Pre-Analysis Plan:
The Politics of Identity:
A Lab-in-the-Field Experiment in South Africa

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1 Introduction

1.1 Abstract

This experiment unpacks the psychological payoff associated with voting for a candidate who shares one's social identity (Akerlof and Kranton, 2000; Tajfel and Turner, 1979) by relating this expressive benefit to other parameters in the voter's utility function, such as expectations about public and private goods. Specifically, the experiment assesses how voters from different ethnic identities in South Africa, particularly Zulu and Xhosa voters, are willing to make trade-offs between these different payoffs when presented with the opportunity to cast a ballot for either a candidate who shares their identity or one who aligns with policy preferences. While other studies have sought to tease apart the expressive from the economic benefit of identity voting (Carlson, Forthcoming), this experiment focuses on precisely measuring a voter's willingness to make *trade-offs* between these different payoffs when choosing between two candidates, thereby measuring the voter's prioritization of expressive voting when other policy considerations are at stake. The experiment makes an additional contribution by measuring the emotional response of voting along or counter to identity lines both physiologically and according to survey self-reporting of emotions. This is a lab-in-the-field experiment that will take place in Vosloros Library in Soweto using 36 iPads. There will be a pre-survey just before the experiment which will establish policy preferences and covariate information, then subjects will be assigned roles as either candidates or voters and then voting will take place.

1.2 Motivation

This experiment unpacks the parameter at the end of a voter's utility function that captures the "expressive benefit" from voting for the candidate from one's social identity group. In so doing, the experiment will relate this expressive benefit parameter to other parameters in the voter's utility function, such as expectations about public and private (e.g. favoritism in distributing funds or hiring for bureaucratic positions) goods provision.

Social identity (Tajfel and Turner, 1979), including class, religion and ethnicity, has long-been emphasized in the seminal literature on voting (Berelson, Lazarsfeld and McPhee, 1954; Lijphart, 1977). The literature on identity and voting has evolved to try to explain *why* identity is so strongly correlated with vote choice, and in so doing the extant literature can be roughly divided into two camps. The first camp argues that identity serves a purely *instrumental* role in voting, such that the correlation between identity and vote

choice merely illustrates the overlap of identity with policy interests (Bates, 1974; Posner, 2001; Rabushka and Shepsle, 1972). The claims regarding how voters use identity-based information cues are diverse. For example, Ferree (2011) argues that black and white constituents in post-apartheid South Africa use the dominant parties' historical racial allegiances as a voting cue, which results in a simple 'census' vote where members of each race vote for the same party. Others argue for a more strategic use of the information identity provides, such as Chandra (2004)'s argument regarding 'head-counting' in India. It has recently been shown that across Sub-Saharan Africa, policy preferences do in fact vary according to ethnic group, even when controlling for individual-level socio-economic and group-level cultural differences (Lieberman and McClendon, 2013), and that identity plays a role in determining service delivery (McClendon, Forthcoming; Miguel and Gugerty, 2005). However, despite this evidence that there is not only a correlation between ethnic identity and vote choice, but also a relationship between ethnicity and policy preference and service delivery, it is still not clear whether voters merely use identity *instrumentally* as information about policy, or whether identity voting is also in large part an *expressive* exercise.

Thus, this second camp of scholars, those that argue for an *emotional* motivation for identity voting, is rooted in the social-psychological theory tying social identity to self-esteem and individual self-worth (Tajfel, 1982; Tajfel and Turner, 1979). This scholarship argues that voters have psychological attachments to group identities that, at least partially, explain the correlation between vote choice and identity (Akerlof and Kranton, 2000; Bianco, 1994; Gilliam, 1996; Horowitz, 1985). Arguments in this vein focus on a link between descriptive representation and government legitimacy and/or trust in government (Mansbridge, 1999; McClendon, 2013; Williams, 1998), which are largely based on the social-psychological claim that contact with ingroup members breaks down prejudices (Paluck and Green, 2009; Pettigrew and Tropp, 2006). But, while some scholars have found that, in fact, voters still pay attention to identity even when candidates resemble one another on other dimensions (Bassi, Morton and Williams, 2011; Dunning, 2010; Landa and Duell, 2015), there is evidence that perhaps certain identities in specific contexts (i.e. ethnicity in Uganda) are not important in and of themselves to voters (Carlson, Forthcoming). Furthermore, it is still unclear *how* this expressive benefit from voting along identity lines interacts with the other payoffs in the voter's utility function.

Thus, my research seeks to shed light on these complexities surrounding social identity politics and unpack the black-box that is the emotional benefit to voters from identity voting.

