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First-person singular and third-person subject pronoun variation: The case of Mexican Spanish in the U.S. state of Georgia

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Abstract
The current study analyzes variable subject pronoun expression (SPE) for first-person singular (1sg) and third-person subjects in a variety of Mexican Spanish spoken by first-generation Mexican immigrants in the state of Georgia, Southeastern U.S. Conversational data from sociolinguistic interviews are employed to examine tokens of 1sg and third-person variable SPE and their usage patterns, considering factors such as tense-mood-aspect (TMA), switch reference, polarity, and verb class by means of logistic regression analyses. Results suggest that all four factors influence 1sg variation, but that third-person variation is restricted to switch reference and TMA. In addition, a significant link between switch reference and TMA is found for third-person subjects, but not for 1sg. The findings lend further support to previous scholars advocating the importance of studying individual grammatical persons in SPE research as this can reveal previously obfuscated nuances in the patterns of subject variation.
Key words: first-person subjects; third-person subjects; subject pronoun expression; Mexican Spanish; morphosyntactic variation.

Resumen
La variación de pronombres sujetos de primera persona singular y tercera persona: El caso del español mexicano en Georgia
El presente estudio analiza la expresión variable de los pronombres sujetos (SPE) de primera persona del singular (1sg) y tercera persona en una variedad de español mexicano hablado en Georgia. Se emplean datos conversacionales de entrevistas sociolingüísticas para examinar los ejemplos de SPE y sus patrones de uso, incorporando

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factores como TMA, cambio de referente, polaridad y clase verbal por medio de los análisis de regresión logística. Los resultados sugieren que los cuatro factores influyen en la variación en 1sg, pero que la variación en tercera persona se limita al cambio de referente y TMA. Además, se halla un vínculo significativo entre el cambio de referente y TMA para sujetos de tercera persona, pero no de 1sg. Los hallazgos brindan apoyo adicional a los estudiosos que defienden la importancia de estudiar personas individuales en la investigación de SPE, ya que puede revelar matices previamente oscurecidos en la variación de sujetos.
Palabras clave: sujetos de primera persona; sujetos de tercera persona; expresión variable de sujetos; español mexicano; variación morfosintáctica.

Résumé

Variation des pronoms sujets de la première personne du singulier et de la troisième personne : le cas de l'espagnol mexicain en Géorgie

La présente étude analyse l'expression variable des pronoms sujets (SPE) à partir de la première personne du singulier (1sg) et de la troisième personne dans une variété d'espagnol mexicain parlé en Géorgie. Les données conversationnelles issues des entretiens sociolinguistiques sont utilisées pour examiner les exemples de SPE et leurs modèles d'utilisation, en intégrant des facteurs tels que TMA, changement de référent, polarité et classe du verbe à travers des analyses de régression logistique. Les résultats suggèrent que les quatre facteurs influencent la variation de 1sg, mais que la variation à la troisième personne est limitée au changement de référent et de TMA. De plus, il existe un lien significatif entre le changement de référence et la TMA pour les sujets à la troisième personne, mais pas 1sg. Les résultats apportent un soutien supplémentaire aux chercheurs qui soutiennent l'importance d'étudier les personnes individuelles dans la recherche SPE, car cela peut révéler des nuances auparavant obscurcies de variation des sujets.
Mots-clés : sujets à la première personne ; sujets à la troisième personne ; expression variable des sujets ; espagnol mexicain ; variation morphosyntaxique.

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INTRODUCTION

Subject pronoun expression (SPE) in Spanish has been studied extensively in monolinguals (e.g. Alfaraz, 2015; Cameron, 1994; Orozco, 2015; Orozco & Guy, 2008; Lastra & Martín Butragueño, 2015; Travis, 2005), bilinguals (e.g. Carvalho & Child, 2011; Flores-Ferrán, 2004; Michnowicz, 2015; Otheguy & Zentella, 2012; Shin & Otheguy, 2009; Silva-Corvalán, 1994; Torres Cacoullos & Travis, 2015; Travis, 2007), and in L2 learners (e.g. Geeslin & Gudmestad, 2016; Geeslin et al., 2015). Variationist scholars have been primarily interested in understanding subject pronoun (SP) frequencies as well as the linguistic and social constraints that govern the variation between *overt* and *null* SPs, as exemplified in (1).

(1) *como* ***él*** **(OVERT)** *siempre iba a la iglesia* ***yo*** **(OVERT)** *busqué una iglesia cristiana donde ir, y* **Ø (NULL)** *nunca encontré*…
'since he was always going to church I looked for a Christian church to go to, and (I) never found…'

Most research on SPE considers all grammatical persons/numbers in the same analysis (see important exceptions below), however, obfuscating patterns for the individual person/number. As different grammatical persons of SPs (e.g. first- vs. third-person) respond to different contextual and interactional factors (Travis, 2005), it is important to continue the study of individual persons/numbers, thus far carried out most extensively for 1sg subjects (e.g. Bessett, 2018; De Prada, 2015; Travis, 2005, 2007; Travis & Torres Cacoullos, 2012), and to a lesser extent for third-person singular (Shin, 2014), third-person plural (Lapidus & Otheguy, 2005), and first-person plural subjects (Posio, 2012; Limerick, in press). The current study aims to continue to uncover individual person/number patterns, in particular the linguistic factors that constrain SP variation by examining, separately, first-person singular (1sg) and third-person SPs in a variety of Mexican Spanish spoken in Georgia.

Moreover, researchers studying interaction effects on SPE have demonstrated that some of the main effects commonly found overall sometimes do not apply (or only apply) to certain portions of their data, revealing a greater complexity and interconnectedness of factors governing pronoun grammar (e.g. Cameron, 1994; Shin, 2014; Travis, 2005; among others). Thus, the present investigation seeks to shed light on these nuances in variable SPE for first- and third-person subjects.

