In this paper, we analyze external possessors in Brazilian Portuguese, showing that those realizing Nominative-Case (Nominative-possessors) are not syntactically uniform, varying derivationally. These variations are related to the vP internal structure. In agentive argument structures, Nominative-possessors are licensed in obligatory control configurations. Non-agentive argument structures give rise to raising configurations. In turn, raising configurations are not syntactically uniform either. Unaccusative vPs, differently from inchoative ones, contain a dative position at the vP edge. This position is used as an intermediate landing site for the raised Nominative-possessor. Importantly, a copy of a possessor in this intermediate position alters information structure at LF, having three interpretative effects: (a) affectedness: the possessor is interpreted as being affected by the denoted event, (b) presupposition of existence: the possessor must be an existent entity, and (b) contextual confinement: the possessor-possessum is interpreted as an integral part-whole at the event time.
1 Introduction

External possessor constructions – where there is a mismatch between syntax and semantics as the possessor is spelled out in a position outside the possessive DP to which it is thematically associated – are quite productive in Brazilian Portuguese (BP). As shown below, different possessive configurations with an external possessor are licensed in the language. (1a) exemplifies Accusative-possessors, in which the possessor, the 2SG clitic, is marked with Accusative Case, surfacing within the vP shell, while the possessum is located within a locative prepositional phrase. (1b) is a case of Dative-possessors. The possessor, the 2SG clitic, is spelled out as Dative, with the possessum surfacing in object position. Dative-possessors are less available in the language; being mostly productive in southern dialects, particularly in the state of Rio Grande do Sul. (1c), in contrast, is not subject to dialectal variation, being widely acceptable. These are Nominative-possessors; the preverbal DP is readily interpreted as the possessor of the inalienable possessum realized in object position. As far as we know, (1c) is unique to BP, being unavailable in other Romance languages.

(1) a. Ele te beijou nas bochechas.
   he 2SG.ACC kissed.3SG in.the.PL cheeks.PL
   ‘He kissed you on the cheeks.’

b. Eu te massageei os pés.
   I 2SG.DAT massaged.3SG the.PL feet
   ‘I massaged your feet.’

c. O relógio quebrou o ponteiro.
   the watch broke.3SG the hand
   ‘The watch had its hand broken.’

The present study investigates Nominative-possessors, aiming to show that these constructions do not have a uniform syntax. Focusing mainly on raising constructions such as (1c) above, we

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1 A reviewer questioned this statement, reporting that speakers from non-southern dialects accept sentences as (i). Our understanding is that Dative-possessors occur in non-southern dialects as well, but not in a productive way. For example, I am a native speaker of a dialect from Minas Gerais (southeast) and I accept and produce sentence (i). Sentence (ii), however, which is part of my parents’ production (dialect from Rio Grande do Sul), is not natural in my dialect.

(i) Ele me beijou a mão.
   he 1SG.DAT kissed.3SG the hand
   ‘He kissed my hand.’

(ii) Ela me cortou o cabelo muito curto.
    she 1SG.DAT cut.3SG the hair too short
    ‘She cut my hair too short.’
present evidence that the syntactic structure underlying these constructions varies as a function of the type of argument structure projected within the vP shell.

Raising Nominative-possessors occur with intransitive predicates expressing a change of state. In (1c), for example, the verb *quebrar* projects a mono-argumental structure, with the theta-marked internal argument (the possessive DP) undergoing a change of state as a result of the action denoted by the verb. Nevertheless, intransitive predicates of this sort do not form a homogeneous syntactic-semantic class. To begin, the predicates in (2) differ semantically from those in (3). In (2), the change of state that the internal argument undergoes has an external cause. In (3) the change of state is caused internally (Kemmer 1993; Levin 1993; Alexiadou et al. 2006; Cançado & Amaral 2010).

