Journal of Conflict Resolution
http://jcr.sagepub.com/

Is Ethnicity Identifiable? Lessons from an Experiment in South Africa

Adam S. Harris and Michael G. Findley

Journal of Conflict Resolution published online 10 October 2012
DOI: 10.1177/0022002712459710

The online version of this article can be found at:
http://jcr.sagepub.com/content/early/2012/10/09/0022002712459710

Published by:
SAGE
http://www.sagepublications.com

On behalf of:
Peace Science Society (International)

Journal of Conflict Resolution
00(0) 1-30

DOI: 10.1177/0022002712459710
http://jcr.sagepub.com

Is Ethnicity Identifiable? Lessons from an Experiment in South Africa

Adam S. Harris[1] and Michael G. Findley[2]

Abstract

Ethnicity is frequently posited as an important factor in civil violence and other political contexts. Despite the attention that ethnicity receives, its effects depend on an important, but mostly ignored, assumption that ethnicity is identifiable within and across groups. There is likely considerable variation in peoples' abilities to identify each other. Certain individuals within groups might be better at identifying others' ethnicities; further, different types of information might aid identification better. We contend that the strength of an individual's ethnic identity influences her ability to identify others correctly. We test this argument using an experiment in the Eastern Cape of South Africa in which individuals attempted to identify members of the major black ethnic groups. We find that the average individual struggles to identify ethnicity correctly in many conditions. Individuals with a stronger identity, however, are often better at correctly identifying the ethnicity of others relative to the average individual. When receiving contradictory information, individuals with stronger identities were sometimes deceived more easily than others. These results have implications for a diverse set of studies relying on the identifiability assumption.

Keywords

ethnicity, identifiability, social identity, conflict, South Africa

[1]Wilf Family Department of Politics, New York University, NY, USA
[2]Department of Government, The University of Texas at Austin, TX, USA

Corresponding Author:
Michael Findley, Department of Government, The University of Texas at Austin, 3.108 Batts, Austin, TX 78712, USA
Email: mikefindley@austin.utexas.edu

> One morning, while we were eating before going to mass, they closed the windows and the gates. Then some boys from another school came in the dining hall and circled the tables. I was trembling. The boys shouted, "Get up, Tutsis. All the Tutsis stand up." There was a boy from my hill at home. We went to primary school together, and he said, "You Odette, you sit down, we know you've been a Hutu forever." Then some other boy came and pulled my hair and said, "With this hair, we know you're a Tutsi."
>
> (Gourevitch 1998, 66-67)

Ethnicity was a central part of the Rwandan genocide. Hutu extremists instigated the genocide and targeted Tutsis along with moderate Hutus. According to convention, Hutu killers often could not discern Hutu from Tutsi unless they viewed officially issued identity cards or obtained other additional information. Even then, some of the best Hutu efforts to identify Tutsis failed. The complexity of ethnic identity in Rwanda is not unique; the world is replete with conflicts, such as Kosovo, Chechnya, and Kenya, in which ethnicity plays an important, but often complicated, role. In this article, we explore this more systematically asking: how well can people discern ethnicity? What conditions enable or hinder accurate ethnic identification?

Studies of Jews following World War II uncovered just how complicated ethnic identification can be (Rice and Mullen 2003). Despite these studies, the difficult-to-test assumption that ethnic divisions are real and more easily recognized than other categories has been generally accepted (Horowitz 1985, 45-47; Chandra 2004, 2006a; Habyarimana et al. 2009). More recently, evidence from a study in Uganda corroborates earlier studies and shows that the identifiability assumption does not always hold (Habyarimana et al. 2009). In their study, Ugandans could not easily identify each other given a variety of information about the person being identified. Their approach captures an important component of identifiability but leaves unexamined the variation in individuals' abilities to identify others *based on the characteristics of the identifier*.

As individuals identify more strongly with their own group, they develop stronger antipathies toward other groups (Tajfel and Turner 1979). Accurate ethnic identification becomes important for appropriately sorting individuals to avoid defiling one's own group (Blascovich et al. 1997). Although identifiability might be difficult on average, we explore whether identifier characteristics, such as a strong identity, facilitate the identification of others.

We conducted an experiment in a large township in South Africa's Eastern Cape province to evaluate our hypotheses about the impact of identity strength. We also consider whether language, name, geographical heritage, and ethnic symbols have an impact on a person's ability to identify others correctly. These types of information—shown in photographs and short video clips—are important because each communicates important features of a person's ethnic identity.

Some of our results provide support to past research, but other results offer new insights. We find that individuals are not able to identify each other easily. Correct identification rates are, on average, even lower than those found in Habyarimana et al. (2007, 2009). Individuals with a stronger attachment to their own group are better at identifying others in several experimental conditions, however. These results are consistent with our hypotheses and with past research on Jewish populations using only photographs (e.g., Allport and Kramer 1946). We also find some evidence that individuals who lied about their ethnicity more easily deceived identifiers with strong ethnic ties, suggesting that a strong identity does not make ethnic targeting foolproof.

The results apply particularly to homogenous regions within multiethnic countries, as the setting of this study consisted primarily of Xhosa identifiers in a homogeneous Eastern Cape of a multiethnic South Africa. Other South African townships are generally quite homogenous, making this study applicable to other regions within South Africa, such as KwaZulu-Natal and the Free State. We discuss external validity at greater length before the conclusion, but note that caution should be exercised in generalizing the results to more diverse areas or to concentrated areas where groups may be better or worse than Xhosas.

A number of research areas make the identifiability assumption and could benefit from being more cautious about the inferences they make. Literatures on ethnic security dilemmas and partition (Posen 1993; Kaufmann 1996; Saideman et al. 2002; Laitin 2004) make the key assumption that people are able to identify others (Sambanis and Schulhofer-Wohl 2009). Research on targeting and in-group sanctioning (Fearon and Laitin 1996; Kalyvas 2006), assimilation (Laitin 1995), ethnic defection (Kalyvas 2008), public goods provision (Chandra 2006a), and pork spending (Fearon 1999), furthermore, makes similar assumptions to some extent.[1] Finally, existing accounts of genocides and conflicts with displacement (Davenport and Stam 2009a) could be told quite differently when reevaluating the identifiability assumption.

We begin by presenting literature on ethnic identifiability and strength, following which we propose theoretical connections between identity strength and ethnic identifiability. We then outline the experimental model and discuss the results showing that ethnic strength plays an important, but not always consistent, role in correct identification. We continue with a discussion of external validity and conclude with the implications of the findings for the ethnicity literature.

Literature Review

Ethnicity has an impact in many political, social, and economic settings. Attempts to understand whether and how ethnicity matters have proved complicated, however. Both the concept and the significance of ethnicity are complex and heavily debated across several disciplines. Even where there is consensus, the characteristics that are important in a given context are not well understood. The "myth of a collective

ancestry" is one of the most accepted conceptualizations of ethnicity. By this understanding, ethnicity includes many individual and group attributes, such as skin color and culture, as well as group-based categories such as tribes and castes that apparently originate from a common ancestry (Horowitz 1985, 52-53). Much of the ethnic conflict literature follows Horowitz's conceptualization with few qualifications.

Because ethnicity is not usually defined precisely (e.g., Alesina et al. 2003), operational measures have been equally vague and unclear. Quantitative studies of civil violence employ various measures capturing different elements of ethnicity: diversity (e.g., Fearon and Laitin 2003), group distinctness (Kirschner 2010), group geographic concentration (Toft 2005), and polarization (Alesina et al. 2003). And still, these measures capture only isolated aspects of ethnicity (Cederman and Girardin 2007; Chandra and Wilkinson 2008; Posner 2004).

Recently, some scholars have called for greater caution in conceptualizing and measuring ethnicity (Posner 2004; Chandra 2006b; Chandra and Wilkinson 2008). Offering a refinement, Chandra (2006b) argues that the defining characteristic of ethnicity is that it captures attributes associated or believed to be associated with *descent*, such as skin color, hair type, physical features, name, language, birthplace, and surname. This allows numerous attributes to characterize ethnicity, while offering a more precise umbrella and separating ethnicity from abstract concepts such as culture. Chandra's conceptualization is insightful and invites the critical question: is ethnicity identifiable? Ethnic similarities or differences may not be relevant if they are not identifiable. We concur with Chandra (2006b) that ethnicity represents descent-based attributes, but we focus on exploring the conditions under which descent-based attributes are indeed identifiable.

Few studies directly question the assumption that ethnicity is identifiable.[2] Horowitz (1985) contends that individuals can identify each other with relative ease, which potentially explains the mostly uncritical acceptance of the identifiability assumption. In discussing caste distinctions in India, he notes that "caste origins could easily be detected without a visible 'rank sign'" and continues, stating "This, in fact, is generally true" (p. 45). Chandra (2004) indicates that less costly information should be available about ethnic identity, such as name, physical features, speech, and dress, than about nonethnic identity.

Horowitz (1985) and Chandra (2004, 2006a) do not believe that ethnic identification is always easy. Although they cite cases in which identification occurred fairly easily, Horowitz discusses others that were difficult (pp. 47-49). Horowitz (2001, 129) also suggests that identification of prospective victims can be easy, but in many cases "it takes some effort to distinguish potential victims from members of other groups . . ." He suggests that potential perpetrators of violence are especially likely to attempt to distinguish among groups, if the costs of making a mistake are very high. Chandra (2004, 42) notes that "The multiple sources of costless data about an individual's ethnic memberships mean that an observer can typically guess an individual's ethnic identity on the basis of a relatively superficial interaction, even though such a guess may turn out to be erroneous."

