Dative variation in the Portuguese of São Tomé

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Abstract
Portuguese of São Tomé (PST) exhibits two strategies to express Recipients: double object constructions (DOC) and ditransitive prepositional constructions (DPC), which employ either the preposition a ‘to’ or the preposition para ‘toward’ (R. Gonçalves 2010). Using data from a spoken corpus, we will analyze to which extent linguistic and extra-linguistic variables can play a role in PST dative variation. Therefore, we will discuss whether it follows Rappaport-Hovav and Levin’s (2008) distinction between give-type verbs (core dative verbs), which occur in both DOC and DPC introduced by a functional preposition, and throw/send-type verbs (non-core dative verbs), which can occur in a DPC introduced either by a functional or directional preposition. We will further address the role of contact with Santome.
**Keywords:** Varieties of Portuguese, Portuguese of São Tomé, dative alternation, core dative verbs vs. non-core dative verbs, functional vs. directional prepositions.

1. **Introduction**

The alternation between a ditransitive preposicional construction (DPC) and a double object construction (DOC) to express the dative argument with the thematic role of Recipient has been studied extensively, both syntactically and semantically, mainly for English (cf. (1)).

(1) a. John gave a book to Mary.
   b. John gave Mary a book.

However, dative alternation is not a widespread phenomenon and many languages lack DOC (e.g. Haspelmath, 2013). Traditionally, it is assumed that this strategy is not available in Romance languages, since verbs cannot assign structural Case to more than one NP (e.g. Kayne, 1984, Baker, 1988). In fact, in European Portuguese (EP), the dative argument
with the thematic role of Recipient is always introduced by the preposition *a* or cliticized by *lhe/lhes* on the verb (cf. (2)).

(2)  
  a. *O João deu um livro ao Pedro.*  
      ‘John gave a book to Peter.’
  b. *O João deu-lhe um livro.*  
      ‘John gave him a book.’

Nevertheless, non-European varieties of Portuguese show a common tendency towards expressing the dative through a range of alternative strategies. Brazilian Portuguese (BP) and Angolan Portuguese (AP) use a DPC introduced either by the preposition *para* or the preposition *em* (BP: Gomes, 2003; Torres Morais and Berlinck, 2007; Torres Morais and Lima Salles, 2010; AP: Cabral 2005; Chavagne 2005). Mozambican Portuguese (MP), on the other hand, largely uses DOC along with dative passives (e.g. P. Gonçalves, 1990, 2002, 2010). According to the literature on these varieties, this grammatical change with respect to the dative expression was triggered by an ambiguous EP input and/or L1 transfer. Alternatively, PST exhibits dative variation between DOC and DPC, which make use of either the preposition *a* or the preposition *para* (and *a* in pronominal contexts) (cf. 3-5) (e.g. R. Gonçalves, 2010).

\[1\]

\[1\] Several authors have proposed that clitic(-doubling) constructions and nonclitic (-doubling) constructions found in Spanish and EP share the same properties of both English DOC and DPC (e.g. Demonte, 1995, Cuervo, 2003, Torres Morais and Lima Salles, 2010). Brito (2009) and R. Gonçalves (2015) argued against this proposal.
(3) a. **Entrega senhor uma cerveja.**
   ‘Give the man a beer.’
   b. **Passa o indivíduo uma repressão.**
   ‘He scolds the guy.’
   c. **Ele tem que esforçar para dar ele estudo.**
   ‘He needs to make an effort to give him an education.’

(4) a. **Dá um dinheiro às pessoas.**
   ‘Give some money to the people.’
   b. **Pedir opinião aos colegas mais velhos.**
   ‘Ask for opinion to the oldest colleagues.’
   c. **Eu pedi-lhe que me levasse para o mercado.**
   ‘I asked him to take me to the market.’

(5) a. **Entregava o dinheiro para o banqueiro.**
   ‘Give the money to the banker.’
   b. **[Ele] vende para ela, ela volta a revender.**
   ‘He sells [it] to her, she resells it.’
   c. **Sempre digo a eles que é para esforçar.**
   ‘I always tell them to make an effort.’

Our main goal is to offer a more detailed characterization of the dative expression in PST, as well as answering the following three research questions.

(i) Does PST show true dative alternation or just variation between DOC and DPC?

(ii) If it does (not), which linguistic and extra-linguistic variables are related to the use of DOC and/or DPC?

(iii) To what extent do transfer from (historical) L1 and access to Universal Grammar play a role in dative expression in PST?
Text will be structured in the following way. In section 2, we will provide a commentary on the linguistic situation of São Tomé and Príncipe. We will focus particularly on the Portuguese nativization process that has taken place in São Tomé and Príncipe mainly since independence (R. Gonçalves, 2010; Gonçalves and Hagemeijer, 2015a). In section 3, we will address some aspects of the dative alternation in English as well as discuss the extent of the similarities between EP and English DPCs. In section 4, we will focus on the alternative dative strategies used in non-European varieties of Portuguese as well as the role of contact between Bantu languages and African varieties of Portuguese. Section 5 refers to the collection and organization of PST data. In section 6, we will discuss to what extent the use of DOC and DPC in PST follows Rappaport-Hovav and Levin’s (2008) distinction between give-type verbs (core dative verbs) and throw/send-type verbs (non-core dative verbs). In section 7, we will briefly mention the strategy employed by Santome, the dominant Portuguese-related creole in contact with PST, and discuss the role of transfer. Finally, section 8 summarizes the findings of this study.