(2)  
a. O vaso quebrou.  
the vase broke.3SG  
‘The vase broke.’

b. O avião explodiu.  
the airplane exploded.3SG  
‘The airplane exploded.’

c. O feijão queimou.  
the bean burned.3SG  
‘The beans burned.’

(3)  
a. O queijo mofou.  
the cheese molded.3SG  
‘The cheese became moldy.’

b. A laranja apodreceu.  
the orange rotted.3SG  
‘The orange rotted.’

c. O leite azedou.  
the milk soured.3SG  
‘The milk turned sour.’

These two classes differ with respect to other syntax-semantic properties. (See Cançado & Amaral (2010) for a detailed characterization of these verbs in BP.) First, only verbs of the first class have transitive alternates, allowing an agentive external argument:

(4)  
a. A faxineira quebrou o vaso.  
the cleaner broke.3SG the vase  
‘The cleaner broke the vase.’
b. O terrorista explodiu o avião.
   the terrorist exploded.3SG the airplane
   ‘The terrorist exploded the airplane.’

c. O cozinheiro queimou o feijão.
   the cook burned.3SG the bean
   ‘The cook burned the beans.’

(5) a. *O fazendeiro mofou o queijo.
    the farmer molded.3SG the cheese
    (‘The farmer made the cheese become moldy.’)

b. *A garçonete apodreceu a laranja.
   the waitress rotted.3SG the orange
   (‘The waitress made the orange rot.’)

c. *O cozinheiro azedou o leite.
   the cook soured.3SG the milk
   (‘The cook made the milk turn sour.’)

Accordingly, verbs of the second class cannot feed passives:

(6) a. *O queijo foi mofado.
    the cheese was.3SG molded
    (‘The cheese was molded.’)

b. *A laranja foi apodrecida.
   the orange was.3SG rotted
   (‘The orange was rotted.’)

c. *O leite foi azedado.
   the milk was.3SG soured
   (‘The milk was turned sour.’)

In addition, as opposed to verbs of the first-class, the verbs in the second class cannot occur with the reflexive clitic se:

(7) a. *O queijo se mofou.
    the cheese REFL molded.3SG
    (‘The cheese molded itself.’)

b. *A laranja se apodreceu.
   the orange REFL rotted.3SG
   (‘The orange rotted itself.’)
c. *O leite se azedou.
   the milk REFL soured.3SG
   (‘The milk turned itself sour.’)

From now on, to avoid confusion, I will reserve the term unaccusative for verbs of the first class and the term inchoative for verbs of the second class. Here are some bona fide examples of unaccusatives and inchoatives verbs in BP:

(8) **Unaccusatives**

(9) **Inchoatives**
    franzir ‘to frown’, cair ‘to fall’, inflamar ‘to have inflammation’,
    embolorar/mofar ‘to mildew’, apodrecer ‘to rot’, amarelar ‘to turn yellow’,
    crescer ‘to grow’, embranquecer ‘to turn white’, cariar ‘to get cavities’, enrugar ‘to wrinkle’

Both unaccusative and inchoative verbs license Nominative-possessor raising, as shown in (10) and (11). Nevertheless, in what follows, we will show that (10) and (11) do not have the same derivation. While (10) involves movement of the possessor through an intermediate position at the edge of the vP domain, (11) does not.

(10) O bombeiro queimou a perna.
    the firefighter burned.3SG the leg
    ‘The firefighter had his leg burned.’

(11) O juiz franziu a testa.
    the judge frowned.3SG the forehead
    ‘The judge frowned.’