1.3 Research Questions

- How willing are voters to trade off voting for a candidate who backs their preferred public good policy in order to cast a ballot for a shared-identity candidate?

- How much does this willingness to trade off vary according to different issues that the representative is going to make decisions about? For example, perhaps constituents vote for the candidate who shares their view on a public good distribution, regardless of identity, when this is the only policy being considered, but they are willing to vote for the shared-identity candidate who backs views *opposite* to theirs with respect to the public good policy when there is also a private good on the line.

- In what ways does the proportion of shared-identity members in a voter's constituency affect voting along identity lines (i.e. do people tend to vote more or less for shared-identity candidates—and are they willing to make more policy trade-offs—when their identity is in the minority or the majority within the group?

- To what extent is the variation in voting decisions outlined above contingent on whether candidates use campaign messages that directly reference/prime identity?

- How is emotional arousal heightened among voters who were faced with certain trade-offs, and are positive emotional outcomes associated with voting for an identity-match? Are there certain covariates that make individuals predisposed to heightened emotional responses when it comes to having to decide whether to vote along identity or policy lines (e.g. are individuals who are less exposed to daily inter-ethnic interactions more likely to have a heightened emotional response when faced with identity-match vs. policy-match decisions?)?

While the research questions above are broadly applicable to any diverse democracy, they are increasingly important with regards to ethnicity in South Africa. While race is still a salient dimension of South African politics, nested within this racial dimension are ethnic or linguistic cleavages, which have been gaining political relevance. Thus, given that South Africa struggles with corruption, particularly at the local level, it is imperative that we 1) understand why and how voters prioritize shared ethnic identity when casting their ballots and 2) how party elites and politicians may be able to use ethnicity in their campaigns in order to garner support. This research makes a contribution to not only the study of Political Psychology by deepening our comprehension of the role of identity in voting, but also to the study of South African politics by pushing our understanding of identity politics beyond racial boundaries, exploring why and how ethnicity is important to voters in Johannesburg and perhaps providing cautionary evidence regarding the ability of South African political elites to manipulate the salience of ethnicity in order to win elections.

2 Research Strategy

2.1 Sampling

2.1.1 Sampling Frame

The eligible population for the study are all voting age Zulu and Xhosa individuals who speak at least a basic level of English[1] living in Soweto. The expected sample size is 1,056 individuals. Given that Zulu is the majority identity in Soweto, the first sampling challenge is making sure that Xhosa's are over-exposed to the calls-for-participation (i.e. the flyers advertising the experiment) to ensure as close to a 50/50 Zulu/Xhosa sample as possible. In this way, the sample will differ from the population demographics. The sampling frame of neighborhoods in which the flyer solicitating participation in the experiment will be distributed will over-represent Xhosa-neighborhoods (using South Africa Census 2011 data). The flyer solicitating participation will explicitly state that only Zulus and Xhosas will be eligible to participate. The flyer will also state that participants must speak English and either Zulu or Xhosa (whichever is their ethno-linguistic tongue). (While it would be optimal to run the experiment including other minority ethnic-linguistic groups, such as Sotho, Venda, Tswana, limited resources dictate that the experiment be run with only the first two major ethnic groups, Zulu and Xhosa, at least for now.)

A second sampling challenge is the fact that, since participation in the experiment will be well incentivized, there will be incentive for non-Zulu/non-Xhosa individuals to show up to participate anyway (and

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[1]I recognize that excluding those who do not speak any English limits the generality of the population I can make inferences about; however, given that the experiment focuses on measuring emotional vs. public/private good incentives to vote for a shared-identity candidate, not shared language as a technological tool (Habyarimana et al., 2007)/reason to vote for a shared-identity candidate, and given that the majority of people living in Soweto do, in fact, at least speak some English, this is a deliberate sampling decision.

just claim to be either Zulu or Xhosa). While this would likely just introduce noise into estimation, it is already a strain on resources to get an adequately powered experiment, so I'd like to reduce this problem as much as possible. Thus, the flier advertising participation in the experiment, while written in English, will make it very clear that participants will be given certain instructions throughout the experiment in their ethno-linguistic tongue, thus trying to make it clear that individuals who do not speak and read either Zulu or Xhosa should not attempt to participate. [It doesn't seem feasible to "kick people out" on the day of the experiment. And while I can always choose to exclude those who clearly did not speak Zulu or Xhosa when analyzing my data, I'd like to reduce this as much as possible. So, any further suggestions on how to deal with this *during sampling/advertising the experiment* would be greatly appreciated!]