Data from sociolinguistic interviews with Mexican Spanish-speakers conducted in Georgia will be analyzed (Limerick, 2018). In addition to making a comparison between different grammatical persons, this paper contributes to the sociolinguistic literature on Spanish in the Southeastern U.S. by expanding on the sparse yet growing scholarship in this region. Due to a historical lack of Spanish-speaking populations in the Southeast, this

region remains understudied (but see Carter, 2014; Limerick, 2019; Montes-Alcalá & Sweetnich, 2014; Ronquest et al., 2020). The state of Georgia in particular demonstrates especially well the recent demographic trends of Latin American immigration with a dramatic increase of 102% in its Latin American population between 2000 and 2010 (Motel & Patten, 2013)[1]. The state reflects the emergence of new Latinx communities and language varieties in the Southeast (Limerick, 2018, 2019). The analysis takes a variationist sociolinguistic perspective (Labov, 1972) and explores factors such as tense-mood-aspect (TMA), switch reference, polarity, and verb class and their influence on SP variation for 1sg and third-person subjects. The following section summarizes some of the previous research on SPE in Spanish, with particular attention paid to the independent factors analyzed here. Section 3 outlines the methodology for the present investigation, and Section 4 presents the results, including a systematic comparison between the 1sg findings and the third-person results. To conclude, Section 5 summarizes the findings and discusses their broader implications regarding SPE research.

SPE in Spanish: Previous research

Previous research on variable SPE has examined both occurrence rates and constraints on variation between null and overt SPs. In terms of frequency, scholars have observed a wide range of overt SP rates across dialects of Spanish, ranging from relatively low rates in Mexico and Spain (~20%) to much higher rates in the Caribbean (~50%) (See Otheguy & Zentella, 2012). With regard to the factors that influence SP variation, several morphosyntactic and semantic/pragmatic variables have been shown to exert a significant influence. Table 1 shows some examples of these variables, the particular contexts in which overt SPs are favored, and example studies of the findings.

[1] For more detailed discussions of Spanish in the Southeastern U.S. in general and Spanish in Georgia in particular, see Limerick (2018), Howe and Limerick (2020), and Montes-Alcalá and Sweetnich (2014).

Table 1. Overview of general findings for linguistic constraints favoring overt SPs

Variable	Overt SPs favored	Example studies
Person/number	Singular verbs	Abreu, 2012 (Florida/Puerto Rico) Bentivoglio, 1987 (Caracas) Carvalho and Child, 2011 (Rivera, Uruguay) Flores-Ferrán, 2004 (NYC) Otheguy and Zentella, 2012 (NYC)
Switch reference	Disjoint reference	Bayley and Pease-Alvarez, 1997 (California) Cameron, 1994, 1995 (San Juan/Madrid) Travis, 2005 (Colombia)
Tense-Mood-Aspect (TMA)	Imperfect, conditional	Carvalho and Bessett, 2015 (Rivera, Uruguay) Silva-Corvalán, 1982 (Los Angeles) Travis, 2007 (Colombia/New Mexico)
Morphological ambiguity	Ambiguous forms	Erker and Guy, 2012 (NYC) De Prada, 2009 (Minorca) Lastra and Martín Butragueño, 2015 (Mexico City) Michnowicz, 2015 (Yucatan)
Verb class	Psychological verbs	Bentivoglio, 1987 (Caracas) Silva-Corvalán, 1994 (Los Angeles) Travis, 2007 (Colombia/New Mexico)
Verbal mood	Indicative	Lastra and Martín Butragueño, 2015 (Mexico City)
Specificity	*Mexico, Spain:* specific reference	Michnowicz, 2015 (Yucatan), Cameron, 1992 (Madrid)
	Puerto Rico: nonspecific reference	Cameron, 1992 (San Juan)
Polarity	Affirmative	Geeslin and Gudmestad, 2016 (U.S.) Lastra and Martín Butragueño, 2015 (Mexico City)
Speech Style	Casual	Ávila-Jiménez, 1996 (Puerto Rico) Lastra and Martín Butragueño, 2015 (Mexico City)

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Clause type	Main clauses	Orozco and Guy, 2008 (Colombia) Otheguy and Zentella, 2012 (NYC) Shin and Montes-Alcalá, 2014 (NYC)
Reflexivity	Non-reflexive verbs	Carvalho and Child, 2011 (Rivera, Uruguay); Otheguy et al., 2007 (NYC)
Priming	Previous overt SP	Cameron, 1994 (San Juan/Madrid) Flores-Ferrán, 2002 (NYC) Travis, 2005 (Colombia)
Lexical frequency	Infrequent verbs	Bayley et al., 2013 (California/Texas)

Social factors, such as gender and age, while less studied, have also been shown to impact variable SPE. The most consistent findings have been that women favor overt SPs (e.g. Alfaraz, 2015; Bayley & Pease-Alvarez, 1996; Carvalho & Child, 2011; Otheguy & Zentella, 2012; Shin & Otheguy, 2013; Solomon, 1999) and that younger speakers favor null SPs (e.g. Carvalho & Child, 2011; Lastra & Martín Butragueño, 2015; Limerick, 2019; Orozco & Guy, 2008). Furthermore, factors such as length of residency, age of arrival, immigrant generation, and level of bilingualism influence SP use in contact varieties of Spanish (see, e.g., Carvalho et al., 2015; Otheguy & Zentella, 2012).

The current study will primarily focus on four of these factors: TMA, switch reference, verb class, and polarity. The following sections will discuss their influence in greater detail according to the findings from previous research. First, however, we will provide some context regarding the factor that most strongly constrains SPE cross-dialectally; grammatical person/number. Although this factor is not employed as an independent variable in the current analysis, it will help set the context for the investigation of SPE.

Person/number

Grammatical person/number has been shown to be the strongest predictor of variable subject expression cross-dialectally (Orozco, 2015). Specifically, 1sg and third-person singular verbs favor overt pronouns (e.g. Flores-Ferrán, 2002; Lastra & Martín Butragueño, 2015; Limerick, 2019; Silva-Corvalán, 1994; Shin, 2012). In fact, most studies have found that all singular forms in general are more likely to appear with overt SPs compared to plural forms, which tend to favor null SPs (Orozco, 2015). The general finding for singular and plural persons/numbers and their influence on subject expression has been explained by Cameron (1993) in the following way:

> If we conceive of plural subjects as sets, we find that discourse is typically structured so that the great majority of plural subjects occur in contexts where their set members are either explicitly or inferably present within the immediately preceding discourse. Such contexts favor null subject expression. Therefore, plural subjects are frequently null overall (p. 328, note 2).

