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**A sociolinguistic approach to implicit language attitudes towards historically white English accents among young L1 South African indigenous language speakers**

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**Abstract:** This study investigates the potential role of context-relevant sociolinguistic factors in explaining young L1 indigenous South African language speakers' IAT (Implicit Association Test) scores towards two varieties largely associated with the white group: Standard South African English and Afrikaans accented English. To this end, a post-IAT sociolinguistic survey on participants' linguistic background, language exposure and intergroup social distance levels (among other social factors) was used. Separate ANOVAS were performed using the IAT reaction times as a dependent variable and sociolinguistic variables as factors. Notably, the sociolinguistic approach revealed that more positive attitudes towards Afrikaans accented English are correlated with the language range of participants, the dominant languages spoken in their places of origin, and the type of school they have attended.

**Keywords:** language attitudes, language indexicality, Implicit Association Test, Afrikaans accented English, Standard South African English

## 1 Introduction

### 1.1 On explicit and implicit attitudes

Traditionally, many human behaviours were thought to be rooted in deliberate reasoning processes (Gawronski and Bodenhausen 2006; Moors and De Houwer 2006). However, this general assumption has been contested by scholars from different scientific disciplines. Studies on intergroup relations and social prejudice have been very prolific in this regard. Within the field of social behaviour, one of the most important conclusions drawn by psychologists is that the overt

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expression of prejudiced beliefs has continuously declined over the past decades, giving way to subtler forms (Gawronski et al. 2008). As a result, it is important to differentiate between *explicit attitudes* which typically predict more deliberate behaviours, and *implicit attitudes* which are associated with more automatic behavioural processes outside people's awareness or control (Son Hing et al. 2008).

Although much of the research work in this field has been devoted to racial, religious, age or sexual orientation matters, their findings have significant methodological implications which can be easily extended to the linguistic arena. Gawronski and Bodenhausen (2006: 692) state that while explicit attitudes are usually assessed by traditional self-reported measures (see also Gawronski et al. 2008), implicit attitudes are typically inferred from people's performance on response latency measures and sequential priming tasks, among other methods. In addition, current research studies on this matter underline that implicit and explicit measures tend to be weakly related (Son Hing et al. 2008; Cunningham et al. 2004), resulting in the study of their inter-relationship as a new research trend (Gawronski and Strack 2004; Rydell et al. 2008; Shoda et al. 2014, among others). Therefore, it would not be unlikely to find mismatches between what people report they think (deliberate action) and what they really feel or believe (unconscious or spontaneous actions).

Moving onto the linguistic field, traditional methodological approaches to the study of language attitudes (e. g. interviews, surveys, etc.) seem to be in line with the study of explicit attitudes, neglecting or underestimating an important opportunity to explore speakers' linguistic (implicit) biases from a deeper level which might contribute to understanding not only language attitudes but also intergroup linguistic behaviour. With the clear intention of exploring the latter option, the next section will offer a brief overview of previous works which helped determine our methodological approach and underline the relevance of our findings.

## 1.2 IAT and language attitudes

In recent years, advances in social cognition research have shown that individuals' ability to reason unconsciously about social constructs is far greater than previously suspected (Campbell-Kibler 2012). Leading scholars from social psychology and interrelated areas have developed different methods to measure people's implicit bias, including the Implicit Associated Test (IAT). This tool, designed by Greenwald et al. (1998) to measure differential association of two target concepts (e. g. two racial groups) with an attribute (e. g. relevant social features), has been extensively used in the past two decades. Despite some

criticism regarding the use and the interpretation of the data generated by IAT,<sup>1</sup> researchers have proven this method to be effective in assessing the strength of the associations between concepts and evaluations by means of participants' reaction times (RT) towards given stimuli (Olson and Fazio 2004; Baron and Banaji 2006; Greenwald et al. 2009; Rosseel et al. 2018).

The use of IAT to assess language attitudes has only begun very recently. Due to the indexical nature of language (Bucholtz and Hall 2004), individuals might also transfer certain characteristics associated with a specific social group to the language variety they use (Campbell-Kibler 2012), despite the fact that such generalization might disregard significant ingroup variation and even take a toll on their intergroup relations (Spitulnik 1998; Makihara and Schieffelin 2007; Adams et al. 2012; Álvarez-Mosquera 2017a). Departing from the evidence that implicit attitudes are highly stable as they are rooted in socialization experiences (Gawronski and Bodenhausen 2006, see also Rudman 2004; Wilson et al. 2000), it was unexpected to find that only a few recent studies have used IAT to investigate the effect of implicit language attitudes in perceiving or conceptualizing speakers.