2.1.2 Statistical Power

Table 1: Voter Types

A	Co-ethnic, Policy Match	Non-Co-ethnic, Policy Match
	Δ_1	
B	Co-ethnic, Policy Mismatch	Non-Co-ethnic, Policy Match
C	Co-ethnic, Policy Mismatch	Non-Co-ethnic, Policy Mismatch
	Δ_2	
D	Co-ethnic, Policy Match	Non-Co-ethnic, Policy Mismatch

Table 2: Unused Voter Types

E	Co-ethnic, Policy Match	Co-ethnic, Policy Mismatch
	Δ_3	
F	Nonco-ethnic, Policy Match	Non-Co-ethnic, Policy Mismatch
G	Co-ethnic, Policy Match	Non-Co-ethnic, Policy Match
	Δ_4	
H	Co-ethnic, Policy Mismatch	Non-Co-ethnic, Policy Mismatch

The subjects randomly chosed as "voters" from my subject pool for each round of the experiment are assigned to one of the four *Voter Types* (as defined by the pair of candidates each voter is choosing from in the "election" they are voting in during that round of the experiment) in Table 1. This means that, in order to be more efficient in my use of observations, I am *not* including in my treatment assignments the candidate-pairs in Table 2, which represent a "pure" policy effect (Δ_3) and a "pure" ethnicity effect (Δ_4). [I present the unused voter types in Table 2 here so that you might feel free to offer comments about whether you think it's OK to leave them out of my experiment (in the interest of resources, since even when I exclude them I estimate needing 1,056 participants) or whether you think there are strong theoretical arguments for including some or all of them.]

According to Table 1, for the baseline effect estimating the magnitude of "pull" away from voting for a co-ethnic candidate when the co-ethnic candidate goes from being a policy match to being a policy *mis*match, my power is determined by the number of subjects in A and B. I will use a two sample t-test to find this effect and am assuming an alpha value of 0.05 and a standard deviation of 0.5 in both samples for the power analysis. Since "Vote Co-ethnic" is a binary variable (1 Co-ethnic, 0 Not), I estimate a mean of 0.8 in group A (I expect there to be some voters for whom identity is not important, and these voters will decide with a coin flip since both candidates are Policy Matches; this will introduce noise and bring the mean down from 1). I estimate the mean for group B to be 0.5. Thus, I estimate an effect size of -0.15 and, in order to have a power value of 0.8, I need at least **44 subjects in each A and B**. I then also need 44 subjects in the other cells of my design, C and D (which represent other relevant counterfactuals), as well as my other treatment conditions (discussed below). This effect size is robust to slight changes in the predicted parameters (e.g. assuming a mean of 0.9 in A or 0.6 in B).

The baseline effects above will be calculated using subjects in voting groups with 50/50 identity proportions. The identity proportion treatment (i.e. minority or majority within the group) is another binary treatment (1=Minority, 2=Majority, 0=50/50). There are two hypotheses that point in opposite directions in terms of predicting the effect of this treatment on the binary outcome *Vote Co-ethnic*. It is possible that the mean of A will increase slightly from 0.8 to 0.9 when this minority treatment equals 1 based on the hypothesis that being in the minority causes an individual to have an even stronger identity reaction, and thus some of those who did not care about identity before and were simply flipping a coin might now vote co-ethnic. It is also possible, however, to predict that the mean of A will decrease slightly from 0.8 to 0.7 based on the hypothesis that those individuals who did not care about identity continue to not care about identity and are now more strategic in their voting and thus vote for the non-co-ethnic with a probability greater than 0.5 (flipping a coin). Then, in group B, under hypothesis 1, those who did not care about ethnicity before might now switch to voting for the Co-ethnic/Policy Mismatch if being in the minority makes ethnicity more salient, thus resulting in a shift in mean from 0.5 to 0.6. Conversely, under hypothesis 2, those who voted for Co-ethnic/PolicyMismatch before might now be disuaded by the fact that they do not expect that candidate to win (if they assume that others also vote according to identity) and thus might switch to voting for the Non-Co-ethnic/PolicyMatch, resulting in a shift in mean from 0.5 to 0.4 . Thus, although these hypotheses point in opposite directions in terms of the effect on the means, the predicted effects under both hypotheses is -0.15 (but the difference will be discernible by comparing the means of these treatment groups since those are different under the two hypotheses). This treatment allows for insights into how identity status in the population (i.e. minority vs. majority) affects behavior. It also allows us to consider whether an expressive benefit is dependent on the expected *outcome* of the election since the mean shifting from baseline to the expected direction in group B under hypothesis 2 would indicate that voters are disuaded from making a trade-off in voting for the Co-ethnic/PolicyMismatch candidate when they believe that candidate is not likely to win (this will be further explored in the survey instruments implemented after voting takes place).