2. The linguistic situation of São Tomé and Príncipe

Until the second half of the 19th century, the three local creoles – Santome (CST), Angolar (ANG) and Principense (PR), with a major role for
CST\(^2\) – were the most widespread languages on the islands; just a very small part of the population spoke Portuguese, mostly as L2. However, with the so-called second colonization of São Tomé and Príncipe (1875-1975) and the arrival of a massive number of indentured laborers from Angola, Mozambique and Cape Verde to work on the coffee and cacao plantations, the population doubled. These newcomers started to learn Portuguese as their L2 instead of the Creoles. This was due to the fact that the ‘forros’ (free slaves), who spoke CST and lived in the villages, were not in contact with the new population, who instead mainly populated the coffee and cocoa plantations (roças) (e.g. Hagemeijer, 2009; Gonçalves and Hagemeijer, 2015a). As a result, the use of Portuguese gradually started to become more common.

In addition, during the Portuguese fascist regime (Estado Novo) creole languages were repressed. However, at the same time, only the higher social classes had access to education in Portuguese. Thus, people started to speak Portuguese with their children, promoting the acquisition of Portuguese as an L1 despite the fact that they themselves had learned it as an L2. Furthermore, after the independence of the archipelago in 1975, Portuguese became the official language, which increased its use across the whole community irrespective of social class.

Data from the last decade’s census show the increase in the number of Portuguese speakers in comparison with the low number of Creole speakers, highlighting the use of Portuguese by the majority of the population (cf. Table 1, updated from R. Gonçalves, 2010).

<table>
<thead>
<tr>
<th></th>
<th>Population</th>
<th>PST</th>
<th>CST</th>
<th>PR</th>
<th>ANG</th>
<th>Capeverdean Creole</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>96.661</td>
<td>60.519 (63%)</td>
<td>54.387 (56%)</td>
<td>1.533 (2%)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1991</td>
<td>117.504</td>
<td>94.907 (81%)</td>
<td>69.899 (59%)</td>
<td>1.558 (1%)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2001</td>
<td>137.599</td>
<td>136.085 (99%)</td>
<td>99.621 (72%)</td>
<td>3.302 (2%)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2012</td>
<td>187.356</td>
<td>170.309 (91%)</td>
<td>62.889 (34%)</td>
<td>1.760 (1%)</td>
<td>11.413 (6%)</td>
<td>14.725 (8%)</td>
</tr>
</tbody>
</table>

Table 1. Number of speakers by language (1981-2012)

While in the 1980s the difference between Portuguese and CST speakers was around 6000, between the 1990s and the 2000s this number surpassed 35,000 speakers. Nowadays, PST is clearly the dominant language. Despite the fact that data from censuses show the growing supremacy of Portuguese in the post-colonial period, they should be carefully interpreted. Three main observations should be gleaned. First, the decrease of Portuguese speakers from 2001 to 2012 should not be interpreted as a general decline in the use of Portuguese. Instead, it can be related to the inclusion of ANG and Capeverdean Creole (CVC) in the
census; note that they had not been considered in the first three censuses.\(^3\) Second, the number of people who speak PR seems to be unrealistic; according to Maurer (2009:3), “on Príncipe, there are about twenty to thirty people over sixty and a few younger ones who have a reasonably active command of the language, and on São Tomé and in Portugal there are some more. (...)” These data are surprising and could be justified only if inhabitants who have “some kind of passive knowledge of the language” have been included. Finally, despite the fact that data from censuses does not distinguish languages spoken as L1 or L2, the contrast between the number of PST and CST speakers suggests that nowadays PST is the dominant L1.

In summary, the independence of the islands from Portugal in 1975 led to a progressively more widespread acquisition of PST as a native language from its long-standing acquisition as an L2. In contrast, the local creoles are now endangered languages to different extents. The features of PST are a result of this historical transition, with the expression of the dative argument as an example of the variation exhibited by this Portuguese African variety.

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\(^3\) Since there is no register of which languages were included in the category other in the 1981-2001 censuses, we can only speculate that people have mentioned Angolar and Cape Verdean Creole.
3. Some properties of DOC and/or DPC languages

As pointed out by Baker (1988), as a result of their Case systems, English and EP (as well as Romance languages in general) are distinct, since the former exhibits both DOC and DPC and the latter only presents DPC. In fact, while verbs from English-type languages can assign structural Case to more than one NP which they govern, verbs from Romance-type languages lack this property. However, as we will see, some correlations can be established between these two groups of languages.

Several analyses of the English dative alternation have distinguished DOC and DPC by saying that the first expresses caused possession while the latter expresses caused motion (e.g. Pinker, 1989; Jackendoff, 1990; Krifka, 1999, 2004; Harley, 2003). The primary reason to associate DPC to a caused motion meaning is the use of the preposition to, which suggests that the argument introduced by to is the goal of a path. However, there are verbs that do not entail a path and can also occur in the DPC, namely the prototypical dative verb – give.

