

Article

Bringing Purported Black Sheep into the Fold: Galician Inflected Infinitives and Puerto Rican Spanish Pre-Verbal Infinitival Subject Pronouns

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Received: 2 April 2019; Accepted: 14 June 2019; Published: 18 June 2019



Abstract: This work reports the results of quantitative, variationist analyses of two typologically unusual constructions in order to explore the grammatical conditioning of subject expression in non-finite clauses. Both constructions, Galician inflected infinitives and (Puerto Rican) Spanish preposed, nominative infinitival subjects, have not been widely studied. As a result, variable expression/omission of subject marking in these constructions is not yet fully understood. Using corpora of oral data, we extract 732 examples of infinitives in purpose clauses (headed by *para*) and employ a logistic mixed effect model to explore the linguistic conditioning of the overt/null variants. We find the appearance of overt subject marking to be conditioned nearly identically across the two distinct languages as well as across finite/non-finite clauses. We utilize this lack of difference to propose that the two construction types may be manifestations of one grammaticalization process. As such, we propose the Puerto Rican Spanish variation may provide a new synchronic source of data with which to explore the diachronic source of (Galician) inflected infinitives.

Keywords: subject expression; non-finite clause; inflected infinitive; purpose clause; grammaticalization; constructions

1. Introduction

Often in linguistic inquiry, typologically or dialectally unusual constructions are treated as if they were outliers—ostensibly aberrant phenomena with little to contribute to general theory. For example, in order to determine the conditioning factors of variable subject pronominal expression in so-called pro-drop languages, previous studies have generally restricted their analyses to finite clauses (for Spanish, see [Otheguy and Zentella 2012](#), and studies included in [Carvalho et al. 2015](#)), whereas non-finite clauses have been generally left outside the envelope of variation. Yet usage-based analyses of seemingly anomalous constructions suggest, in fact, that the same processing mechanisms which operate generally in a language can give rise, over time, to these ‘nonconforming’ linguistic units (e.g., [Bybee et al. 2016](#)). The analysis of these unusual forms, then, provides fresh data to test theories of diachronic trajectories, synchronic variation, and conceivably future paths of change. It is to two instantiations of such “black sheep” that we turn our attention in the current study. Our analysis of two underexplored constructions in two Romance languages shows that not only are the constructions more alike than dissimilar, but that also they inform quite straightforwardly lines of research central to linguistic debate regarding the nature and function of non-finite clauses as well as subject expression. What is more, the quantitative analyses suggest the disparate constructions could share a common grammaticalization pathway, providing a fresh lens through which to consider the origin of inflected infinitives in Romance.

The two Romance varieties we explore are Galician and (Puerto Rican) Spanish. Both exhibit an unusual construction from a typological as well as a dialectal point of view. Galician has an inflected infinitive construction *para facer-es* ‘for you-2SG to do’ and Puerto Rican Spanish a preverbal, nominative subject plus infinitive construction *para tú hacer* ‘for you-2SG to do’. In both languages, these constructions enter into variation with uninflected or unexpressed forms (a description of the variants and the variation is provided in the Background section below).

We approach the data from within a comparative-variationist perspective (Poplack and Tagliamonte 2001; Walker 2010; Tagliamonte 2012), in which we attempt to discover the probabilistic grammar of these seemingly unrelated phenomena through the quantitative analysis of the linguistic factors conditioning the expression of these morphosyntactic variants. Although inflected infinitives are widely studied in Portuguese (for empirical studies see Vanderschueren 2013; Vanderschueren and Diependaele 2013; Vanderschueren and Cuyper 2014), no large-scale, quantitative analysis of naturalistic Galician data exists. Likewise, though, as has been mentioned before, variable subject expression in finite constructions is widely studied, corpus-based analyses of subject expression in non-finite clauses are much more infrequent (but see Schulte 2007, 2018; Vanderschueren 2013).¹

The approach taken in this work reflects the assumption that both construction types vary in the degree to which the subject referent is expressed or referenced. Galician inflected infinitives mark the subject referent with a suffix inflection on the infinitival form. Puerto Rican Spanish infinitives may mark subject reference with a pre-posed nominative subject pronoun (Rivas et al. 2018). Both construction types vary with null expression. Despite the surface differences (separate languages, different forms), the two constructions reflect different ways of encoding the grammatical relation of subject. As both construction types are understudied, we hope to address the following research question: Can a comparative, variationist analysis allow us to identify specific similarities/differences across these construction types (*para facer-es* vs. *para tú hacer* ‘for you-2SG to do’)? We will show that, despite apparent dissimilarities, these constructions are functionally equivalent. Our results suggest that inflected infinitives and pre-verbal infinitival subjects may be understood as synchronic manifestations of the same grammaticalization process. This paper, thus, provides a new lens through which we can explore the much-debated origin of the inflected infinitive. In what follows we first provide a brief description of the constructions under consideration and highlight relevant previous research. We next detail our data and methods, present our results, and provide a discussion.

2. Background

As mentioned above, the two constructions under consideration in this work are largely underexplored. Nevertheless, the variation they present in subject reference is informed by a vast bibliography on related languages and variable phenomena. The following sections outline the nature of the variation in the constructions we analyze and highlight pertinent previous research that informs our hypotheses. The constructions will be addressed in turn.

2.1. Galician Inflected Infinitives

When compared with other Romance languages, there are relatively few studies which explore Galician. Like Portuguese, Sardinian, and Mirandese (Scida 2004, p. 2), Galician evidences inflected infinitives (Álvarez and Xove 2002, pp. 306–10; Freixeiro and Ramón 2006, pp. 387–403). Inflected infinitives differ from the bare infinitives in that they possess an inflectional suffix denoting person and number in all but the first and third singular forms. Examples can be seen in the Table 1 below.

