

CAN MOBILITY AFFECT GRAMMAR AT THE MORPHOSYNTACTIC LEVEL? A STUDY IN BRAZILIAN PORTUGUESE¹

A MOBILIDADE PODE AFETAR A GRAMÁTICA NO NÍVEL MORFOSSINTÁTICO? UM ESTUDO NO PORTUGUÊS BRASILEIRO

Manoel Siqueira (UFS)²

manoel.siqueira77@hotmail.com

<https://orcid.org/0000-0002-5928-3450>

Raquel Meister Ko. Freitag (UFS)

rkofreitag@uol.com.br

<https://orcid.org/0000-0002-4972-4320>

ABSTRACT: *In this paper, a study about the presence of the definite article before possessed NP (D-presence) in Brazilian Portuguese is carried out with a sample constituted by sociolinguistic interviews with students from the Federal University of Sergipe (UFS), Brazil, to observe whether the distribution pattern of the variable suggests an effect of mobility in the students' speech. An analysis is carried out with a sample from the Deslocamentos 2020 dataset, composed of sociolinguistic interviews with college students from Universidade Federal de Sergipe (UFS), balanced for degree of mobility (students from Sergipe, Alagoas, and Bahia), time in the undergraduate program, and sex (n = 60). Results show that D-presence is sensitive to dialectal factor, with D-absence predominating in data from Sergipe and Alagoas, and D-presence predominating in data from Bahia, but it is not sensitive to the integration into the new community considering speakers' time in the undergraduate program. This result contributes to revealing how mobility affects grammar at the morphosyntactic level.*

KEYWORDS: *displacements; dialectal marker; linguistic contact.*

RESUMO: *Neste artigo, é realizado um estudo sobre a presença de artigo definido antes de SN com possessivo no português brasileiro por meio de uma amostra constituída por entrevistas sociolinguísticas com estudantes da Universidade Federal de Sergipe (UFS),*

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Brasil, para observar se o padrão de distribuição da variável sugere um efeito da mobilidade na fala dos universitários. A análise é feita com uma amostra do conjunto de dados Deslocamentos 2020, constituído por entrevistas sociolinguísticas com universitários da UFS, distribuídos em grau de mobilidade (alunos de Sergipe, Alagoas e Bahia), tempo no curso e sexo (n = 60). Os resultados mostram que a presença do determinante é sensível ao fator dialetal, com dados de Sergipe e Alagoas predominando a ausência e dados da Bahia predominando a presença, mas não é sensível à integração na nova comunidade considerando tempo no curso. Os resultados contribuem para a compreensão de como a mobilidade afeta a gramática no nível morfossintático.

PALAVRAS-CHAVE: *deslocamentos; marcador dialetal; contato linguístico.*

1. Introduction

Mobility has long been discussed as an important factor to observe linguistic change. Studies about linguistic variation have shown how (groups of) speakers' grammar can be affected through migration and eventual contact with linguistic differences, which has the potential for convergent dialect accommodation: when speakers are in contact with mutually intelligible, but distinct dialects of the same language, language change can occur (LABOV, 1966; TRUDGILL, 1986; BRITAIN; TRUDGILL, 1999).

Due to public policies for inclusion in higher education, the Brazilian educational system expanded throughout the 2010s, and this expansion has modified the college students' profile. The access of students from socially disadvantaged classes and the academic mobility of students from different geographical regions affect their language. In a social space like a college campus, linguistic diversity sets up a scenario for linguistic change, once mobility triggers linguistic contact. College students' migration to a new community expand their contact with different varieties of languages. This difference was well-observed in phonological levels (see BORTONI-RICARDO, 1985; CAMPBELL-KIBLER et al., 2014; SANTANA, 2018; CORRÊA, 2019). At the morphosyntactic level, though, there is a lack of studies that consider language change/dialectal accommodation through contact (but see GUEDES, 2019; OUSHIRO, 2020). It is well known that linguistic contact may lead to gradual structural convergence, even in (morpho)syntax (AUER, 2007), but this level of linguistic analysis is relatively less explored than phonological changes.

In Brazilian Portuguese (BP), the presence or absence of the definite article in determiner position (D) before possessed NP, a Noun Phrase with a possessive pronoun, as in

(1) and (2), behaves as a dialectal marker. In some communities, such as in the state of Sergipe, in the Northeast region of Brazil, the absence of the article in D-position is more frequent; in other regions, such as Bahia, a neighboring state, D-presence is the norm.

- (1) Eu vi o-DET seu-POSS irmão.
I saw the-DET your-POSS brother.
'I saw your brother'.
(2) Eu vi Ø-DET seu-POSS irmão.
I saw Ø-DET your-POSS brother.
'I saw your brother'.

Speakers' mobility may highlight differences in their linguistic uses regarding this dialectal marker. In this paper, an observational study of this feature is carried out with a sample from the *Deslocamentos* 2020 dataset, constituted by sociolinguistic interviews with undergraduate students from the Federal University of Sergipe (UFS), in Sergipe, Brazil, distributed in degree of mobility, time in the undergraduate program, and sex (n = 60). It is argued that there is an effect of linguistic contact due to mobility in the presence of definite articles in determiner position (D) before possessed NP in the UFS community, resulting in dialectal accommodation (TRUDGILL, 1986). The analysis was conducted by means of two steps of statistical analyses. The first step of statistical analyses measured the effects of linguistic features controlled by previous studies; the second step, the effect of social features on the rate of D-presence in the students' speech.