The paper is organized as follows. We will first assess the general properties of Nominative-possessor structures, showing that there are two main types: raising and obligatory control (section 2). Focusing on raising, we will then investigate differences between unaccusative and inchoative predicates, observing that unaccusatives, as opposed to inchoatives, provide an intermediary landing site for the raised possessor (section 3). In section 4, we offer novel evidence suggesting that the intermediate position under consideration is a context-grounding position along the lines proposed by Uriagereka (2000). In section 5, we conclude the paper, summarizing our findings and their potential contributions to the study of possessive structures and information structure, while making note of an issue that requires further investigation.
2 Nominative-possessors: control and raising

BP is a partial null subject language, with finite null subjects behaving as obligatorily controlled elements (Modesto 2000; Rodrigues 2004; Holmberg et al. 2009; Nunes 2019; Martins & Nunes 2021, among others). In tandem, null possessives in agentive structures like (12) are also obligatorily controlled (Rodrigues 2004; 2010; Floripi & Nunes 2009; Rodrigues & Dal Pozzo 2017, among others).

(12) [a Maria] vai mandar [a filha e1/2] para a Europa.
the Mary will.3SG send.INF the daughter to the Europe
‘Mary will send her daughter to Europe.’

When semantically associated to inalienable nouns such as kinship terms, BP null possessors pass all the tests for obligatory control: (a) a c-commanding antecedent is obligatory, not just preferred (13a); (b) the antecedent is the closest c-commanding DP, and split antecedents are not allowed (13b); (c) under ellipsis, only the sloppy reading is available (13c); (d) with only-NP antecedents, only the covariant reading is allowed (13d); (e) the de-se reading is forced. (13e) is infelicitous if Maria is not aware that she has a husband.

(13) a. *[a prima e] chegou
the cousin arrived.3SG
(‘My/His/Your/Our/Their cousin arrived.’)

b. [a Maria] disse que [a Ana] detesta [o marido e1/2/1+2] detesta [o marido e1/2/1+2]
the Maria said.3SG that the Ana hate.3SG the husband
‘Maria said that Ana hates her husband.’ (✓Ana’s husband/*Maria’s husband.)

c. [a Maria] detesta [o marido e] e [a Carla] detesta [o marido e] detesta [o marido e]
the Maria hate.3SG the husband and the Carla hate.3SG the husband
‘Maria hates her husband, and Carla does too.’
(✓Carla hates her own husband. / *Carla hates Maria’s husband.)

d. Só [a Maria] detesta [o marido e] detesta [o marido e]
only the Maria hate.3SG the husband
‘Only Maria hates her husband.’
(✓Only Maria is an x, such x hates x’s husband./ *Only Mary is an x, such x hates Maria’s husband.)

e. [a Maria] odeia [o marido e] hate.3SG the husband
‘Maria hates her husband.’ (✓De se reading/ *De re reading)
In addition, these possessors are subject to island effects. For example, they cannot be bound outside specific definite DPs in object position (14a). Likewise, they cannot be bound outside DPs in subject position (14b).

(14)  
a. [a Maria], não penteia [aquele cabelo *e1/dela1]  
the Maria not comb.3SG that hair of.her  
‘Maria does not comb that hair of hers.’

b. [a Maria], disse que [um irmão *e1/ dela1] ganhou na loto  
the Maria said.3SG that a brother of.her won.3SG in.the lottery  
‘Maria said that a brother of hers won the lottery.’

Although differences between standard theories of obligatory control and Hornstein’s (1999; 2001) movement theory are irrelevant here, in more recent analyses, these null possessors are taken to be the residue of movement through a thematic position, as represented in (15). The possessor moves to Spec-TP to value its Case feature, passing through Spec-vP, where it collects the agent theta role (Rodrigues 2004; 2010; Floripi & Nunes 2009; Rodrigues & Dal Pozzo 2017).

(15)  
[TP [DP [a Maria]1 [T [vAgent [v [VP detesta [DPPossessive o t1Possessor marido]]]]]]]  
the Maria hate.3SG the husband  
‘Maria hates her husband.’

As mentioned in the introduction, and as (16) and (17) illustrate, Nominal-possessors can also occur in raising configurations involving unaccusative and inchoative predicates. In principle, both (16) and (17) fit the structural scheme in (18), where the possessor moves directly from its thematic position inside the possessive DP to Spec-TP:

(16)  
A Maria manchou a pele.  
the Maria stained.3SG the skin  
‘Maria had her skin blemished.’