¹ The few studies of subject expression in non-finite clauses focus upon Spanish varieties (e.g., Peninsular) in which infinitival subjects, if expressed, generally occur postverbally. In these varieties, as is noted by Vanderschueren (2013, p. 290), the subject of infinitival clauses in Spanish is either focalized or occurs in athetic clause.

Table 1. Inflected variants of the Galician infinitive *facer* ‘to make, to do’.

	Singular	Plural
1st	<i>facer</i>	<i>facer-mos</i>
2nd	<i>facer-es</i>	<i>facer-des</i>
3rd	<i>facer</i>	<i>facer-en</i>

Speakers vary in their use of inflected as opposed to uninflected infinitives. As is noted in previous literature (Álvarez and Xove 2002, p. 307), the inflected infinitive is not obligatory in any syntactic context. Examples (1) and (2) illustrate the same verb (*ser* ‘to be’) spoken with (1) or without (2) inflection on the infinitive (*sermos~ser*).²

1. **Galician**—Inflected infinitive
estamos máis fortes, máis seguras, máis preparadas, máis decididas para **sermos** úteis ó noso pobo e á nosa clase
‘We are stronger, more confident, more prepared and more decided in order to be useful to our people and our class’
[OFDL-CORILGA-PALOMANS-BRAVO-01-2013]
2. **Galician**—Uninflected infinitive
pra **ser** fortes hai que funcionar unidos e formar un consorcio
‘In order for us to be strong we have to work together and create a consortium’
[MESE-CORILGA-MATALOBOS-03-2009]

Both these examples lack an overt first person plural subject pronoun (Galician *nós*), as is typical. Overt subject pronouns with infinitives, while possible in Galician,³ are exceedingly rare in our data (6%, N = 2). In this sense, Galician differs from Portuguese, a language in which inflected infinitives are often accompanied by an overt subject pronoun. For example, Jansegers and Vanderschueren (2010, p. 419), who study inflected infinitive expression in Portuguese and Galician in the translations of three literary texts, find 5 examples (3%) of infinitives with expressed subject in Galician versus 150 examples (28%) in the Portuguese data.

Although inflected infinitives in Portuguese are widely studied from a variety of frameworks, there are relatively few empirical studies on Galician infinitives (e.g., García Gondar 1978; Asaka 1984; Jansegers and Vanderschueren 2010), which are mainly based upon written works. Inflected infinitives are not as frequent in Galician as they are in Portuguese (Jansegers and Vanderschueren 2010, p. 420; Vázquez Diéguez 2012), which may partially account for the discrepancy in quantity of research.

What we know about inflected infinitives, thus, comes largely from studies based upon Portuguese data. In this respect, Vanderschueren (2013), Vanderschueren and Diependaele (2013), and Vanderschueren and Cuyper (2014) analyze variable inflected infinitive expression in Portuguese adverbial clauses. These authors reduce the envelope of variation to those cases in which the subject of the infinitive is coreferential with the subject of the main clause. The reason is that in cases in which the subject of the inflected infinitive is different from the subject of the main clause, the inflected infinitive is practically obligatory in Portuguese. In those cases in which both inflected and uninflected infinitive are in syntactic variation (i.e., in constructions in which the infinitival subject is coreferential with the subject of the main clause) the inflected infinitive is favored over the uninflected infinitive in the following contexts:

- (a) contexts in which the adverbial clause presents higher syntactic and semantic autonomy,
- (b) contexts in which the subject of the infinitive is cognitively less accessible to the hearer, and

² In addition, purpose clauses may also be expressed by means of a finite verb in the subjunctive mood, as is explained in §2.3.

³ (García Gondar 1978, p. 150) reports 9% of inflected infinitives has an expressed subject in his literary data, and 11% in his dialectal data.

- (c) contexts in which the infinitival clause displays syntactic evidence of its verb-like nature. These studies also show, however, that the inflected infinitive is favored more with stative verbs than with action verbs, which is interpreted as the inflected infinitive being used as a marker of the verb-like status of the infinitival clauses.

The diachronic source of inflected infinitives is not entirely understood or agreed upon. Inflected infinitives are already present in the earliest written documentation of Galician-Portuguese.⁴ In the literature, we can distinguish two main approaches: proponents of one approach argue that the inflected infinitive arose from the Latin imperfective subjunctive. The strongest evidence in favor of this theory is the phonological and morphological similarity between both conjugation types. This theory was developed, among others, by [Rodrigues \(1914\)](#) and has later been supported, sometimes with some changes, by [Osborne \(1982\)](#); [Wireback \(1994\)](#); [Martins \(2001\)](#); [Scida \(2004\)](#) and [Harris \(2013\)](#). The other theory maintains that the inflected infinitive was an innovation of Romance stemming from the construction [NOMINATIVE SUBJECT PRONOUN + UNINFLECTED INFINITIVE]. This theory was developed by [Maurer and r \(1968\)](#) and has been later supported by [García García Gondar \(1978\)](#); [Vincent \(2000\)](#); [Schulte \(2007\)](#) and [Carvalho \(2015\)](#). According to this theory, the infinitive acquired inflectional endings by analogy with finite forms. Some authors ([Bourciez 1930](#)) argue that the inflectional endings are taken from the future subjunctive, since the conjugated forms of both tenses coincide in regular verbs.⁵ Given the enormous gap in time and the relative scarcity of written texts upon which to compare competing etymological sources, theories regarding the origin of this construction remain speculative.