Some research on identifiability exists, although psychologists have conducted most of it. Following World War II, scholars studied the identifiability of Jews using photographs (Allport and Kramer 1946; Savitz and Thomasson 1959; see Rice and Mullen [2003] for a review) and demonstrated the difficulties of accurate identification. More recently, a study conducted in Uganda examined whether individuals can identify each other given information, such as name, language, heritage, and culture (Habyarimana et al. 2009). They found that individuals were not highly successful at identifying each other and there was variation across individuals and groups.

We build on and extend earlier literature by examining how the *strength of one's ethnic identity* affects her ability to correctly identify others. In general, scholars have argued that identity strength is a key dimension of interethnic relations (Gibson and Gouws 2003), and there is some initial evidence that it affects ethnic identifiability (Allport and Kramer 1946; Dorfman, Keeve, and Saslow 1971).

Theory

Individuals identify more strongly with their own group when they have a more salient connection to it as well as feelings of superiority toward another group (Blascovich et al. 1997; Tajfel and Turner 1979, 1986; Tajfel 1981; Horowitz 1985, 144).[3] A person who has a stronger identity highlights the positive in her own group relative to the negative in other groups (Tajfel and Turner 1986). By differentiating, she emphasizes her group's uniqueness, which leads to out-group prejudices and possibly hatred (Blascovich et al. 1997).[4]

As individuals develop pride towards their own groups and prejudice toward out groups, those with stronger ethnic attachments (hereafter *stronger ethnics*)[5] learn the characteristics of other groups. Even if stereotypical, stronger ethnics learn about other groups, but also about individuals, because they want to categorize people accurately (Tajfel and Turner 1986; Taylor and Moghaddam 1994; Blascovich et al. 1997). It is one thing, for example, for a Hutu to believe that Tutsis are taller, lighter skinned, and have narrower noses than Hutus, but it is quite another for a Hutu to meet a Tutsi and correctly identify whether she is Tutsi.

A stronger ethnic learns the differences between individual members of her own group and other individuals because confusing outsiders as insiders would "defile" or "contaminate" what she perceives as the uniqueness of her own group (Brigham 1971; Marques, Yzerbyt, and Leyens 1988; Blascovich et al. 1997). An individual with a weaker ethnic identity has fewer such concerns and knows less information about others, more generally. Thus, in accordance with substantial research on social identity and identification, we hypothesize the following:

Hypothesis 1: A stronger ethnic is more likely to successfully identify others than a weaker ethnic.[6]

Ideally, we would like to understand the determinants of successful identifiability when individuals have different types and amounts of information available. Individuals use information about names, language, and accents to identify other people. For example, individuals make judgements about ethnicity based on stated or revealed information about an identifyee's ethnicity, parent's ethnicity, and mode of dress

Processing available information can be challenging, however, and individuals differ in the ways in which they consider incoming information. Stronger ethnics are particularly motivated to avoid erroneously including members of other groups into their own group. As such, they develop and hold beliefs that differentiate people and use information to update and confirm their beliefs (Marques, Yzerbyt, and Leyens 1988; Yzerbyt, Leyens, and Bellour 1995). Processing information requires a reliance on stereotypes (Duckitt 2003), by which we mean simplified representations that may be partially accurate, but not fully. Stronger ethnics who hold such conceptions should have an advantage in filtering new, accurate information over those who do not.

Because stronger ethnics know relatively more information about other groups generally, even if stereotypical, they should be relatively more certain about identification. When new truthful information surfaces, less information processing is needed to match the truthful information with their prior beliefs (Tiedens and Linton 2001). An individual might explicitly identify his own ethnicity, for example, and offer supporting evidence that confirms the stated ethnicity. The stronger ethnic can relatively easily match the truthful information with previous beliefs to make a judgment about whether the person is telling the truth. Weaker ethnics, on the other hand, may not understand how well the information applies, and though they may try harder to place people accurately, they will lack the information and strongly held previous beliefs to know whether people are lying or telling the truth. Accordingly, we hypothesize the following:

Hypothesis 2: A stronger ethnic is more likely to successfully identify others than a weaker ethnic given more true information about a person's ethnic identity.

While people may be honest about their ethnicity in some contexts, individuals might deliberately provide misinformation to an identifier to pass as a member of another ethnic group. During the Rwandan genocide, some Tutsis attempted to pass as Hutus to avoid being killed (Davenport and Stam 2009a); similar incidents occur in many episodes of civil violence. A person trying to pass as a member of another ethnicity needs to convey the stereotypical information to deceive the identifier and a stronger ethnic can look for the differentiating cues to decide whether a person belongs to the stated group.

Additional information may not always help a stronger ethnic, but could actually work to the stronger ethnic's disadvantage. Given the time and energy invested in learning about other groups, the greater levels of certainty may falsely encourage stronger ethnics. While they may devote time to distinguishing people, they are more

likely to base their decisions on heuristics rooted in the stereotypes they already hold rather than process the information systematically (Weary and Jacobson 1997; Tiedens and Linton 2001). Greater levels of certainty also provide an internal cue that further processing is not necessary (Eagly and Chaiken 1993; Mackie, Asuncion, and Rosselli 1992).[7] If false information arrives and is consistent with the stereotypes that the strong ethnic holds, then she is less likely to devote much time and energy to thinking more deeply (Kruglanski 1990). Individual memory may also be constructive and update with stereotypical cues such that people are biased toward following those newer cues (Brigham 1986; Festinger 1957; Loftus 1980). Thus, a stronger ethnic who knows the stereotypes, regardless of whether they are correct, and then sees or hears them from someone else, could actually be fooled more easily.

For example, a Tswana individual in South Africa might fool a strong ethnic Xhosa into believing she is actually Sotho (an ethnic group that is much more similar to Tswana than to Xhosa) if the Tswana individual provides enough information about Sothos and the strong ethnic Xhosa identifies those cues with Sothos without engaging in deeper information processing. A weaker ethnic Xhosa will likely not know one way or the other whether the individual is Sotho because she does not know the stereotypical cues and may thus be more likely to process the information more carefully, but ultimately not have enough background or information to distinguish adequately and thus will guess as if at random. Thus, we hypothesize the following:

Hypothesis 3: A stronger ethnic is likely to be less successful than a weaker ethnic at identifying those that lie about their ethnic identity.

Experimental Design

We conducted an experiment in a large township that we call Mayibuya in South Africa's Eastern Cape province, which we describe more in the following.[8] The experiment consisted of presenting a photo and a randomly selected video of a person (hereafter ethnic *representer*), repeated for multiple representers, to individuals recruited in Mayibuya (hereafter *subjects*). The subjects attempted to identify the ethnicity of the representers. For each photo and then video, the subject made a guess about the representer's ethnicity based on the 2001 census's list of the nine major black African ethnic groups.[9]

Ethnic Representers

From May to June 2008, we recruited representers from throughout South Africa based on their ethnic identity, age, and gender to ensure variation and proportionality. This resulted in a sample of seventy-six representers, proportional to the *national* demography of black ethnic groups (e.g., the percentage Xhosa in the sample closely matched the percent Xhosa in the population, and so forth).[10] The sample was less representative of geographic region: of the seventy-six ethnic representers, forty-six

live in the Eastern Cape Province (60 percent), twenty-two in Gauteng (29 percent), five in Limpopo (7 percent), two in Northwest (3 percent), and one in KwaZulu Natal (1 percent). The ethnic representers, therefore, came from five of the nine provinces. A few were born and/or raised in Mpumalanga and Free State Provinces thus yielding representation from seven of the nine provinces.

We obtained background and demographic information from the ethnic representers and then took a bust photograph and recorded ten *separate* videos designed to capture various components of ethnicity. In the videos, the ethnic representer does only the following: (1) states first given name,[11] (2) states surname,[12] (3) greets in primary language,[13] (4) greets in English, (5) states and argues for true identity,[14] (6) states and argues for true identity with supportive ethnic symbol in the background, (7) states and argues for true identity with contradictory symbol,[15] (8) states and argues for false identity, (9) states and argues for false identity with supportive symbol, and (10) states and argues for false identity with contradictory symbol.[16,17] Each of these conditions captures various degrees of what Chandra (2006b) calls "descent-based attributes." Some of these characteristics are easier to manipulate, and some are more visible than others, thus providing varying amounts of information about ethnicity.

We categorize photographs and videos into "signs" and "signals" (Horowitz 1985; Habyarimana et al. 2007). The photograph and videos 1 through 4 tested the impact of *signs* on ethnic identifiability: the "manifestation[s] of group membership that [are] beyond an individual's control, at least in the short run" such as physical characteristics, accents, and language, and videos 5 through 10 test *signals*: "action[s] taken by an individual in order to communicate membership of an identity" (Habyarimana et al. 2007, 6).

Ethnic representers received 20 Rand (about US$2.47) for participation and 2 Rand (~ $0.25) for each time they successfully passed as a member of a different ethnic group. The flat participation payment compensated representers for videos 1 through 7, and additional compensation was given for videos 8 through 10 as an incentive for representers to lie well. We capped additional compensation at 20 Rand per person (~ $2.47) for a total possible payment of 40 Rand.