Furthermore, the widest distinction generally found for person/number is that 1sg forms favor overt SPs the most (as stated above) while first-person plural forms (*nosotros*) strongly favor null SPs. Regarding the former pattern, the high use of *yo* has been attributed to the "egocentric nature of discourse" (Posio, 2011, p. 795). Similarly, as Morales (1986) explains, by explicitly making reference to herself, the speaker's pragmatic need to stay overtly present in the conversation is fulfilled. Regarding the latter pattern, it could be the case that *nosotros* is rarely expressed due to its comparatively longer length as well as the fact that its verbal inflection is the least ambiguous (Bentivoglio, 1987). Similarly, Orozco and Guy (2008) suggest that since it has the most morphologically distinct and regular verb forms, the use of *nosotros* would be redundant. This is particularly convincing given that the first-person plural verbal inflection (*-mos*) stays the same for all TMAs in comparison to first and third-person singular forms which become indistinct (i.e. morphologically ambiguous) in the imperfect, subjunctive, and conditional.

The study of individual persons/numbers

Some researchers emphasize the importance of examining one specific person/number at a time rather than including all person/number forms in the same analysis (e.g. Posio, 2012; Shin, 2014; Travis, 2005, 2007; Travis & Torres Cacoullos, 2012). For instance, Travis (2005, 2007) studied the 1sg form exclusively, calling attention to contextual factors such as information structure (given vs. new referents) as well as the number of possible subject forms, among other factors. Specifically, she highlights that first-person subject referents, in contrast to third-person, can always be considered given in that they are present in the physical context. In terms of the number of subject form options, Travis (2005, 2007) underscores that with first-person forms there are only two options (expressed vs. unexpressed pronoun) while third-person forms have three possibilities since the lexical subject is an additional option. Thus, to control for some of these factors and to study a relatively homogeneous set of subjects, she promotes this methodology.

Shin (2014) also draws attention to the need for additional studies that focus on individual persons since including multiple persons together can sometimes obscure certain patterns. As a result of narrowing her study to third-person singular subjects, Shin (2014) discovered that the factor of TMA showed differential effects for newcomers vs. US-born Spanish-speakers in NYC. In particular, TMA was absent as a constraint for newcomers, but emerged as significant for US-born speakers. Furthermore, Lapidus and

Otheguy's (2005) study of solely third-person plural subjects revealed an elevated use of overt SPs (*ellos*) for nonspecific referents among US-born bilinguals. The current study follows the above researchers in utilizing a homogenous person/number methodology, in particular employing a continuation of 1sg subjects in one case, and third-person subjects in another case.

Switch-reference

Switch-reference, which considers continuity vs. change from one subject to another, also shows a strong influence on SPE cross-dialectically (e.g. Bayley & Pease-Alvarez, 1997; Bentivoglio, 1987; Cameron, 1994; Carvalho & Child, 2011; De Prada, 2009; Michnowicz, 2015; Orozco, 2015; Otheguy & Zentella, 2012; Silva-Corvalán, 1994; Torres Cacoullos & Travis, 2010; Travis, 2005). Specifically, when there is a switch in subject referent, the SP is often overt, as seen with *yo* in (2); when there is no switch, null SPs are preferred, as in (3).

(2) *ahora ya la comunidad hispana pues hemos crecido mucho y este pues* ***yo pienso*** *que debemos…* [F39]
'now the Latino community well we have grown a lot and umm well I think that we should…'

(3) *yo me relaciono mu- muy mucho con mi hermanito y y y s- ...(1.5)* ***Ø paso*** *mucho tiempo allí* [M27]
'I relate ve- very much with my little brother and and and s- …(1.5) I spend a lot of time there'

This pattern is generally thought to have a functional influence that has to do with referential tracking (Shin & Otheguy, 2009). As Cameron (1994) explains, "expressed pronominal subjects compensate for the change of information state which occurs with a switch in subject reference" (pp. 40-41). In other words, overt SPs tend to be used in such contexts in order to facilitate interpretation of the antecedent. According to Shin and Otheguy (2009), this is especially important for third-person referents for disambiguating between *él* and *ella*, as in the following example from their data:

(4) *Ella tenía su novio allá y* ***él*** *pensaba venir pero no le dieron la visa* (p. 120, emphasis mine)
'She had her boyfriend there and he was planning on coming, but they didn't give him the visa.'

Shin and Otheguy (2009) argue that since there are competing referents in (4) (*ella* and *su novio*), the use of *él* helps the listener to track the antecedent of *pensaba*. Furthermore, some researchers also include an intermediate category, *partial switch*,

which analyzes cases of switch in subject where the subject is coreferential with the immediately preceding object, as in (5).

(5) …*en México me inculcó mi mamá que* ***tenía*** *que ir a la iglesia*… [M52]
'…in Mexico my mom instilled in me that I had to go to church…'

In this example, there is a switch in subject from *mi mamá* to *yo* (*tenía*), and *yo* is coreferential with the previous object *me*. In general, previous studies have reported either a slight favoring of overt SPs, or a neutral effect for such contexts, that is, neither a favoring nor a disfavoring effect (e.g. Lastra & Martín Butragueño, 2015; Orozco, 2015; Orozco & Guy, 2008; Otheguy & Zentella, 2012). This pattern makes sense because there is still a switch in subject reference, promoting a higher use of overt SPs (relative to same reference contexts), but, at the same time, since the coreferential object was just mentioned and is salient in the discourse, overt SPs are less necessary for referential tracking and thus a weaker effect is found.

Tense-mood-aspect (TMA)

The tense-mood-aspect (TMA) of a verb has also been shown to condition SPs. Certain TMAs favor overt SPs while others favor nulls. For instance, Silva-Corvalán (1982) found that imperfects and conditionals favor overt SPs while presents and preterits are more likely to appear with nulls, as was also found by other researchers (e.g. Cameron, 1994; Carvalho & Bessett, 2015; Travis, 2007). To explain such correlations, it has been proposed that imperfects and conditionals favor overt SPs due to their potential ambiguity. Since their first and third-person singular verb forms are morphologically indistinct, the use of overt SPs would serve to disambiguate the referents of such forms, an explanation that forms part of the Functional Hypothesis (Hochberg, 1986). Other studies, however, have found no such correlation (e.g. Bentivoglio, 1987; Enríquez, 1984; Ranson, 1991).

An alternative explanation for the TMA effect, one that is not related to ambiguity, has been proposed by Silva-Corvalán (2001). She discusses imperfects and preterits in relation to discourse functions, suggesting that more overt SPs are used with imperfects due to the backgrounded nature of the imperfect aspect, and that fewer overt SPs are used with preterits since they tend to foreground events. That is, for events that are more backgrounded the focus is on the subject (hence the use of an overt SP) whereas the focus is more on the action with more foregrounded events (hence the lack of an overt SP). However, this hypothesis has been rejected in more recent work. For instance, Shin (2014) argues rather for the aforementioned ambiguity explanation, finding that imperfects favored overt SPs particularly in contexts of switch reference and with competing referents, both contexts in which referential tracking is more difficult. Given her findings, Shin argues that her analysis lends no support to Silva-Corvalán's (2001) proposal.