The private benefit treatment adds to the list of voting criteria a consideration about how the selected candidate will decide to distribute a pot of money among the constituents once elected. This private good consideration will be in addition to (i.e. a treatment layered on top of) the existing public good and ethnicity dimensions that voters are presented with in the baseline. Thus, this private benefit treatment variable is once again dichotomous (1=voter *i* was in the private benefit treatment condition, 0=voter *i* was not in the private benefit treatment condition–which means voter *i* could have been in the baseline or one of the other two treatment conditions, since I will pool across treatment conditions as long as they are not correlated).

The private benefit treatment effect will thus once again be estimated by comparing the mean of the dichtomous outcome variable ("Vote Co-ethnic") among the different voter types in Table 1, comparing those for whom *Private Good*=1 to those for whom *Private Good*=0. I predict that the mean of the "Vote Co-ethnic" binary variable in group A will increase from the baseline 0.8 to 0.9 with this treatment condition, given that those who do not care about ethnicity before might now find it strategic to do so. I predict that the mean in voter group B will also increase, going from the baseline 0.5 to 0.6. Thus, I estimate an effect size for the *Private Good* treatment of -0.1.

The priming identity treatment is built in as separate treatment condition speeches to be added to the baseline pre-written speeches read by the participants assigned to the role of 'candidate.' In addition to the body of these speeches that was read in the baseline condition (which discussed the candidates' public good policy preference), these speeches will have additional sentences that speak explicitly about the candidates ethno-linguistic identity (i.e. something like "I am proud to be [Zulu/Xhosa]" [but I am open to discussing variations of this treatment]). Thus, these identity-priming sentences will be in addition to the fact that even the speeches in the baseline condition include an introduction and closing to be read in the candidate's ethnic language (i.e. Zulu or Xhosa) (Dunning, 2010) in order to make it clear which ethnic group the candidate is from in the baseline[2]. The idea is to have these identity-priming sentences mimic phrases found in campaign speeches of actual local candidates. I predict that the effect of this treatment will be to increase the mean of "Vote Co-ethnic" from 0.8 to 0.9 among the A group and from 0.5 to 0.6 in group B, for an effect size of -0.1.

The experiment will be run at one site (the Vosloros Library) but over the course of 8 consecutive weekends. I will have 66 subjects per day (with 2 sessions per day, 1 with 36 subjects, another with 30 subjects). This means I will have about 132 subjects play the game per weekend, so will require 8 weekends to obtain a 1,056 subject sample. In order to account for uncontrollable variation between hours/days/weeks, I will impose a session fixed effect in my analysis.

2.1.3   Assignment to Treatment

As indicated in Table 1, there are 4 voter types to which subjects must be allocated, A-D. In order to achieve these groups, the following 4 combinations of candidate-types and voter-types (as defined by ethnicity and policy preference, X or Y) must be randomized over.

Group 1: B's and D's
Candidates: Zulu, X; Xhosa, Y
Voters: zulu x (D); xhosa y (D); zulu y (B); xhosa x (B)

Group 2: A's and C's
Candidates: Zulu, X; Xhosa, X
Voters: zulu x (A); xhosa y (C); zulu y (C); xhosa x (A)

Group 3: A's and C's
Candidates: Zulu, Y; Xhosa, Y
Voters: zulu x (C); xhosa y (A); zulu y (A); xhosa x (C)

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[2]English will naturally also be spoken with an accent by each participant, another indicator of the candidate's ethnicity

Group 4: B's and D's
Candidates: Zulu, Y; Xhosa, X
Voters: zulu x (B); xhosa y (B); zulu y (D); xhosa x (D)

Recall from the power analysis above that I need 44 subjects per voter type from among the treatment type (A) and the primary control type (B) to detect an effect of -0.15 in the baseline (i.e. to detect just the ethnicity vs. public good policy trade-off effect). In order to explore further variation in voting, I also need subjects of types C and D, and while I would like to down-weight C and D voter types to reduce my sample size, these voter types are by construction complementary to A and B, and so I also need 44 C and 44 D.

Thus, I need 176 voters, or 44 voting groups of 4 voters each, which means I also need 88 candidates (2 candidates per voting group), for a total of **264 subjects to establish my baseline effect**. I then need this same number for each of my treatment effects, for a **total subject pool of 1,056**.

On each day of the experiment, there will be 2 sessions. Session 1s will have 5 voting groups of 4, each with 2 candidates, for a total of **30 subjects in Session 1s**. Session 2s will have 6 voting groups of 4, each with 2 candidates, for a total of **36 subjects in Session 2s**. Thus, **on each day of the experiment there will be a total of 66 subjects**. Which means **the experiment will be run for a total of 16 days, or 8 weekends**.