Subjects

We recruited *subjects* exclusively from Mayibuya through poster advertisements covering all parts of the township. The subjects' participation included a prestudy questionnaire, the viewing of photographs and videos in which subjects attempted to guess the representer's identity, and a poststudy questionnaire. After completing the questionnaire, each subject was instructed that the distribution of representers matched the national demography and then viewed the photo and one of the videos (randomly selected) for all seventy-six representers.

Each subject attempted to guess the ethnic identity after each photo and video resulting in a total of 152 guesses per subject. With sixty-two subjects, the experiment yielded a total of 9,424 observations. Each subject received 20 Rand (about

US$2.47) for participation and 50 South African cents (~$0.07) for each correct guess to incentivize serious participation. We capped additional compensation at 30 Rand per person (~$4.29) for a total possible payment of 50 Rand (~$6.76).

Validity of Experimental Conditions

We constructed each experimental condition to capture certain aspects of ethnic identity: name, features, speech patterns/accents, and dress (Chandra 2004). We also present information that one might be able to gather when two people meet for the first time—facial cues and clothing, for examples. The first five experimental conditions capture all of these factors. Representers provided still other information in the signal videos.

Because ethnic representers have a vast repertoire of ethnic characteristics, we provided adaptable scripts for the signal videos to minimize additional variation. Across the videos, ethnic representers addressed four topics tied to descent-based attributes (Chandra 2006b): their stated ethnicity, their parents' ethnicities (to capture one element of social networks as well as hereditary transfer of ethnic identity), the region their family comes from (to capture settlement and migration patterns), and up to three articles of traditional clothing (to capture cultural factors).

Although more could be communicated, these four characteristics affect identifiability because they are easily observed and the information is accessible in real-world settings. For example, if someone wanted to know if their new neighbor was Zulu, she could easily ask the person (or another person in the neighborhood) from where the family moved. When it is revealed that the family comes from KwaZulu Natal, then the person may feel that she needs no more information in order to judge that the family is Zulu. If she wanted further evidence, she might look to see what type of food the family eats or the traditional clothes the family wears when going to weddings and other occasions.

The information in the experimental conditions does not directly capture other factors such as official documents or third-party statements/denunciations.[18] We attempted to capture these possibilities indirectly by including substantiating or countervailing evidence during the signal videos. To do this, we placed a symbol associated with a group in the background of some of the signal videos.[19] At times, these symbols supported what the representer was saying about herself, and at other times it contradicted what she was saying. These symbols gave the subjects some information beyond the representer's word to inform the subject's assessment. Thus, when a Xhosa person gave evidence of her Xhosa heritage with the picture of a Zulu warrior behind her, the subject may deduce that there is something amiss and would have to decide which to believe: the word of an individual or the context surrounding his interaction with her.

The South African Context

Mayibuya is an exclusively black area that was created under the apartheid regime. Just over half of the population lives on an annual income of less than $1,400 and

62 percent are unemployed (South Africa Statistics 2001). Mayibuya is socioeconomically representative of South Africa, but not ethnically representative. The Gauteng Province is extremely ethnically diverse, while KwaZulu Natal is as Zulu as the Eastern Cape is Xhosa.

Apartheid in South Africa was unique, but even under apartheid, and especially as it broke down, a substantial amount of violence occurred between black ethnic groups in addition to violence between whites and blacks (Arnold 1995; Horowitz 2001; Stiff 2002). The violence between the Xhosa dominated African National Congress (ANC) and the Zulu dominated Inkatha Freedom Party (IFP) in the early 1990s and in the run-up to the 1994 elections provides the clearest example. Horowitz (2001) notes that the Xhosa–Zulu conflict is a result of the historically polarized nature of their relationship and the IFP's efforts to undermine the ANC's pan-ethnic reputation and claims.[20]

Strained Xhosa–Zulu relations have begun to cool since 1998. With the election of an ANC Zulu, Jacob Zuma, to the presidency, the ANC and IFP have become less ethnic in nature. In 2005, however, Zulus protested the corruption charges against Zuma as ethnically motivated. The Xhosa–Zulu political cleavage is not likely to disappear because these two ethnic groups are the most politically relevant. Most other ethnic groups are effectively excluded from central politics.

The Xhosa–Zulu cleavage is, ironically enough, one of the most easily confused cleavages. The two groups are potentially easily confused because both groups are part of the Nguni language family and thus are similar both linguistically and culturally relative to other ethnic groups in South Africa (the other two Nguni ethnic groups are Ndebele and Swati). The other major language family in South Africa is the Sotho language family (Sotho, Pedi, Tswana groups).[21]

Estimation and Measurement

The dependent variable in each regression is a *guess* (*correct* = 1, *incorrect* = 0), which we regressed on the *ethnic strength* score and control variables all measured prior to the experiment. Because the *guess* variable is binary, we estimated logit regressions, clustering on the subject.[22] Descriptive statistics for all of the variables appear in the Supplementary Appendix.

We measure subject *ethnic strength* based on the Multigroup Ethnic Identity Measure (MEIM) from Phinney (1992). See the Supplementary Appendix for more information about the measure.[23] We also include a measure of representer *ethnic strength* measured using the MEIM. *Subject age* and *representer age* control for whether experience makes the subject better able to identify the representer, or the representer better able to represent one's group. *Subject gender* and *representer gender* control for any gender-specific effects, though we have no a priori expectation about whether men or women are better guessers.

Related, we include subject–representer match variables. The *gender match* variable is dichotomous and takes a value of 1 if the gender of the subject and

representer are the same. The *ethnic strength match* variable is also dichotomous and takes a value of 1 if the ethnic strength scores of the subject and representer are within one standard deviation of each other. The *ethnicity match* variable takes on the value 1 if both the subject and the representer are Xhosa and takes the value 0 otherwise. *Age distance* is the absolute value of the difference in age between the subject and representer. We include these variables because subjects may be better able to correctly identify those representers who are most similar to themselves.

We included three education measures to consider whether general knowledge obtained in schools facilitates more accurate identification. *Schooling* is the highest grade that the subject has completed. *Schooling father* is the highest grade that the subject's father completed *schooling mother* is the highest grade the subject's mother completed.

The *Years in Mayibuya* variable measures how long the subject has lived in the township. Because Mayibuya is predominantly Xhosa, it is possible that those who have lived outside of the area have a better knowledge of other ethnic groups.[24] Finally, *religious activity* measures how often a subject attends church or other religious ceremonies or gatherings and ranges from never to more than twice a week. This variable provides some estimate of how active or insulated people are in their communities.

We attempt to account for time effects by including an *experimental order* variable as well as an *order squared* variable to capture nonlinear dynamics. The *experimental order* variable is ordinal, ranging from 1 to 152 for each subject, and identifies when the subject viewed each photo or video. If subjects learn and get better, we would expect a positive relationship; if they get tired and sloppy, we expect a negative relationship; and if there is a nonlinear effect, the squared term should capture it.[25]

Results

The probability of successfully identifying the ethnicity of others is, on average, fairly low. Xhosas correctly identified other Xhosas in 45 percent of the overall cases, which represents the highest probability. Table 1 reports the ratio of times that a subject guessed a certain ethnicity (rows) to the times that the subject *correctly* guessed the representer's identity (columns). For example, row 2 is Pedi, column 5 is Tsonga, and the number in the corresponding cell is .06. When Xhosas saw Tsongas, they mistakenly guessed Pedi 6 percent of the time. Because the columns indicate the representer's stated identity, the numbers within the columns sum to 1 (before rounding). The principal diagonal (lightly shaded cells) represents the probability of correct identification for each given group. The off diagonal represents the probability of incorrect identification, where the darkly shaded cells represent the highest probability of incorrect identification.

Xhosas consider some other groups as similar to themselves: they incorrectly identify Pedi, Sotho, Tswana, Venda, and Zulu most often as being Xhosa (darkly

Table 1. Xhosas' Probability of Correct/Incorrect Classification

Guess	Correct identity								
	Ndebele	Pedi	Sotho	Swati	Tsonga	Tswana	Venda	Xhosa	Zulu
Ndebele	.22	.07	.05	.05	.07	.06	.08	.06	.08
Pedi	.06	.17	.06	.08	.06	.08	.04	.05	.07
Sotho	.15	.15	.22	.08	.08	.14	.08	.08	.09
Swati	.07	.07	.07	.14	.08	.08	.12	.05	.07
Tsonga	.06	.08	.06	.06	.18	.07	.08	.06	.06
Tswana	.02	.1	.11	.15	.12	.18	.06	.06	.08
Venda	.17	.1	.07	.1	.17	.09	.18	.07	.08
Xhosa	.13	.15	.23	.15	.16	.18	.22	.45	.18
Zulu	.12	.13	.12	.19	.09	.13	.14	.13	.28

Note. This table reports the ratio of times a subject guessed a certain ethnicity (rows) to the times the subject correctly guessed the representer's identity (column). The principal diagonal (lightly shaded cells) represents the probability of correct identification. The off diagonal represents the probability of incorrect identification where the darkly shaded cells represent the highest probability of incorrect identification.

shaded cells). These "errors of inclusion," ranging from 13 to 23 percent, illustrate the percentage of time subjects erroneously include members of other groups in their own. Table 1 provides an initial look at subjects' ability to identify ethnicity correctly, but we hypothesized earlier that strength of ethnic identity might be an important mitigating factor. Although rates of successful identification are low generally, we can still examine the impact of ethnic strength because our primary interest is in *relative*, not *absolute,* success. Xhosas may not be able to identify others' ethnicity easily, but are stronger ethnic Xhosas relatively better than weaker ethnic Xhosas? We now turn to a consideration of the ethnic strength variable and disaggregate the conditions (photos and videos) to evaluate the success rate given different types of information.[26]