Verb class

Numerous researchers have found that verb class can also determine how an SP is manifested (e.g. Bentivoglio, 1987; Orozco, 2015; Otheguy & Zentella, 2012; Silva-Corvalán, 1994; Travis, 2007). In general, it has been noted that verbs pertaining to psychological/mental activity (e.g. *creer* 'believe', *pensar* 'think'), verbs of communication (e.g. *decir* 'say', *hablar* 'speak'), and copulas (e.g. *ser*, *estar* 'be') tend to be expressed with overt pronouns, with psychological verbs showing the highest probability. On the contrary, motion verbs tend to disfavor overts (Bentivoglio, 1987; Silva-Corvalán, 1994; Travis, 2007). Regarding psychological verbs, it has been hypothesized that overts are frequently used because these verbs tend to express the point of view of the speaker and because of the implied contrastive function that is often emphasized in such contexts (Silva-Corvalán, 1994). The speaker "asserts their role in the utterance" by using an overt SP (Travis, 2007, p. 117). With regard to the preference for overt SPs with communication verbs, particularly *decir*, Travis (2007) has postulated that this is perhaps related to the epistemic function of *decir* to express an opinion (e.g. *yo digo que* 'I say that'), similar to the aforementioned effect for psychological verbs. Additional categories have also been employed for verb class, such as stative and activity verbs (e.g. Erker & Guy, 2012; Orozco, 2015; Orozco & Guy, 2008; Otheguy & Zentella, 2012). These studies have generally found that stative verbs favored overt SPs while activity verbs were more likely to appear with nulls.

Polarity

Polarity considers affirmative vs. non-affirmative clauses and their conditioning on SP variation. While still relatively understudied, this variable has occasionally been analyzed in previous research, with some researchers finding a significant effect (Geeslin & Gudmestad, 2016; Lastra & Martín Butragueño, 2015) and others reporting a lack of effect (Torres Cacoullos & Travis, 2015; Travis & Torres Cacoullos, 2012)[2]. For example, Lastra and Martín Butragueño (2015) found that non-affirmatives (negatives and interrogatives) disfavored overt SPs and that affirmatives showed a neutral effect. These authors give a possible explanation for this pattern in terms of the frequent clustering together of negative clauses in their data, which tend to be coreferential. They hypothesize that "if negated clauses cluster together, it is possible that co-reference across these negated clauses contributes to their disfavoring effect on overt SPPs [Subject

[2] Some differences in terminology and methods among these studies should be noted: Lastra and Martín Butragueño (2015) use the term *enunciative type* to refer to polarity (positive vs. negative), but with the addition of interrogative tokens being included in a *non-affirmative* category. Other researchers cited in this section use the terms *polarity* (Travis & Torres Cacoullos, 2012) and *verbal negation* (Geeslin & Gudmestad, 2016) and simply use the classification of affirmative vs. negative sentences. See Section 3 for further methodological details.

Personal Pronouns]" (Lastra & Martín Butragueño, 2015, p. 46). In other words, there could be an interaction between the switch reference and polarity variable such that negative clauses disfavor overt SPs more frequently in coreferential contexts than in switch reference contexts.

Likewise, Geeslin and Gudmestad (2016) found that negation disfavored overt SPs while affirmative clauses favored them. This finding confirmed their prediction based on previous research that the presence of pre-verbal elements makes null SPs more likely. Interestingly, this variable was only significant for 1sg forms and not for second-person singular forms in Geeslin and Gudmestad's analysis, which calls for further research on the interaction of negation and person.

Furthermore, Travis and Torres Cacoullos (2012), while not finding a significant effect for polarity overall, did find effects upon considering particular verb classes/lexemes. Their study revealed interesting patterns in the distinction between cognitive and non-cognitive verbs and their influence on polarity, namely that negation favored overt SPs, but only for non-cognitive verbs. Moreover, although a significant effect for cognitive verbs was not found overall, the researchers did find an effect when considering only the particular verbal lexeme *creo*, specifically that negation highly disfavored overt SPs (e.g. ***Ø no*** *creo*).

METHODOLOGY

Research questions

The following research questions guide the current study:
RQ1: What are the usage patterns for 1sg and third-person SPE in terms of governing constraints in this variety of Mexican Spanish?
RQ2: Do the independent factors interact with each other in a significant way?
RQ3: What do the findings tell us regarding the role of individual person/number (1sg vs. third-person) on usage patterns for variable SPE?

Data collection

In 2015, sociolinguistic interviews were conducted with Spanish-speakers who were either living or working in Roswell, a suburb of the city of Atlanta, Georgia, at the time of data collection (Limerick, 2018). The sample for the present analysis consists of 20 first-generation Mexican immigrants. The interviews lasted between 30 minutes and one hour. They were informal, conversational, and addressed topics of personal history, local community life, differences between the speakers' home countries and the U.S., and experiences adapting to life in Roswell, among others.

The speakers

The speakers were born in various regions of Mexico, and they consist of 12 females and eight males with ages ranging from 25 to 60 (see Tables 2 and 3 below). Additionally, their length of residency (LOR) in the U.S. ranges from two to 25 years (average = 12 years), and their ages of arrival (AOAs) range from 11 to 56 (average = 27). In terms of education levels, they range from primary school to university. The speakers have a variety of occupations, nearly half of them being small business owners. Finally, their English proficiency ranges from very poor to good. English proficiency was measured using speakers' self-ratings on a scale from 1 (very poor) to 5 (very good), with an average rating of 2.75.