2.1.4 Attrition from the Sample

The pre-survey is given on the day of the experiment (rather than trying to implement the pre-survey prior to the experiment) in order to make sure attrition is not an issue. Thus, given that this is a lab experiment and the pre-survey takes place just before the subjects begin the experiment, there is no attrition once data collection begins. The only type of attrition, then, is subjects not showing up who have been invited from the sampling frame, which is designed to oversample Xhosa voters. Thus, given that I do not have data on potential subjects before they arrive, I will not be able to say anything about the "no shows."

2.2 FieldWork

2.2.1 Instruments

1. Pre-Survey Instruments

   (a) Covariates

      i. *Ethnicity*, Zulu or Xhosa (Flyers inviting participation will have explicitly stated that participants much be either Zulu or Xhosa, but this instrument will leave the answer open ended so if a respondent indicates that they are something other than Zulu or Xhosa they will be asked not to participate further in the experiment. Asking this question in an open-ended manner is an attempt to ensure that participants who want to be part of the experiment do not lie about their ethnicity and say they are Zulu or Xhosa even when they aren't. But, this is a design obstacle that should be further considered).

      ii. *Age*, Number indicating respondent's age

      iii. *Gender*, binary variable indicating subject's gender

iv. *Education Level*, categorical variable indicating maximum level of education achieved

v. *Daily interactions with Zulus and Xhosas*, categorical variable asking participants to place themselves on a scale in terms of frequency of inter-ethnic interactions (1-5)

vi. *Reported Salience of Ethnic Identity*, categorical variable asking participants to place themselves on a scale in terms of importantance of their ethnic identity to them

vii. *Objective Salience of Ethnic Identity*, binary variable coded 1 if participant was able to correctly answer a question calling on knowledge specific to the cultural traditions of her ethnic group (there will be a Zulu and Xhosa specific question, but all participants will see both questions, such that if you are able to answer the outgroup's culturally specific question this will be used to show that you are culturally immersed with respect to the outgroup).

(b) Policy Preferences

i. *Policy Preference*, reports of binary preference (X or Y) on 10 policies chosen for their expected orthogonality with ethnicity and their salience within the community of Soweto (have not figured out these policies yet, but will research some relevant public goods that could be donated to so that this is a real policy and the $500 from my research fund could actually be donated to each of these).

2. Outcome Instruments

(a) Behavioral Outcome Variable

i. *Vote Co-ethnic*, 1=Voter i cast her ballot for the co-ethnic candidate in her candidate pair; Voter i cast her ballot for the non-co-ethnic candidate in her candidate pair.

(b) Survey/Physiological Outcome Variables

i. *Emotional Response to Voting*, I still need to develop the questions eliciting how the participant's responded emotionally to the act of voting

ii. *Most Important Factor in Voting*, categorical variable in which participants are asked to rank the considerations they made when deciding which candidate to cast their ballot for (e.g. Ethnicity of candidate, 2. Public Good Policy preference of candidate).

(c) Cortisol Vairable

i. *Cortisol Level Immediately After Voting*, Participants will be asked to chew on a piece of cotton and place it in the container provided at their iPad station. These swabs will be sent to a a lab for testing of cortisol levels. Any significant increase in cortisol levels among those participants who were faced with a trade-off between voting for the candidate who aligned with their policy preference vs. the candidate who shared their identity (i.e. voters of type B) over the cortisol levels of voters not faced with such a trade-off (i.e. voters of type A, C or D), will be used in conjunction with the *Emotional Response to Voting* survey instruments to assess a heightened emotional response associated with this type of trade-off in identity voting.

To my knowledge, this type of experiment and the specific use of these instruments in this context have not previously been used. Thus, I will be running this experiment with minimal-group identities (Tajfel and Turner, 1979) in June/July 2015 in the NYU CESS lab, as well as with racial identities in the U.S. in a lab in Trenton, NJ in September 2015 in preparation of this Johannesburg edition. I will also pilot the baseline experiment (just ethnicity vs. public good policy preference match trade-off) in the Vosloros Library before

the execution of the actual experiment.

As I develop the particular questions to be used in the *Emotional Response to Voting* instruments, I will consult literature/experiments from Social Psychology that have used these types of instruments.