We now estimate a logit model with the ethnic strength variable and dummy variables for each experimental condition. The photo condition is omitted from the analysis and serves as the reference category. Table 2 suggests that a stronger ethnic is more likely to identify the person in the video successfully (at the .1 significance level). Thus, initial evidence indicates that ethnic strength may facilitate accurate ethnic identification. The results also show that in some conditions, more information facilitates accurate identification. Relative to the photo condition, hearing the representer's name, surname, and own language greeting significantly increase the likelihood of successfully identifying the representer. In addition, receiving an honest signal from the representer facilitates correct identification. However, receiving an English greeting or a deceptive signal actually *reduces* the likelihood of successful identification relative to only seeing a photo of the representer. It is possible that an English greeting introduces more noise and that people are generally more likely

Table 2. Ethnic Strength and Identification

Dependent variable: correct guesses	
Variables	(1)
Subject: Strength score	.342* (.205)
Sign conditions	
First name	.651*** (.123)
Surname	.608*** (.137)
Greet in own language	1.538*** (.130)
Greet in English	−.258* (.154)
Honest signal conditions	
Signal own ethnicity	2.555*** (.237)
Signal own ethnicity w/ own symbol	3.110*** (.253)
Signal own ethnicity w/ other ethnic symbol	2.496*** (.224)
Deceptive signal conditions	
Signal other ethnicity	−1.518*** (.268)
Signal other ethnicity w/other ethnic symbol	−.946*** (.281)
Signal other ethnicity w/own ethnic symbol	−.682** (.334)
Observations	7,795

Note. Standard errors in parentheses. Ethnic representers are those in the pictures/videos and subjects are those that are viewing the videos. Standard errors clustered on subject. Subject and representer characteristics (i.e., age, gender, etc.), subject–representer dyadic variables, order, and order squared are included in the model but are not reported here but are reported in Supplementary Appendix. Reference category (*control* condition) is the photo experimental condition.
*$p < .1$. **$p < .05$. ***$p < .01$.

to believe what the representers say about themselves despite knowing the probability of receiving a deceptive signal.

Tables 3 and 5 report a series of split-sample models estimating the hypothesized moderating effect of a subject's ethnic identity strength. Models 1 through 5 in Table 3 show that a "stronger ethnic" is not necessarily always more successful given more information. When a Xhosa only sees the representer (model 1: Photograph), only hears a person's first name, or only receives a greeting (whether in the person's own language or English), the strength of ethnic identity does not have a significant impact on her ability to correctly identify others. All the coefficients except for model 5 (Greet English) are in the expected positive direction but do not meet a .1 level of statistical significance. Some of these results are unsurprising; an individual's first name conveys little information about ethnicity, for example. An individual's surname in South Africa conveys relatively more information about group identity. Surnames are associated with language and tradition (more so than first names), and surnames are passed down to children. Although we expected a greeting in the representer's native language to aid correct identification, the results do not confirm that expectation.[27]

To aid substantive interpretation for all results, we calculated predicted probabilities for the identity strength measure for each model. Table 4 reports the change in one's

Table 3. Ethnic Strength and Identification In Different Conditions

Dependent variable: correct guesses					
Variables	(1) Photograph	(2) First name	(3) Surname	(4) Greet own language	(5) Greet English
Subject: strength score	.145 (.153)	.608 (.453)	.757** (.377)	.333 (.422)	−.031 (.480)
Subject characteristics					
Subject: age	−.003 (.006)	−.022 (.018)	−.019 (.017)	−.013 (.013)	−.0376* (.022)
Subject: gender	.213* (.119)	.062 (.270)	.104 (.403)	−.316 (.326)	−.933** (.382)
Subject: education	−.008 (.050)	.243** (.117)	−.095 (.140)	.328*** (.116)	.095 (.172)
Subject: father's education	−.014 (.031)	.014 (.072)	−.104 (.073)	.095 (.065)	−.009 (.081)
Subject: mother's education	−.051* (.030)	.029 (.087)	.035 (.086)	.075 (.092)	.156 (.143)
Subject: years in Mayibuya	.002 (.005)	.003 (.014)	.021 (.015)	.007 (.010)	.043** (.019)
Subject: religious activity	−.021 (.032)	.061 (.074)	−.080 (.089)	−.020 (.112)	.152 (.115)
Dyadic variables					
Gender match	.026 (.105)	.061 (.238)	.133 (.279)	−.345 (.238)	.491 (.346)
Age distance	.004 (.006)	.016 (.016)	−.014 (.012)	.007 (.013)	−.011 (.022)
Ethnic strength match	−.056 (.100)	−.166 (.231)	.106 (.288)	.163 (.252)	.179 (.357)
Ethnicity match	1.407*** (.132)	2.439*** (.368)	1.744*** (.287)	2.845*** (.418)	1.940*** (.399)
Constant	−2.219*** (.669)	−6.418*** (2.243)	−3.386* (1.870)	−4.794*** (1.847)	−3.476 (2.122)
Observations	3,906	404	396	398	351

Note. Standard errors in parentheses; ethnic representers are those in the pictures/videos and subjects are those that are viewing the videos. Standard errors clustered on subject. Representer characteristics (i.e., age, gender, etc.) and order and order squared are included in all models but are not reported here as they are consistently statistically insignificant and/or 0. See Supplementary Appendix for table with all covariates.
*$p < .1$. **$p < .05$. ***$p < .01$.

Table 4. Substantive Impact of Identity Strength on Correct Guesses

Condition	Strength score Δ min to max (2.5 to 4)	Strength score Δ ± 1 standard deviation
Probability Δ	Probability Δ	
Photograph	2.6	.5
First name	13.8	8.9
Surname	16.0	8.7
Greet: own language	9.7	5.6
Greet: English	−.3	−.2
Signal true identity	28.7	26.5
Signal own identity with own symbol	31.5	28.6
Signal own identity with other symbol	25.6	22.5
Signal other identity	−6.3	−4.9
Signal other identity with other symbol	−2.6	−2.7
Signal other identity with own symbol	−20.7	−21.8

Note. The second column reports changes in the probability of success when ethnic strength changes from the minimum value (2.5) to the maximum value (4). The third column reports changes in the probability of success when the Strength Score variable changes from one standard deviation below the mean to one standard deviation above the mean. Predicted probabilities are calculated holding continuous variables at their mean and dummy variables at their mode. The highlighted cells indicate statistically significant effects of ethnic strength under the respective conditions.

ability to identify others correctly given a change from the lowest observed strength score (2.5) to the highest strength score (4) and given a change from one standard deviation below to one standard deviation above the ethnic strength mean. These calculations are based on a baseline probability of .27, and the conditions in which the strength score is a statistically significant indicator are shaded in the table. For model 3, we found a 16.0 percent increase in the predicted probability of guessing the representer's identity correctly when ethnic strength changes from its minimum to its maximum (8.7 percent increase when moving from one standard deviation below the mean to one standard deviation above). Thus, when one hears the surname of an individual, the strongest ethnic in our sample is 16 percent more likely to successfully identify the individual relative to the weakest ethnic in our sample.

Moving from Table 3 to Table 5, we now examine the effects of the signal videos. Models 6 through 8 consider correct guessing in the context of the videos in which the person is telling the truth; models 9 through 11 consider the deceptive videos. In all of them, the person being recorded first states the ethnicity she belongs to or is trying to pass as and then gives evidence for why she is a member of the stated group. The results of model 6 show that subjects with a stronger ethnic identity are *not* significantly better at correctly identifying representers when the representers state their ethnicity, offer additional information beyond a name or greeting, *and* tell the truth. In models 7 and 8 (Table 5), representers again truthfully reveal their identity, but now cultural symbols belonging to the stated group and to a different

Table 5. Ethnic Strength and Identification in Different Conditions

Dependent variable: correct guesses						
Variables	(6) Signal own (True) ID	(7) Signal own w/ own symbol	(8) Signal own w/ other symbol	(9) Signal other (Fake) ID	(10) Signal other ID w/ other symbol	(11) Signal other ID w/ own symbol
Subject: strength score	.942 (.740)	1.481* (.798)	.952 (.720)	−1.375* (.729)	−.266 (.827)	−1.129 (.877)
Subject characteristics						
Subject: age	.010 (.025)	.020 (.026)	.016 (.022)	−.097 (.082)	.024 (.032)	.026 (.042)
Subject: gender	.657 (.661)	.283 (.554)	.805 (.534)	−.103 (.703)	.718 (.535)	.157 (.545)
Subject: education	−.004 (.234)	−.215 (.211)	−.066 (.196)	.320 (.421)	.120 (.235)	.209 (.223)
Subject: father's education	−.143 (.125)	−.011 (.129)	.030 (.116)	−.145 (.147)	.143 (.145)	.028 (.107)
Subject: mother's education	.042 (.181)	.019 (.195)	.010 (.163)	−.012 (.237)	−.106 (.198)	.159 (.205)
Subject: years in Mayibuya	.015 (.022)	.015 (.022)	.021 (.022)	.024 (.036)	−.046 (.028)	−.033 (.024)
Subject: religious activity	−.178 (.164)	−.172 (.162)	−.173 (.152)	.042 (.148)	.087 (.172)	.303 (.193)
Dyadic variables						
Gender match	.119 (.224)	.260 (.232)	−.062 (.194)	−.389(.543)	−.068 (.378)	.319 (.366)
Age distance	.023 (.015)	−.008 (.015)	.012 (.012)	.049 (.061)	−.014 (.022)	.032 (.022)
Ethnic strength match	.281 (.225)	−.032 (.287)	.019 (.237)	−.951* (.570)	−.140 (.420)	−.663 (.404)
Ethnicity match	.574** (.267)	.451 (.368)	.067 (.283)	1.611** (.649)	1.099** (.490)	1.032** (.481)
Constant	−2.577 (2.652)	−2.811 (3.363)	−3.442 (2.698)	4.123 (3.394)	−1.600 (3.110)	−4.944* (2.736)
Observations	403	374	412	379	403	369