2. Mobility as an explanatory factor in sociolinguistic research

Mobility plays an important role in linguistic change. Due to mobility, speakers come into contact with linguistic features that are not part of the grammar of their home community. Contact leads them to incorporate linguistic differences in their grammar and/or to disseminate features from their home community to other communities (BRITAIN 2006, 2008), once the immigrant usually shares a set of linguistic similarities with the speakers of his new community, but tend to differ concerning their regional variety (AUER, 2007).

Sociolinguistic researchers have shown the influence of mobility as a diffuser of linguistic innovations and as a conditioner of linguistic variation and change (BRITAIN, 2008; BORTONI-RICARDO, 1985). An example is the migration from rural to urban areas in which rural individuals accommodate their speech to the linguistic patterns of their new community

(e.g., LABOV, 1972). In other words, migrants change some aspects of their language when facing new varieties. This accommodation, though, cannot be considered as an equal use of the new patterns, since accommodation in post-adolescents is often incomplete and often inaccurate (BRITAIN, 2013), leading those individuals to use their language similarly to the new community pattern, but with some aspects of the pattern of their home community. In other words, adult migrants do not become natives in the new variety, but rather employ interdialectal forms and rates of usage.

Through migration, speakers are usually in a situation in which new social networks must be constructed (AUER, 2007). The greater the amount and the longer the duration of exposure to the new environment and new networks, the greater the degree of accommodation to the new community dialect is expected. In the same way, the greater the individual's social network with groups from the new community, the greater the accommodation to the new pattern is expected. The integration of individuals into the new community, observed by their social network, justifies the linguistic behavior of migrants being more similar to the new community than to the behavior of their community of origin, as stated in Carmichael's (2017) research that examined rates of r-lessness with speakers affected by Hurricane Katrina in Chalmette, Louisiana, which caused large-scale displacement in the region. The author measured the participants' connections to Chalmette in post-Katrina location status (whether participants returned or relocated after the storm) and place orientation (an ethnographical measure of stance and exposure to places outside of Chalmette). Results show an agentive identity-driven quality to (r) variation in Chalmette, rather than a geographic motivation to use r-less pronunciations. Place orientation predicts rates of r-less better than post-Katrina location.

More evidence for the effects of exposure to a new environment and new networks are found in studies carried out in Brazilian Portuguese (BP). For example, Bortoni-Ricardo (1985; 2011) found, by describing how rural migrants adjust their speech to the urban environment of the capital of Brazil, Brasília, that migrants with a higher index of integration and urbanization showed a greater tendency to employ standard forms (such as first-person and third-person plural verb agreement). The more integrated into the new community the speakers are, the greater the tendency for those speakers to change their linguistic behavior from typically rural to a more urban linguistic behavior.

Moreover, the apparent-time methodology provides an understanding of long-term effects to the exposure of linguistic changes, once it allows access to the extent of the contribution of interpersonal accommodation to language change (AUER, 2007). Studies that

consider this methodological tool demonstrates that, when comparing migrants with different times of exposure, the rates of linguistic variable rules are usually different. Oushiro (2019) compared the speech of migrants from a Northeast state of Brazil that now live in Southeast states with the speech of natives of those states to describe the behavior of pretonic vowels /e/ and /o/. Results show that there are migrants whose linguistic behavior is close to the patterns of the new community, with no significant differences concerning the pronunciation of the vowels by natives of the host communities. The study demonstrates that migration to the new community in early adolescence leads to higher accommodation to the Southeast's vowel patterns. Age at the time of migration seems to play an important role in linguistic change (OUSHIRO, 2020).

In circumstances in which a large number of speakers migrates, the linguistic contact of speakers can be extremely potentialized. At a university, for example, a profuse displacement cycle is observed, with speakers originally from multiple dialectal regions coming into contact with one another, especially because “college is a common [...] relocation experience for young adults, often involving moves to new dialect regions, or interaction with others who have come from other regions” (CAMPBELL-KIBLER et al., 2014, p. 21). In Brazil, public policies for inclusion in higher education have modified the profile of college students. The implementation of such policies resulted in greater access to university for different social classes. The Federal University of Sergipe (UFS), in Sergipe (a Northeastern state), Brazil, for instance, became an institution that receives different types of students who migrate to be part of the campus practices, who interact with one another and begin to develop practices together. There was also an increase in students from states other than Sergipe at UFS (RIBEIRO, 2019a). With this addition, UFS became a space with a plurality of students, from Sergipe and otherwise.

This plurality results in language diversification and linguistic change, which is well observed in Corrêa (2019), who describes the palatalization of /t/ and /d/, as in *tia* “aunt” and *dia* “day” in the speech of college students from UFS, in Brazil. The results show that outsiders palatalize more, while individuals originally from the state present low palatalization frequency. The author observes that the longer the time of insertion in the community, the greater the frequency of use of the palatal variant.

Ribeiro (2019a, 2019b) also highlighted college students' relationship with mobility in the same community. The author showed that the rate of use of the locative preposition *ni*, “in” or “at”, (opposed to *em*) is greater for speakers of the countryside of the state, while it is lower for those from the metropolitan region of the state and outsiders. Unlike Corrêa's research, the

greater the time of insertion in the community, the lower the frequency of *ni*, since this variant has a rural stigmatized character. Both studies demonstrate that long-time exposure, through apparent-time methodology, can change the language behavior of migrants: the more they integrate into the academic environment, the more they change their linguistic uses.