(17)  
O nenê caiu o cabelinho.  
the baby fell.3SG the hair.DIM  
‘The baby lost his/her baby hair.’

(18)  
[TP DP1 [T [v [VP V [DPPossessive t1]]]]]]  

In section 3 and 4, we will argue that (18) is the right structure for (17), but not for (16). For now, let us first focus on previous analyses, which do not endorse the scheme in (18) at all, arguing that in sentences like (16) and (17), the possessor is realized in a sentential topic position, above TP. The argumentation supporting this proposal is mistaken, however.
Brazilian researchers have analyzed sentences with possessor-raising as topic-subject constructions, with the possessor surfacing at the left periphery of the sentence, triggering verbal agreement morphology (Pontes 1987; Galves 1998; 2001; Lobato 2007; Kato & Duarte 2017; Munhoz & Naves 2012). Assuming BP to be a topic-prominent language (Kiss 1995), and couching their analysis within the recent C-T feature inheritance framework proposed in Chomsky (2008) (see further developments in Jiménez-Fernández (2010; 2011), Miyagawa (2010; 2017) and Jiménez-Fernández & Miyagawa (2014)), Munhoz & Naves (2012) take BP to be a topic-prominent language, analyzing the underlying syntactic structure of (16) and (17) as in (19), where the possessor is spelled out in Spec-αP, with α receiving φ-features and topic-focus feature from C.

(19)

a. [CP [αP [a Maria]1 [α [TP ... [VP manchou [dp α pele t1]]]]]]
the Maria stained.3SG the skin

‘Maria had her skin blemished.’

b. [CP [αP [o nenê t1] [α [TP ... [VP caiu [dp o cabelinho dele t1]]]]]]
the baby fell.3SG the hair.DIM of.him

‘The baby lost his/her baby hair.’

Considering that topics are definite DPs (Fodor & Sag 1982), Munhoz & Naves offer as evidence for their proposal the observation that the Nominative-possessors at issue have referential interpretations. However, sentences like (20) are grammatical. Thus, it is rather unclear that the referential reading that the authors point to is indeed a requirement of Nominative-possessor raising.

(20)

a. Ninguém quebrou o dedo aqui, meu irmão.
nobody broke.3SG the finger here, my brother

‘My brother, nobody broke his finger here.’

b. O assassino do Smith, se existe um, vai mofar a bunda na
the assassin of.the Smith, if is one, will.3SG mold.INF the ass in.the
jail

*Idiomatically:* ‘Smith’s assassin, if there is one, will be in jail for a long time.’

*Literally:* ‘Smith’s assassin, if there is one, will get mold on his ass in jail.’

c. Algum nenê está caindo o cabelo aqui no berçário.
some baby.DIM is.3SG falling the hair here in.the nursery

‘Some little baby is losing his/her baby hair here in the nursery.’

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Languininho (2006) suggests that raising Nominative-possessors have a structure similar to that in (18), with the possessor being base-generated and spelled out in Spec-TP. For space reasons we will not discuss this possibility here.
Nunes & Kato (2023) also observe that sentences like (16) and (17) are appropriate answers to out-of-the-blue questions such as (21). This is not a well-suited property of topics. Sentential answers to out-of-the-blue questions force a reading focused on the event itself, a statement about what happened, a thetic judgment in Kuroda's (1972) sense, whereas sentences with a topicalized DP forcedly receive a categorial judgment, being a statement about the topic.

(21) A: O que aconteceu?
   the what happened.3SG
   ‘What happened?’

   B: A Maria manchou a pele.
   the Maria manchou.3SG the skin
   ‘Maria’s skin blemished.’

   B’: O nenê caiu o cabelinho.
   the baby fell.3SG the hair.DIM
   ‘The baby lost his/her baby hair.’