Starting from this fact, Rappaport-Hovav and Levin (2008) propose a quite different approach to the English dative alternation according to the semantic meaning of the verbs. They analyze give-type verbs, referred to as ‘core dative verbs’, differently from throw and send-type verbs, labeled as ‘non-core dative verbs’, with the former having a caused possession meaning and the latter both caused motion and caused possession meaning.
Therefore, their approach associates the cause possession meaning not only to the DOC but also to the DPC. The authors presented several arguments against the existence of a path in the DPC with give-type verbs, in spite of the presence of the preposition to. Most of these arguments are based on Levinson’s (2005) tests and on the distinction between two homonymous prepositions: a to-directional preposition and a to-functional preposition. According to these authors, while the argument selected by give-type verbs can only be questioned by whom (cf. (6)), the argument of throw and send-type verbs can be questioned by both whom and where (cf. (7-8)).

(6) a. To whom did you give the ball? To my brother.
    b. *Where did you give the ball to? To my brother.

(7) a. To whom did you throw the ball? To my brother.
    b. To whom did you send the package? To my brother.

(8) a. Where did you throw the ball to? To third base.
    b. Where did you send the bicycle to? To Rome.

(Rappaport-Hovav and Levin, 2008, p. 137)

This distinction between two grammatical functions of the preposition to has also been mentioned by Larson (1988, p. 369-374), by saying that while some English DPCs involve a true preposition, in others to is reduced to a Case marker. Therefore, there are two different DPCs in English, depending on the dative verb: (henceforth) DPC₁ which involve Recipients selected by both core and non-core dative verbs and a functional
preposition; and (henceforth) DPC$_2$ which can involve Goals selected by non-core dative verbs and a directional preposition.

In addition, there are also some constraints in terms of the animacy of the dative argument. With give-type verbs both DOC and DPC$_1$ can only occur with [+ANIM] arguments (cf. (9)), unless complex predicates of the type <light verb+deverbal noun> are involved (cf. (10)).

(9)    a. I gave the package to Mary/*London.
       b. I gave Mary/*London the package.
       (Adapted from Rappaport-Hovav and Levin, 2008, p. 138)

(10)   a. We gave a fresh coat of paint to the house (= paint the house).
       b. We gave the house a fresh coat of paint (= paint the house).
       (Adapted from Levin and Rappaport-Hovav, 2011, p. 8)

On the other hand, throw and send-type verbs can select both [+ANIM] arguments. As a result, when a [+ANIM] argument is involved, the “goal may be interpreted as a recipient by the Animate Goal as Recipient implicature” (Levin and Rappaport-Hovav, 2011, p. 7) and a DPC$_1$ (or a DOC) occurs. On the other hand, when a [-ANIM] argument is involved, only the DPC$_2$ is available (cf. (11)).

(11)   a. I sent the package to Mary / London.
       b. I sent Mary / *London the package.
       c. I threw the ball to Mary / the other side of the field.
       d. I threw Mary the ball / I threw *the other side of the field the ball.
       (Adapted from Rappaport-Hovav and Levin, 2008, p. 138)
In sum, while core dative verbs subcategorize Recipients [±ANIM], non-core dative verbs can subcategorize Recipients [+ANIM] or Goals [−ANIM]. In addition, the two homonymous prepositions differ in the semantic features they encode. While core dative verbs can only combine with a [−dir, -loc] preposition, non-core dative verbs can combine with both [−dir, -loc] and [±dir, + loc] prepositions.

This distinction between two classes of dative verbs and the (features of the) prepositions they combine with is also important to address the properties exhibited by the EP DPC(s). In fact, EP dative verbs exhibit a similar behavior to that found in English: only the argument selected by verbs that encode both caused possession and caused motion, such as enviar ‘send’ and atirar ‘throw’, can be questioned by both quem ‘whom’ and onde ‘where’, as well as subcategorize [±ANIM] arguments (cf. (12) vs. (13-14)).

(12)  a. *A quem é que deste a bola? Ao meu irmão.
     ‘To whom did you give the ball? To my brother.’

     b. *Onde é que neste a bola? Ao meu irmão.
     ‘Where did you give the ball to? To my brother.’

(13) a. A quem é que enviaste a carta? Ao meu irmão.
     ‘To whom did you send the letter? To my brother.’

     b. Aonde é que enviaste a empregada? Ao mercado.
     ‘Where did you send the maid to? To the market.’

     c. Para onde é que enviaste a carta? Para Lisboa.
     ‘Where did you send the letter to? To Lisbon.’

(14)  a. A quem é que atiraste a bola? Atirei-a o meu irmão.
‘To whom did you throw the ball? To my brother.’

b. *À/para onde* é que atiraste a bola? À/para a parede.
   ‘Where did you give the ball to? To the wall.’

With complex predicates, as in (15), EP core dative verbs can also select dative arguments [-ANIM]. This means that, just like in English, the properties of the deverbal noun prevail, *i.e.* it is the deverbal noun along with the light verb that selects the dative argument.⁴

(15) *O João deu um empurrão à porta (= empurrou a porta).*
   ‘John gave a push to the door (= pushed the door).’