As previously described in an earlier pilot study (Álvarez-Mosquera 2017b) and in a short report on the effective use of this methodology in the South African context (Álvarez-Mosquera and Marín-Gutiérrez 2018), a limited number of researchers have adopted IAT for sociolinguistic purposes (see Babel 2010; Redinger 2010; Campbell-Kibler 2012; Rosseel et al. 2015, Rosseel et al. 2018). Of special importance from a methodological view point and our current line of research, Pantos (2010; see also Pantos and Perkins 2013) replaced visual inputs (e. g. faces – commonly used in social psychology) by audio inputs to investigate implicit attitudes of native U.S. English speakers toward U.S.-accented speech and foreign-accented speech. In line with Pantos' approach, we designed a similar experiment (pilot study) to test the viability of this tool in the South African context with a small multi-ethnic and multilingual sample (n = 13) which represents the germ of this research project (Álvarez-Mosquera 2017b;

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<sup>1</sup> Despite the popularity of the IAT, a number of research studies have questioned the use and the type of data generated by this tool. Blanton et al. (2009) warned about potential measurement errors in the way the test is scored which can lead to incorrect conclusions, especially when used as a diagnostic tool. Consequently, they highlight the central importance of revising the psychometric properties. Similarly, Azar (2008) advises reducing the noise that incorrect usage can produce on the final results. As these and other objections have been previously discussed (see Álvarez-Mosquera and Marín-Gutiérrez 2018; Rosseel et al. 2018), we would like to underline that, as long as the researcher has a clear idea of the scopes, strengths and weaknesses of this tool, IAT can be a useful tool of analysis. For more details on how this tool works see Section 2.

see also methodology). More specifically, the results of that exploratory study carried out in 2015 showed that, in testing attitudes towards two accents largely associated with white South Africans (Afrikaans accented English and Standard South African English) there seems to be a potential positive trend towards the latter, although the low number of the linguistically diverse sample hindered its statistical validity. As opposed to Pantos' approach, the pilot study also took into account relevant sociolinguistic parameters in the local context, including participants' linguistic background, language exposure and inter-group social distance levels. Results showed an overall consistency between the IAT results and the participants' sociolinguistic background (Álvarez-Mosquera 2017b).

Following this approach, we replicated this study (2016) in order to corroborate the efficacy of this tool in determining language attitudes; on this occasion, L1 South African indigenous language speakers' attitudes towards the same English accents (Álvarez-Mosquera and Marín-Gutiérrez 2018). With a much higher number of participants ( $n = 79$ ), the results suggested that these participants – native speakers of any of the nine official indigenous languages – showed statistically significant negative attitudes towards Afrikaans accented English speakers which, in turn, proved the indexical nature of accents in triggering language attitudes. Based on the relevance of these data, the current article aims to delve deeper in the study of the role of language attitudes in the process of social categorization of speakers of the two selected accents by analysing the consistency between the IAT results and the participants' sociolinguistic background. However, before proceeding with the specificities of our methodological approach, further information about the sociolinguistic dynamics of South Africa concerning the targeted language groups will be provided.

### 1.3 The South African case

In order to understand the significance of our approach and the value of our results, it is central to address the linguistic situation in South Africa. In a country with 11 official languages where English is the main lingua franca across ethnic groups, this study focuses on the attitudes towards two English varieties historically associated with the white groups, namely Standard South African English and Afrikaans accented English.<sup>2</sup> An appropriate contextualization of

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<sup>2</sup> By *Standard South African English* (SAE) in this article we refer to what Lass (2002) describes as the local standard (earlier term: Respectable SAE). This variety differs from an exocentric BBC-oriented English. We are aware that this term is not fully unproblematic as recent research have shown that middle-class speakers from other ethnic groups have adopted features of SAE

these varieties requires taking into account fundamental aspects of their original speaking communities. On the one hand, Afrikaans – despite having more speakers in the coloured group than in the white group (Census 2011; see also footnote 2) – is still negatively viewed by most of the black population of South Africa due to various socio-historical reasons (see Painter and Dixon 2013). As specified in the previous stages of this research (Álvarez-Mosquera 2017b; Álvarez-Mosquera and Marín-Gutiérrez 2018), the Bantu Education Act (1953) which was the legislation provided for racially segregated education, drastically accentuated the status of Afrikaans as the language of oppression (Kamwangamalu 2003; Rudwick 2008). Even with the arrival of the democracy (1992), Afrikaans continued to experience a constant decline in socio-political and economic terms. As a case in point, the social media propelled #AfrikaansMustFall campaign in 2016 resulted in the recent removal of Afrikaans as a language of instruction in several higher educational institutions such as the University of Stellenbosh and the University of Pretoria, among others (Prinsloo 2007; Painter and Dixon 2013; Fraser 2015; Giliomee 2016).

On the other hand, the current situation of English in the South African context is completely different. Despite also being a colonial language (together with Afrikaans), its status as a dominant language has been continuously strengthened over time. In this regard, English has monopolized the activity in the parliament, media, government institutions, and, in general terms, intergroup interactions with speakers of different language backgrounds (Kamwangamalu 2003; Mesthrie 2006; Bangeni and Kapp 2007). In addition, English is seen as the language of advancement among the youth (Greenfield 2010); a position which is reinforced by its status as a global language and its predominance in the country's economic sector (Cornelissen and Horstmeier 2002; Casale and Posel 2011). Not surprisingly, the social relevance of English and the gradual decline of Afrikaans led the former towards a dominant position in the educational system too, as this might be also the result of its role as a lingua franca and its perception as a *neutral* language (Silva 1997; De Klerk 2002; Teferra and Altbach 2004).