The plurality of students at a college campus shows that different groups tend to behave differently. However, there are cases in which, even if there are differences in the linguistic uses of (groups of) speakers, there is stability of the internal conditioners, which suggests a convergence of the conditioners for different varieties, as we see in BP verb agreement. Although presenting social stratification, the internal constraints demonstrate the same effect, as shown by Novais (2021, 2022), in which college students from different regions, even using the third-person plural verb agreement differently, demonstrate that the same linguistic conditioners act on variation, such as phonic salience and subject position. The same is true when we talk about the variation in the government of locative complements of movement verbs (*a, para, em*), such as *Vou no banheiro*, *Vou para o banheiro*, and *Vou ao banheiro* (I'm going to the restroom), in which college students from different geographic regions, which present different patterns for prepositions, converge in terms of internal conditioners, such as permanence in the locative and configuration of space (RODRIGUES, 2021). Linguistic variables can present stability of the internal conditioners between different groups, even if there are differences in the application. The migration to a new community can change the language of (group of) speakers, but the linguistic constraints might be the same as their home variable rules.

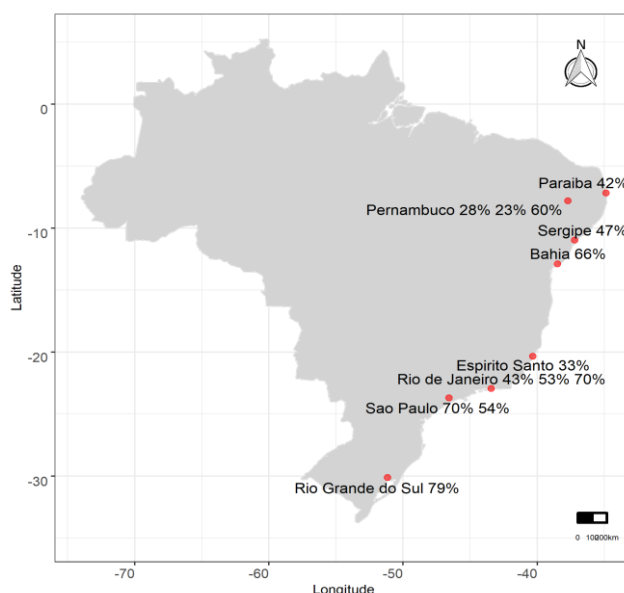
The studies presented in this section show the effect of migration in the speech of individuals and the consequent linguistic change due to contact. Speakers from different dialectal regions have different linguistic behaviors. As they migrate, their language variety can change, as we have seen in this section. D-presence before possessed NP can be one of the changes.

3. The case of the D-presence before possessed NP

Several sociolinguistic researches have shown dialectal differences in D-presence before possessed NP. As Lucchesi (1993, p. 91) argues, “in Portugal and the South of Brazil, the definite article and the possessive normally co-occur, whereas in Northern and Northeastern Brazil the article is normally absent”. Siqueira (2020b), through a review article, also shows dialect differences for D-presence before possessed NPs: while Northeastern speakers tend not to employ the article, those from the South tend to employ it.

Studies carried out in BP provide more evidence of dialectal differences in D-presence before possessed NP (SILVA, 1982, 1998a, 1998b; CAMPOS JR., 2011; PEREIRA, 2017; GUEDES, 2019; SEDRINS et al., 2019; SIQUEIRA, 2020a), displayed in Figure 1.

Figure 1 – Distribution of the presence of the determiner position before pre-nominal possessives in BP³



Source: the authors.

Although the mentioned surveys are methodologically different, with different samples, the rates of D-presence are higher in the studies from the Southern and Southeastern region, while those from the Northeastern region are lower. However, the behavior of Espírito Santo, a Southeastern state, is similar to those of the Northeast, differing from other results in the Southeastern region. These results show a dialectal difference in D-presence before possessed NP.

Being a dialectal marker, D-presence before possessed NP in BP is one of the rules that define the linguistic behavior of a group of speakers and linguistic contact is responsible for the entry of this pattern in the community and its diffusion to other communities. Contact with different dialects can lead speakers to change their linguistic behavior: D-presence pattern to a D-absence pattern, and vice versa. This is well shown in Guedes (2019), who compares the speech of three

³ Data referring to Paraíba are from Guedes (2019); Pernambuco, from Pereira (2017), Sedrins et al. (2019), and Callou and Silva (1997); Bahia and Rio Grande do Sul, from Callou and Silva (1997); Sergipe, from Siqueira (2020a); Espírito Santo, from Campos Jr. (2011); São Paulo, Callou and Silva (1997), and Guedes (2019), respectively; for Rio de Janeiro, the percentages are, respectively, from Silva (1982), Silva (1998a; 1998b), and Callou and Silva (1997).

different groups: (i) speakers from Paraíba (a Northeastern state) (PBSP) who migrated to São Paulo (a Southeastern state); (ii) native speakers of São Paulo (SP); and (iii) native speakers from Paraíba (PB). The results show that PBSP speakers present linguistic behavior more similar to those from SP (49 % and 46 % respectively) – their new community –, than to those from PB (58 %), the old community. The author concludes that there is a Northeast vs. Southeast polarization in D-presence, suggesting that this variable is an indicator of the individual's dialect of origin.