Table 2. Speaker demographics (females) (adapted from Limerick, 2019)

Speaker	City/State of Origin	LOR	AOA	Education	Occupation	English proficiency
F39Mex	Mexico City, D.F	14	25	Partial law school	Owner of clothing boutique	2
F49Mex	Juando, Mexico	7	42	Primary school	Restaurant-food prep	3
F56Mex	Acapulco, Guerrero	25	31	Secondary school	Owner of tax business	4
F34Mex	Mexico City, D.F	10	24	University	Owner of clothing store	4
F25Mex	Zacatecas (state)	13	12	High school + Cosmetology school	Restaurant worker	4
F26Mex	Monterrey, Nuevo León	12	14	High school (U.S.)	Secretary	4
F52Mex	Mexico City, D.F	2	50	High school	Owner of sewing business	1
F43Mex	San Luis Potosí (state)	24	19	High school + Cosmetology school	Cosmetologist	3
F60Mex	Colima (state)	4	56	High school	Hairstylist	1
F32Mex	Acapulco, Guerrero	7	25	University	Owner of jewelry store	2

F30Mex	Mexico City, D.F	10	20	High school + Cosmetology school	Esthetician	3
F28Mex	Guerrero (state)	2	26	Master's	Cashier	3

Table 3. Speaker demographics (males) (adapted from Limerick, 2019)

Speaker	City/State of Origin	LOR	AOA	Education	Occupation	English proficiency
M51Mex	Cuernavaca, Morelos	10	41	Primary school	Landscaping	1
M41Mex	Mexico City, D.F	13	28	Partial university	Owner of clothing boutique	3
M34Mex	Morelos (state)	10	24	University	Owner of computer repair shop	3
M33Mex	Mexico City, D.F	12	21	Partial University	Owner of appliance store	3
M32Mex	Tampico, Tamaulipas	16	16	Secondary school	Manager of grocery store	3
M27Mex	Mexico City, D.F	16	11	High school (U.S.)	Auto body repair	4
M43Mex	San Juan del Río, Querétaro	25	18	Partial high school	Carpenter	2
M52Mex	Mexico City, D.F	15	37	Partial secondary school (2	Owner of bakery	2

The variable context

In order to analyze SPE, the audio data were first transcribed. All 1sg and third-person finite verbs were then extracted from the interviews in order to locate each instance of SP usage[3]. In order to isolate only cases in which variation between an overt and null SP can occur in Spanish, the following types of tokens that fell outside the variable context were excluded: verbs within subject headed relative clauses; verbs appearing with full noun phrases; existential structures (e.g. *haber*, *ser*); *hacer* + time expressions; verbs with

[3] Singular and plural third-person pronouns were combined due to a low number of tokens for each grammatical number (N=372 [3sg]; N=387 [3pl]).

inanimate referents; impersonal *se* expressions; imperatives; set phrases where an overt or null SP was categorical (e.g. *¿Qué sé **yo**?* 'What do ***I*** know?'). Speakers did not alternate between an overt and null SP in any of the above cases; thus, these structures were excluded. For all tokens within the variable context (N = 757 [3rd-person]; N = 2,565 [1sg]), the coding of whether each verb appeared with a null or overt SP was carried out. Subsequently, the four independent variables were coded using the categorizations discussed in the following section.

Linguistic variables

The four internal predictors for the current analysis are the following: Switch-reference, TMA, Verb class, and Polarity. The inclusion of these predictors is based on their significance in previous SPE research (and, in the case of polarity, its relative underexploration in the SPE literature), and the coding methods are primarily based on Otheguy and Zentella's (2012) analysis of NYC Spanish as well as Lastra and Martín Butragueño's (2015) study of Mexico City Spanish (See Table 4).

Table 4. Linguistic variables and categories

Variable	Categories
Switch-reference	Same-reference Switch-reference Partial-switch (subjects that are coreferential with preceding objects), as in the following example: *pues todos nos catalogan como delincuentes, que **venimos**, a quitar el trabajo* 'everyone categorizes us as delinquents, that we come, to take jobs away' [F60]
TMA	Present indicative, preterit, imperfect, perfect (including present perfect and pluperfect), present subjunctive, past subjunctive, synthetic future, periphrastic future, conditional *Imperative mood was not included since it was categorically null.
Verb class[4]	Mental processes: (e.g. *creer* 'believe', *pensar* 'think', *saber* 'know') Stative verbs: (e.g. *ser* 'be', *estar* 'be', *tener* 'have') *Verba dicendi* (i.e. communication, e.g., *decir* 'say', *hablar* 'speak') Activity verbs (e.g. *jugar* 'play', *hacer* 'do/make', *ir* 'go')
Polarity[5]	Affirmative Non-affirmative (both negative and interrogative)

[4] These categories are based on Bentivoglio et al. (2011).

[5] I adopt Lastra and Martín Butragueño's (2015) categories for what they call 'enunciative type'.

Statistical Methods

To determine the statistical significance of the linguistic variables and the relative weight of each factor regarding its conditioning on SPE, mixed-effects multivariate analyses (logistic regression) were carried out using *Rbrul* (Johnson, 2009) with the inclusion of the speaker as a random effect. A multivariate analysis enables us to determine the relative effect of multiple factors at once. Specifically, it facilitates the production of ranking for the statistically significant factors based on the amount of variation explained by each factor. Moreover, the quantitative results assist in creating a ranking of values within a single factor group or variable (e.g. Switch Reference)—i.e. values within a factor group that favor overt SPs (e.g. switch) vs. those factors that disfavor overt SPs (e.g. same reference). In addition, the inclusion of the speaker as a random effect in the statistical model is a way of controlling for the individual speaker and ensuring that the results obtained are generalizable to the data set as a whole, and that the patterns are not due to particular speakers skewing the results (Bayley *et al.*, 2013; Michnowicz, 2015; Shin, 2014; Shin & Van Buren, 2016).

The following section presents the results of the current study. First, however, it is important to note some methodological modifications made to the dataset after the initial coding took place. Due to low token counts for some of the categories, these were collapsed. Specifically, the category *partial switch* was moved to the *switch* category, and six of the nine TMA categories of *perfect, present subjunctive, past subjunctive, synthetic future, periphrastic future,* and *conditional* were collapsed into a single category named *All other TMAs* (see Lastra and Martín Butragueño, 2015, for similar methods). For the multivariate analysis, then, Switch Reference comprised *same* and *switch*, and TMA included four levels: *Present*, *Preterit*, *Imperfect*, and *All Other TMAs*.[6]

RESULTS AND ANALYSIS

1sg: Pronoun rates and linguistic constraints

The overall occurrence rates for 1sg SPs were 36% overt (922/2,565) and 64% null pronouns (1,643/2,565). All four linguistic variables tested (switch reference, TMA, verb class, polarity) showed a statistically significant effect on 1sg SPE, with switch reference and TMA exerting the most powerful effects overall (see Table 5). Table 5 below presents the constraint hierarchies for each significant factor. The first column shows each factor group along with their particular levels, and the second column presents the factor weights (FW) for each constraint from highest to lowest probability of appearing with an

[6] To explore possible regional differences in the current data, a separate regression analysis was run that also included Region as an independent variable (Mexico City vs. Non-Mexico City). Region was not significant ($p = 0.13$), suggesting a lack of variation based on regional origin in Mexico.

overt SP. When a FW is closer to 1, this indicates a relative favoring of overt SPs. When it is closer to 0, it generally indicates a disfavoring of overt SPs (see Tagliamonte, 2006).