2.2. Puerto Rican Spanish Preverbal, Subject Pronoun + Infinitive Construction

Variable subject pronoun expression is widely studied in Spanish for finite constructions. This large body of research, focused upon the variation between overt and null pronoun expression (*yo/Ø tengo* ‘I have’), has descriptively differentiated dialects—e.g., Dominican Spanish ([Alfaraz 2015](#)) and Mexican Spanish ([Lastra and Butragueño 2015](#))—has argued for and against functional hypotheses ([Hochberg 1986](#); [Cameron 1993](#)), has advanced our understanding of mechanisms underlying language and dialect contact ([Otheguy et al. 2007](#); [Travis et al. 2017](#)), and has elucidated the first-, second- and heritage-language acquisition process of variable morphosyntactic features (e.g., [Shin and Erker 2015](#); [Silva-Corvalán 2015](#); [Montrul and Sánchez-Walker 2015](#)).

Owing to this large body of research, the linguistic constraints favoring and disfavoring overt expression of a subject pronoun are well understood for Spanish (for a summary, see [Carvalho et al. 2015](#)). Often considered outside the envelope of variation is the expression of subject pronouns in non-finite clauses. Rates of expression in these contexts are significantly lower than in finite clauses. Perhaps as a result, until recently, variation of subject expression in non-finite clauses [for example, *para (yo) hacer* ‘for me to have’] has not been fully integrated into the academic discussion ([Schulte 2007, 2018](#); [Vanderschueren 2013](#); [Rivas et al. 2018](#)).

An overt subject pronoun with an infinitive is not dialectally restricted in Spanish. However, preverbal subject pronouns with non-finite verbs are particularly frequent in Caribbean varieties of Spanish (e.g., [Morales 1986, 1989](#); [De Mello 1995](#); [Lipski 1996](#)). Table 2 illustrates the preverbal subject expression in Puerto Rican Spanish.

⁴ Galician-Portuguese arose in the western territories of the Iberian Peninsula (present-day Galicia and northern Portugal) in the Middle Ages. In the 15th century, Portuguese became the national language of Portugal, and Galician was relegated to mainly oral uses due to the imposition of Spanish in Galicia ([Mariño Paz 1998](#); [Monteagudo Romero 2017](#)).

⁵ In fact, the oldest theory on the origin of the inflected infinitive argued that the inflectional endings arose from the endings of the future subjunctive, since the infinitive and the future subjunctive shared the same forms for first and third person singular in regular verbs ([García Gondar 1978](#), p. 13). As is noted by [Wireback \(1994, p. 548\)](#), the main problem with this theory is that the future subjunctive and the infinitive only co-occur in one context: subordinate clauses with *despois* ‘after’.

Table 2. Puerto Rican Spanish preverbal subject pronouns with *hacer* ‘to make, to do’.

	Singular	Plural
1st	<i>yo hacer</i>	<i>nosotros hacer</i>
2nd	<i>tú/Usted. hacer</i>	<i>Ustedes hacer</i>
3rd	<i>él/ella hacer</i>	<i>ellos/ellas hacer</i>

As with Galician inflected infinitives, the appearance of a preverbal subject pronoun in Puerto Rican Spanish is variable. The following examples illustrate with the verb *hacer* (‘to make/to do’) that speakers may choose to express the preverbal subject pronoun (3) or leave it out (4).

3. **Puerto Rican Spanish**—Expressed preverbal subject pronoun
 si aquí hay recaó pa’ **yo hacer** sofrito.
 ‘Here is the cilantro so I can make sauté’
 [Int. 18, 2000]
4. **Puerto Rican Spanish**—Unexpressed subject pronoun
 veinticinco minutos que me da para **hacerle** el desayuno
 ‘twenty-five minutes that I have to cook him breakfast’
 [Int. 5, 2000]

The construction illustrated in example (3) of a preverbal, nominative subject + infinitive has not been extensively studied from a quantitative perspective. Previous research has revealed, nevertheless, that the appearance of a subject pronoun in this construction is more common with the first and second singular pronouns (*yo, tú*) as well as the third person impersonal *uno* ‘one’ (Morales 1986, 1989).

The appearance of this construction, particularly in the Caribbean, is argued to be symptomatic of both relatively high rates of overt subject pronouns generally in the varieties spoken there (Brown and Rivas 2011; Otheguy and Zentella 2012) as well as a tendency toward a solidification of Subject-Verb-Object (SVO) word order (Suñer 1986; Morales 1989; Toribio 2000). In Puerto Rican Spanish, then, infinitival subjects tend both to be expressed and to occur in preverbal position. In this respect, they resemble finite clauses.⁶ Like in finite clauses, infinitival subjects in Puerto Rican Spanish take nominative case and occur in preverbal position, differentiating them, thus, from infinitival subjects in other Spanish varieties in which subjects of non-finite clauses tend to appear postverbally, a clausal position generally associated with objects in Spanish.

2.3. Purpose Clauses

Both constructions summarized in Sections 2.1 and 2.2 are variable and share the commonality that each has a variant that lacks subject expression (the Galician bare infinitive, the Spanish null subject + infinitive) and another variant that expresses subject agreement (the Galician inflected infinitive, the Spanish overt subject + infinitive). Further, each construction type is in variation with a finite construction in which the verb is expressed in subjunctive mood. This can be seen illustrated in examples (5) and (6):

5. *empeñarei todo o meu esforzo para que os acordos sexan posibles*
 ‘I will make every effort so agreements are possible’
 [OFDL-CORILGA-NUNHEZFEIJOO-05-2009]
6. *yo te pago pa’ que me lo **hagas** rápido*
 ‘I am paying you so you can do it fast’
 [Int. 9, 2000]

⁶ Subjects are overwhelmingly expressed in preverbal (as opposed to postverbal) position in Puerto Rican oral data (Brown and Rivas 2011, p. 33).