Note. Standard errors in parentheses. Ethnic representers are those in the pictures/videos and subjects are those that are viewing the videos. Standard errors clustered on subject. Representer characteristics (i.e., age, gender, etc.) and order and order squared are included in all models but are not reported here as they are consistently statistically insignificant and/or 0. See Supplementary Appendix for table with all covariates.
*$p < .1$. **$p < .05$. ***$p < .01$.

group appear in the background respectively. Ethnic strength is a significant predictor of successful identification when a supportive symbol is included. The correct symbol (model 7; see also Table 5) in the truthful videos increased correct identification for the strong ethnic but the incorrect symbol does not (model 8; see also Table 5). Thus, it seems that strong ethnics need additional information to believe what the individual is saying and that a contradictory symbol introduces noise that prevents a stronger ethnic from having any relative advantage. Importantly, representers tell the truth and lie in an equal number of videos; knowing this, subjects must be cautious about believing an individual's stated identity.

Coupled with the results of the deceptive videos, these results reveal a potentially interesting effect: having a stronger identity makes one more likely to identify those telling the truth, but significantly *less* likely to identify the ethnicity of others when they are lying, under some conditions. Model 9 in particular has a statistically significant (at the .1 level) negative effect; Models 10 and 11 are also negative, but not significant. Thus, there is some evidence that strong ethnics are more easily duped, but more so when the only information they have is the word of the individual. In addition, ethnic strength does not seem to matter when symbols are added to the deceptive videos.

The results have thus far considered the various conditions in isolation. But under what conditions is ethnic strength a more powerful predictor of successful identification? Figure 1 plots the ethnic strength coefficients and their confidence intervals. It is clear that the only significantly different effect of ethnic strength across the "sign" conditions is that of the Surname condition (models 2–6). The different effects come into play when considering the signal conditions. Ethnic strength has a significantly different effect on successful identification when comparing models 7 and 9. The difference between these models captures the difference in truthfulness of the message the representer is sending. Overall, ethnic strength has a positive relationship with ethnic identification, but when representers lie, the relationship is negative.[28]

Turning to the control variables (reported in the Supplementary Appendix), significance is rare and not consistent across conditions except for the ethnicity match variable (significant in all models except 7 and 8), and its effect is always positive. Under most conditions, if the subject and the representer are both Xhosa, the subject is significantly more likely to correctly identify the representer, a result consistent with the findings in Table 1 and with some arguments that ethnicity is not easily identifiable across ethnic groups (Habyarimana et al. 2007). Thus, one of the strongest predictors of correct identification is coethnicity, but ethnic strength still has a significant effect on successful identification when controlling for it, under some conditions. Few of the representer control variables (age, gender, ethnic strength) or other dyadic variables reach significance. Finally, the experimental order and order squared variables never have a strong substantive impact on successful identification, and experimental order is only statistically significant in models 1 and 8.

Finally, we considered several additional models to understand better how the homogeneity of Mayibuya might matter. As a robustness check, we estimated the

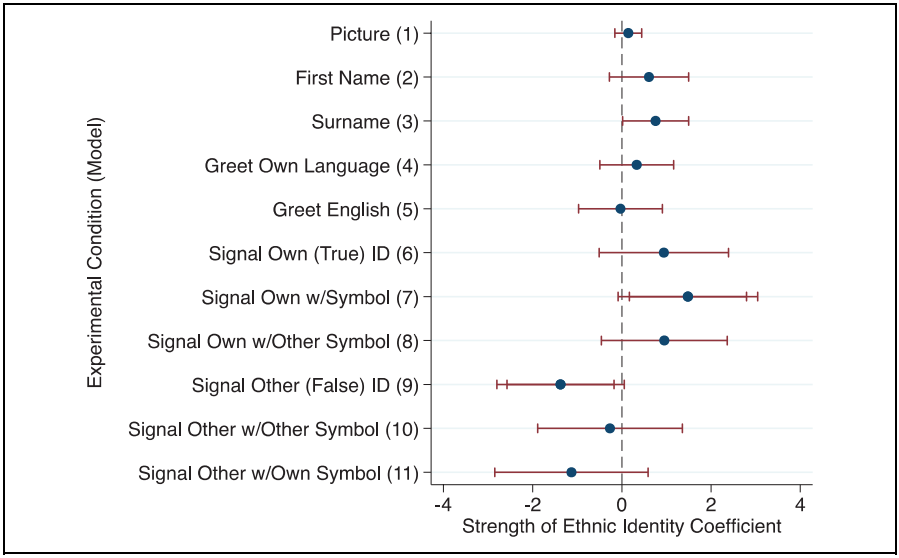

Figure 1. Variation in the effect of ethnic strength by experimental condition.
Note. Figure 1 plots the ethnic strength coefficients with their 95 percent confidence intervals from each model in Tables 2 and 4. Models 8 and 10 also have hash marks for their 90 percent confidence intervals as these coefficients are significant at the .1 level.

above twelve models clustering on the representer and using multilevel clustering which allows for clustering on both representer and subject in a single model. The results reported here using subject clustering are more conservative (higher standard errors) than using representer clustering, thus we report here the results of the subject-clustering models, which can be interpreted as the most conservative. In addition, the results reported here are robust to multilevel clustering.[29]

In sum, the empirical results support Hypothesis 1 because a stronger ethnic is generally more successful at identifying the ethnicity of others (Table 2). We do find that the stronger ethnic is more successful when given certain types of information (surname and cues about correct identity), especially information that is more relevant to ethnic identity (Hypothesis 2). Hypothesis 3 finds some support because a stronger ethnic is less able to identify deceptive representers, apparently believing the stereotypical cues provided by others.

External Validity: South Africa and Beyond

All subjects were Xhosas from Mayibuya Township, which is about 90 percent Xhosa. The subjects viewed photos and videos of representers from nine different ethnic groups in South Africa. Thus, based on the ethnic makeup of the Eastern

Cape, the results could be applied to other ethnically homogenous areas within South Africa, such as KwaZulu-Natal (Statistics South Africa 2001), even though some homogenous groups may be better or worse than Xhosas in their ability to identify others.

More generally, South Africa is not necessarily representative of the rest of Africa; it is far more developed and enjoys a relatively more stable political and economic environment. Given the extraordinarily diverse set of countries that have undergone conflict, making strong claims about external validity is laden with pitfalls. Variables that may matter include language families, number of distinct groups, geographic concentration, levels of intermarriage, religion, skin color and bodily features, type of violence, and information available to people, to name just a few. Two features seem particularly important for our experiment: geographic concentration of ethnic groups and the overall number of groups.[30] As such, we consider a few comparisons based on these characteristics to see what can be learned. Ultimately, the experiment needs to be replicated elsewhere to understand the generalizability of the results.

Geographic Concentration and Number of Groups

We consider how variation in geographic concentration and number of groups should affect successful identification. At the risk of oversimplification, we consider high/low values of each factor. If there are few ethnic groups and they are geographically concentrated in homogeneous areas there should be a relatively low level of difficulty in identifying members of other groups (scenario 1). On the flip side, if there are many groups and they are all geographically dispersed, then the level of difficulty increases substantially (scenario 2). If on the other hand, there are many groups, but they are geographically concentrated, then there should be a medium level of difficulty relative to the other cases (scenario 3). Finally, if there are few groups, but they are geographically dispersed, then there should also be a medium level of difficulty (scenario 4).

South Africa fits within scenario 3 given that there are many groups, but they are mostly concentrated in separate regions (e.g., Xhosas in the Eastern Cape; Zulus in KwaZulu-Natal; Sothos in the Free State). Although there are a number of groups, information about region helps offset the complexity of identification making it neither the easiest nor the hardest case. Kenya may be similar to South Africa, given that it has a large number of ethnic groups that are relatively segregated, except in Nairobi and other localized exceptions. Thus, we may also expect a medium level of difficulty in ethnic identification in Kenya. This application, of course, comes with caveats, not least of which is that Kenya has several different language groups while South Africa only has two. Regions of Uganda and Tanzania also share these similarities with South Africa and Kenya, and we might expect broadly similar outcomes, though of course each particular group is different and could have higher or lower baseline levels of correct identification. Finally, Sudan has a large number of groups and has some levels of geographic concentration, but on the other hand faces

significantly more complicated linguistic diversity as well as quite different religious groupings, which likely makes Sudan more complex than South Africa.

A country such as Rwanda is quite the opposite of South Africa on these two dimensions. It has a small number of groups (effectively 2) and they are geographically intermixed (scenario 4). Arguably, despite the different societal structures, however, Rwanda and South Africa both present moderate levels of difficulty to those attempting to identify members of other groups. There are fewer groups to distinguish among in Rwanda, thus simplifying the identification decision, but the high levels of ethnic mixing and similar physical and cultural features complicate identification. Furthermore, given that many perpetrators of the 1994 genocide were not always local and often faced displaced populations (Davenport and Stam 2009b), identification was not always straightforward.