   In addition, while [+ANIM] Recipients selected by both core and non-core dative verbs can be cliticized by *lhe(s)* ‘her, him, them’ on the verb, [-ANIM] Goals must be replaced by the locative adverbial *lá* ‘there’ (cf. (16)).

(16) a. *Dei/enviei/atirei-lhe a bola (= ao meu irmão).*
    ‘I gave/sent/threw him the ball (= to my brother).’

   b. *Enviei a carta/atirei a bola para lá.*
      (= para Lisboa / [a / para] a parede)
      ‘I sent the letter/ I threw the ball over there (= to Lisbon / to the wall).’

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⁴ About the lexical and syntactic properties of complex predicates of the type <light verb+deverbal noun> in EP, see Duarte, Colaço, Gonçalves, Mendes and Miguel (2009).
As a result, both EP and English have an ambiguous input between dative verbs that select both Recipient and Goal arguments (non-core dative verbs) as well as two DPCs introduced either by a functional preposition a ‘to’ (DPC₁), with [-dir, -loc] features, or a directional preposition a/para ‘to/toward’ (DPC₂), with [+dir, +loc] features.

Taking this characterization of EP DPCs into account, in the next section we will discuss how the dative argument is being (re)interpreted in non-European varieties of Portuguese. We will analyze the extent to which the use of DOC and/or DPC is the result of an ambiguous EP input and/or language contact.

4. Dative expression in non-European varieties of Portuguese

Although EP only uses a DPC introduced by the preposition a to express Recipients, several studies have shown that dative expression is changing in non-European varieties of Portuguese; they are losing both the functional preposition a and the dative clitics lhe(s) ‘him, her, them’ and reanalyzing directional prepositions as functional ones.

BP and AP typically exhibit a DPC. However, while the former uses the preposition para, the latter prefers the preposition em (cf. (17.a) and (18.a)). In addition, in BP, the dative clitics lhe(s) ‘him, her, them’ are also
being replaced by pronominal forms *ele/ela(s) ‘he/she/they’* (e.g. BP: Gomes, 2003, Torres Morais and Lima Salles, 2007; AP: Cabral, 2005; Chavagne, 2005).5

(17) a. *Dei palestras para a turma que foi para lá.*
   ‘I gave workshops to the class that went there.’

   b. *Não digo mais nada a ele.*
   ‘I will not say anything else to him.’

   c. *A sua filha diz que não enviou recado algum para ele.*
   ‘His daughter says she didn’t send any message to him.’

   (CRPC, BP)6

(18) a. *Deu na mãe a outra metade.*
   ‘S/he gave [in] her/his mother the other half.’

   b. *Dei-lhe uma sova.*
   ‘I gave him a beating.’

   (Chavagne, 2005, p. 225; appendix 1, 208)

According to Torres Morais and Berlinck (2007), the use of DPC introduced by the preposition *para* in BP may have been triggered by dative verbs that entail a path, such as *enviar* ‘send’, *levar* ‘take’ and *trazer* ‘bring’, which are non-core dative verbs in Rappaport-Hovav and Levin’s (2008) terminology. Data from the 19th century show that the dative argument [+ANIM] was mainly introduced by *a*, while the preposition *para*

3 There is a general loss of both dative and accusative third person clitics in BP. Non-clitic pronouns (or null object) occur instead (e.g. Cyrino, 1993; Pagotto, 1993; Kato, Martins and Nunes, in press).

was preferred with [-ANIM] arguments. In contrast, data from the second half of the 20\textsuperscript{th} century show that the preposition \emph{para} started to become more widespread, occurring irrespective of animacy, in particular with core dative verbs such as \emph{dar} ‘give’ and \emph{dizer} ‘tell’. As we have seen, EP \emph{send} and \emph{throw}-type verbs can select both Recipients and Goals; however, the directional preposition \emph{para} can only be used for Goals. The widespread use of the preposition \emph{para} in BP introducing both Recipients and Goals [±ANIM] may have been triggered by an ambiguous input from EP. Therefore, the semantic meaning of the verbs seems to have played a role in the grammatical change of the dative expression in BP.

On the other hand, the use of a DPC introduced by the preposition \emph{em} in AP appears to be related to contact with Bantu languages in which both Recipients and Goals are introduced by the same (locative) preposition. In fact, although Bantu languages are typically associated to DOC, the co-occurrence of DPC is also possible in some of them (e.g. Baker, 1988). In Kimbundu and Umbundu, Bantu languages in contact with AP, the preferred strategy to introduce Recipients uses locative prepositions \emph{ku} and \emph{ko} ‘in’ (cf. (19)) (e.g. Hagemeijer, in press).\footnote{The numbers 6 and 2 in (19) refer to noun class prefixes in Bantu.}

\begin{itemize}
\item (19) a. \textit{Nga-bana ma-divulu ku-a-thu.} \\
1SG.PST-give6-book LOC-2-people
\end{itemize}
‘[I] gave the book to the people.’
(Kimbundu; adapted from Hagemeijer, in press)

b. *Nda-ka a-livulu ko-ma-nu.
1SG.PST-give 6-book LOC-2-people
‘[I] gave the book to the people.’
(Umbundu; adapted from Hagemeijer, in press)

On the other hand, MP largely uses DOC and dative passives (cf. (20.a-b)). In addition, direct objects [+ANIM] are introduced by the preposition *a* and cliticize through the dative clitics *lhe/lhes* ‘him/her/them’ (and not the accusative *o/a, os/as*) (cf. (20.c-d)) (cf. P. Gonçalves, 1990, 2002, 2010).