For the sake of completeness, let us mention that the sentences in (20) can also serve as appropriate answers to out-of-the-blue questions, ruling out, thus, the possibility of a broad focus interpretation.³

In view of the above, Kato & Ordóñez (2019), as well as Nunes & Kato (2023), assume that Nominative-possessors are spelled out in Spec-TP, although they do not uphold the structure in (18), as we will see shortly.

Important to our present discussion, Kato & Ordóñez observe that, even though BP had undergone diachronic changes in the C-T domain (loss of referential null subjects and impoverishment of verbal agreement morphology), the emergence of possessor raising in the language is unrelated to these changes. This observation results from comparisons between BP and Dominican Spanish. Dominican Spanish is comparable to BP in that it lost null subjects too (see Toribio 1993; Bullock & Toribio 2009; Camacho 2016, on Dominican Spanish), but it did not gain possessor raising. While fronted possessors with dative-clitic doubling are available in Dominican Spanish (22), non-doubled Nominative-possessors of the sort found in BP are not (23):

(22) A este reloj se le rompió la aguja.
    to this clock REFL 3SG.DAT broke.3SG the need
    ‘The clock’s hand broke.’

(23) *El reloj rompió la aguja.
    the clock broke.3SG the needle
    (‘The clock’s hand broke.’)

³ We are thankful to one of the reviewers for calling this to our attention.
An obvious difference between BP and Dominican Spanish is the clitic system. While Dominican Spanish kept 3Person clitics, BP lost them. To exemplify this loss, consider the Dative-possessor constructions in (1b) again. In addition to being productive only in some dialects, these constructions are restricted to 1Person and 2Person clitics because the 3Person clitic is not available anymore. As a matter of fact, BP does not license 3Person Dative-possessors at all, independently of them being clitics or not. As Torres Morais & Lima-Salles (2016) observe, 3Person Dative-possessors, clitics or full DPs, are readily licensed in other Romance Languages, but not in BP. The sentences in (24), for example, are acceptable in European Portuguese, but not in BP. Thus, by and large, BP has lost Dative-possessors. We will not discuss it, but the availability of dative-possessors with 1Person and 2Person clitics might be just a diachronic residue.

(24)  a. A Maria admira o talento ao João. (EP/*BP)
      the Maria admire.3SG the talent to.the João
    b. A Maria admira-lhe o talento. (EP/*BP)
      the Maria admire.3SG-3SG.DAT the talent
      'Maria admires John’s/his talent.'

These observations led Kato & Ordóñez to hypothesize that the emergence of Nominative-possessor raising, as in (16) and (17), is related to structural changes within the vP shell. In their analysis, the Dative functional projection at the border of the vP domain (Let us call it DatP.) lost its ability to value a Case feature in BP. As a result, a possessor cannot be spelled out in Spec-DatP, although the position can still host an intermediate copy of a possessor. That is, the possessor DP, on its way to Spec-TP, where it values its Case, passes through Spec-DatP:

(25)  [\[TP \{[DP o relógio], T, T \{[DatP τ₁] [DatP quebrou [DP o ponteiro τ₁]])\]}]
      'The clock’s hand broke.'

(25) differs from the scheme in (18) in that it contains a projection (DatP) that serves as an intermediate landing site for the raised possessor. Kato & Ordóñez, as well as Rodrigues (2020), following Landau (1999), point out that the movement of the possessor through the edge of the vP (Spec-DatP in (25)) has, as a consequence, the semantics of affectedness: the possessor is interpreted as being affected by the event denoted by the verb.

To recapitulate, BP has two well-defined types of Nominative-possessors: obligatory control and raising. There is compelling evidence that in both configurations, the possessor surfaces in sentential subject position (Spec-TP). However, assuming (25), in raising, but not in obligatory control, the possessor passes through Spec-DatP. In what follows, we will show that this is partially true. It is arguably true that Spec-DatP does not involve obligatory control, but it seems firmly false that all raising configurations are like (25). Only those built upon an unaccusative
argument structure confirm (25). In inchoative structures, the postulated possessor's intermediate movement does not take place. In other words, inchoatives structures fall under the scheme in (18).

