0.007)	0.002 (0.008)	-0.003 (0.006)	-0.006 (0.006)
Male	-0.033 (0.019)	-0.032 (0.021)	-0.012 (0.024)	-0.013 (0.025)
Wealth (asset index)	-0.296 (0.287)	-0.204 (0.340)	0.010 (0.009)	0.016* (0.010)
Coethnic share 30km /0.5km (census data)	0.003*** (0.000)	0.003*** (0.000)		
Coethnic share 0.5km (survey data)			0.102* (0.059)	0.121** (0.060)
Non-co-ethnic Interviewer	0.027 (0.016)	0.010 (0.018)	-0.064** (0.030)	-0.067** (0.030)
Urban	-0.013 (0.015)	-0.035* (0.019)		
Constant	0.109 (0.077)	0.035 (0.090)	0.504*** (0.092)	0.566*** (0.093)
Country-spec. cntrls	yes	yes	yes	yes
Ethnic group f.e.	yes	yes	yes	yes
Region fixed effects	yes	yes	n/a	n/a
R^2	0.09	0.10	0.15	0.14
N	5674	5693	1543	1543

Standard errors in parentheses. ***.01, **.05, *.10

H Matrilineality in Malawi

In Malawi, we probe further to determine if willingness to deviate from one's ethnic group is more likely under different descent regimes: are those of mixed ethnic heritage less likely to vote with the group if their family is matrilineal? While we do not have strong priors in this regard, it is possible that given the male dominance in politics and the weakening of matrilineal institutions in Malawi that that answer is likely to be yes. We therefore re-estimated Models (1) and (2) from Table 6 and interaction mixed ethnicity with our indicator of matrilineality. The results are reported in Table 12 (we only report the relevant coefficients, but all control variables are included in the models). We find that in the full sample, only the interaction term is significant, which suggests that the results we see above are largely driven by those who are from matrilineal groups (the effect is negative, significant, and is nearly twice as large). However, in urban areas, the interaction term is not significant and the mixed ethnicity coefficient remains significant and negative. It is not surprising that such traditional descent rules do not play a strong role in urban settings.

Table 12: The Effects of Matrilineality

	Malawi Full Sample	Malawi Urban Sample
Mixed Ethnicity X Matrilineal	-0.092*** (0.016)	-0.018 (0.027)
Mixed Ethnicity	0.011 (0.016)	-0.075** (0.026)
Matrilineal	0.082* (0.041)	-0.059 (0.085)
Constant	0.086 (0.074)	0.221 (0.128)
Controls included in main analysis	yes	yes
Ethnic group fixed effects	yes	yes
Region fixed effects	yes	yes
N	6489	972
R^2	0.10	0.09

Standard errors in parentheses. ***.01, **.05, *.10

I Details on the construction of inter-marriage estimates in the DHS surveys

To estimate country-level inter-marriage rates, we use the “couples recode” files provided by DHS, which include all male-female pairs who reported being married or living together. We encountered two challenges in generating estimates. First, the ethnic coding schemes vary in the level of aggregation considerably across surveys and years. Often there is no obviously correct way to deal with alternative categorization schemes. For example, the Akan in Ghana are often treated as a single ethnic group in political science scholarship, but can also be sub-divided as Asante, Fante, Akim, and so forth. Using a more disaggregated coding scheme would produce a higher estimate of inter-marriage. An Asante-Fante couple, for example, would be coded as ethnically-mixed if we used a scheme based on sub-tribe but not if we aggregated sub-tribes to a higher level (Akan in this case). Unfortunately, the DHS provides no documentation regarding the decision rules that were used to construct ethnic categorizations. Given the inherent arbitrariness of any decisions we might make, we used the list from Fearon (2003) – a common dataset used by political scientists – as our guide, excluding surveys in which the ethnic coding scheme was substantially more disaggregated than that from Fearon (2003). We also found variations in the DHS ethnic codes across years for individual countries. In most cases, we were able to generate a uniform coding scheme by collapsing the codes to the least disaggregated level used in the surveys. We excluded surveys that could not be aggregated. We also exclude all DHS surveys that did not collect data on ethnicity. Table 13 below presents the ethnic groups categorization scheme used for all included surveys, relative to the group list from Fearon (2003).

A second challenge is that the DHS surveys typically include an “other” category for members of smaller tribes. We coded couples as ethnically mixed when the ethnicity of one individual was provided and the other was listed as “other.” We excluded couples in which both members of the couple were coded as “other” since we had no way of knowing whether the two were from the same ethnic group.