(20) a. *Os pais escondem os filhos a verdade.*
‘The parents hide the children the truth.’

b. *Os filhos são escondidos a verdade (pelos pais).*
‘Children have the truth hidden from them (by-the parents).’

c. *Elogiaram a uma pessoa/a ela.*
‘They praise [to] one person / [to] her.’

d. *Elogiaram-lhe.*
‘They praise him/her.’

(P. Gonçalves, 2002, p. 333)

The literature on MP has claimed that this grammatical change on the dative expression was triggered by an interpretation of an ambiguous EP input along with the transfer of L1 Bantu languages. As pointed out by P. Gonçalves (2002), EP input suggests that the use of the preposition is
optional, which leads L2 learners to exhibit a grammar that is not convergent with the target.

In sum, contact between Portuguese and different Bantu languages led to different dative strategies in African varieties of Portuguese. Furthermore, EP ambiguous input also plays a role. In the following sections, we will address the data from PST and discuss the role of both universal properties of Grammar and language contact.

5. Methodology

This study uses a spoken corpus of PST (280,000 words), which was collected between 2008 and 2011 within project VAPOR of the Center of Linguistics of the University of Lisbon. The data consists in interviews with 65 participants aged between 18 and 71, with different levels of education (ranging from elementary school to the university) from the city of São Tomé and its peripheral areas. Participants were asked about familiar subjects in order to obtain the most natural speech possible. They were also asked about the first language they spoke in their childhood, which was consistently Portuguese. When asked about CST, they stress their passive use of this language: they do not usually speak it, but they can understand
(some of) it. Therefore, the corpus represents a sample of the current semi-
spontaneous urban PST spoken as an L1.8

Dative strategies were extracted from the corpus and organized in an
Excel file, according to linguistic and extra-linguistic variables, namely (i)
type of verb (both main and light core and non-core dative verbs); (ii)
animacy of Recipient; (iii) level of education of the participants. In the next
section, we will discuss the data.

6. Results

5.1 General results

The distribution of PST dative strategies in the corpus shows that PST exhibits two strategies to express Recipients, namely a DPC, which employ either the preposition a ‘to’, or the preposition para ‘toward’, as well as a DOC (cf. Table 2). Dative passives do not occur in the PST corpus we analyzed.

8 Further information can be found in the project webpage, from Center of Linguistics of University of Lisbon (CLUL).
Table 2. Absolute and relative frequency of dative strategies in PST corpus

<table>
<thead>
<tr>
<th></th>
<th>Full NP</th>
<th>Pronominal NP</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DPC (a)</strong></td>
<td>40 (26%)</td>
<td>40 (26%)</td>
<td>81 (53%)</td>
</tr>
<tr>
<td><strong>DPC (para/a)</strong></td>
<td>27 (18%)</td>
<td>9 (6%)</td>
<td>37 (24%)</td>
</tr>
<tr>
<td><strong>DOC</strong></td>
<td>24 (16%)</td>
<td>11 (7%)</td>
<td>35 (23%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>91 (60%)</td>
<td>60 (40%)</td>
<td>151 (100%)</td>
</tr>
</tbody>
</table>

On the one hand, Table 2 emphasizes the preference for the DPC introduced by the preposition *a* with full NPs, and for the dative clitic *lhe/lhes* ‘him/her/them’ with pronominal NPs: this strategy was used for 53% of the dative strategies in the PST corpus. On the other hand, there is a clear variation between the DPC introduced by the preposition *para* and DOC (24% vs. 23%). However, differently from the former, these strategies seem to occur mainly with full NPs. Only 13% of the contexts with Recipients in the corpus involve the pronominal forms *ele/ela(s)* introduced by *a* or *para*. In addition, there doesn’t seem to be a preference for one of these prepositions over the other. They show the same percentage of occurrence: 3% of *para* + *ele/ela(s)*, as well as 3% of *a* + *ele/ela(s)* (cf. (5.b-c)). This stands in contrast with the data from BP, which shows a preference for DPC introduced by the preposition *para* in both nominal and pronominal contexts. The PST data also contrast with the MP data, which exhibit DOCs along with dative passives.
The assumption that the co-occurrence of DOC and DPC in the PST is evidence of the dative alternation, as in English, implies that both strategies are produced by the same informants. In order to answer our first research question, we will further consider the number of informants that express the dative with DOC and/or DPCs. Each category corresponds to a group (cf. Table 3).