Guedes' (2019) results are evidence of some stability of internal constraints in the three groups on D-presence, with differences in application. *Grammatical person*, *possessive number*, and *possessive gender* present similar behavior in the three groups; *type of preposition* and *syntactic function* show differences. For instance, with SP speakers, D-presence is more predominant with prepositions that can contract with the D (in BP, *em* 'in', *de* 'of', *para* 'for' and *por* 'by') than with the ones that cannot contract (in BP, *com* 'with') and without preposition; with PB and PBSP speakers, D-presence is only predominant with prepositions that can contract and that cannot contract (i.e., when there is a preposition). In NP without preposition, the application is for D-absence. Differences in the application might be an effect of dialectal differences. The author's research demonstrates that speakers can converge with the variable rules of the new community, as migrants apply the rules of D-presence more like those from São Paulo than from Paraíba.

Research about the phenomena provides information about the dialectal differences in the variable rule and information on how migrants tend to adopt the linguistic behavior of their new community regarding D-presence (GUEDES, 2019). Controlling the informant's region of origin and their insertion into the campus community can help obtain results that are consistent with the accommodation that comes from mobility.

4. Methods

4.1. A dialect distinct sample

A sample based on the region of origin (displacement profile) and the integration into the university community (time in the undergraduate program) was collected with college students from the Federal University of Sergipe (UFS), as part of the project *Como Fala, Lê e Escreve o Universitário?* (How does the college student speak, read and write?), in the *Falares*

Sergipanos database (FREITAG, 2013).⁴ The sample is labeled *Deslocamentos 2020* and contains four (4) forms of mobility (Table 1).

Table 1 – Displacement profile

Displacement 1	Undergraduate students from the Federal University of Sergipe (UFS) who were born and raised in the metropolitan region of Sergipe (including cities as Aracaju, Nossa Senhora do Socorro, São Cristóvão, and Barra dos Coqueiros). Those students must live in the region.
Displacement 2	Undergraduate students from the Federal University of Sergipe (UFS) who were born and raised in the interior of Sergipe. Those students commute daily to the university.
Displacement 3	Undergraduate students from the Federal University of Sergipe (UFS) who were born and raised in the interior of Sergipe. Those students now live in the metropolitan region of Sergipe, near the university.
Displacement 4	Undergraduate students from the Federal University of Sergipe (UFS) who were born and raised in Alagoas and Bahia, who currently reside in Greater Aracaju.

Source: the authors.

The *Deslocamentos 2020* sample is also stratified considering (1) the time in the students' undergraduate program, initial (first two years) and final (5th period onwards), and (2) sex, male and female. All displacement profiles have 12 speakers (divided in time in the undergraduate program and gender), a total of 60 college students (Table 3). College students' mobility in the sample is displayed in Figure 2.

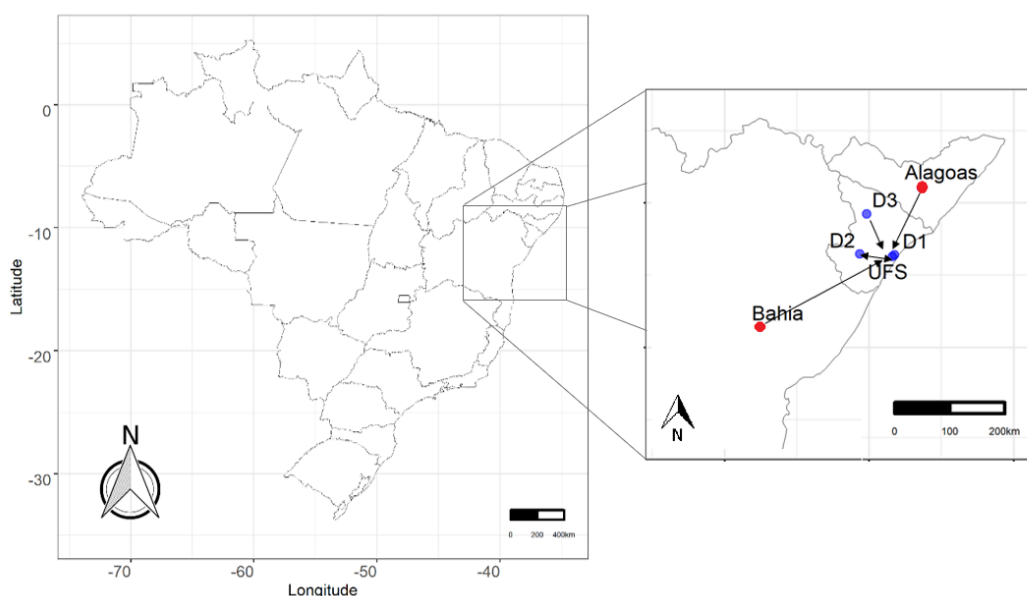
Table 2 – Displacements 2020 stratification

	Initial		Final	
	Male	Female	Male	Female
Displacement 1	3	3	3	3
Displacement 2	3	3	3	3
Displacement 3	3	3	3	3
Displacement 4				
Alagoas	3	3	3	3
Bahia	3	3	3	3

Source: the authors.

⁴ *Falares Sergipanos* is a synchronic linguistic database of Portuguese from the state of Sergipe, Brazil, following two collecting approaches – speech communities (homogeneous stratification) and practice communities (socio-personal relationships) (see FREITAG, 2017).