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to different degrees in what can be defined as a process of linguistic *deracialization* (see Mesthrie 2010, Mesthrie 2017; Wilmot 2014). However, we can still assert that, in general terms, this variety remains largely associated with South African whites. Regarding the term *Afrikaans-accented English*, we refer to the English produced by L1 white Afrikaans speakers. This variety should not be confused with Cape Flats English (also known as Kaaps or Cape Vernacular Afrikaans) mostly spoken by coloured people in Cape Town (Finn 2008) which is related to but identifiably different from white Afrikaans-accented English due to distinctive lexical, phonological, syntactic and morphological features (see Dyers 2015: 57–58). The audio files used in this study have been supervised by the distinguished South African Linguist Professor Rajend Mesthrie.

Taking this complex socio-historical background into account, the study of the formation and evolution of contemporary language attitudes in South Africa appears to be of central importance. However, little academic attention has been given to this aspect in the past few decades. Notably, De Klerk (1999) underlined how the higher social status of English (and Afrikaans to some extent) have shaped social attitudes towards both colonial and indigenous languages in the country. In the case of Afrikaans, the earlier attempts to resist the Anglicization of Southern Africa turned this language into a symbol of white Afrikaner nationalism (Painter and Dixon 2013: 110), and despite Afrikaans language activists' efforts to normalize and improve social attitudes towards this language (Webb 2010), a change in overall attitudes has not yet been confirmed. In recent times, Painter and Dixon (2013) denounced the significant lack of research on language attitudes across the largest ethnic groups in South Africa. In line with our research, these researchers already highlighted the need to investigate accent evaluation due to its informativity and subtle influence on the role of social categorization (Painter and Dixon 2013: 109; see also Álvarez-Mosquera and Marín-Gutiérrez 2018).

Therefore, in a country where English has a prominent social role as the main lingua franca across the different ethnic groups, the aim of this study is to fill this research lacuna. As specified before, we seek to contribute to the understanding of language attitudes towards two accents historically associated with the white groups (Standard South African English and Afrikaans accented English) by studying the correlations between IAT data and a number of socio-linguistic variables (see Section 2.2). Due to their complex socio-historical backgrounds, we will focus specifically on young L1 South African indigenous speakers' implicit attitudes, a generation that was either born after the apartheid era or was too young to remember anything directly from that period. Although further information about the participants will be provided, we need to keep in mind that we have carried this study among college students at the University of Cape Town (UCT), a multi-ethnic institution where English is the main language of instruction. This environment guarantees the exposure of our participants to individuals from the main ethnic and linguistic groups and a good command of the English language (see Section 2.3 for further details).

## 2 Methodology

This article replicates the methodological approach followed by Álvarez-Mosquera (2017b) in the original pilot study carried out in April 2015 with a

much higher number of participants ( $n = 79$ ). More specifically, the sociolinguistic approach maintained in this study seeks to determine what social variables might or might not contribute to the development of the detected statistically significant negative attitudes towards the Afrikaans accented variety among the target group (Álvarez-Mosquera and Marín-Gutiérrez 2018) due to its potential relevance in the social categorization process. To do so, we will first explain how the IAT data were obtained in an earlier stage of this study (Section 2.1) and then explore the correlations between IAT results and sociolinguistic outcomes of the post-IAT survey (Section 2.2). Specific details about the selected sample will be also provided (Section 2.3).

## 2.1 IAT procedure

The IAT's computer-based tasks were presented using E-prime 2.0.10 (build 353) in order to display the audio clips and social traits to participants and record their responses as well as their reaction times. The audio clips consisted of 7 pre-tested neutral sentences in each of the accents (14 audios in total). To record them, we selected two females from the same age group, comparable (educated) social background and with a perceptible accent of their mother tongue (English and Afrikaans respectively). As for the social traits, we used a total of eight words which were clearly positive in social terms (e. g. friendly, gentle, loving, etc.) and eight clearly negative (rude, racist, untrustworthy, etc.). Each participant completed the IAT's computer-based tasks under the same conditions.<sup>3</sup>

All the audio and textual inputs were organized in five blocks which were presented to each participant. Blocks 1, 2 and 4 were training blocks that consistently showed stimuli in isolation (either words or audios) and participants only had to classify them according to two provided categories which were assigned two different keys in the keyboard (e. g. classifying *racist* as a *good* or *bad* social trait). In contrast, blocks 3 and 5 were measurement blocks in that they presented paired categories (see Álvarez-Mosquera 2017b). In Block 3, participants found that Afrikaans accented English was paired with bad (negative) social traits by assigning both categories to the same response key, while Standard South African English was associated with positive ones following the

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<sup>3</sup> The main researcher obtained ethical clearance from the Linguistic section of the School of African and Gender Studies, Anthropology and Linguistics (AXL) at the University of Cape Town. Participation was entirely voluntary. The names of the participants were not used except for the informed consent form that they read and signed. This study involved no known risks to the participants.



same procedure (congruent condition).<sup>4</sup> Throughout this block, participants were requested to sort both audio inputs (language varieties) and words (both types of social traits) – presented one at the time – into the right category as fast as they could. Stimuli (words or audios) were presented in a random order and no more than three of either category appeared consecutively. Block 5 displayed the reversed combined task presented in Block 3, that is, Afrikaans accented English was paired with positive attributes and Standard South African English with negative ones (incongruent condition).