In both languages purpose clauses are headed by *para* 'for'. For Spanish *para* can variably be realized as *pa'* or *para* (Díaz-Campos et al. 2012) and the Galician preposition has at least three recognized variants (*para, pra, pa*).⁷ *Para*-clauses tend to occur with non-finite (infinitive) verbs as opposed to finite (subjunctive) forms (García Gondar 1978, p. 142; Suñer 1986, p. 194; Jansegers and Vanderschueren 2010, p. 434). This reflects a crosslinguistic tendency for purpose clauses to combine with non-finite verbal forms (Cristofaro 2003, p. 168; Schmidtke-Bode 2009, pp. 49–50).

We examine purpose *para* clauses because historically they are the oldest attested construction types with the variants of interest in this work (Davies 2003, pp. 16–17 for Spanish, García Gondar 1978, p. 63 for Galician). Purpose clauses with *para* are also among the most frequently occurring in synchronic varieties with both inflected infinitives in Galician (García Gondar 1978, p. 142; Asaka 1984, p. 18; Jansegers and Vanderschueren 2010, p. 433) and preverbal, nominative subject pronouns in Puerto Rican Spanish (Morales 1986, p. 105; De Mello 1995, p. 827), making data collection less onerous. Lastly, by examining the Galician and Spanish variants in this same construction type, we can control, to a small degree, semantic and syntactic factors that could encumber our cross-linguistic comparisons.⁸

3. Data and Methods

We are interested in examining the variation as it is used in the speech community. For that reason, we chose to analyze corpora reflecting oral data. In the case of Galician, we rely upon the *Corpus oral informatizado da lingua galega* (CORILGA) from the Instituto da Lingua Galega-Universidade de Santiago de Compostela. This corpus reflects recordings made between 1960 and the present in Galicia, Spain. For the purposes of this project we limit our analyses to the formal (as opposed to informal) speech since the construction of interest (inflected infinitives) is significantly higher ($X^2 = 14.37555$, $p < 0.0001$) in formal, oral speech (7% inflected infinitives) than in informal speech (2% inflected infinitives). Future research should consider any differences between speech styles. The speech of all twenty-two speakers, both male and female, represented in the CORILGA 'formal' data, comprises our data source. The individuals range in age from 15 to 70+. For the Spanish data we use a corpus of spontaneous recorded conversations between native-speaking friends and family in Cayey, Caguas, and San Juan, Puerto Rico (Cortés-Torres 2005). Recordings were made in 2000 and 2013. There are 30 different speakers (male and female) in the corpus aged 24–80. Together, these corpora comprise approximately 57 hours of speech.

In order to determine the factors that constrain each of the variants in both constructions, we extract all instances of *para* purpose clauses with null or pre-posed pronominal subjects and with inflected as well as uninflected infinitives. For Puerto Rican Spanish, we include in the envelope of variation all the examples we find of infinitives with a null subject as well as all the examples in which the infinitive is preceded by a subject pronoun: *yo* 'I', *tú/usted* 'you', *él/ella* 'he/she', *nosotros/nosotras* 'we', *ustedes* 'you, plural' and *ellos/ellas* 'they'. We exclude from the analysis examples in which the infinitive is preceded by other pronouns (N = 5) or a lexical subject (N = 2). In Galician, as is shown in Table 1, infinitives lack an inflectional ending for first and third person singular. For this reason, we exclude from the analysis all examples in which the subject of the infinitive is first or third person singular (N = 272). Therefore, the envelope of variation for Galician includes uninflected infinitives with a second person singular or a plural subject (N = 163) as well as all examples of inflected infinitives: second person singular *-es*, first person plural *-mos*, second person plural *-des*, and third person plural

⁷ We tested the impact of these phonetic variants on the use of inflected infinitives in Galician and of preverbal infinitival subjects in Puerto Rican Spanish. This linguistic factor did not turn out to be significant in any of our quantitative analyses.

⁸ Thus, the results of this study are based on the usage-patterns that we find in purpose *para* clauses. Since the likelihood of subject expression varies according to the preposition (see García Gondar 1978; Jansegers and Vanderschueren 2010 for Galician inflected infinitives, and Schulte 2018 for Spanish preverbal infinitival subject pronouns), future research should determine whether our findings also apply beyond purpose clauses.

-en (N = 13). Thus, our analysis is based on a total number of 732 tokens (538 for Puerto Rican Spanish and 194 for Galician).

Based upon previous empirical literature on Portuguese inflected infinitives and variable subject pronoun expression in Spanish finite clauses, we code for linguistic factors thought to predict subject expression in the clauses under investigation here. For each infinitive we code the dependent variable: presence (Galician inflected infinitive, Puerto Rican Spanish overt subject pronoun) or absence (Galician uninflected infinitive, Puerto Rican Spanish null subject pronoun) of subject expression. Both constructions (inflected infinitives, preverbal infinitival subjects) are manifestations of the same grammatical phenomenon: an overt marking of subject reference which contrasts with null. Thus, we would expect that the overt variant will be conditioned by the hearer’s ease of subject reference accessibility in discourse. In line with Ariel (2001), we determine the degree of accessibility of the subject referent by taking into account two factors: competition for reference and distance between subject mentions. If there is a switch in reference between the target verb and the previous verb (Cameron and Flores-Ferrán 2004), or increased distance between subject mentions (Travis et al. 2017), subject expression may be more likely.