3 Affectedness and movement through Spec-DatP

Affectedness is understood as a change of state, location or existence obtained and maintained by the internal argument due to the event denoted by the verb (Fillmore 1970; Anderson 1979; 2006; Tenny 1987; Dowty 1991; Beavers 2006; 2011; Arsenijević et al. 2020). It is implicated in many syntactic-semantic processes, including those required for nominal passive and middle formation (Anderson 1979; 2006; Fagan 1988; Condoravdi 1989; Doron & Rappaport 1991). The contrast in grammaticality between (26) and (27) indicates that nominal passives are possible only if the underlying direct object is an affected entity. Similarly, affectedness is a requirement on the well-formedness of middles (28)–(29).

(26)  
   a. The enemies sank Black Pearl.  
   b. Black Pearl's sinking by the enemies.

(27)  
   a. Hypatia knew mathematics.  
   b. *The mathematics' knowledge by Hypatia.

(28)  
   a. The enemies will not sink Black Pearl easily.  
   b. Black Pearl does not sink easily.

(29)  
   a. Hypatia knew mathematics well.  

Affectedness has been linked to the aspectual properties of the predicate. Verbs denoting delimited events select for direct objects that are event delimiters, and the degree by which the object is affected measures out the duration of the event (Tenny 1987; 1994). More recent investigations have proposed that affectedness is a relational notion involving the event, the direct object and an aspectual scale projected by the verb, defining the progress of the change impinged on the object (Kennedy & Levin 2008; Beavers 2011; Arsenijević et al. 2020). Beavers (2011) proposes that the aspectual scale is an argument of the verb. In an event-decomposition analysis, this can be syntactically modeled by positing that the argument structure of affecting predicates contains an extra projection in which the direct object and the aspectual scale interact structurally in a Spec-Head relation.

Affectedness imposes a presupposition of existence on the direct object (Anderson 1979; 2006; Beavers 2011). In (26) and (28), for instance, the boat the term Black Pearl denotes must have existed prior to the event of sinking.
An intriguing fact is that dative-possessors are also constrained by affectedness. Possessors marked with Dative Case are interpreted as being affected by the verbal action. This seems to be a universal property of Dative-possessors, being observed in many unrelated languages (Vergnaud & Zubizarreta 1992; Deal 2013; Fernández-Alcalde 2014; Gafter 2014; Lee-Schoenfeld 2016). In (30a) from German and in (30b) from French, the possessor is affected by the event. Thus, in inalienable part-whole possessions like in (30), an affected-possessor entailment is obtained: (30a) entails *Bello licked me*, and (30b) entails *the doctor examined them*.

(30) a. Bello hat mir die Hand gekleckt.
   Bello had.3SG 1SG.DAT the hand licked
   ‘Bello licked my hand.’

   b. Le médecin leur a examiné la gorge.
   the doctor 3PL.DAT had.3SG examined the throat
   ‘The doctor examined their throat.’

The presupposition of existence triggered by the affectedness constraint is equally relevant to the characterization of Dative-possessors (Lee-Schoenfeld 2006; Deal 2013). (31), from German, is infelicitous if it makes reference to a deceased neighbor.

(31) Tim hat der Nachbarin das Auto gewaschen.
   Tim had.SG the neighbor.DAT.FEM the car washed
   ‘Tim washed the neighbor’s car.’