<table>
<thead>
<tr>
<th>Number of informants</th>
<th>DPC (a) Group I</th>
<th>DPC (para) Group II</th>
<th>DOC Group III</th>
<th>DPCs (a/para) Group IV</th>
<th>DOC/DP Cs Group V</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 (32%)</td>
<td>5 (11%)</td>
<td>7 (15%)</td>
<td>6 (13%)</td>
<td>14 (30%)</td>
<td></td>
<td>47 (100%)</td>
</tr>
</tbody>
</table>

Table 3. Absolute and relative frequency of informants by dative strategies in the PST corpus.

47 out of the 65 informants of the corpus produce DOC and/or DPCs. The other informants do not exhibit utterances with dative arguments whose thematic role is that of a Recipient. Based on Table 3, it is possible to distinguish between five groups of informants, according to the strategy/strategies they use to express the dative. One group of informants only produce the DPC introduced by a (Group I); another group of informants only produces the DPC introduced by para (Group II); another group of informants only produces DOC (Group III); yet another group of informants produces DPCs with both prepositions a and para (Group IV).
Finally, there is a group of informants who effectively produce DOC and DPCs (Group V) and therefore exhibit dative alternation.

Crucially, these data confirm the existence of the dative alternation in the PST as opposed to other non-European varieties of Portuguese. Next, we will analyze the PST data by using linguistic and extra-linguistic variables in order to answer our second research question.

6.2 Results by linguistic and extra-linguistic variables

6.2.1 Class of dative verb

According to Rappaport-Hovav and Levin, (2008), the semantic difference between DOC and DPC in English is the result of the lexical properties of the verbs and the prepositions they combine with. Therefore, core dative verbs can occur with both DOC and DPC₁, irrespective of animacy. In contrast, DOC and DPC₁ are restricted to [+ANIM] arguments when non-core dative verbs are involved. Moreover, DPC₂ is restricted to non-core dative verbs and [-ANIM] arguments. If verb sensitivity plays any role in PST, we expect to find the preposition para, which is [+dir, + loc] in EP, occurring only with non-core dative verbs (and [-ANIM] arguments) (cf. Table 4).
First of all, the distribution of dative strategies by class of dative verb shows that non-core dative verbs are not frequent in the PST corpus. In fact, 90% of the analyzed utterances involve a core dative verb. In addition, not only is this the dominant class of dative verbs in the corpus, but the verb *dar* ‘give’ is also the most common. It occurs in 65 utterances out of 136 with core dative verbs. The other cases involve a variety of other verbs that inherently express acts of transfer, such as *alugar* ‘rent’ or *vender* ‘sell’; verbs of future having, such as *permitir* ‘allow’ or *prometer* ‘promise’; as well as verbs of communication, such as *dizer* ‘tell’, *perguntar* ‘ask’ or *ensinar* ‘teach’, following the subclasses of core dative verbs presented by Rappaport-Hovav and Levin (2008).

According to our predictions, the DPC introduced by the [-dir, -loc] *a* mainly occurs with core dative verbs (cf. (4), repeated in (21)). The only occurrence of this strategy with the non-core dative verb *enviar* ‘send’ was
produced by an informant from Group I, *i.e.* those who only produce DPCs with the preposition *a* and core dative verbs (cf. (22)).

(21) a. *Dá um dinheiro às pessoas.*
    ‘Give some money to the people.’

    b. *Pedir opinião aos colegas mais velhos.*
    ‘Ask for opinion to the oldest colleagues.’

(22) *Tenho lá um colega que ficou no meu boutique*
    ‘I have a friend there who stays in my shop*
    *e eu envio-lhe peça.*
    ‘and I send him an item.’

In addition, DOC mainly occurs with core dative verbs (cf. (3) repeated in (23)). The two occurrences of this strategy with non-core dative verbs were produced by informants from Group III, *i.e.* those who only produce DOC (cf. (24)). In fact, informants from Group V produce DOCs exclusively with core dative verbs.

(23) a. *Entrega senhor uma cerveja.*
    ‘Give the man a beer.’

    b. *Passa o indivíduo uma repressão.*
    ‘He scolds the guy.’

    c. *Ele tem que esforçar para dar ele estudo.*
    ‘He needs to make an effort to give him an education.’

(24) a. *Mandar as pessoas palavrões.*
    ‘Send (=say) people swear words.’
b. *Eu* atirava muitas coisas
   ‘I used to throw many things
tudo o que é coisas como fruteira.\(^9\)
to everything such as breadfruit tree.’

However, the PST corpus also shows that DPC introduced by the
preposition *para* (or *a* with pronominal NPs) mainly occurs with core dative
verbs (cf. (5), repeated in (25.a-c) vs. (25.d)).

(25) a. Entregava o dinheiro *para o banqueiro*.
   ‘Give the money to the banker.’

b. *Ele* vende *para ela*, ela volta a revender.
   ‘He sells [it] to her, she resells it.’

c. Sempre digo a eles que é *para esforçar*.
   ‘I always tell them to make an effort.’

d. *Ele trouxe carta para todas as meninas*.
   He brought a letter to all the girls.’

\(^9\) Despite the fact that the Theme precedes the Recipient, (24.b) can be considered a DOC
as well, since a different word order can be related to the Recipient as a complex NP. In
fact, some Bantu languages which exhibit DOC also allow the goal
(=Recipient/Beneficiary) to occur in the second object position, “as a marked alternative to
the generally dominant goal-patient ordering” (Bearth, 2006, p. 123-124) (cf. (i)).