Additionally, in line with our position that these unusual constructions are manifestations of variable subject expression, we control for factors widely cited in the previous literature as conditioning subject pronominal expression in finite clauses: subject grammatical person and priming (the repetition of a form or structure that appears in the immediately preceding discourse). First and second persons favor subject pronouns (Holmquist 2012, p. 211). Thus, for the quantitative analysis, we split the category of person into two. In one of the variants, we include first and second person (first singular, first plural, second singular and second plural in the Puerto Rican Spanish data and first plural, second singular and second plural in the Galician data). The other variant includes all examples of third person (third singular and third plural in the Puerto Rican Spanish data and third plural in the Galician data). We do not establish comparisons of number between singular and plural because variation in Galician inflected infinitives is restricted in the singular category of number to second person. Regarding priming, overt pronouns prime overt pronouns and null primes null (Cameron and Flores-Ferrán 2004; Travis 2007; Brown and Rivas 2011).

Table 3 summarizes how we operationalize each of these linguistic factors in our coding of purpose clauses:

Table 3. Operationalization of linguistic factors.

Linguistic Factor Group	Code
Switch Reference	We code each subject of the purpose clause as having a <i>same</i> or a <i>different</i> referent from the subject of the previous finite verb.
Referential Distance	We code the distance between the subject of the purpose clause and the closest previous subject mention, be it through lexical NPs, pronominal forms, or agreement (that is, distance between accessible referents) in number of words. ⁹ Distance is regarded as a continuous variable in our statistical analyses.
Grammatical Person	We distinguish between third person vs. first and second persons
Priming	We code for subject expression in the previous finite verb. We distinguish between overt subjects (pronominal or lexical) and null subjects.

⁹ In 92% (N = 673) of the examples, the purpose clause occurs after the main clause. Therefore, in these cases, the previous subject mention corresponds to the subject of the main clause.

4. Results

4.1. Descriptive Statistics

With regard to finite as opposed to non-finite expression in purpose clauses headed by *para*, in both languages speakers overwhelmingly employ an infinitive as opposed to a subjunctive verb. This is summarized in Table 4. In Galician, the infinitival expression accounts for 89% of the *para* clauses and in Puerto Rican Spanish 77%. This similarity across languages is in line with the cross-linguistic tendency for non-finite verbal forms to be used with purpose clauses (Cristofaro 2003, p. 168; Schmidtke-Bode 2009, pp. 49–50).

Table 4. Proportion of non-finite and finite (subjunctive) *para* clauses.

Clause Type	Galician		Puerto Rican Spanish	
	N	% Data	N	% Data
Infinitive	466	89	538	77
Subjunctive	56	11	165	23
Total	522	100	703	100

If we just consider the infinitival clause, it can be seen that the proportion of the overall data that expresses subject (through inflection or preverbal subject pronoun) is relatively small. In Galician, out of the 466 total infinitives used in *para* clauses, 7% of them are inflected (N = 31). Similarly, for the Spanish data, out of a total of 538 infinitival *para* clauses, 6% contain a preverbal overt subject pronoun (N = 34). These proportions are summarized in Table 5.

Table 5. Proportion of non-finite *para* clauses with subject expression.

Subject Reference	Galician		Puerto Rican Spanish	
	N	% Data	N	% Data
Expressed	31	7	34	6
Unexpressed	435	93	504	94
Total	466	100	538	100

Nevertheless, as explained above, not all forms of the infinitive in Galician inflect. The first- and third-person singular forms do not show variation. Thus, if we just consider infinitival forms for which variation is possible, the equivalence across languages seems diminished. Table 6 summarizes the infinite forms in both languages excluding, for Galician, the non-variable 1st and 3rd singular forms.

Table 6. Proportion of non-finite *para* clauses with subject expression (excluding 1st & 3rd singular for Galician).

Subject Reference	Galician		Puerto Rican Spanish	
	N	% Data	N	% Data
Expressed	31	16	34	6
Unexpressed	163	84	504	94
Total	194	100	538	100

Although relatively infrequent in both languages, subject expression in infinitival clauses is significantly ($X^2 = 16.44301$, $p < 0.001$) more frequent in Galician (16% inflected infinitive) than in Puerto Rican Spanish (6% preverbal subject expression). But do these significantly different rates of expression imply significantly different grammatical conditioning, i.e., is subject expression in infinitival clauses constrained similarly across these two languages? In order to address this question, we submit

our data to statistical analysis to determine which linguistic factors promote subject expression, i.e., inflected infinitives in Galician and preverbal infinitival subject pronouns in Puerto Rican Spanish.

4.2. Results of the Statistical Analysis

We submitted the data summarized in Table 6 to a generalized linear mixed model (GLMM) using R ([R: A Language and Environment for Statistical Computing](#), R Foundation for Statistical Computing, Vienna, Austria) predicting subject expression/omission in *para* infinitival clauses in both languages. We include the speaker and the verb infinitive as random effects and test for an effect on subject expression of the linguistic factor groups outlined in the Data and Methods section, in addition to language. The best GLMM model, as determined by the AIC, is summarized in Table 7.

Table 7. Factor groups predicting subject expression in Galician and Puerto Rican Spanish (N = 732).

Linguistic Factor Group	Estimate	Standard Error
Switch in Reference (yes)	2.582 ***	(0.61)
Distance in number of words	0.161 **	(0.05)
Language (PR Spanish)	−0.350	(0.57)
Person (third)	0.476	(0.59)
Language (Span) X Person (third)	−2.407 **	(0.80)
Distance X Switch Reference (yes)	0.177 *	(0.06)

** < 0.01, *** < 0.001.

The results summarized in Table 7 are the first to report the linguistic factor groups that significantly constrain variable subject expression in non-finite Galician and Puerto Rican Spanish clauses. The analysis of subject expression in *para* clauses in different languages (Galician, Puerto Rican Spanish) reveals important similarities. Despite significantly higher rates of Galician inflected infinitives compared to Puerto Rican Spanish preverbal pronominal subject expression (summarized in Table 6), there is no independent effect on subject expression of language type; whether the target token is Galician inflected infinitive or Puerto Rican Spanish preverbal pronominal expression.