With this design, when the mapping of one of the English varieties and a type social traits (positive or negative) were in line with the participant's attitudes, we found faster responses as the association of the two retrieved it faster. On the contrary, if they were not in line, slower answers were registered.

## 2.2 Sociolinguistic approach

In order to accomplish the main goal of this study, a post-IAT survey was used to determine what social variables might play a role in the development of the detected statistically significant diverging attitudes. The importance of the findings lies in the fact that language attitudes might deeply affect the social categorization process and consequently, intergroup relationships. Understanding the social dynamics that can trigger or hinder such attitudes appears to be of central importance. To do so, we paid particular attention to the correlations between the IAT results and the sociolinguistic information participants provided us in a post-IAT survey. More specifically, we kept a record of the participants' ethno-linguistic and geographical backgrounds as possible factors which could have an impact on participants' IAT scores. This included participants' language repertoire, languages used at home, places of residence and most spoken languages in their environment. Different from the pilot study, we added *type of schools attended*<sup>5</sup> as a new variable. In addition, the degree of social distance with regard to specific indicators of inter-group contact was also considered due to its sociolinguistic

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<sup>4</sup> Taking into account the recent history of this country (see Section 1), the association of positive traits to Standard South African English and negative traits to Afrikaans accented English was established as the *congruent condition* (Block 3) The opposite association of features to each variety (Block 5) was considered the *incongruent condition*.

<sup>5</sup> In South Africa, there are three major types of schooling: government (public) schools, ex-Model C schools (former whites-only government schools, currently semi-private and state-controlled), private (independent) schools. Fees and educational standards tend to be higher in the last two types of schools as well as the number of white students (Wa Kivulu et al. 2010: 129; Roodt 2011).



relevance (see Álvarez-Mosquera 2017a). The underlying idea is to determine to what degree their (potential) exposure to speakers of the two language varieties under investigation throughout their lives (according to participants' responses and the latest census) can play a role in shaping their language attitudes.

## 2.3 Participants

L1 South African indigenous language speakers were our target group so as to find correlations between their language attitudes towards Standard South African English and Afrikaans accented English, and their sociolinguistic background. Relevant to our approach, this study specifically focuses on the language attitudes of a generation of South Africans who are not directly connected to the apartheid era. Therefore, all our participants were between 18 and 25 years old. In accordance with these parameters, students enrolled at UCT were regarded as ideal in that we were not only interested in the language attitudes of members of this post-apartheid generation, but also the multi-ethnic composition of the student body would guarantee at least some exposure to other racial (and language) groups. In this regard, according to the Centre for Higher Education Trust (organization that publishes relevant data and performance 20 indicators for the 26 public universities in South Africa), the UCT student body in 2015 – latest available data – was made up of 24.88% black students, 13.13% coloured students, 6.85% Indian students, and 29.74% whites. Remarkably, 25.38% of them did not specify their racial group as self-disclosure of race is voluntary at this institution. Having established the rationale to choose this population group, we also acknowledge the fact that our sample represents a very specific sector of the South African population, that is, highly educated young individuals in an elite university.<sup>6</sup> While the research interest is still obvious in that they represent, to some degree, the future of this country, we are aware that the specificities of this context will require further testing in order to gain insight in other social spheres.

A call for participation was distributed through different UCT forums and other participants were recruited on campus. A total of 81 subjects completed the experiment. Following the standard procedures, one participant was eliminated because of high number of errors on the IAT and another due to the excessive reaction times. Results were calculated using the remaining 79 participants.

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<sup>6</sup> R500 million are made available by UCT as financial aid to both ensure that it attracts the best students and redress past disadvantage and ensure a diverse student body (UCT Admission policy).

## 3 Results

### 3.1 IAT

With regard to the IAT data, reaction times were subjected to an analysis of variance (ANOVA) with *congruence* (congruence vs. incongruence) acting as the independent variable. Results showed a main effect of congruency explained by shorter reaction times in the congruent condition ( $M = 1111.96$ ) in comparison with the incongruent condition ( $M = 1163.15$ ),  $F(1, 78) = 12.58$ ;  $p < 0.001$  (see Álvarez-Mosquera and Marín-Gutiérrez [2018] for further details). In other words, this group of L1 South African indigenous language speakers showed a statistically significant positive attitude toward Standard South African English more often than toward Afrikaans-accented English by means of making these connections faster in the congruent condition. This outcome also proved the indexical nature of accents in triggering language attitudes.