Figure 2 – Mobility in the *Deslocamentos 2020* sample



Source: the authors.

Data collection followed the protocol defined for the *Falares Sergipanos* database (FREITAG, 2013), with sociolinguistic interviews of 40–60 minutes carried out with a script of questions about personal life and social issues, such as Education, Security, Health, Gender Equality, etc. At the end of the interview, participants took part in a linguistic perception test.

4.2. Analysis procedure

The interviews were transcribed using the ELAN software (Version 6.0) (HELLWIG; GEERTS, 2013). After transcription, we exported the transcripts archives in .txt files to identify all occurrences of possessed NP. Next, possessed NP was categorized considering the presence or absence of a determiner, to verify its distribution⁵.

The results were measured through two steps of statistical analyses. The first step measured the effects of linguistics features controlled by previous studies. Chi-square tests were conducted to observe the relationship between the absolute frequency of the dependent variable and the linguistic features (the independent variable). After the chi-square analysis, the statistically significant constraints were included in a mixed-effects logistic regression model

⁵ Contexts of neutralization were excluded from analysis (e.g., contexts with demonstrative pronouns, vocative, crystallized expressions, idiomatic expressions, contexts in which the noun is not represented syntactically in the sentence, contexts in which it is inaccurate to know if there is a determiner, and contexts in which the speaker repeats the interviewer's question).

to observe the effects of all linguistic constraints upon the response variable, considering all displacement profiles. In the second step, the effect of social features was measured by computing the mean rate of D-presence by students and comparing the effect of students' time in the undergraduate program and displacement profile.

The statistical analyses were made with R (R CORE TEAM, 2018), in RStudio interface, with the aid of the *ggplot2* package (WICKHAM, 2016) and *sjPlot* package (LÜDECKE, 2021).

5. Results

The rate of D-presence in the community is 44 % (n = 2,326), as in (3). In the sample *Deslocamentos* 2020, there is a predominance of D-absence in possessed NP, which reaffirms the behavior of the phenomenon in dialectal regions of Northeast Brazil (PEREIRA, 2017; GUEDES, 2019; SEDRINS et al., 2019; SIQUEIRA, 2020a).

- (3) o-DET meu-POSS curso que é Jornalismo ele só tinha aqui na universidade (FER3FI).
'(the)-DET my-POSS course which is Journalism it was available only here at the university'.

The lower frequency of D-presence might be an effect of the higher contact with speakers from Sergipe, a state where D-absence is the pattern. The higher the network with speakers from within the state, the higher the exposure to the pattern of the state. Linguistic features can show some effects in the different groups. In the following sections, the statistical results from step 1 and step 2 are presented.

5.1. Step 1: Linguistic features

As noted in Guedes (2019), linguistic features, such as *grammatical person*, *possessive number* and *gender*, *type of preposition*, and *syntactic function*, seem to show some common language constraints between the three groups (PBSP, SP, and PB) in realizations of D-presence before possessed NP, with differences in the application. The results presented in this section aim to observe if those constraints behave similarly in our data to measure the effects of linguistics features controlled by previous studies.

Table 3 – Linguistic constraints

<i>Grammatical Person</i>	D-presence	D-absence	Total
First	918 43.6 %	1186 56.4 %	2104 100 %
Second	44 44.4 %	55 55.6 %	99 100 %
Third	55 44.7 %	68 55.3 %	123 100 %
Total	1017 43.7 %	1309 56.3 %	2326 100 %
$\chi^2 = 0.077 \cdot df = 2 \cdot \text{Cramer's } V = 0.006 \cdot p = 0.962$			
<i>Possessive gender</i>	D-presence	D-absence	Total
Masculine	447 39.8 %	676 60.2 %	1123 100 %
Feminine	570 47.4 %	633 52.6 %	1203 100 %
Total	1017 43.7 %	1309 56.3 %	2326 100 %
$\chi^2 = 13.247 \cdot df = 1 \cdot \phi = 0.076 \cdot p < 0.001$			
<i>Possessive Number</i>	D-presence	D-absence	Total
Singular	882 45 %	1080 55 %	1962 100 %
Plural	135 37.1 %	229 62.9 %	364 100 %
Total	1017 43.7 %	1309 56.3 %	2326 100 %
$\chi^2 = 7.405 \cdot df = 1 \cdot \phi = 0.058 \cdot p = 0.007$			
<i>Type of preposition</i>	D-presence	D-absence	Total
Absence of preposition	336 23.1 %	1117 76.9 %	1453 100 %
Contracted	633 92.8 %	49 7.2 %	682 100 %
Not contracted	48 25.1 %	143 74.9 %	191 100 %

Total	1017 43.7 %	1309 56.3 %	2326 100 %
$\chi^2 = 945.369 \cdot df = 2 \cdot \text{Cramer's } V = 0.638 \cdot p < 0.001$			
<i>Syntactic function</i>	D-presence	D-absence	Total
Nominative	252 23.9 %	802 76.1 %	1054 100 %
Accusative	92 27.7 %	240 72.3 %	332 100 %
Genitive	212 90.2 %	23 9.8 %	235 100 %
Dative	152 67.6 %	73 32.4 %	225 100 %
Ablative	309 64.4 %	171 35.6 %	480 100 %
Total	1017 43.7 %	1309 56.3 %	2326 100 %
$\chi^2 = 544.316 \cdot df = 4 \cdot \text{Cramer's } V = 0.484 \cdot p < 0.001$			

Source: the authors.