2.2.2 Data Collection

The lab experiment will be conducted in the Vosloros Library in Soweto (where I have previously conducted focus groups) by my research team, which will be assembled with the help of the research assistant I used in my August 2014 preliminary research, Sibusiso Ndimande (a native of Soweto) and undergraduate research assistants from Wits. The experiment will study the two most predominant ethnic groups in South Africa, Zulu and Xhosa. The experiment, and thus the entire data collection process, will take approximately 3 months (1 week to set up the lab, 1 week pilot, 1 week to work out any kinks, 8 weeks to run the experiment, 2 weeks buffer).

Before the experiment begins, subjects will complete a pre-survey collecting covariates (e.g. age, gender, ethnicity, daily inter-ethnic interactions) and their policy preference, X or Y, on a number of public good policy questions chosen because they are 1) salient issues for the subject pool but 2) not expected to be correlated with ethnicity. Based on pre-survey results, the experiment will use a policy that is in fact orthogonal to ethnicity. The pre-survey will take place on the day of the experiment, rather than door-to-door in the weeks prior to the experiment for a number of reasons. First, it would be a strain on resources to run the pre-survey before the experiment, and there would likely be attrition (i.e. some people who were pre-surveyed would not show up for the experiment). Second, the fact that reported policy preferences might change between the pre-survey and the day of the experiment (and, in particular, this might happen at different rates for different individuals as a function of when they were pre-surveyed since the survey would have to take place over the span of weeks if done before the experiment) would introduce unnecessary noise into estimation. Third, it is useful to ask the questions about policy preferences in the pre-survey just prior to the experiment because this ensures that the policy preference is salient in the minds of subjects, thus increasing the chance that the policy preference is a factor in their decision making, which is vital to the experimental manipulations.

Thus, because the pre-survey takes place at the beginning of *each* experimental session, the policy preference that is orthogonal to ethnicity might change from session to session, and thus different sessions might use different public goods policies. However, this should not be a problem given that, as previously stated, post-data collection estimation will impose a session fixed effect (this also is necessary to account for variation that might occur in the weeks spanning the experimental sessions).

Participants will each sit at a station with an iPad (they will have filled out the pre-survey at these stations as well). After the pre-survey, some are randomly assigned into groups of 6 breaking down into 3 identity proportions: 2 Zulu/2 Xhosa; 3 Zulu/1 Xhosa and 1 Xhosa/3 Zulu. Subjects are also assigned based on X or Y policy preference from the pre-survey in a way that ensures there are equal proportions of voter types A-D in Table 1 with respect to ethnicity and policy preference. A picture of fellow group members appears on each subject's screen [This on its own will not reveal the identities of each of the other voters, so I am still thinking of the best way to accomplish this. I am also thinking of varying whether voters see this identity-revealing information in order to be able to test whether there is a group-specific fixed effect in behavior to do with a group norm driving my results (Habyarimana et al., 2007). If this were the case, it would be sort of damning for my analysis, so any input on this would be greatly appreciated!]. These are

the groups of *voters*. They will each vote for one of two candidates after watching a brief speech from both candidates on their screen.

A second randomly selected group of subjects will be *candidates*. Two candidates are assigned to each group of 4 voters: every group gets a Zulu candidate and a Xhosa candidate. The candidates are also assigned to groups with respect to their policy preferences in a way that, in conjunction with the random assignment of voters to groups, ensures equal proportions of voter types A-D in Table 1. The candidates see pictures and names of their voters, and are given a speech to read in English, with an introduction/closing in their ethnic language, that supports either policy X or Y, based on what they indicated was their preference in the pre-survey. Candidates are informed that a group of 4 voters will see their speech and their opponent's speech, and then the group will elect one of them.

The voters will then see the speeches of each candidate and cast a ballot for their preferred candidate. Prior to voting, it will be explained to both the voters and the candidates that money from the experiment will be allocated to the public good policy chosen by the policy preference of one of the candidates from the entire experiment at random (i.e. a lottery). Thus, while this dilutes the immediate relevancy of the candidate selected (since voters know that there is then a probability distribution over which their candidate's policy preference actually gets used), it increases the saliency of the policy by allowing me to allocate a more significant amount of money to this policy, which is a strategy that has proven effective in other field work (Olken, 2010).

If it is IRB amenable, I'd also like to potentially vary how much information is revealed about how many total participants there are in the experiment, thereby varying the degree to which the odds of the lottery are transparent to different treatment groups of subjects. This would, theoretically, provide some variation in the *salience* of the public good policy in the minds of these different groups of voters, which would allow me to speak to possible policy recommendations for increasing accountability by showing that, in order to pull people who tend to vote along ethnic lines (and disregard public good policy preference match with candidate) toward voting along policy lines, one must make the policies more salient in the minds of voters. [Further ideas/recommendations along these lines would be appreciated!]