Table 5. Hierarchy of constraints (1sg SPE) (n = 2,565)

Factor	Factor weight	% Overt	N tokens	*p*-value
Switch reference				3.54e-32
switch	.63	49%	1138	
same	.37	25%	1427	
RANGE	26			
TMA[7]				1.60e-08
Imperfect	.59	47%	363	
All Other TMAs	.41	34%	2,202	
RANGE	18			
Verb Class				1.01e-06
Mental	.60	46%	701	
Stative/communicative	.48	34%	890	
Activity	.44	31%	974	
RANGE	16			
Polarity				1.76e-03
Affirmative	.55	37%	2230	
Negative	.45	30%	335	
RANGE	10			

[7] The TMA categories were collapsed into Imperfect vs. All Other TMAs because an initial regression analysis showed this to be the only statistically significant distinction. That is, the three categories 'present', 'preterit', and 'All other TMAs' did not pattern in significantly different ways from each other.

Switch reference

In line with the highly repeated finding for all Spanish varieties found in previous work (e.g. Carvalho & Child, 2011; Michnowicz, 2015; Orozco, 2015; Otheguy & Zentella, 2012; Torres Cacoullos & Travis, 2010; Travis, 2005), including studies solely examining 1sg SPE (e.g. Bessett, 2018; De Prada, 2015; Torres Cacoullos & Travis, 2010; Travis, 2005), overt SPs were favored in switch reference contexts (fw = .62) while same reference environments promoted nulls (fw = .37). What is striking about these results is that the proportion of overt SPs nearly doubles when there is a switch in subject reference (49% vs. 25% same reference). Another finding of interest is the high rate of 49% for *yo* with a switch, one of the highest rates in any given variable context and a case in which it is virtually equally split when comparing overts vs. nulls.

TMA

Also consistent with previous studies in general (e.g. Cameron, 1994; Carvalho & Bessett, 2015; Lastra & Martín Butragueño, 2015; Orozco, 2015, 2016; Shin & Van Buren, 2016; Silva-Corvalán, 1982; Travis, 2007), imperfect verbs favored *yo* while all other TMAs disfavored *yo* (fw = .59 vs. .41, respectively). In terms of proportions, verbs in the imperfect appeared with overt SPs 47% of the time and with all other TMAs overall, speakers produced *yo* 34% of the time.

Verb class

Regarding verb class, mental activity verbs favored the use of *yo* (fw = .60) whereas activity verbs showed a slight disfavoring (.44). Stative/communicative verbs showed a more neutral effect, that is, neither favoring nor disfavoring overt SPs (.48). As observed in the TMA and switch reference factors explained above, the *yo* rate for the most favored contexts is notably high (46% for mental verbs). The pattern for mental verbs follows the trend in the variationist literature (e.g. Orozco, 2015; Otheguy & Zentella, 2012; Silva-Corvalán, 1994; Torres Cacoullos & Travis, 2010; Travis, 2007). The finding for activity verbs also aligns with previous studies (e.g. Erker & Guy, 2012; Orozco, 2015; Orozco & Guy, 2008; Otheguy & Zentella, 2012). However, the effect of stative and communication verbs is inconsistent with previous research since these verb classes showed a neutral effect in the present study and a favoring of overt SPs in other studies (e.g. Erker & Guy, 2012; Orozco, 2015; Orozco & Guy, 2008; Otheguy & Zentella, 2012; Travis, 2007).

Polarity

Finally, the data show the following concerning the influence of polarity on the variable *yo*: Affirmative contexts slightly favored overt SPs (.55), and negative contexts showed a

slight disfavoring of overts (.45). This factor demonstrated the weakest and most modest effect on variable 1sg SPE relative to the other three factors. Nonetheless, the regression analysis indicated that it was a statistically significant effect ($p < 0.01$). This finding agrees with the results of Lastra and Martín Butragueño (2015) and Geeslin and Gudmestad (2016). The pattern for polarity in the current data can be explained by its interaction with verb class ($p < 0.01$). Specifically, the affirmative/negative distinction only applies to mental verbs (and no other verb class), in the present study. For mental verbs, the distinction was 49% overt SPE in affirmative contexts vs. 26% overt SPE for negative polarity. In contrast, such a dramatic difference in overt SP rate was not observed with activity, communicative, and stative verbs (activity: 30% affirmative vs. 32% negative; communicative: 34% vs. 33%; stative: 35% vs. 28%).

The relationship between TMA and switch reference

Returning now to the factors of switch reference and TMA, I will discuss here some additional findings. Upon testing the interaction between TMA and switch reference, we see a divergence from previous research (See Table 6). While the pattern trends in the same direction as that of other studies (Cameron, 1994; Shin, 2014), the difference was not statistically significant ($p > 0.05$). In particular, we do not see a significantly wider distinction between same and switch reference for the imperfect than we do for other TMAs; the difference is rather marginal (29% difference of overt SPs between same and switch contexts versus, for example, a 23% difference for verbs in the present tense). Nevertheless, this does not mean that *yo* is not used to clarify the subject referent. For instance, example (6) below demonstrates precisely a disambiguating function of *yo*, given that there is a competing referent in the preceding clause (*una señora*). It is also interesting to note the unusually high proportion of overt 1sg SPs with the imperfect when there is a switch in referent (64%).

(6) *una señora me <u>contrató</u>…**yo no hablaba** inglés, nada, era- tenía una semana de haber llegado…*
'a woman hired me…I didn't speak English, at all, I was- I had been here for a week…

Table 6. % Overt SPE for TMA:Switch reference (1sg)

TMA	Same	Switch	% difference	Total
Imperfect	35%	64%	29	47%
Present	24%	47%	23	35%
Preterit	23%	49%	26	33%
All Other TMAs	24%	49%	25	36%
Total	25%	49%	24	36%

$p > 0.05$

Third-person: Linguistic constraints

Regarding variable SPE for third-person, the regression analysis revealed that two of the four factors were statistically significant: TMA and Switch reference (See Table 7).