In Cyprus, on the other hand, there are two primary groups that are similar in many outward features—Greek and Turkish Cypriots—but both groups are relatively segregated and belong to different religions (scenario 1). If judging only from facial cues, it would be difficult to distinguish the two, but religious symbols and regions of residence, if available, would make successful identification much easier than in some other countries. In Sudan, the categorization of Arab versus black African would likely be easier than categorization within either of these broader dimensions. Similar to Cyprus, religious and other cues could aid identification across the two broader groupings. In Bosnia, furthermore, the mix of geographic concentration, a small number of groups, and religious differences, if all of this information is available, might make identification easier than in some other locales. Clearly, Bosnian Serbs and Bosnian Muslims were similar in many respects, and displacement complicated the identification task, but when sufficient information was available then identification may be relatively easier than in some other areas.

The United States and many European countries likely fit into the category of having many different groups with relatively low concentration (scenario 2). This could also be the case in large urban centers of places like South Africa (Johannesburg) and Kenya (Nairobi). We might expect the results to be quite different with rates of successful identification significantly lower in these areas than in our study area.

We have purposefully been speculative in this section and reiterate that adequately assessing external validity would require replication of the experiment in a more diverse set of contexts. The geographic concentration of groups and the number of groups both offer some clues about how these findings might apply to actual ethnic violence, and considering a larger set of characteristics would enable further generalization.

Application to Different Types of Conflict

Our results may not apply to all types of violence. People who know and understand the ethnic makeup of their own neighborhoods often carry out communal violence. Many instances of violence in India provide a case in point (Kakar 1996). Indeed, in

cases where perpetrators know their victims very well, the process of identification may be less important (Sambanis and Schulhofer-Wohl 2009).

Violence perpetrated by individuals from geographically concentrated, homogenous groups may be most applicable to our research because such individuals likely do not know the ethnic backgrounds of people in other regions. Importantly, ethnic homogeneity in regions appears to be an important underlying factor in many conflicts (Saideman and Ayres 2000; Toft 2005), whereas heterogeneity frequently encourages cooperation (Varshney 2001; Anderson and Paskeviciute 2006). Much evidence suggests that a consideration of identifiability in areas with homogenous identity structures is important and could address a continuing literature on the topic (Weidmann 2009).[31]

Other common types of violence may occur when perpetrators do not know local areas well. In state-based violence, for example, armies and militias frequently operate well outside of their individual zones of familiarity. Indeed, in any case where targeting based on ethnicity is required, then the ability to identify others is important (Kalyvas 2006). During genocides, in particular, perpetrators are less likely to know local areas and may be rushed to make identification decisions, which are more likely to be erroneous. Furthermore, during genocide many people are likely trying to pass as members of another ethnic group relative to lower-level conflicts in which such passing may not be feasible. In addition, even if individuals have local knowledge of an area, large-scale genocidal violence often displaces people (Davenport and Stam 2009b) making identification relatively more difficult and passing relatively easier.[32]

When ethnic security dilemmas occur in the wake of state collapse or weakness, ethnic identifiability may also be an important consideration. As Sambanis and Schulhofer-Wohl (2009) contend, the ability to identify others is a key assumption in the security dilemma and partition literatures (Posen 1993; Kaufmann 1996) because people need to identify coethnics with whom they can seek support as well as others that may be potential targets following ethnic wars. Our results provide some initial evidence that identification is not as straightforward as the partition and ethnic security dilemma literatures expect, and thus, partition as a solution to ethnic problems may need to be reconsidered further.[33]

More generally, very little attention has been devoted to some basic microfoundational assumptions about the role of ethnicity in conflict. Does ethnicity "harden" among individuals during a war making it a justification for violence after wars have begun (e.g., Kalyvas 2003)? How is ethnicity used in the process of targeting to induce control and compliance (e.g., Kalyvas 2006; Lilja and Hultman 2011)? Does the ability to identify individuals enable targeting that prolongs wars (e.g., Kirschner 2010)? Can individuals be identified effectively for the provision of benefits based on ethnicity (Chandra 2006a)? Does ethnic identification enable rebel-group mobilization that contributes to war escalation (Eck 2009)? While much of the ethnic conflict literature takes the identifiability assumption for granted, our results indicate that individuals frequently misidentify others and even strong

ethnics can make mistakes and be deceived. The results also indicate that even the best attempts to label and monitor individuals are not foolproof. Ethnicity as a marker and cause of violence is incredibly fuzzy for those motivated by the ethnic cues. New and in-depth data offer support for the notion that ethnicity is a noisy motive for perpetrators and an unreliable indicator of victims, implying a reconsideration of ethnicity's role (Davenport and Stam 2009b).

Conclusion

We found that a stronger ethnic identity can increase one's ability to identify the ethnicity of others correctly; the effect is not consistent or straightforward, however. This result varies depending on the type of information: when a stronger ethnic is given only limited information (except for surnames), she is not significantly better at identifying others. When the stronger ethnic is told the identity of another (whether right or wrong), she is more prone to believe that person—correctly under some circumstances, but incorrectly in others.

Having a stronger ethnic identity is a two-edged sword: a stronger identity might facilitate easier identification of others but the stronger ethnic might be fooled easier as well. Potential perpetrators of violence with stronger identities are more certain about the stereotypical group-identifying information. If potential victims can provide these signs and symbols, the potential perpetrator might indeed be convinced more easily.

The results of this article suggest caution in the inferences we make about the precise role of ethnicity in causing or prolonging conflict, but clearly much remains to be done to understand the conditions under which individuals can identify each other as well as the implications for theories of conflict. Extending the research into other geographic areas will be an important test of the generalizability of the results. Some, but not all, of our results are similar to those found in a quite different context (Habyarimana et al. 2009). Carrying out the research in other contexts could help sort out demographic or cultural differences, such as the heterogeneity or homogeneity of ethnicity. It may also show that some groups are better or worse than Xhosas in their ability to identify others, something identified in a similar study (Habyarimana et al. 2009). Our results also show that while groups generally cannot correctly identify others reliably, there is cause to focus on and refine our concepts of identity association and strength (Sidanius and Pratto 1999) in future studies of ethnic identifiability and their connections to violence.

Acknowledgments

We thank James Habyarimana, Macartan Humphreys, Daniel Posner, and Jeremy Weinstein for sharing information about their research including prestudy and poststudy survey questions and Jamie Druckman, James Kuklinski, Dan Nielson, and Megan Spencer for helpful comments on this article. Replication materials are available at the *Journal of Conflict Resolution* website at http://jcr.sagepub.com/ and at http://michael-findley.com.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Notes

1. The results of this study might have implications for other research domains on ethnicity. Identifiability is likely important in studies of parties, voting, clientelism, and patronage (e.g., see Chandra 2004, 2006a; Ferree 2004; Posner 2005, 2007).
2. Notable exceptions include Allport and Kramer (1946); Lindzey and Rogolsky (1950); Dorfman, Keeve, and Saslow (1971); Quanty, Keats, and Harkins (1975); and Habyarimana et al. (2009).
3. While social identity theory could apply to any type of group, ethnicity is one important category within which people sort themselves.
4. Social identity theory has had a strong impact on the field of ethnic relations, but its foundations have been examined extensively and often found to be fragile (e.g., Yamagishi and Kiyonari 2000; Brubaker, Loveman, and Stamatov 2004; Hale 2008). The basic argument that minimal group categorization produces group-oriented behavior finds support in most work on social identity (Hale 2008).
5. The term *stronger ethnic* refers to someone who has a stronger tie to his or her ethnic group relative to other members of the group.
6. This hypothesis makes no claims about the baseline levels of successful identification. We are primarily interested in what causes variation around the baseline, regardless of how high or low it is. Our argument suggests that, because many individuals are not strong ethnics, the baseline should be relatively low. We present results about the baseline levels and variation around the baseline in the results section.
7. Others have shown that a sense of certainty tends to motivate emotions such as anger, which further encourage heuristic processing (Bodenhausen, Sheppard, and Kramer 1994; Tiedens and Linton 2001).
8. The name Mayibuya is substituted for the actual township name to preserve anonymity.
9. The identities from the census represent what Habyarimana et al. (2009) call "benchmark" identities. It is possible that they differ from what individuals would subjectively report if asked. We used the benchmark identities because, in the South African context, they capture the identities that individuals typically use. In Gibson's (2004) study, black South Africans almost always identified themselves either as South African or as one of the ethnic identities on the census, rather than another subcategory.
10. According to the 2001 Census this distribution is Zulu 23.8 percent, Xhosa 17.6 percent, Pedi 9.4 percent, Tswana 8.2 percent, Sotho 7.9 percent, Tsonga 4.4 percent, Swati 2.7 percent, Venda 2.3 percent, and Ndebele 1.6 percent (Statistics South Africa 2001).