### 3.2 Sociolinguistic approach

Central to our approach, in this study we kept record of each participant's ethnolinguistic and geographical background so as to investigate potential relationships between these variables and the participants' IAT scores. For analytical purposes, we coded and/or quantified (1) their mother tongue (L1), (2) languages spoken at home, (3) languages they spoke fluently, (4) the three most spoken languages in their communities, (5) place/s of residence (including their time living in each of them), (6) type of school(s) attended, and (7) the degree of social distance<sup>7</sup> with the main ethnic groups in South Africa. With this design we aimed to detect which of

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<sup>7</sup> As noted in the pilot study, this variable, designed in collaboration of other South African researchers, was calculated through participants' answers to the following questions (using a 10 point grading scale):

(1) How familiar would you say you are with members of these groups?; (2) How often do you do things socially with members of this group? (This includes things like going to movies or parties, eating together, etc.); (3) How often do you study or do other class work with members of this group?; (4) How often do you have social contact with members of this group in your/their home? and (5) How many people from this group do you consider core/close friends? (Álvarez-Mosquera 2017b).

With this design, we grouped participants' overall punctuations into four stages of social distance: low (39–50), mid-low (26–38), mid-high (13–25), high (0–12).

the aforementioned variables could be associated with the implicit linguistic attitudes shown by participants towards the studied speaking groups. In order to explore this scenario, separate ANOVAS were performed using the reaction times as a dependent variable and sociolinguistic variables as factors (see Table 1).

Overall, this sociolinguistic approach provides us with socially relevant data that add more value to the mere main effect of congruency detected by IAT. As we can see in Table 1, the language range of participants, the main languages spoken in their places of origin and the type of school they have attended appear to play a significant role in their overall perception of these two speaking groups. The significance of these results and its sociolinguistic interpretation will be specifically addressed and contextualized in the following section.

### 3.3 Analysis and contextualization of the findings

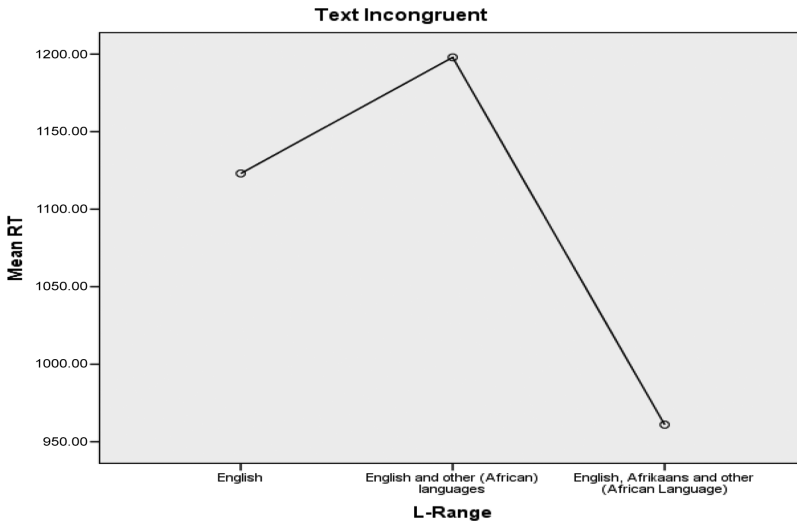
With a higher number of participants ( $n = 79$ ), a specific target group (L1 South African indigenous language speakers) and a new variable (type of school), the results of this extension of the 2015 pilot study effectively contribute to untangle the social dynamics that might trigger or hinder language attitudes toward the two selected varieties among members of the target group. Of special relevance to the current South African context, besides confirming an overall positive bias toward the Standard variety, our sociolinguistic approach detected statistically significant differences within the specific group of participants who showed a more positive attitude towards Afrikaans accented English than to Standard English. Each of the aforementioned factors (see Table 1) that appear to play a role in the emergence and/or development of these attitudes will be now further analysed.

First, the language range of the participants seemed to be central to the process of developing implicit attitudes towards outgroup speakers. In this sense, this effect was detected when participants processed textual inputs. More specifically, those participants whose language range included Afrikaans presented statistically significant lower reaction times in the incongruent condition, that is to say, when Afrikaans accented English was associated with positive social features (see Figure 1). From a socio-cognitive perspective, these results suggest that their potential use of the Afrikaans language with other Afrikaans speakers might have equipped them with enough counter-examples to dismantle the prototypical negative social image attached to Afrikaans speakers (see Park and Judd 1990; Finlayson et al. 1998; Álvarez-Mosquera 2017a). In this regard, it is perhaps important to note that all participants spoke English (main lingua franca in the country and language of instruction at UCT) and none of our participants were fluent in Afrikaans only (besides their own L-1).

Table 1: ANOVAS performed with the sociolinguistic variables.