Table 7. Hierarchy of constraints (third-person SPE) (n = 757)[8]

Factor	Factor weight	% Overt	N tokens	*p*-value
TMA				0.0211
Imperfect	.62	35%	119	
Preterit	.53	29%	141	
Present	.45	22%	421	
All Other TMAs	.40	18%	76	
RANGE	22			
Switch reference				2.46e-03
switch	.57	31%	279	
same	.43	21%	478	
RANGE	14			
Speaker (random) Std. Dev. .58				

Switch reference

For third-person variable SPE, the switch reference constraint was unsurprisingly significant, with the direction of effect consonant with the norm observed in the literature. Specifically, switch reference contexts exhibited a factor weight of .57 (31% overt) while same reference environments disfavored nulls with a factor weight of .43 (21% overt).

[8] This model does not include nonspecific third-person plural tokens. As these tokens were shown to be categorically null in an initial analysis, they were excluded from the study.

TMA[9]

With regard to TMA, and similarly to 1sg above, the Imperfect favored *yo* (fw = .62) while the category of All Other TMAs disfavored *yo* (.40). Unlike for 1sg, the preterit and present tenses showed effects that were distinct from each other, with the preterit showing a neutral effect (.53) and the present tense slightly disfavoring overt SPs (29% vs. 22% overt, respectively).

Significant interaction between TMA and switch reference

Although the interaction between TMA and switch reference was not significant for 1sg as presented above, results for third-person pronouns from the interaction term TMA:switch reference did reveal a statistically significant effect ($p < 0.05$). As seen in Table 8, while the same/switch distinction is not substantial for present, preterit, and All Other TMAs, there is a stark contrast between same and switch for the Imperfect (% difference of 39%). Thus, overt SPs are much more likely to occur with verbs in the imperfect when there is also a switch in subject referent, consistent with previous studies that have examined this interaction (Cameron, 1994; Shin, 2014)[10]. Put another way, overt SPs are favored in switch reference contexts, especially for imperfects. In fact, 59% of switches in the imperfect are overt, making it one of the few variable contexts in which the production of overt SPs outweighs that of null SPs (59% overt vs. 41% null).

Table 8. % Overt SPE for TMA:Switch reference (3rd-person)

TMA	Same	Switch	% difference	Total
Imperfect	**21%**	**59%**	**39**	47%
Present	20%	26%	6	35%
Preterit	28%	31%	3	33%
All Other TMAs	17%	20%	3	36%
Total	25%	49%	24	36%

$p < 0.05$

Examples (7) – (9) illustrate this particular context of the use of overt third-person SPs *ella* and *él* when there is a switch in subject referent. In each of these cases, there is a competing referent present in the immediately preceding discourse. The use of the overt SPs, then, facilitate referential tracking for the listener. In other words, the speakers

[9] "Number:TMA" was included as interaction term in a separate regression analysis, and was not significant. Thus, the TMA effect is operative, regardless of whether the third-person verb is singular or plural.

[10] This is also consistent with Lastra and Martín Butragueño's (2015) study of Mexico City Spanish, in which they found that morphologically ambiguous verbs with overt SPs were more frequent in switch reference contexts.

efficiently make it clear that the referent is *ella*, not the speaker for (7) and (8), and that it is *él* (not the speaker) for (9).

(7) *mi abuelita incluso una vez me… me trató de enseñar que, que si yo volvía a agarrar dinero que* ***ella me iba*** *a poner las manos en la estufa…* [M27]
'my grandma one time even…she tried to teach me that, that if I took money again that she was going to put my hands on the stove…'

(8) *y ella la conocí, porque* ***ella*** *limpiaba las casas don- donde yo trabajaba de... de babysitter…[F25]*
'and I met her, because she used to clean the houses whe- where I worked as…as a babysitter'

(9) *mi esposa y yo, íbamos a la escuela, por parte de de mi hijo, entonces,* ***él*** *acababa la escuela y salía y llegaba a la casa… pues comía se bañaba y eso y…*[M52]
'my wife and I, we would go to the school, because of my son, so, he would finish school and would leave and get home…well, he would eat and bathe and stuff and…'

Comparing 1sg and third-person

This section will address some additional comparisons that are notable between 1sg and 3rd-person SPE for the current data. Table 9 below shows a comparison of the constraint hierarchies for 1sg and 3rd-person (repeated from above). Regarding switch reference, this factor shows a stronger effect for 1sg (range = 26) than for 3rd-person (range = 14), with 1sg usage in switch reference contexts nearly double that of same reference (49% vs. 25%, respectively). 3rd-person, by contrast, shows a narrower difference of 31% overt with switch and 21% overt with same reference. Thus, these two different grammatical persons respond to switch reference to differing degrees: switch reference, then, impacts different persons differently.

Moreover, the interactions discussed above demonstrate that the switch reference effect of 1sg is not only stronger overall, but that it shows more of an independent effect on SPE, lacking an interaction with TMA (and other factors). On the other hand, 3rd-person switch reference is weaker overall, but it significantly intersects with TMA and is thus dependent on TMA. In other words, the switch reference effect for 3rd-person is amplified by TMA, particularly with imperfect verb usage. In contrast, the TMA effect for 1sg is there, regardless of switch reference, thus also showing an independent TMA effect on SPE.

Table 9. 1sg vs. 3rd-person: Constraint hierarchies

1sg	Factor weight	% Overt	**3rd-person**	Factor weight	% Overt
Switch reference			**Switch reference**		
switch	.63	49%	switch	.57	31%
same	.37	25%	same	.43	21%
RANGE	26		RANGE	14	
TMA			**TMA**		
Imperfect	.59	47%	Imperfect	.62	35%
All Other TMAs	.41	34%	Preterit	.53	29%
			Present	.45	22%
			All Other TMAs	.40	18%
RANGE	18		RANGE	22	
Verb Class					
Mental	.60	46%			
Stative/communicative	.48	34%			
Activity	.44	31%			
RANGE	16				
Polarity					
Affirmative	.55	37%			
Negative	.45	30%			
RANGE	10				

Furthermore, results from the multivariate analyses for each grammatical person showed that third-person is not sensitive to two of the factors included, namely verb class and polarity, while 1sg is sensitive to such constraints. This further shows that different grammatical persons behave differently. In particular, this finding demonstrates that depending on the grammatical person of interest, the factors constraining variable SPE will vary. For the current data, four factors significantly influence 1sg subject expression while only two factors constrain third-person SPE. This latter finding is consistent with Shin (2014)'s study of exclusively 3sg pronouns, in which no effect was found for verb class. Hence, verb class may only impact 1sg. Concerning polarity, the current findings are consistent with those of Geeslin and Gudmestad (2016), who also found a polarity effect solely for 1sg. Additionally, the two conditioning factors shared by both grammatical persons in the present study have varying effects, both in terms of relative strength on SP variation as well as degree of interdependence on each other.