Thus, after the elections of candidates, we can compare the relative size of an expressive vs. a policy payoff by comparing relevant differences from among these various types of voters shown in Table 1. We can also evaluate whether minority/majority status of the voter's identity within the voting population affects this trade-off between expressive and policy benefit by comparing these outcomes among the different identity proportion treatments. Furthermore, there are three additional treatments that allow us to discern how different contextual factors affect these trade-off decisions.

First, in a separate set of treatment groups, candidates will read speeches identical to the policy speeches, but that also emphasize ethnicity (the content of these speeches is yet to be written but will be added in the Appendix). This allows us to test how the trade-off between co-ethnic match/policy preference-match above is affected by elite manipulation.

Second, some voters are told that their candidate is given money to distribute among the members at her discretion (and then the elected candidate distributes these funds). This allows us to see whether voters are more willing to trade off public-good-policy-match for identity-match when a private good is at stake

(i.e. when there is immediate/individual-level opportunity for the elected representative to show ethnic favoritism).

Voters are surveyed, and cortisol levels are measured, after voting, which allows me to test an emotional mechanism driving voting decisions (i.e. is arousal heightened among voters who were faced with certain trade-offs, and are positive emotional outcomes associated with voting for an identity-match?). Free form responses to certain questions in this post-voting survey also allow me to perform a manipulation check (i.e. do the majority of respondents identify that they were making a choice between voting for their fellow Zulu/Xhosa or voting for the candidate who had the same preference on which public good policy should be donated to).

Data will be collected within the confines of the lab setup in the Vosloros Library. The data will be collected on the iPads in the lab and will be confidential and anonymous insofar as subject names will not be attached to the data collected from each of the iPads and only the primary investigator and her 6 research assistants will ever have contact with the subjects in the context of the lab or see this data as it is being collected.

2.2.3 Data Processing

Data processing entails compiling, organizing and cleaning the data retrieved from the iPads after each session of the experiment. As discussed above, the experiment will take an estimated total of 2.5 months to execute. This time period is estimated keeping in mind that experimental sessions will occur only on the weekend (Saturday and Sundays). Thus, while some of the compilation and organization of raw incoming data will have to happen between sessions, most of this data checking and organization will take place during the weekdays between these experimental sessions that are to take place on the weekends. This will ensure that the organization of data is kept meticulously from week to week. The compiled data will only ever be seen by me, the primary investigator. Research assistants in the lab will never have any reason to see the data in its raw form. I will have ownership of the data and will store the data on my own personal harddrive and backup account. The data will be used and analyzed by me for the purposes of writing my dissertation and papers once I return to New York (approximately March 2016), and then once these papers have been published, the data will be made publicly available online.

3 Empirical Analysis

3.1 Variables

1. Pre-Survey Variables

    (a) Covariates

        i. *Ethnicity*, eventually coded as 1=Zulu, 2=Xhosa
        ii. *Age*, integer
        iii. *Gender*, binary
        iv. *Education Level*, categorical
        v. *Daily interactions with Zulus and Xhosas*, categorical (scale 1-5)

   vi. *Reported Salience of Ethnic Identity*, categorical

   vii. *Objective Salience of Ethnic Identity*, binary

  (b) Policy Preferences

   i. *Policy Preference 1-10*

2. Outcome Variables

  (a) Behavioral Outcome Variable

   i. *Vote Co-ethnic*, dichotomous

  (b) Survey/Physiological Outcome Variables

   i. *Emotional Response to Voting (physiological)*, continuous (cortisol level)

   ii. *Emotional Response to Voting (self-report)*, categorical (scale 1-10)

   iii. *Most Important Factor in Voting*, categorical (scale 1-5)

3. Treatment Variables

  (a) Identity Proportion within Voting Group, dichotomous (1=minority, 2=majority)

  (b) Private Good, dichotomous (1=yes, 2=no)

  (c) Identity Prime, dichotomous (1=yes, 0=no)

3.1.1   Balancing Checks

Two sample t-tests will be used to check balance across treatment (i.e. B voters) and control (e.g. A voters) groups, assessing whether there was by random chance any significant difference across observables (e.g. age, gender, education). However, given that the experiment will employ a randomization process to different voting groups, these covariates should not be correlated with treatment assignment.