	Gender		L1		Home		L-Range		1st Com		Residence		School		S D (Whites)	
	F	p	F	p	F	p	F	p	F	p	F	p	F	p	F	p
Audio_cong	0,49	0,49	1,65	0,13	1,00	0,45	2,98	0,06	0,53	0,87	0,96	0,42	*5,99	0,00	0,20	0,90
Text_cong	1,11	0,30	1,68	0,13	1,73	0,10	2,13	0,13	1,36	0,22	1,40	0,25	*4,55	0,01	0,45	0,72
Audio_incong	1,20	0,28	1,53	0,17	1,24	0,29	2,66	0,08	0,91	0,53	1,05	0,38	*5,03	0,01	1,15	0,34
Text_incong	2,85	0,10	1,64	0,14	1,30	0,25	*5,252	0,01	1,33	0,24	*2,885	0,04	*4,99	0,01	0,52	0,67

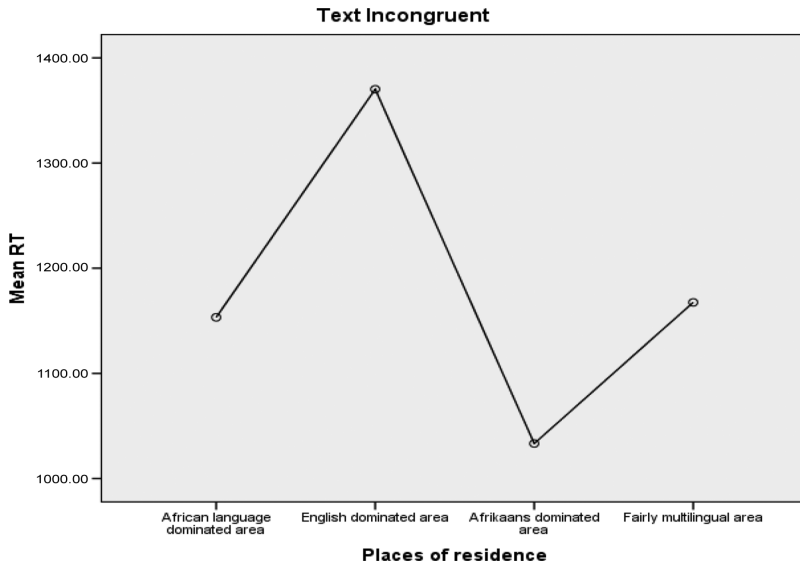
Note: L1 = Mother Language; Home = languages spoken at home; L-range = languages spoken fluently; 1st\_Com = main language spoken in the community; Residence = main language/s spoken in their place/s of residence; S\_D = Social Distance. (\*) Statistically significant effects



**Figure 1:** L-1 indigenous African language speakers' language range and RT (text incongruent).

Continuing with the analysis of other factors that might interfere in the process of shaping participants' language attitudes, the variable *language exposure* appears to be statistically significant as well. In our survey, participants were asked to specify their place(s) of residence and the approximate time living in each of them (if more than one). We used the 2011 census data to determine participant's *relative* language exposure (see Deumert 2010). In doing so, we differentiated among clearly *Afrikaans-dominated areas*, *English dominated areas* and *African language dominated areas* (for any of the nine indigenous South African languages). In addition, when participants lived in several places with different language distributions or in places with an unclear dominant language, we used the category *fairly multilingual areas* instead.

Following this approach, Figure 2 clearly illustrates how those L1 South African indigenous language speakers who live or had lived in Afrikaans dominated areas present statistically shorter reaction times when processing incongruent textual inputs, that is, positive terms associated with Afrikaans accented English. On the contrary, those participants who lived in English dominated areas show the longest reaction times with the same input, while residents in African language dominated areas and fairly multilingual locations presented intermediate scores. In other words, participants' higher exposure to speakers of Afrikaans appears to reverse the pattern drawn by those participants who do not have this exposure, especially in English dominated areas, and consequently tend to rely on more (negative) stereotypical features associated with Afrikaans



**Figure 2:** Place of residence and RT (text incongruent).

accented speakers (Park and Judd 1990; Finlayson et al. 1998; Álvarez-Mosquera 2017a). The cognitive impact of social interaction in the process of social categorization has been addressed by many scholars in the last decades. Notably, research suggests that social interaction by itself is not enough to improve intergroup relationships (Pettigrew 1998; see also Islam and Hewstone 1993), and the same limited effects should be expected for changing implicit (social) attitudes. However, in line with our results, Seutloali (2015) conducted a study on own-race bias in facial recognition amongst black, coloured and white South Africans. Unlike previous studies that tend to use self-report methods to measure participants' interracial contact, in this study the researcher was able to establish participants' interracial friendships as one of the main factors that diminishes own-race bias (Seutloali 2015: 3) by empirically studying the racial compositions of their home towns. Her results showed a moderate negative correlation between interracial contact and own-race bias (Seutloali 2015: 25). From the linguistic point of view, Figure 2 suggests that language exposure can also interfere with how participants have been cognitively associating different social features to speakers of different language varieties (and their corresponding accents in English) according to their own experience. In this regard, their exposure to a larger number of speakers of Afrikaans and their possible interaction (even through English) in this case, given certain social conditions (Crisp

and Beck 2005; see also Hewstone et al. 2002; Miller 2002), might have led to the emergence of alternative models, distancing themselves from stereotypical features (Pettigrew [1998], see also Islam and Hewstone [1993]).