The DHS surveys records polygamous marriages (multiple women married to the same man), and all marriages are included in the couples recode files used to estimate inter-marriage rates. Thus, in instances of polygamy, men are “double-counted” in the data file, while all women are only counted once.

DHS samples often over-sample parts of the country. To adjust for this, we weight our estimates using the “women’s weights” that are designed for generating population estimates for the female population.

Table 13: Ethnic Coding Schemes

COUNTRY	DHS	FEARON (2003)
Benin 1996; 2001; 2006; 2011/12	Adja & related Bariba & related Betamaribe & related Dendi & related Fon & related Peulh & related Yoa & Lokpa and related Yoruba & related Other	Bargu Fon Peul (Fulani) Yoruba-Nagot
Burkina Faso 1992/93; 1998/99; 2003; 2010	Bobo Dioula Fulfude (Peul) Gourmantche Gouroussi Lobi Mossi Senoufo Touareg Bella Other	Busansi Bwa Dagara Fulani (Peul) Grunshi (Ghhgurunshi) Gurma (Gubarma) Lobi Mossi Senoufo Songhay Western Mande
Cameroon 2011	Adamaoua-Oubangui Arab-Choa/Peulh/ Haoussa/Kanuri Biu-Mandara Bantoede South-West Grassfields Bamilike /Bamoun Cetier /Ngoe/Oroko Beti/Bassa/Mbam Kako/Meka/Pygme Stranger/Other	Beti Bamileke Bassa-Dakoko -Douala Bamoun Eastern Nigritic Fulani Kirdi Northwest Southwest
CAR 1994/95	Haoussa Sara Mboum Gbaya Mandjia Banda Ngbaka-Bantou Yakoma-Sango Zande-Nzakara Other	Banda Mbaka (Bwaka) Riverene-Sango- Mandjia (Mandja, Mangbai) Gbaya (Baja,Baya) Sara Mbum (Bum)
Congo 2011/12	Kongo Punu	Lari Kongo-Sundi -Bembe-Kota- Echira-Kamba

	Duma	-Dondo
	Mbere/mb	Teke
	Teke	Mbete
	Mbochi	Vili
	Sangha	Sanga
	Kota	Kouyou
	Makaa	
	Oubangui	
	Pygmee	
	Etranger	
	Other	
DRC 2007; 2013/14	Bakongo Nor. And Sou.	Azande-Mangbetu cluster
	Bas-Kasai & Kwilu-Kwngo	Ngbandi
	Cuvette Central	Tetela-Kusu
	Ubangi And Itimbiri	Bakongo
	Uele Lake Albert	Kwilu Region
	Basele-K	Ngbaka
	Kasai, Katanga, Tanganika	Tutsi
	Lunda	-Banyamulenge
	Pygmy	Mongo
	Others	Lunda-Yeke
		Luba Shaba
		Luba Kasai
		Kivu Province
		Lulua
		Mbandja
Gabon 2000; 2012	Fang	Fang
	Kota-Kele	M'bete
	Mbede-Teke	Kota
	Myene	Njebi
	Nzabi-Duma	Duma
	Okande-Tsogho	Teke
	Shira-Punu/Vili	Eshira
	Pygmee	French
	Other	Bapounou
		Nkomi
		Tsogo
		Baloumbou
		Mpongwe
		Orungou
Gambia 2013	Mandinka/Jahanka	Mandingo
	Wolof	Fulani (Fula, Peul)
	Jola/Karoninka	Wolof
	Fula/Tukulur/Lorobo	Diola-Jola
	Serere	Serahuli (Sarakohe)
	Serahuleh	Serer
	Creole/Aku Marabout	Mandjak
	Manjago	
	Bambara	
	Other	
	Non-Gambian	
Ghana 1993; 1998;	Akan	Ashanti, Asante