3.1.2   Treatment Effect Estimation

$$\text{Vote RaceMatch}_i = \beta_0 + \beta_1 \text{RaceMatch, PolicyMismatch}_j + \beta_2 \text{RaceMismatch, PolicyMismatch} +$$
$$\beta_3 \text{RaceMatch, PolicyMismatch} X \text{RaceMismatch, PolicyMismatch} + \epsilon_i, \tag{1}$$

 Above is the specification I will run to estimate treatment effects in the baseline group. The dependent variable, *Vote Co-ethnic* is a binary indicator of whether subject i voted for her co-ethnic in the election. β_0 represents the condition in which candidate j is both voter i's co-ethnic and her policy match. β_1 is the treatment effect of interest, and thus represents the shift away from this co-ethnic voting behavior when the candidate j is a policy *mis*match in terms of voter i's policy preference. β_2 is the counterfactual to this voter pair, that is when candidate j is non-co-ethnic *and* a policy mismatch, and β_3 is the interaction capturing the shift from either voting for the co-ethnic policy mismatched candidate or the non-co-ethnic policy mismatched candidate. A similar equation will be used to estimate other treatment effects, but the comparison groups will be the subjects who received that particular treatment (e.g. those subjects who were in the minority in their voting groups) as compared to the subjects in the baseline and other treatment conditions (I will pool across other treatment conditions as long as there is no correlation among treatments). I will not use controls in the specification unless there were significant differences between treatment and control groups on observables by random chance, in which case I will show the results with and without controlling for those imbalanced covariates.

3.2 Heterogenous Effects

I plan to investigate heterogenous effects by daily inter-ethnic interactions; identity attachment, using the self-reported measures as well as the objective factual measures; and emotional response, as measured both by self-reported measures of heightened emotion and cortisol levels (assuming these two measures point in the same direction). In addition, I will look at whether emotional response varies according to certain covariates, such as daily inter-ethnic interactions, identity attachment and education level.

3.3 Standard Error Adjustment

I think standard errors should be clustered at the very least by weekend, but probably by day or even session.

4 Research Team

1. Principal Investigator: Emily A. West

2. Primary Research Assistant: Sibusisu Ndimande

3. Additional Research Assistants: 5 Undergraduates from Wits

See **Calendar** section below for a detailed explication of the roles of each of these team members.

5 Deliverables

1. West, Emily A. **Dissertation:** *The Politics of Identity: Race and Ethnicity in the U.S. and South Africa*

2. West, Emily A. **Paper:** *Is Ethnic Voting Expressive or Strategic? Evidence from a Lab Experiment in South Africa*

3. West, Emily A. **Paper:** *The Emotions of Voting: Evidence from a Lab Experiment in South Africa*

4. West, Emily A. **Paper:** *How Do Politicians Use Ethnicity to Garner Votes? Systematic Qualitative Evidence from Municipal Elections in Johannesburg*

6 Calendar

In August 2014 I spent a month in Johannesburg conducting preliminary research. I will hire the same research assistant that helped me with this research, Sibusisu Ndimande. S'bu will help set up the lab (set up Wifi for all of the iPads at different stations, etc.) in the same location I used in August, the Vosloros Library. I will need 5 additional research assistants on each of the days that I actually run the lab experiment (which will be 8 weekends, 16 days total). Professor Daryl Glaser at University of Witswatersrand, whom I met with about my research in August, has agreed to help me find undergraduate assistants to hire. Vosloros Library has already agreed to make the library available for a modest fee each day.

In addition to the 8 weekends it will take to actually run the main experiment, I will need to run a small pilot beforehand and I will need ample time to set up the lab and distribute flyers advertising participation

before the first weekend (this distribution/advertising will take place during the weeks between each weekend's session after that). Thus, I estimate that the whole experiment will take between 3-4 months to execute.

7   Budget

Travel Expenses
1 Roundtrip Ticket to OR Tambo Airport, $2,000
Rent for 4 months in Johannesburg, $4,000
Rental Car (seating for 5 passengers to transport research assistants from Wits) to get to Soweto during experiment, $4,000
 Total: $10,000

Data Collection Costs
36 iPads (purchased used from eBay), $5,400
Fee for Vosloros Libary for days of experimental sessions, $1,000
Wifi router and service in Vosloros Libary for 3 months, $500
Compensation for participants in experiment ($2.50/participant on Airtime cards, 1,056 participants, plus 66 for pilot), $2,805
Money to be allocated in lottery as private good for 44 voting groups, at $10 per group, $440
Money to be allocated in lottery as public good, $500
Cortisol Sample Kits, $1,778
Cortisol Lab Results 14.25/sample, $9,975
 Total: $22,398

Honoraria for Commissioned Research
Primary Research Assistant (Sibusisu Ndimande) 10 weeks, $2,450
Undergraduate Research Assistants to run experiment (5 from Wits) 8 weekends, $2,800
 Total: $5,250

$36,648

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