The factor Switch Reference is a significant predictor of variance in subject reference expression. When there is a switch in reference between the target verb and the subject of the preceding finite verb, expression (preverbal infinitival subject pronouns in Puerto Rican Spanish, inflected infinitives in Galician) is more likely (estimate 2.582). Similarly, distance, which is treated as a continuous variable in the statistical analysis, also significantly predicts subject expression in these data. The greater the distance in number of words between the target infinitive and the last subject mention (expressed lexically, pronominally, or inflectionally), the more likely preverbal pronominal subjects and inflected infinitives are to be expressed.

There are two significant interactions in the data: Distance X Switch Reference (yes) and Language (Spanish) X Person (third). The first interaction reflects the fact that, for both inflected infinitives and preverbal infinitival subjects in our data, the effect of distance seems to be overridden by the role of switch reference. That is, when there is a switch in reference, greater distance does not equate to significantly greater subject expression. Subjects, it seems, are just more likely given the change in subject reference. In turn, in contexts in which there is no switch in reference between contiguous subjects, overt subject markers correlate with the distance between contiguous referents as expected: the higher the distance, the more frequent the presence of overt subject markers in the purpose clause.

The second interaction, Language (Spanish) X Person (third), reflects the only apparent significant difference between both languages with regard to overt subject marking in non-finite clauses. The interaction reflects the fact that in the Spanish data, first and second persons (*yo, tú, usted, nosotros/as, ustedes*) very strongly favor expression of a pronoun over third person. However, when considering this result, it must be taken into account that, unlike first and second person pronouns, third person

pronouns alternate with other indefinite pronouns and lexical noun phrases as third person subjects.¹⁰ In fact, if we only take into account personal pronouns, the percentage of preverbal infinitival subjects in the first and second persons is 88% in our data. However, if we include those examples of preverbal infinitival subjects that include other pronouns or a lexical noun phrase, the percentage of preverbal infinitival subjects in the first and second persons goes down to 63% (n.s.). In contrast, no person effect is found in inflected infinitives for Galician. First person plural, second person singular and second person plural do not favor inflected infinitives in Galician over third person plural. No other linguistic factor or interaction was found to significantly constrain overt subject marking in these data.

5. Discussion

As has been noted in typological studies (Givón 2001, p. 175; Andrews 2007, pp. 71–77; Dixon 2010, pp. 125–26), the grammatical relation of subject may be encoded by means of different devices depending on the language and/or the construction: case, agreement and clausal position. In Spanish, subjects occur in the nominative case if they are pronominal; both pronominal and nominal subjects display verbal concord and, even though there is a certain degree of flexibility regarding clausal position, subjects tend to occur preverbally, as is shown in previous quantitative studies (Bentivoglio and Weber 1986, p. 14; Bentivoglio 1988; Morales 2006, p. 489; Rivas 2008, p. 896; Rivas 2013, p. 103; Mayoral Hernández 2014, p. 121). This tendency is even more evident in Caribbean varieties of Spanish (Ortiz López 2009, pp. 89–90). For example, Brown and Rivas (2011, p. 33) find 96% of preverbal subjects in their Puerto Rican data, and similar percentages of SV word order are reported for Cuban Spanish: 91% (Dauphinais Civitello and Ortiz-López 2016, p. 289) and 84% (Erker et al. 2017, p. 73).

In order to identify coding devices for the grammatical relation of subject, cross-linguistic typological studies primarily rely on declarative, main clauses. As is noted by Givón (2001, p. 26), these clause types constitute the prototypical cases of finiteness. However, in complementation and adverbial subordination, cross-linguistic typological approaches have identified a variety of strategies that display different degrees of nominalization or non-finiteness, among which infinitival clauses can be included. Infinitival clauses lack T(ense)-A(spect)-M(ood) variation and typically take a null subject. If the subject is expressed, it generally occurs in an oblique case. In this respect, Givón (2001, pp. 66, 68) establishes a correlation between the occurrence of nominal (i.e., less finite) complement verbs and the presence of non-prototypical subject marking.¹¹

In this study, however, we analyze two infinitival constructions that are typologically unusual. Unlike in most languages, Galician infinitives may take a different inflectional ending according to the referent of its subject. Similarly, unlike in most languages, infinitives in Puerto Rican Spanish may take a preverbal, nominative subject. In this respect, Puerto Rican Spanish also differs from other Spanish dialects, in which infinitival subjects, like objects, tend to occur in postverbal position.¹² Inflected infinitive and preverbal infinitival subject constructions are closer to prototypical finite clauses than typical infinitival constructions: in Galician, like in finite constructions, subjects display verbal concord with the infinitive; in Puerto Rican Spanish, like in finite constructions, the subject of the infinitive takes the nominative case and occurs preverbally.

The purpose of this study is to explain the nature of these two unusual constructions using as a starting point the empirical findings of two bodies of literature: variable inflected infinitive expression in Portuguese and variable subject pronominal expression in Spanish finite clauses. The results of our quantitative studies reveal that the expression of these subject markers (inflected

¹⁰ We are grateful to one of our reviewers for pointing this out to us.

¹¹ This must be understood as a cross-linguistic tendency. Szabolsci (2009) argues that some Romance languages (Brazilian Portuguese, Italian, Romanian and Spanish) as well as Hungarian and Hebrew present overt nominative subjects in infinitival complements.