The linguistic feature *possessive gender* and *number*, *type of preposition*, and *syntactic function* are statistically significant, while *grammatical person* is not. For *possessive gender*, the frequency of D-presence is higher with possessed NP that is *feminine* (47.4 % n = 57), as in (4). For the linguistic variable *possessive number*, D-presence is higher with singular possessed NP (45 % n = 882), in (5). D-presence is extremely high when in a NP with a *preposition that can contract* (92.8 % n = 633) with the determiner, in (6). For *syntactic function*, the frequency of D-presence is higher in the functions of *genitive* (90.2 % n = 212), *dative* (67.6 % n = 152), and *ablative* (64.4 % n = 309), such as in (7), (8), and (9), functions that need to have a preposition in their structure.

(4) a-DET minha-POSS mãe tipo já me disse coisas horríveis (PAU4MF).
'(the)-DET my-POSS mother like she already told me awful things'.

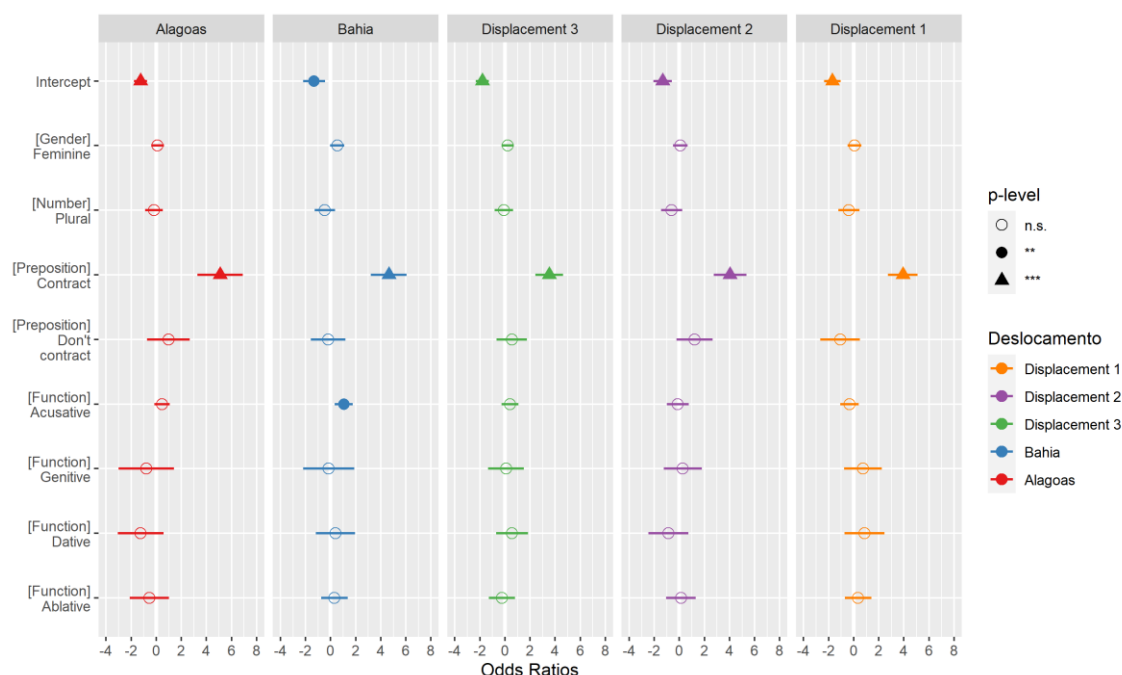
(5) onde não tem só o-DET meu-POSS departamento tem o-DET meu-POSS departamento e de petróleo eu acho (MIK4FF).
'where there isn't (the)-DET my-POSS department only, there is (the)-DET my-POSS department and petroleum one, I guess'.

- (6) a gente precisa entender e saber lidar com as pessoas do-PREP+DET nosso-POSS dia a dia (AUR4FF).
 ‘we need to understand and to know how to deal with people of (the)-PREP+DET our-POSS daily life.
- (7) eu tenho alguns amigos da minha-POSS infância que estão morando lá (PAU4MF).
 ‘I’ve got a few friends from (the) my-POSS childhood that are living there’.
- (8) eu tinha responsabilidade de cuidar da minha-POSS vó (JOS4MI).
 ‘I had the responsibility of taking care of (the) my-POSS grandmother’.
- (9) eu vou pro cinema com-PREP as-DET minhas-POSS amigas (BEA4FI).
 ‘I go to the movies with-PREP (the)-DET my-POSS friends’.

D-presence tends to be higher when there is a preposition in the NP, a Prepositional Phrase (PP). The frequency of D-presence in PP is higher than in contexts where there is no preposition. This is well shown in contexts of PP with prepositions that *can contract* and in syntactic functions that need a preposition, like *dative*, *genitive*, and *ablative*. However, in PP with prepositions that *cannot contract*, there is a small frequency for D-presence.

Next, it is observed whether all five groups of our sample behave similarly by controlling those constraints (only statistically significant ones) in a logistic regression model with the informant as random effects (formula = glmer (VD ~ gender_poss + number_poss + preposition + function + (1 | informant), data = data, family = binomial)).

Figure 3 – Logistic regression model with the informant as random effects with all displacement profiles and significant linguistic constraints



Source: the authors.