The last factor which deserves particular attention is the type of school that participants have attended. The schooling options in South Africa mostly consist of government (public) schools, ex-Model C schools and private (independent) schools. Public schools, the vast majority in the country, depend on the government for funding and supplies. In general terms, due to the lack of financing and official monitoring, many children at these institutions receive low standards of education as a result of overcrowded facilities, mostly unqualified teachers or absence of appropriate equipment (Power n.d.). Ex-Model C schools are currently governing body-funded public institutions. Although this name is no longer official, this term has remained useful as it continues to denote schools with some additional financial resources and other means to provide better education, better facilities, more experienced staff, and other school management advantages. Previously only white institutions situated in former suburban, town and city locations, they tend to keep English or Afrikaans as their language of instruction. In recent times, many of these schools have all become parallel-medium schools, using both English and Afrikaans in their classrooms (C. Prinsloo, personal communication, July 19, 2017). Finally, South African students can also attend private or independent schools. Although they are still under the jurisdiction of the Department of Basic Education (DBE), their greater financial resources allow them to offer different subjects and have additional academic resources which tend to result in higher educational standards. Private schools are much more expensive than any of the public schools and are attended by children from middle and high income families (Power n.d.).

Going back to our study, although each participant's personal (language) experience in any of these schools is practically impossible to measure, the data obtained in this section show a diverging pattern for those students who attended ex-Model C schools. As shown in Figure 3, ex-Model C school former students present statistically significant lower reaction times with both inputs (textual and audio) in both conditions (congruent and incongruent). A possible explanation for these distinct results might have to do with the language policies followed in these institutions as their students' language attitudes significantly differ from private school or government (public) school's students. More specifically, as we stated above, many of the centers are currently parallel-medium schools that use both English and Afrikaans as languages of instruction and this might result in students attaching a different cognitive load to the mental representation of speakers of the targeted varieties. Taking into account this



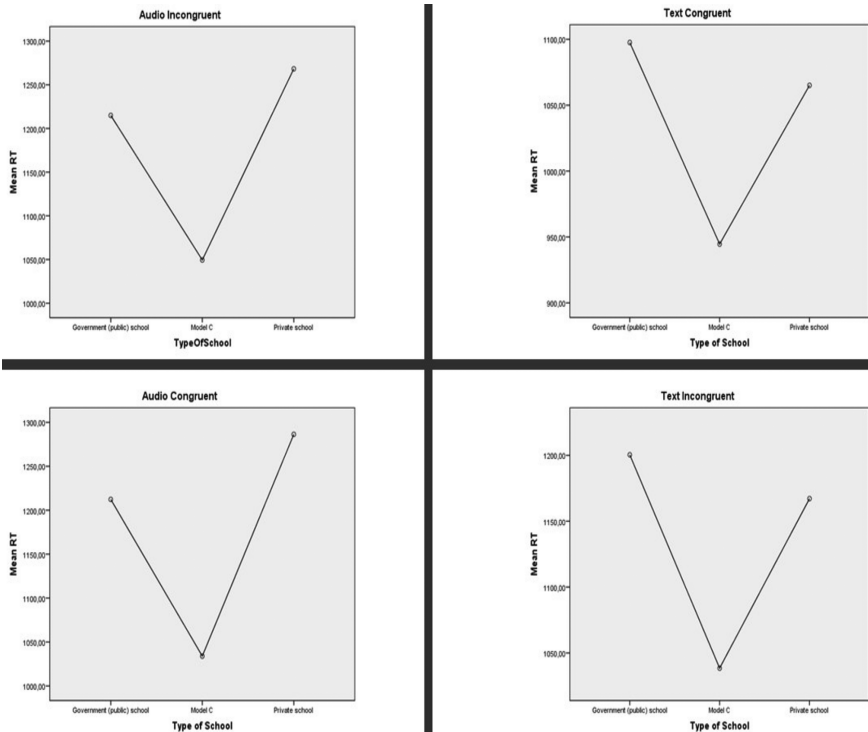


Figure 3: Type of school and RT for all inputs.

divergent pattern, one could highlight the fundamental role of education in the development of positive social/linguistic attitudes. In this regard, parallel-medium education seems to equip L-1 indigenous South African language speakers with the necessary language abilities and/or exposure to boost the cognitive benefits of (extended) close interaction with members of these two speaking groups. C. Prinsloo (personal communication, July 19, 2017), former Chief Research Specialist in the Education and Skills Development research program at the Human Science Research Council (HSRC; see also Wa Kivulu et al. 2010; Roodt 2011), states that “urbanization and bussing in children from townships on the fringes of cities and towns, resulted in a range of outcomes that are not at all homogenous any longer as to the home languages and population groups of these schools and areas”. Our results, then, might underline a potential outcome of the increasing ethno-linguistic diversity in this type of schools.