(i) a. *Mama a-li- m-pa m-toto ki-tabu*
   mother 1-PAST 1-give 1-child 7-book
b. *Mama a-li- m- pa ki-tabu m-toto*
   mother 1-PAST 1-give 7-book 1-child
   ‘Mother gave the child a book.’ (Swahili, Bearth, 2006, p. 123-124)

In addition, both Recipient and Theme in (24.b) are [-ANIM]. According to Morolong and
Hyman (1977), when there is no animacy distinction between both nouns either word order
is possible (cf. (ii)).

(ii) a. *ke-phehétsé mokété lijó*.
   ‘I cooked feast food.’
b. *ke-phehétsé lijó mokété*
   ‘I cooked food feast.’ (Sesotho, Morolong and Hyman, 1977, p. 203)
In addition, these occurrences were not only produced by informants from Group II or IV, *i.e.* those who produce DPCs with *para*, but also by informants from Group V, *i.e.* those who display the dative alternation. It is in fact possible to find occurrences of the prototypical core dative verb *give* ‘*dar*’ with both DOC and DPCs in the same informant.

These data underscore the overgeneralization of the preposition *para* in PST, following what has been described for BP. As discussed previously, this grammatical change in dative expression in both varieties may be related to the ambiguous EP input. In particular, EP exhibits two homonymous prepositions *a*: (i) a [-dir, -loc] preposition *a* which introduces the Recipient of both core and non-core dative verbs; and (ii) a [+dir, +loc] preposition *a* (or *para*) which introduces the Goal of non-core dative verbs. Therefore, the use of preposition *para* to introduce arguments of core dative verbs may result from a reinterpretation of EP input: *para* was reanalyzed as a [±dir, ±loc] preposition.

In the next section we will analyze the distribution of dative strategies by animacy of the argument in order to show that DPC introduced by *para* is indeed used to express Recipients (and not Goals) in PST.

### 6.2.2 Animacy

As we mentioned in section 3, core dative verbs mainly subcategorize [+ANIM] Recipients, unless a complex predicate of the type <light
verb+deverbal noun> is involved. In this case, Recipients can be [+ANIM]. On the other hand, Recipients of non-core dative verbs are exclusively [+ANIM]. We will now briefly discuss the relation between animacy and dative verbs in PST (cf. Table 5 and Table 6).

<table>
<thead>
<tr>
<th></th>
<th>Core dative verbs</th>
<th>Non-core dative verbs</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Main verb</td>
<td>Light verb</td>
<td></td>
</tr>
<tr>
<td>[+ANIM] DPC (a)</td>
<td>47 (31%)</td>
<td>23 (15%)</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>[+ANIM] DPC (para/a)</td>
<td>24 (16%)</td>
<td>0 (0%)</td>
<td>12 (8%)</td>
</tr>
<tr>
<td>[+ANIM] DOC</td>
<td>25 (16%)</td>
<td>6 (4%)</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>96 (63%)</td>
<td>29 (19%)</td>
<td>14 (10%)</td>
</tr>
</tbody>
</table>

Table 5. Absolute and relative frequency dative strategies by type of verb and [+ANIM] Recipients.

<table>
<thead>
<tr>
<th></th>
<th>Core dative verbs</th>
<th>Non-core dative verbs</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Main verb</td>
<td>Light verb</td>
<td></td>
</tr>
<tr>
<td>[-ANIM] DPC (a)</td>
<td>0 (0%)</td>
<td>9 (6%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>[-ANIM] DPC (para/a)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>[-ANIM] DOC</td>
<td>0 (0%)</td>
<td>2 (2%)</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>0 (0%)</td>
<td>11 (8%)</td>
<td>1 (1%)</td>
</tr>
</tbody>
</table>

Table 6. Absolute and relative frequency dative strategies by type of verb and [-ANIM] Recipients
First of all, the distribution of dative strategies by animacy shows that [-ANIM] arguments are not frequent in the PST corpus (8%). In fact, 92% of the analyzed utterances involve a [+ANIM] argument. Furthermore, the [-ANIM] Recipient is mainly selected by light core dative verbs which occur in the DPC with a functional preposition. There is only one occurrence of a [-ANIM] Recipient with the full non-core dative verb *atirar* ‘throw’ in a DOC (cf. (24.b)). On the other hand, the fact that no [-ANIM] with non-core dative verb occurs with the DPC introduced by *para* emphasizes that this argument is indeed a Recipient and not a Goal.¹⁰ One must also note that there are no occurrences of light core dative verbs with the DPC introduced by *para*, highlighting the relation between this strategy and main dative verbs.

To sum up, the prediction is borne out that there is a relation between both DOC and DPCs and [+ANIM] Recipients subcategorized by both core and non-core dative verbs in PST. However, additional data should be taken into account.

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¹⁰ The corpus also exhibits several contexts in which non-core dative verbs select [-ANIM] Goals. However, they have not been considered in our analysis (cf. (i)).