¹² Schulte (2018, p. 186), who bases her analysis on the occurrence of infinitival subjects with the verbs *hacer* 'to do' and *saber* 'to know' in Peninsular Spanish, shows that all prepositions present a higher percentage of postverbal than preverbal infinitival subjects with the exception of *sin* 'without', which combines with a preverbal infinitival subject in 68% of the examples.

infinitive, preverbal nominative subjects) is conditioned by similar linguistic factors. By combining these two subject grammatical markers, we are able to identify striking similarities between both phenomena, which lead us to suggest that they are actually different linguistic manifestations of the same grammaticalization process.

As is shown in the previous section, both variable inflected infinitive expression in Galician and variable preverbal nominative infinitival subject expression in Puerto Rican Spanish are statistically constrained by two main linguistic variants: infinitival subject referent different from the previous clause and increased distance from the previous subject referent. In this respect, the grammatical behavior of these subject markers is neither anomalous nor dissimilar from the grammatical behavior of variable subject expression found in finite clauses (e.g., in Spanish). In other words, in line with Rivas et al. (2018, p. 35), our results suggest that subject expression in infinitival clauses perform the same cognitive function as subject expression in finite clauses. The overt variants in our data, namely agreement or a stressed pronoun, respond predictably to the presence of competing referents¹³ or the increased distance between referents in discourse. Uninflected infinitive and null subject pronoun, in turn, track subject referents with the highest accessibility (Ariel 2001, p. 31).

In addition, we identify other similarities that suggest that inflected infinitives and pre-verbal infinitival subjects may actually represent different stages of one and the same grammaticalization process. If this notion were correct, inflected infinitives would be in a more advanced grammaticalization stage than preverbal infinitival subjects, and the construction [PREVERBAL NOMINATIVE SUBJECT + INFINITIVE] would be in its initial grammaticalization stages for reasons we outline below. The first similarity is that, as mentioned above, both constructions seem to have emerged in the same discourse context, namely, purpose *para* clauses. For Spanish, Davies (2003, p. 16) points out that preverbal infinitival subjects arise in combination with the prepositions *por/para* 'for', which typically introduced purpose and reason clauses. Similarly, for medieval Galician-Portuguese, García Gondar (1978, p. 142) shows that purpose clauses are the context in which the inflected infinitive most frequently occurs (42%), followed by reason clauses (36%). Similar results are provided for Old (Galician-)Portuguese in Wireback (1994) and Harris (2013), with the prepositions *pera/para/por* being the contexts in which the inflected infinitive most frequently occurs in their data. Moreover, Davies (2003, p. 16) reports that *de* 'of' is the second most common preposition after which preverbal infinitival subjects occur, and so does Wireback (1994, p. 548) for old (Galician-)Portuguese.

Apart from its common origin, the spread of both constructions also suggests that they may be in different stages of the same grammaticalization process. In both languages, the constructions spread from the preposition *para* to other prepositions. Morales (1986, p. 105) points out that, although *para* is the preposition that most frequently combines with infinitives with a preverbal subject in her data of present-day Puerto Rican Spanish, other prepositions such as *por* (reason) *al* (time) and *sin* (manner) may also occur with this construction. Similar results are found for inflected infinitives in Galician. The highest frequency of occurrence of the inflected infinitive is found in purpose clauses, followed by time clauses (García Gondar 1978, p. 142; Asaka 1984, p. 18). In fact, in a more recent corpus-based study, Jansegers and Vanderschueren (2010) point out that the preposition *antes de* 'before' outranks *para* as far as frequency of use with inflected infinitives (Jansegers and Vanderschueren 2010, p. 433).¹⁴ However, inflected infinitives also occur in other contexts, aside from adverbial clauses. For example, the inflected infinitive may function as subject, as is shown in (7), direct object (8), and predicative complement of copulative verbs (9):

¹³ As is noted by one of our reviewers, an alternative explanation may be that the speaker chooses to use the inflected infinitive in order to indicate that s/he is talking about someone else.

¹⁴ This increase of inflected infinitive expression in time clauses throughout the history of Galician is already identified by (García Gondar 1978, p. 142). Similar results are provided for Portuguese inflected infinitive expression in (Vanderschueren 2013, p. 139)).

7. Estálles privado **entraren** na bodega
'It is forbidden for them to go in the cellar'
García Gondar (1978, p. 93)
8. Hai, xa que logo, escritores que á hora de crear demostran **teren** confundido o folklórico co trascendente
'There are, thus, some writers who show to have mistaken folkloric with transcendent things when they write'
García Gondar (1978, p. 111)
9. O caso é **atoparen** unha fórmula que teña garantía de eficacia
'The thing is for them to find a formula whose effectivity is guaranteed'
García Gondar (1978, p. 111)

In contrast, in Puerto Rican Spanish preverbal infinitival subjects are generally restricted to adverbial clauses (Morales 1989, p. 148). However, recent studies (Aponte Alequín and López 2015; Ortiz López and Alequín 2018) show that Caribbean speakers also accept the [PREVERBAL NOMINATIVE SUBJECT + INFINITIVE] construction in contexts in which they are not preceded by a preposition. In (10), the construction *él tener ya todo seteado* 'lit: (for) him to already have everything set up' is the direct object of *dice* 'say', whereas in (11), *nosotros como pueblo entender todo lo que conlleva* 'for us as a nation to understand all that it entails' is the subject of *es* 'it is':

10. Nosotros estamos buscando otras alternativas, pero el director dice **él tener** ya todo *seteado*
'We are looking for other alternatives, but the director says he already has everything set up'
Aponte Alequín and López (2015, p. 397)
11. Es importante **nosotros** como pueblo **entender** todo lo que conlleva
'It is important for us as a nation to understand everything it entails'
Aponte Alequín and López (2015, p. 397)

In the quantitative analyses that these authors conduct, however, the absence of a preposition disfavors the use of the infinitive (Ortiz López and Alequín 2018, p. 155), which suggests that constructions such as (10) and (11) are probably relatively new. Therefore, if we were to accept that inflected infinitives and preverbal infinitival subjects are manifestations of the same grammaticalization process, we could argue that the former are more grammaticalized than the latter on the basis of inflected infinitives being used in a broader number of contexts. As is noted by Bybee (2015, p. 127), one of the mechanisms of change that categorizes grammaticalization is 'category expansion', that is to say, the more grammaticalized a construction is, the higher the number of contexts in which the grammaticalized construction will occur.