11. The representer was asked to give the name with which she would introduce herself in conversation. In English, she says "My name is [insert name]."
12. In English, she says, "My surname is [insert surname]."
13. For videos 3 and 4, the representer had the freedom to choose whether she wanted to greet casually or formally. She also chose if she wanted to greet one person or many people. This was done so that each subject could greet in the way he or she felt most comfortable.
14. In videos 5 through 10, the individual stated the appropriate ethnic category and then proceeded to argue why she belongs to the purported group using the following script: "I am a [insert ethnic group]. My father is a [insert ethnic group] and my mother is a [insert ethnic group]. My family comes from [insert province or town of origin]. And traditionally, we wear [insert up to three articles of traditional clothing]."
15. For video 7, the "contradictory symbol" is for the assigned false ethnic identity. If a Xhosa is assigned to convince people that she is Zulu, then in video 7 she says that she is Xhosa, with the Zulu symbol behind her.
16. For video 10, the "contradictory symbol" is the symbol of the individual's true ethnic identity. If a Xhosa is assigned to convince people that she is Zulu, then in video 10 the person is saying she is Zulu, with the Xhosa symbol behind her.
17. The "false" identity was assigned prior to recruitment of ethnic representers. We first assigned at least one person in each group to pretend to be a member of one of the other eight ethnic groups so that we covered all groups, and then randomly assigned the remaining ethnic representers. For example, we recorded 23 Zulus, so we first assigned one man and one woman to pretend to be each of the other eight ethnic groups, and then we randomly assigned the remaining seven individuals making sure that none of these seven pretended to be members of the same group. When there were less than eight ethnic representers from a given ethnic group, we randomly assigned the false ethnic group.
18. The focus of the experiment is on individuals. States may also be involved in defining, identifying, and verifying ethnicity, but they are not the only actors that do so. Furthermore, the involvement of the state may fluctuate over time. In many countries, such as South Africa, the state has been far more involved in the past than it is now. Ultimately, individuals and groups of individuals might care about ethnicity because it can affect their personal welfare on a daily basis. Thus, a focus on individual-level ethnic identifiability does not capture all aspects of identification, but it is an important first step.
19. We chose obvious symbols for each group that would have approximately equal effects. For a Xhosa representer, we recorded three separate videos. In them, a Xhosa representer tried to convince the subject that she is Xhosa (1) without any symbol, (2) with the correct picture of a Xhosa in the background, and (3) with the incorrect Zulu picture. The same representer would then be recorded three more times trying to convince the subject that she is Zulu (1) without any picture in the background, (2) with the accompanying Zulu symbol, and (3) with the Xhosa symbol.
20. Another example is the Ama-Afrika group in the Eastern Cape, which was supported by the apartheid government and used violence, patronage, and cultural appeals to undermine the ANC and its Xhosa power base (Stiff 2002).

21. This article does find evidence that Zulus and Xhosa are most often mistakenly identified as the other group (see errors of inclusion in Table 1). What matters most may not actually be correct identification of smaller groups such as the Ndebele and Tswana, but rather that one can differentiate between Xhosa, Zulu, and everyone else collectively.
22. We also clustered on ethnic representer and subject–representer dyads, but report subject clustering because it is the most conservative test.
23. This instrument is not perfect and may be picking up noise related to, for example, a person's cognitive ability. Future research could systematically vary the measure as part of the experiment to refine the operationalization.
24. This measure is imperfect because it picks up age to some extent. Those individuals who have lived in the township for short periods of time might have just moved in or they might just be younger subjects.
25. Because subjects viewed and guessed on 152 photographs and videos, there are at least three potential biases due to time that we are concerned about. First, the subject might get better at guessing as she familiarizes herself with the experiment and the types of videos. Second, she might get tired and sloppy over time, not fully considering the information presented in each photo or video. Third, she might learn quickly and become better in the middle of the experiment, but then get tired and less accurate over time. It is also possible, but not probable, that individuals would begin successfully, get worse, and then get better.
26. In Supplementary Appendix, we report descriptive results of the percent correctly identified scaled by different levels of ethnic strength. This offers an initial breakdown of correct guesses, which we then quantify using the regression analyses reported in the article.
27. A likely explanation is that different ethnic groups often use similar words in their greetings, even though accents might be different. Depending on which part of the country they come from, for example, Pedis, Tswanas, and Sothos all use the same greeting regardless of their language. Also, most ethnic groups in South Africa have more than one greeting, which complicates the information the greeting provides.
28. We also pooled various conditions to consider what can be learned from similar sets of conditions. When pooling all of the sign conditions, the result is positive and significant, indicating that stronger ethnics are generally better at identifying others. We then pooled the signal conditions in five different ways and report all of the results in Supplementary Appendix. In short, these results indicate that the signal conditions generally aid accurate identification, especially when supportive symbols are displayed. When only contradictory symbols are included, guesses are less accurate.
29. For further robustness checks, we estimated three more models, which are not reported here. We first considered a control for whether the ethnic representer currently lives in the Eastern Cape. This control sought to check whether the ethnic representers actually characterized their ethnic groups as opposed to someone who has been among Xhosas and has "acclimatized" to the Eastern Cape. The results of all the regression models are qualitatively the same. We then measured the number of languages a subject speaks as a proxy for how much exposure the subject has to people outside of the Eastern Cape (a factor that might also be captured by gender, years in Mayibuya, and the strength score). The results are again very similar to those reported in the article.

30. We thank the anonymous reviewers for focusing on these two particularly important categories.
31. We addressed the homogeneity issue in several other ways. First, the rationale for having subjects from only one group was to explore variation on ethnic strength *within* the group as opposed to across groups. Given resource constraints, we chose to emphasize this dimension in order to understand strength of identity as clearly as possible. Second, although Mayibuya is relatively homogenous, we learned from interacting with Mayibuya residents that many do indeed interact with people from other ethnic groups, though not as much as someone that lives in the more heterogeneous areas of Johannesburg. In addition to interpersonal interactions, all news in the area is national and most people follow the news regularly. Third, in our analysis, we control for the number of years the subject has lived in Mayibuya to understand how insulated they have been.
32. Of course, some states carefully map and monitor towns and villages as they carry out targeted violence and displacement could lead to a situation in which coethnics congregate together, thus becoming an easier target.
33. As some violence can be spontaneous and seemingly random, we also expect our results to apply well to many isolated incidences of discrimination and violence that occur in day-to-day activities. This may apply in the context of targeted violence, but also in the context of ethnic discrimination in the economic or social sphere.

References

Alesina, Alberto, Arnaud Devleeschauwer, William Easterly, Sergio Kurlat, and Romain Wacziarg. 2003. "Fractionalization." *Journal of Economic Growth* 8 (2): 155–94.

Allport, G., and B. Kramer. 1946. "Some Roots of Prejudice." *Journal of Psychology* 22:9–39.

Anderson, Christopher, and Aida Paskeviciute. 2006. "How Ethnic and Linguistic Heterogeneity Influence the Prospects for Civil Society: A Comparative Study of Citizenship Behavior." *Journal of Politics* 68 (4): 783–802.

Arnold, Guy. 1995. *Wars in the World since 1945*. 2nd ed. London: Cassell.

Blascovich, Jim, Natalie A. Wyer, Laura A. Swart, and Jeffery L. Kibler. 1997. "Racism and Racial Categorization." *Journal of Personal and Social Psychology* 72 (6): 1364–72.

Bodenhausen, Galen, Lori Sheppard, and Geoffrey Kramer. 1994. "Negative Affect and Social Judgment: The Differential Impact of Anger and Sadness." *European Journal of Social Psychology* 24:45–62.

Brigham, John. 1971. "Ethnic Stereotypes." *Psychological Bulletin* 76 (1): 15–38.

Brigham, John. 1986. "Race and Eyewitness Identifications." In *Psychology of Intergroup Relations*, edited by Worchel Stephen, and William G. Austin, 260–82. Chicago: Nelson-Hall.

Brubaker, Rogers, Mara Loveman, and Peter Stamatov. 2004. "Ethnicity as Cognition." *Theory and Society* 33 (1): 31–64.

Cederman, Lars-Erik, and Luc Girardin. 2007. "Beyond Fractionalization: Mapping Ethnicity onto Nationalist Insurgencies." *American Political Science Review* 101 (February): 173–85.

Chandra, Kanchan. 2004. *Why Ethnic Parties Succeed: Patronage and Ethnic Head Counts in India*. Cambridge: Cambridge University Press.

Chandra, Kanchan. 2006a. "Counting Heads: A Theory of Voter and Elite Behaviour in Patronage Democracies" In *Patrons, Clients or Politics: Patterns of Political Accountability and Competition*, edited by Herbert Kitschelt, and Steven Wilkinson, 84–109. Cambridge: Cambridge University Press.

Chandra, Kanchan. 2006b. "What is Ethnic Identity and Does it Matter?" *Annual Review of Political Science* 9:397–424.

Chandra, Kanchan, and Steven Wilkinson. 2008. "Measuring the Effect of 'Ethnicity.'" *Comparative Political Studies* 41 (4-5): 515–63.

Davenport, Christian, and Allan Stam. 2009a. "What Really Happened in Rwanda?" Miller-McCune report. Accessed July 24, 2011. http://www.miller-mccune.com/politics/what-really-happened-in-rwanda-3432/.

Davenport, Christian, and Allan Stam. 2009b. "Rwandan Political Violence in Space and Time." Unpublished manuscript, University of Notre Dame.

Dorfman, Donald, Susan Keeve, and Carl Saslow. 1971. "Ethnic Identification: A Signal Detection Analysis." *Journal of Personality and Social Psychology* 18 (3): 373–79.

Duckitt, John. 2003. "Prejudice and Inter-group Hostility." In *Oxford Handbook of Political Psychology*, edited by David Sears, Leonie Huddy, and Robert Jervis, 559–660. Oxford, UK: Oxford University Press.