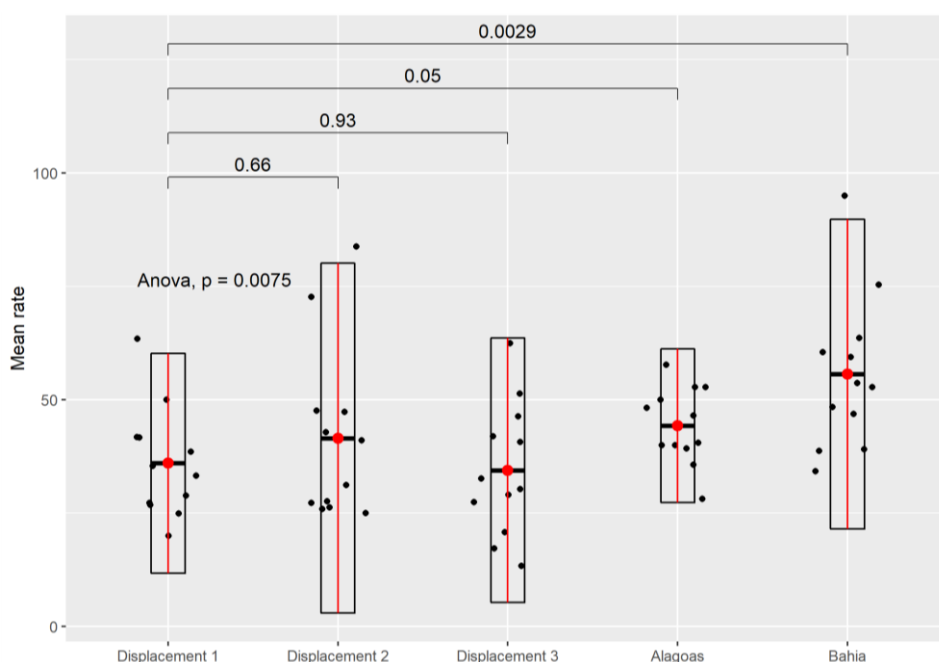
The logistic regression model with the informant as random effects shows that in all displacement profiles there is a significant negative effect on D-presence when the possessive is in the masculine form, in the singular, when it is in a NP without a preposition, and in the syntactic function of nominative, as it is observed in the coefficients of the intercept. On the other hand, in all displacement profiles, there is a positive and significant effect of D-presence when the possessive NP has a preposition that can contract with the determiner. Also, the accusative function on Displacement 4 (Bahia) has a positive and significant effect on D-presence. All other constraints have not displayed a significant effect. The differences in the syntactic function can be a result of the presence/absence of a preposition.

There is, at a certain level, stability of internal constraints in the five groups, with differences in application, especially concerning the type of preposition. The differences observed in the coefficients might be an effect of dialectal differences. Linguistic constraints in D-presence before possessed NP are a tendency in Brazilian Portuguese, which shows that even though (groups of) speakers behave differently, the linguistic conditioners are the same for these Northeastern speakers.

5.2. Step 2: Social features

Faced with a dialectal distinct variable, it is common to find different patterns in environments that are widely diversified in terms of the origins of the speakers, as a college. There are students both from the university region and from other places, such as the countryside of the state, neighboring states, and more distant states as well. The university space is shared by people who belong to different dialectal regions and have, in their linguistic repertoire, different variants for language phenomena. One way to observe dialectal differences in the speech of college students is through observation of their region of origin. Here, the variable displacement shows this difference (Figure 4).

Figure 4 – Mean rates of D-presence among students' displacement profiles



Source: the authors.

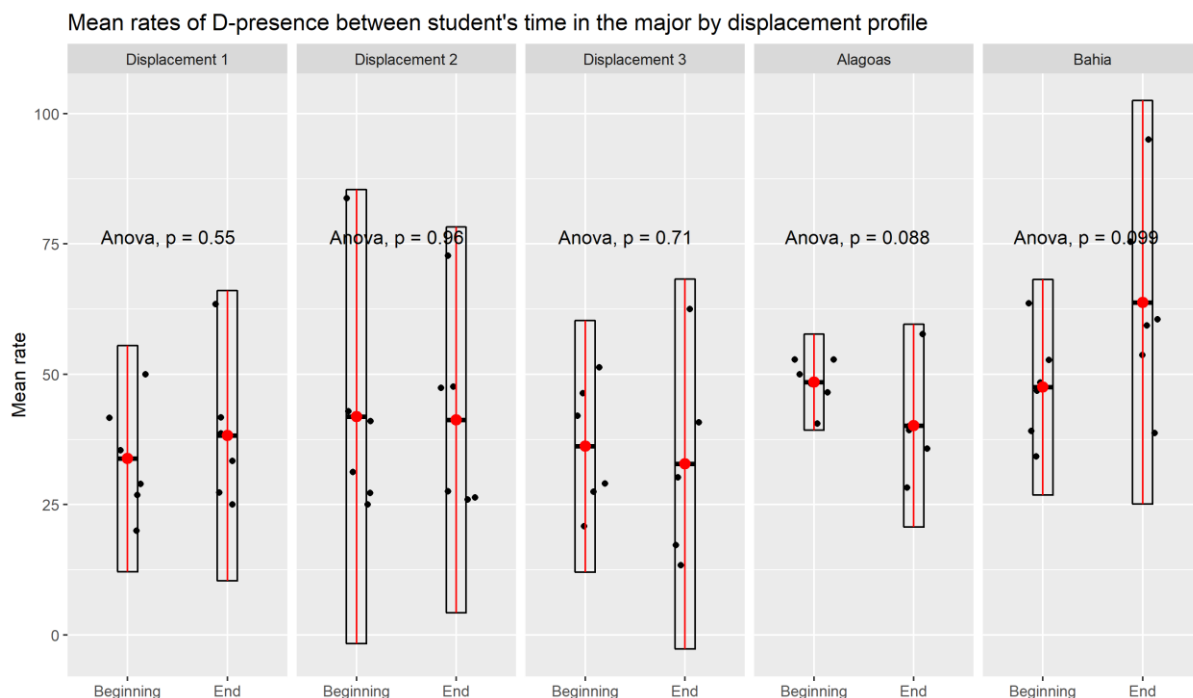
The global mean rate for D-presence ($M = 42.4$, $SD = 16.2$) is affected by displacement profile group (Figure 4): there are significant differences among the mean rates of all displacement profiles ($F(4, 53) = 3.79$, $p = 0.009$). The mean rates of students from Bahia ($M = 55.6$, $SD = 17.0$) and Alagoas ($M = 44.3$, $SD = 8.4$), students who migrate to live near the university, are greater than the mean rates of students from Sergipe, as we can see in the Displacement 1 ($M = 36.0$, $SD = 12.1$), Displacement 2 ($M = 41.5$, $SD = 19.2$) and