2003; 2008; 2013/14	Ga/Dangme Ewe Guan Mole-Dagbani Grusi Gurma Mande Other	Mossi-Dagomba, Ewe Guan Fanti, Fante Ga Abangbe Nzema Konkonba Anyi-Bawle Yoruba Mande
Guinea 1999; 2005; 2012	Guerze Kissi Malinke Peulh Soussou Toma Other	Fulani Mande Mande-Fu West Atlantic
Kenya 1993; 1998; 2003; 2008/09; 2014	Kalenjin Kamba Kikuyu Kisii Luhya Luo Meru/Embu Mijikenda/Swahili Somali Taita/Taveta Other	Kikuyu-Meru -Embu Luhya Luo Kamba Kalenjin Gusii-Kisii Mijikenda Turkana Somali Masai Boran Rendille
Liberia 2013	Bassa Gbandi Belle Dey Gio Gola Grebo Kissi Kpelle Krahn Kru Lorma Mandingo Mano Mende Sarpo Vai Other	Kru Kissi Loma Mandingo Vai Krahn(Guere) Americo-Libs Bassa Grebo Gio Gola Mano Ghandi(Bandi) Kpelle(Guerze)
Malawi 2000; 2004/05; 2010; 2015/16	Chewa Tumbuka Lomwe Tonga Yao	Chewa Lomwe (Nguru) Mananja-Nyanja Yao Ngoni

	Sena	Northerner (Nkonde-Tonga-Tumbuka)
	Nkonde	
	Ngoni	
	Other	
Mali 1995/6; 2001; 2006; 2012/13	Bambara	Mande
	Malinke	Peul (Fulani)
	Peulh	Senufo
	Sarakole/Soninke/Marka	Sarakole-Soninke
	Sonrai	Songhai
	Dogon	Tuareg
	Tamacheck	Dogon
	Senoufo/Minianka	Bozo
	Bobo	Moor
	Other	Xaasongaxango
Mozambique 1997	Xitsonga & Similiar	Chopi
	Emakua & Similiar	Islamic Coastal
	Cisena & Similiar	Makonde-Yao
	Elomue & Emarenjo	Makua-Lomwe
	Xitswa & Similiar	Shona
	Portugues	Tsonga
	Other	Zambezi
Namibia 2000	Afrikaans	Ovambo
	Damara>Nama	Kavango
	English	Herero, Mbanderu
	Herero	White
	Kavango Languages	Nama
	Caprivi Languages	Damara
	Oshiwambo	Coloured
	San	Basubia
	Tswana	Mafwe
	Other	San
		Baster
Niger 1992; 1998; 2006	Arab	Hausa
	Djerma/Songhai	Djerma (Zarma, Jerma)-Songhai
	Gourmantche	Tuareg
	Haoussa	Kanuri
	Kanouri	Gourmantche
	Peul	Toubou
	Touareg	
	Toubou	
	Other	
Rwanda 1992	Hutu	Hutu-Twa
	Tutsi	Tutsi
	Twa	
	Other	
Senegal 1992; 2005; 2010/11; 2012/14; 2015/16	Wolof	Wolof
	Poular	Peul (Fulani/Tukulor)
	Serer	Serer
	Mandingue	Mandinka
	Diola	Diola

	Soninke Not A Senegalese Other	Soninke
Sierra Leone 2008; 2013	Temne Mende Kriole Mandingo Loko Sherbro Limba Kono Other Sierra Leone Other Non Sierra Leone	Creole Kissi Kono Koranko Limba Loko Mende Sherbo Susu Temne
Togo 1998; 2012/13	Adja-Ewe/Mina Kabye/Tem Akposso/Akebou Ana-Ife Para-Gourma/Akan Other Togolese Stranger	Ouatchi/Mina Ewe(Ethoue, Eibe, Ephe, Krepe) Kabre(Cabrai, Bekaburum, Kabure, Kaure) Gurma Moba(Bmoba, Moab, Moare, Mwan) Kotocoli (Cotocoli, Tem,Chaucho, Chaucho,Temba,Timn) Losso Adja Akposso Bassari Konkomba
Uganda 1995	Acholi Alur Baamba Badama Bafumbira Baganda Bagisu Bagwere Bahororo Bakiga Bakonjo Banyankole Banyarwanda Banyole Banyoro Barulli Barundi Basoga Batoro Iteso Kakwa Karimojong Kumam Langi	Acholi Alur Ankole Baganda Banyarwanda Banyoro Basoga Gisu Kakwa Karamojong Kiga Lango Lugbara Madi Padhola Rwenzururu Sebei Teso Toro

	Lugbara	
	Madi	
	Nubiam	
	Samia	
	Sebei	
	Other	
Zambia 1996; 2001/02; 2007; 2013/14	Barotse	Barotse
	Bemba	Bemba Speaker (Mambwe)
	Lunda-Kaonde	Lunda-Kaonde
	Nyanja	Nyanja Speaker (Tumbuka)
	Tonga-Ila-Lenje	Tonga-Ila-Lenje