Eagly, Alice, and Shelly Chaiken. 1993. *The Psychology of Attitudes*. Fort Worth, TX: Harcourt Brace Jovanovich.

Eck, Kristine. 2009. "From Armed Conflict to War: Ethnic Mobilization and Conflict Intensification." *International Studies Quarterly* 53 (2): 369–88.

Fearon, James D. 1999. "Why Ethnic Politics and 'Pork' Tend to go Together." Presented at MacArthur Foundation-sponsored conference on Ethnic Politics and Democratic Stability, Wilder House, University of Chicago, May 21–23.

Fearon, James D., and David D. Laitin. 1996. "Explaining Interethnic Cooperation." *American Political Science Review* 90 (4): 715–35.

Fearon, James D., and David D. Laitin. 2003. "Ethnicity, Insurgency and Civil War." *American Political Science Review* 97 (February): 75–90.

Ferree, Karen 2004. "The Microfoundations of Ethnic Voting: Evidence from South Africa." *Afrobarometer Working Paper No. 40*, Institute for Democracy in South Africa, Cape Town.

Festinger, Leon 1957. *A Theory of Cognitive Dissonance*. Stanford, CA: Stanford University Press.

Gibson, James L. 2004. *Overcoming Apartheid: Can Truth Reconcile a Divided Nation?* New York: Russell Sage Foundation.

Gibson, James, and Amanda Gouws. 2003. *Overcoming Intolerance in South Africa: Experiments in Democratic Persuasion*. Cambridge: Cambridge University Press.

Gourevitch, Philip. 1998. *We Wish to Inform you that Tomorrow We will be Killed with our Families*. New York: Farrar, Straus and Giroux.

Habyarimana, James, Macartan Humphreys, Daniel Posner, and Jeremy Weinstein. 2007. "Placing and Passing: Evidence from Uganda on Ethnic Identification and Ethnic Deception." Presented at the American Political Science Association, Chicago.

Habyarimana, James, Macartan Humphreys, Daniel Posner, and Jeremy Weinstein. 2009. *Coethnicity: Diversity and the Dilemmas of Collective Action*. New York: Russell Sage Foundation.

Hale, Henry. 2008. *The Foundations of Ethnic Politics: Separatism of States and Nations in Eurasia and the World*. Cambridge: Cambridge University Press.

Horowitz, Donald L. 1985. *Ethnic Groups in Conflict*. Berkeley: University of California Press.

Horowitz, Donald L. 2001. *The Deadly Ethnic Riot*. Berkeley: University of California Press.

Kakar, Sudhir. 1996. *The Colors of Violence: Cultural Identities, Religion, and Conflict*. Chicago: The University of Chicago Press.

Kalyvas, Stathis. 2003. "The Ontology of 'Political Violence': Action and Identity in Civil Wars." *Perspectives on Politics* 1 (3): 475–94.

Kalyvas, Stathis. 2006. *The Logic of Violence in Civil War*. Cambridge: Cambridge University Press.

Kalyvas, Stathis. 2008. "Ethnic Defection in Civil War." *Comparative Political Studies* 41 (8): 1043–68.

Kaufmann, Chaim. 1996. "Possible and Impossible Solutions to Ethnic Civil Wars." *International Security* 20 (4): 136–75.

Kirschner, Shanna 2010. "Knowing Your Enemy: Information and Commitment Problems in Civil Wars." *Journal of Conflict Resolution* 54 (5): 745–70.

Kruglanski, Arie. 1990. "Motivations for Judging and Knowing: Implications for Causal Attribution." In *Handbook of Motivation and Cognition: Foundations of Social Behavior*, vol. 2, edited by E. Tory Higgins and Richard M. Sorrentino, 333–68. New York: Guilford Press.

Laitin, David D. 1995. "Marginality: A Microperspective." *Rationality and Society* 7 (January): 31–57.

Laitin, David D. 2004. "Ethnic Unmixing and Civil War." *Security Studies* 13 (4): 350–65.

Lilja, Jannie, and Lisa Hultman. 2011. "Intraethnic Dominance and Control: Violence against Coethnics in the Early Sri Lankan Civil War." *Security Studies* 20:171–97.

Lindzey, G., and S. Rogolsky. 1950. "Prejudice and Identification of Minority Group Membership." *Journal of Abnormal and Social Psychology* 45: 37–53.

Loftus, E. F. 1980. *Memories are Made of This: New Insights into the Working of Human Memory*. Reading, MA: Addison-Wesley.

Mackie, Diane, Arlene Asuncion, and Francine Rosselli. 1992. "The Impact of Positive Affect on Persuasion Processes." In *Emotion and Social Behavior*, edited by Margaret Clark, 201–20. Newbury Park, CA: Sage.

Marques, Jose, Vincent Yzerbyt, and Jacques-Philippe Leyens. 1988. "The 'Black Sheep Effect': Extremity of Judgments Towards Ingroup Members as a Function of Group Identification." *European Journal of Social Psychology* 18:1–16.

Phinney, Jean S. 1992. "The Multigroup Ethnic Identity Measure: A New Scale for Use with Diverse Groups." *Journal of Adolescent Research* 7 (April): 156–76.

Posen, Barry. 1993. "The Security Dilemma and Ethnic Conflict." *International Security* 35 (1): 27–47.

Posner, Daniel. 2004. "Measuring Ethnic Fractionalization in Africa." *American Journal of Political Science* 48 (4): 849–63.

Posner, Daniel. 2005. *Institutions and Ethnic Politics in Africa*. Cambridge: Cambridge University Press.

Posner, Daniel. 2007. "Regime Change and Ethnic Cleavages in Africa." *Comparative Political Studies* 40 (11): 1302–27.

Quanty, Michael, John Keats, and Stephen Harkins. 1975. "Prejudice and Criteria for Identification of Ethnic Photographs." *Journal of Personality and Social Psychology* 32 (3): 449–54.

Rice, Diana, and Brian Mullen. 2003. "Isaac, Ishmael, and Janus: Past and Future Lessons Regarding the Ethnic Categorization of Faces." *Applied Cognitive Psychology* 17 (9): 1129–47.

Saideman, Stephen, and William Ayres. 2000. "Determining the Causes of Irredentism: Logit Analyses of Minorities at Risk Data from the 1980s and 1990s." *Journal of Politics* 62 (4): 1126–44.

Saideman, Stephen, David Lanoue, Michael Campenni, and Samuel Stanton. 2002. "Democratization, Political Institutions, and Ethnic Conflict: A Pooled Time-Series Analysis, 1985-1998." *Comparative Political Studies* 35 (1): 103–29.

Sambanis, Nicholas, and Jonah Schulhofer-Wohl. 2009. "What's in a Line? Is Partition a Solution to Civil War." *International Security* 34 (2): 82–118.

Savitz, Leonard, and Richard Thomasson. 1959. "The Identifiability of Jews." *American Journal of Sociology* 64 (5): 468–75.

Sidanius, Jim, and Felicia Pratto. 1999. *Social Dominance: An Intergroup Theory of Social Hierarchy and Oppression*. Cambridge: Cambridge University Press.

Statistics South Africa. 2001. Census 2001. Accessed April 23, 2008. http://www.statssa.gov.za/census01/html/RSAPrimary.pdf.

Stiff, Peter. 2002. *Warfare by Other Means: South Africa in the 1980s*. Alberton, South Africa: Galago Books.

Tajfel, Henri. 1981. *Human Groups and Social Categories: Studies in Social Psychology*. New York: Cambridge University Press.

Tajfel, H., and J. C. Turner. 1979. "An Integrative Theory of Intergroup Conflict." In *The Social Psychology of Intergroup Relations*, edited by W. G. Austin, and S. Worchel, 33–47. Monterey, CA: Brooks/Cole.

Tajfel, H., and J. C. Turner. 1986. "The Social Identity Theory of Intergroup Behavior." In *Psychology of Intergroup Relations*, edited by S Worchel, and W. G. Austin, 7–24. Chicago: Nelson-Hall.

Taylor, Donald, and Fathali Moghaddam. 1994. *Theories of Intergroup Relations: International Social Psychological Perspectives*. Westport, CT: Praeger.

Tiedens, Larissa, and Susan Linton. 2001. "Judgment under Emotional Certainty and Uncertainty: The Effects of Specific Emotions on Information Processing." *Journal of Personality and Social Psychology* 81 (6): 973–88.

Toft, Monica. 2005. *The Geography of Ethnic Violence: Identity, Interests, and the Indivisibility of Territory*. Princeton, NJ: Princeton University Press.

Varshney, Ashutosh. 2001. "Ethnic Conflict and Civil Society: India and Beyond." *World Politics* 53 (3): 362–98.

Weary, Gifford, and Jill Jacobson. 1997. "Causal Uncertainty Beliefs and Diagnostic Information Seeking." *Journal of Personality and Social Psychology* 73 (4): 839–49.

Weidmann, Nils. 2009. "Geography as Motivation and Opportunity: Group Concentration and Ethnic Conflict." *Journal of Conflict Resolution* 53 (4): 526–43.

Yamagishi, Toshio, and Toko Kiyonari. 2000. "The Group as the Container of Generalized Reciprocity." *Social Psychology Quarterly* 63 (2): 116–32.

Yzerbyt, Vincent, Jacques-Philippe Leyens, and Fanny Bellour. 1995. "The Ingroup Overexclusion Effect: Identity Concerns in Decisions about Group Membership." *European Journal of Social Psychology* 25:1–16.