Displacement 3 ($M = 34.4$, $SD = 14.5$). The lowest frequencies are observed in students from Displacement 3 and 1, respectively. Individually, there are no significant differences among the mean rates of Sergipe displacement profiles and between Alagoas, Sergipe, and Bahia, but there are differences between Sergipe displacement profiles and Bahia ($p = 0.0029$).

Bahia is the only displacement that presents a predominance of D-presence. The frequency of D-presence in Displacement 4 (Bahia and Alagoas) demonstrates that for speakers from outside Sergipe the D-presence is greater, while Sergipe shows a dialectal behavior for D-absence. The difference between the displacements is an indication of the dialectal character of this variation, as speakers from different regions have different linguistic patterns for the variation in D-presence in our data.

The speakers' dialectal region interferes with the uses they make of D-presence; integration into a new community, over time, can also interfere with these uses, which leads us to control time in the undergraduate program (Figure 5), subdivided into initial (first two years) and final (5th period onwards).

Figure 5 – Mean rates of D-presence between student's time in the undergraduate program by displacement profile



Source: the authors.

At the initial time in the undergraduate program, the mean rate for D-presence is greater in Displacement 3 ($M = 36.1$, $SD = 12.0$), and Alagoas ($M = 48.4$, $SD = 4.6$) than at the final time. On the other hand, in Displacement 1 ($M = 38.237$, $SD = 13.916$), Displacement 2 ($M = 41.257$, $SD = 18.511$), and Bahia ($M = 63.780$, $SD = 19.344$) the mean rate for D-presence is greater at the end of the undergraduate program. The ANOVA⁶ test shows that the interaction between displacement and time in the undergraduate program is not statistically significant ($F(4, 50) = 1.21$, $p = 0.320$). Individually, neither of the displacements profile shows a statistically significant difference between the beginning and the end of the undergraduate program (according to Figure 5). Although there is a difference in displacements when looking at time in the undergraduate program, this difference is not statistically significant.

Even though migration, displacement from a dialectal region to another, contact with different varieties, and contact time interfere in the linguistic uses made by the speakers, we have observed, in our results, the non-effect of the integration to the community based on the apparent time methodology, demonstrating that the time in the undergraduate program does not seem to lead to change in the speech of college students, unlike what is seen in Côrrea (2019) and Ribeiro (2019), in which the more integrated the students are with the new community, the more they change their linguistic behavior. This must be an effect of the level of awareness to that variable, which seems not to be part of the conscious awareness of the speakers. As Trudgill (1986, p. 11) points out, “in contact with speakers of other language varieties, speakers modify those features of their varieties of which they are most aware”. The more aware of the variant the speakers are, the greater the chances for them to modify their speech. The level of awareness is a necessary condition for dialect loss and acquisition of a new one.

6. Final remarks

This study presented an observational study about the presence of the definite article before possessed NP (D-presence) in Brazilian Portuguese in the speech of students from the UFS community. Linguistic conditioners behave similarly in all five groups, differing only in the rates of application, which suggests stability of the internal factors for variable D-presence. The differences in the application might be a result of social conditioners, like the ones presented in this study, such as mobility and integration into the new environment.

⁶ Analysis of variance (ANOVA) is a linear modeling method for evaluating the relationship among groups.

D-presence is sensitive to the dialectal factor – since different geographic regions present different linguistic patterns for variation, forming different dialectal regions of the language –, with D-absence predominating in data from Sergipe and Alagoas, and D-presence predominating in data from Bahia. This result highlights that, since speakers are sensitive to new forms when they migrate, there may be an effect of mobility acting upon their language. But the observation of the integration into the academic environment through the variable time in the undergraduate program shows that D-presence is not sensitive to this factor, with no statistically significant differences between speakers at the end or at the beginning of the undergraduate program.

The students' mobility and integration into the new community may expand their contact with different varieties, resulting in changes in their language since varieties that are in contact can be linguistically altered (TRUDGILL, 1986), but this change is not attested here.

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