Discussion

The current study has analyzed the usage of 1sg and third-person SPs in a variety of Mexican Spanish spoken in Georgia in an attempt to continue the study of individual grammatical persons and to uncover patterns of variable SPE that were perhaps obfuscated in previous work due to the incorporation of all grammatical persons/numbers. In answering our first research question (*What are the usage patterns for 1sg and third-person SPE in terms of governing constraints?*), we found that 1sg SPE is constrained by four factors in the current data: Switch reference, TMA, verb class, and polarity. The use of *yo* was favored when there was a switch in subject referent, the use of the imperfect, with mental verbs, and with affirmative clauses. Regarding third-person SPs, the data showed that TMA and switch reference exerted a significant influence, but that neither verb class nor polarity were conditioning factors. As in the case of 1sg, the use of overt SPs with third-person verbs was favored with a switch in subject and with the imperfect.

Turning to our second research question (*Do the independent factors interact with each other in a significant way?*), the answer is affirmative for third-person SPE, but not for 1sg subjects. Specifically, the factors of TMA and switch reference significantly interacted with each other to constrain third-person SPs whereby verbs that were both (a) in the imperfect and (b) in contexts of a switch in subject had significantly higher overt pronoun rates (59%) when compared with environments of other tenses and same reference contexts. In particular, there was a 39% difference in overt SP rate between same and switch reference with the imperfect, while there was only a 3%-6% difference for other tenses. In fact, the overt SP rate more than doubled in switch reference contexts in the imperfect (59%) when compared to the other TMAs (20% – 31%).

Finally, our third research question asked the following: *What do the findings tell us regarding the role of individual grammatical person (1sg vs. third-person) on usage patterns for variable SPE?* The findings overall provide further support to researchers who promote the study of individual grammatical persons (Posio, 2012; Travis, 2005, 2007; Travis & Torres Cacoullos, 2012; Shin, 2014), and to the implication that subject pronouns do not constitute a monolithic category (Torres Cacoullos & Travis, 2015). This conclusion arises from the differences observed between 1sg and 3rd-person discussed in *Results and Analysis*. First, the multivariate analysis revealed that the overall strength of effect for the switch reference constraint was generally more powerful for 1sg than for third-person. Additionally, the findings from the interaction effect analyses demonstrated that while switch reference and TMA have independent effects on 1sg SPE, their effects are more interdependent regarding 3rd-person pronoun variation. There was a statistically significant effect for the interaction TMA:switch reference for the latter, but not for the former. These findings are consistent with those of Shin (2014), who found the same interaction effect in her study of 3sg SPs among Spanish-speakers in NYC. From a theoretical standpoint, the current differential findings for 1sg vs. third-person could be explained with issues of accessibility and reference tracking (see Cameron, 1994; Shin & Otheguy, 2009). Specifically, 1sg referents are more accessible than third-person referents, thus the need to facilitate reference tracking with an overt pronoun is much greater for the less accessible third-person forms. In fact, as discussed above in *SPE in Spanish Previous Research*, Travis (2005, 2007) underscores that first-person subject referents, in contrast to third-person, can be considered given since they are part of the physical context. In line with Travis, I would argue that 1sg referents are more accessible and salient than third-person referents. It could be the case that, at least for singular imperfect verbs with null SPs (e.g. *tenía*), that the default referent is *yo*, rather than *él*/*ella*. Hence, the speaker may feel the need to pay special attention to add the third-person SP in switch reference contexts (but not so much the 1sg SP) to clarify and disambiguate the reference (Shin, 2014). Further research that considers the broader discursive context of 1sg and third-person SPE is needed to confirm this hypothesis.

The potential implications for the above findings are as follows: Instead of assuming that certain predictors in general favor overt SPs, we should bear in mind that this is highly dependent on the particular person/number being used. For instance, the current analysis showed that mental verbs favor overt SPs, but not always; in the case of third-person SPE, verb class was not a significant factor (i.e. mental verbs in the third-person behaved no differently from other verb classes regarding variable SPE). Likewise, polarity showed an effect for 1sg, but not for third-person. Furthermore, the interaction effects suggest that the potential role of ambiguity resolution for overt SPs may apply to third-person, but not to 1sg. These findings echo what other researchers have found and bolster previous claims regarding the differential behavior of particular persons/numbers (Travis, 2005, 2007; Shin, 2014).

Conclusion

This paper has reported on findings from a variationist sociolinguistic analysis of 1sg and third-person variable SPE in a variety of Mexican Spanish spoken in the Southeastern U.S. (Georgia), an area that remains underexplored in the field of Hispanic Linguistics. Using sociolinguistic interview data from 20 speakers and incorporating logistic regression analyses of overt and null pronoun usage, the present investigation has shown that 1sg SPs are influenced by TMA, switch reference, polarity, and verb class in this variety, and that third-person SPs are conditioned by TMA and switch reference. Additionally, it was found that there is a significant interaction between TMA and switch reference for third-person SPE, whereby overt SPs are more likely to occur in environments of switch reference than same reference, particularly with the use of the imperfect aspect. The current findings reveal patterns that are sometimes obfuscated in studies that include all grammatical persons within the same analysis. For instance, Limerick (2019) found a lack of a TMA effect for the same speech community (in Roswell, Georgia) when including all persons/numbers while the current study shows that TMA does in fact impact 1sg and 3rd-person subjects. Future studies should continue this type of analysis to determine whether this is potentially a general pattern for Spanish, that is, if TMA only impacts particular grammatical persons (see also Shin, 2014, who found differential TMA effects particularly for 3sg SPs). Moreover, it may be the case that studies showing an overall effect for TMA, not having considered interactions with person/number, potentially obscure the dependent effects (interactions) of TMA on particular grammatical persons. Further, additional research that separately analyzes 3sg and 3pl is needed to tease apart potentially unique patterns for singular vs. plural. Future work also needs to take into account additional independent variables (e.g. priming, clause type, age, gender) in order to further explain the overt/null variation for particular grammatical persons as well as continue to diversify the dialects studied in terms of both country/ethnic origin (Chilean, Uruguayan, Salvadoran, Afro-Latinx, etc.) and Southeastern U.S. location (Alabama, North and South Carolina, Mississippi, etc.).

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