Finally, when we look at the number of verb types that these constructions occur with, the results also suggest that inflected infinitives are more grammaticalized than preverbal infinitival subjects. In our data, inflected infinitives occur with a higher proportion (n.s.) of verb types/lexemes (19%, N = 139) than preverbal infinitival subjects (12%, N = 199). As is noted in previous studies (e.g., Brinton and Traugott 2005, p. 109), increase in type frequency is generally associated with grammaticalization processes after their initial stages.

In the previous paragraphs, we identify a number of similarities between inflected infinitives and preverbal infinitival subjects that suggest that they may be different manifestations of the same grammaticalization process. Our quantitative analyses show that the expression of both constructions is conditioned by the same linguistic factors (switch reference, distance). Additionally, both constructions present striking similarities regarding their origin (purpose clauses) and spread to new contexts (adverbial clauses > other clausal positions: subject, direct object, predicative complement). We also report that preverbal infinitival subjects occur in more restricted contexts and with fewer verb types than inflected infinitives. We interpret these results as suggesting that inflected infinitives in Galician being more grammaticalized than preverbal infinitival subjects in Puerto Rican Spanish.

Additionally, the results of our analysis provide new insights regarding the debate on the origin of the inflected infinitival forms in Galician-Portuguese. As is mentioned in the introduction section, according to the “creative” theory (Maurer and r 1968), the inflected infinitive arose from an uninflected infinitive preceded by a subject in the nominative case. Since inflected infinitives are already attested in the earliest written records of Galician-Portuguese, we lack written evidence in favor or against this theory. The occurrence of the [NOMINATIVE SUBJECT PRONOUN + UNINFLECTED INFINITIVE] construction may have been potentially promoted by the preponderance of contexts in which the infinitive occurred in vulgar Latin, since prepositions started to govern infinitives (Maurer and r 1968). Additional evidence supporting the “creative” theory is provided by Carvalho (2015). Through a detailed corpus-based study of the contexts of occurrence of the inflected infinitive in Old (Galician-)Portuguese, this author shows that this construction occurs in the same constructions in which the uninflected infinitive construction would occur.

On the other hand, as is noted by Harris (2013), one of the drawbacks of the “creative” theory is that the percentage of expressed subjects with inflected infinitives is rather low in previous stages of the language. Harris (2013, p. 309) reports that only 10% of the inflected infinitives has an expressed subject in his data of Old (Galician-)Portuguese. Similarly, García Gondar (1978, p. 150) also notes that only 15% of the examples of his medieval data occur with an expressed subject. One of the reasons for this result could be that medieval Galician-Portuguese, as was the case with Latin, was a null subject language. Therefore, since the infinitive was already carrying subject marking through its inflectional endings, the use of an expressed subject could be regarded as redundant, especially in formal written records. In this respect, inflected infinitives and preverbal infinitival subjects arise in two language varieties belonging to two different types when considering the category of subject expression. Unlike inflected infinitives, preverbal infinitival subjects arise in a variety of Spanish (Caribbean) that may be in the process of becoming a fixed Subject-Verb-Object language (Suñer 1986; Morales 1989; Toribio 2000). In addition to the existence of preverbal infinitival subject constructions, other evidence in favor of this analysis is the high percentage of preverbal pronominal subjects (see above), the non-inversion of *wh*-questions (Brown and Rivas 2011), and the loss of the differential object marker *a* (Alfaraz 2011).

The comparative analysis of inflected infinitives in Galician and preverbal infinitival subjects in Puerto Rican Spanish we carry out in this paper suggest that these two constructions may represent different diachronic stages of the same grammaticalization pathway. Further evidence in favor of this analysis may be provided by studies that account for the spread of inflected infinitives in Galician and preverbal infinitival subjects in Puerto Rican Spanish in order to evaluate the similarities and differences of both phenomena. We leave this endeavor for future research.

Author Contributions: Conceptualization, E.B. and J.R.; methodology, E.B. and J.R.; software, E.B. and J.R.; validation, E.B. and J.R.; formal analysis, E.B. and J.R.; investigation, E.B. and J.R.; resources, E.B. and J.R.; data curation, E.B. and J.R.; writing—original draft preparation, E.B. and J.R.; writing—review and editing, E.B. and J.R.; visualization, E.B. and J.R.; supervision, E.B. and J.R.; project administration, E.B. and J.R.; funding acquisition, E.B. and J.R.

Funding: This research received no external funding.

Acknowledgments: We would like to thank Mayra Cortés-Torres for sharing her Puerto Rican data with us. We would like to acknowledge the Graduate Committee on the Arts and Humanities Grant (College of Arts and Sciences, University of Colorado at Boulder) that one of the authors received for a research stay at Instituto da Lingua Galega. We are grateful to Instituto da Lingua Galega for sharing the *CORILGA* corpus with us. Additionally we would like to acknowledge the constructive comments received on an earlier version of this project at the 13th High Desert Linguistic Society Conference and helpful reviews given to us by two anonymous reviewers.

Conflicts of Interest: The authors declare no conflict of interest.

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