(i)  a. *Angola é que tem que (...) enviar de novo para país. (=para lá)*
    ‘Angola must send [it] again to the country. (=over there)’

    b. *Outra pessoa (...) cuida [da criança] e leva para escola. (=para lá)*
    ‘Another person takes care of the child and takes her to school. (there)’
In the next section, we will analyze the data in the light of the informants’ level of education in order to discuss whether this variable can explain the distribution of dative strategies by the different group of informants.

6.2.3 Level of education

Several studies on Portuguese varieties, and many other languages, emphasize the role that education plays with respect to language variation. A higher degree of exposure to education seems to warrant greater convergence with the target grammar (e.g. Brandão and Vieira, 2012; Alexandre, Gonçalves and Hagemeijer, 2011, for PST). In order to analyze the extent to which the production of DOC and/or DPC is related to this extra linguistic variable, two education levels have been considered: equal or less than the 9th year of education, equal or more than the 10th year of high school (cf. Table 7).11

11 The age groups are on average 35 years old.
Table 7. Absolute and relative frequency of dative strategies by informants’ level of education.

<table>
<thead>
<tr>
<th>Group</th>
<th>1st-9th year</th>
<th>10th graduation</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I – DPC (a)</td>
<td>5 (11%)</td>
<td>10 (21%)</td>
<td>15 (32%)</td>
</tr>
<tr>
<td>Group II – DPC (para)</td>
<td>2 (4%)</td>
<td>3 (6%)</td>
<td>5 (11%)</td>
</tr>
<tr>
<td>Group III – DOC</td>
<td>6 (13%)</td>
<td>1 (2%)</td>
<td>7 (15%)</td>
</tr>
<tr>
<td>Group IV - DPCs (a/para)</td>
<td>1 (2%)</td>
<td>5 (11%)</td>
<td>6 (13%)</td>
</tr>
<tr>
<td>Group V – DOC/DPCs</td>
<td>4 (9%)</td>
<td>10 (21%)</td>
<td>14 (30%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>18 (38%)</td>
<td>29 (62%)</td>
<td>47 (100%)</td>
</tr>
</tbody>
</table>

The results clearly show the effect of education: informants with a lower level of education mainly produce DOCs (13%), while informants with higher levels of education only produce DPCs introduced by a (21%) or DPCs introduced by a or para (11%) as well as the dative alternation (21%). However, the level of education of the informants from Group V does not lead to greater convergence with the target.

In the next section, we will briefly mention the dative strategy exhibited by CST, the dominant Portuguese-related creole in contact with PST and discuss the extent to which the PST strategies are the result of transfer from this creole language.

7. Santome
DOC is a generalized property of Atlantic creole languages (e.g. Hagemeijer and Alexandre, 2012; Hagemeijer, 2007; Haspelmath, 2013) and the only strategy in CST to express Recipients with both main and light verbs (cf. (26-27)) (Hagemeijer, 2007; Gonçalves and Hagemeijer, 2015b). In spite of this, CST lacks dative passives (nor syntactic passives, in general).

(26) \( N \ bïla \ \text{mêse} \ \text{punta} \ Sabinu \ ūa \ kwa \)
1SG turn want ask Sabinu a thing
‘I want to ask Sabinu something else.’
(Gonçalves and Hagemeijer, 2015b)

(27) \( Non \ ka \ \text{da} \ Sumu \ \text{gloya}. \)
1PL TAM give Lord glory
‘We glorify the Lord.’
(Gonçalves and Hagemeijer, 2015b)

Therefore, PST and CST exhibit different strategies to express Recipients: while the latter only uses DOC to express Recipients, the former prefers DPC\(_1\) (and exhibits the dative alternation). In addition, CST also exhibits a DPC introduced by \( da \) to express datives with the thematic role of Beneficiary with core dative verbs, as well as a serial verb construction to express Goals with non-core dative verbs (Gonçalves and Hagemeijer, 2015b).

8. Final remarks
Returning to our research questions, we can conclude that PST exhibits the dative alternation, although it is not a widespread phenomenon and contingent on the informants’ level of education. Furthermore, there seems to be some evidence that the dative alternation is determined by linguistic variables such as the type of dative verb and animacy of the dative argument. In fact, both DOC and DPC introduced by the functional preposition *a* only occur with core dative verbs. However, the DPC introduced by the preposition *para* occurs with both core and non-core dative verbs. We assume that the [+dir, +loc] preposition *para* from EP has been reanalyzed as [±dir, ±loc], as the result of an ambiguous input from the target-variety. With respect to the animacy of the Recipient, the findings are not robust, since [-ANIM] Recipients are not frequent in the PST corpus. However, while DPC introduced by *a* and DOC occur with both [±ANIM], DPC introduced by *para* strictly occurs with [+ANIM]. Therefore, our analysis involves Recipients (and not Goals).

In conclusion, while CST may have played a role in PST properties, since DOC is used but no dative passives are exhibited, the use of the dative alternation cannot (only) be explained by transfer. PST converges with the target-variety, displaying (and mainly using) a DPC introduced by a functional preposition. Therefore, both transfer and Universal Grammar are acting together with respect to the dative variation found in the PST.
References