In line with this last observation, based on previous social psychology studies conducted in South African higher educational institutions (Tredoux et al. 2005;

Finchilescu et al. 2007) which have documented cases of limited intergroup relations (e. g. auto-segregation patterns), it might be also worth highlighting the potential positive socio-cognitive effects of an earlier and longer exposure to out-group language varieties in the academic environment. In this regard, the linguistic factor – a central element in establishing intergroup contact – should be taken into account in future socio-psychology studies due to its potential role in changing or fostering intergroup interaction.

## 4 Discussion

From a wider perspective, the scientific relevance of these findings lies in the fact that L1 indigenous South African speakers represent the vast majority of the South African population, while English is most often the chosen lingua franca in interracial interactions. Therefore, nowadays, English is being used to communicate between this large (and diverse) group and white speakers in this case, making accents in this language highly informative. Our overall results suggest that, most likely as a result of socio-historical and social-cultural factors – including patterns of (auto)segregation and the lack of inter-group social contact, among others (see Tredoux et al. 2005; Finchilescu et al. 2007; Dixon et al. 2010; Álvarez-Mosquera 2017a) – the indexicality of the Afrikaans accent used in this study appears to be enough to trigger overall implicit negative attitudes among the majority of this young target group (Álvarez-Mosquera and Marín-Gutiérrez 2018).

Focusing on our sociolinguistic approach, the results also show that a limited number of young L1 South African indigenous language speakers seem to revert these stereotypical negative associations as a result of their lived experiences (see also Gawronski and Strack 2004; Rydell et al. 2008). More specifically, being able to communicate in Afrikaans, living in an Afrikaans dominated area or even attending hypothetically multiracial schools with multilingual education or with Afrikaans as a language of instruction [ex-Model C schools] could potentially provide participants with enough personal interaction with Afrikaans accented English speakers so as to create a more diverse mental representation of this group. This first-hand experience with members of this language group would then prevent participants from relying on prototypical associated features as they would be equipped with enough counter-stereotypical information.

The results of this study also underline that the emergence of positive attitudes towards Afrikaans accented English among members of the L1 indigenous South African speaking communities is still exceptional. In fact, recent student movements like #AfrikaansMustFall (with significant support from the black youth)

might corroborate a significant divergence in the perception of the two *colonial languages*. Thus, Afrikaans (and not so much English) appears to be more strongly associated to pre-democracy stereotypes even among this younger social sector (see Álvarez-Mosquera 2017a) and these associations seem to be projected in their respective accents in English. In framing this general finding, besides taking into account the specific profile of our participants (e. g. educational context), we cannot ignore other current noticeable social aspects of the South African society which might influence the participants' mental representation of speakers of these varieties. This includes, but it is not limited to, facts related to unbalanced wealth distribution and uneven socioeconomic power relations (Gibson and Claassen 2010) which shape the social dynamics of this country. In this regard, the more relevant role of English in today's South Africa (Casale and Posel 2011), including in the educational setting (Greenfield 2010; Parmegiani 2014), cannot be ignored in terms of allocating a more positive cognitive load to native speakers of this language.

## 5 Conclusion

This study has effectively contributed to the exploration of the use of IAT for sociolinguistic purposes. Given the difficulty of investigating the role of implicit language attitudes in society, our findings demonstrate that the mixed-method approach used in our pilot study (Álvarez-Mosquera 2017b) is able to trigger informative data that contribute to explaining the language attitudes detected by IAT in great detail. In general terms, the above data provided us with valuable information that underline the central role of accents in South Africa's main interracial lingua franca, that is, English. Focusing on the largest racial group in South Africa (L1 indigenous South African language speakers) and given the fact that IAT only allows us to work with binary variables, the results corroborate an overall positive bias toward one of the two language varieties largely associated with the white group: Standard South African English. Despite this outcome, our methodological approach was also able to detect diverging socialization patterns among those participants who presented statistically significant positive attitudes towards Afrikaans accented English.

To conclude, it is important to acknowledge that, from a cognitive perspective, language perceptions can be influenced by other personal experiences of which the impact is hard to measure objectively. Consequently, these experiences might play an important role in the emergence of positive or negative attitudes towards any of the two accents that we investigated. Further research should delve deeper into the array of personal experiences which might have a significant

cognitive effect on determining attitudes toward these and other language varieties or accents in the South African context. Moreover, possible comparisons between explicit and implicit attitudes in this context could contribute to the understanding of implicit-explicit attitude discrepancies (IED) as indicators of attitude changes in progress. In the particular case of Afrikaans, it would be also worth exploring language attitudes associated to Cape Flat English (also known as Kaaps or Coloured English) in that this variety is associated with a different ethnic group and its indexicality might trigger different implicit attitudes among out-group members in the South African context.

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