As considered above, it has been suggested that affectedness is a thematic relation, and the literature on Dative-possessors offers analyses along the same lines. Within Government & Binding Theory and the Minimalism, it had been proposed that Dative-possessors are obligatory control configurations, where the possessor is base generated, externally merged, in its surface position, where it receives an ‘affected’ theta-role (Guéron 1985; Borer & Grodzinsky 1986; Tellier 1991; Authier 1992; Hole 2004, among others). Subsuming Dative-possessors as obligatory control configurations is a possibility, although we concur with Landau's (1999) observation that affectedness is a diffuse notion that does not fit well the linguistic characterization of theta roles. We will revisit this issue in section 4, but, for the time being, we will neutralize it, concentrating on the observation that Dative-possessors are subject to the affectedness constraint, which gives rise to the affected-possessor entailment in (30) and to the presupposition of existence in (31). We will use the affected-possessor entailment and the presupposition of existence as tests to detect affectedness.

Unsurprisingly, residues of Dative-possessors in BP, illustrated in (1b) – repeated below as (32) – behave as described above with respect to the affectedness constrain. The possessor is affected by the denoted event, holding an affected-possessor entailment. (32) entails *I massaged*...
As for the presupposition of existence, it cannot be easily tested in BP since in this language Dative-possessors are restricted to 1Person and 2Person clitics.

(32) Eu te massageei os pés.
I 2SG-DAT massaged.3SG the.PL feet
‘I massaged your feet.’

In Nominative-possessors, the affectedness constraint applies to the possessor in raising configurations whenever the predicate is headed by an unaccusative verb. (33), for example, forcedly triggers a reading in which the possessor is affected by the burning event, resulting in an affected-possessor entailment. It also responds well to the presupposition of existence test. (34) is infelicitous if used to describe a situation in which the pig is dead. Notice the contrast in acceptability between (34) and (35) in which the possessor is spelled out in its canonical position, within the possessive DP.

(33) A Maria queimou o pé na fogueira.
the Maria burned.3SG the foot in.the bonfire
‘Mary burned her foot in the bonfire.’

(34) O porco queimou a costela na fogueira.
the pig burned.3SG the rib in.the bonfire
‘The pig burned its ribs in the bonfire.’
(#’The pork’s rib got burned in the bonfire’.)

(35) A costela do porco queimou na fogueira.
the rib of.the pig burned.3SG in.the bonfire
‘The pork’s rib got burned in the bonfire.’

Contrastingly, Nominative-possessors in inchoative structures are not subject to the affectedness constraint. First, the affected-possessor entailment is not observed in (36), which does not entail that the baby fell. Second, these structures do not give rise to a presupposition of existence. (37) and (38) are both acceptable, even if we are talking about a deceased neighbor of ours.

(36) O nenê caiu o cabelinho.
the baby fell.3SG the hair.DIM
‘The baby lost his baby hair.’

(37) O nosso vizinho caiu o cabelo (logo depois que ele morreu).
the our neighbor fell.3SG the hair right after that he died.3SG
‘Our neighbor lost his hair (right after he had died).’
(38) O cabelo do nosso vizinho caiu (logo depois que ele morreu).  
the hair of.the our neighbor fell.3SG right after that he died.3SG  
‘Our neighbor’s hair fell (right after he had died).’

This is in accordance with the fact that Dative-possessors are possible with unaccusative-causative alternating verbs, but not with inchoatives.

(39) Eu vou te queimar a mão se você não ficar quieto.  
I will.1SG 2SG.DAT burn.INF the hand if you not stay.INF quiet  
‘I will burn your hand if you do not stay put.’

(40) *Eu vou te crescer o cabelo para você ficar mais bonita.  
I will.1SG 2SG.DAT grow.INF the hair for you stay.INF more beautiful  
(‘I will make your hair grow so that you can look prettier.’)

Notice that (40) is ungrammatical not because the verb crescer cannot be used transitively. It actually can if coerced, as (41) shows:

(41) Eu vou crescer o seu cabelo um pouquinho para você ficar mais bonita.  
I will.1SG grow.INF the your hair a little.bit for you stay.INF more beautiful  
‘I will make your hair grow a little bit so that you can look prettier.’

In addition to these observations, Nunes & Kato (2023) point out that resumptive possessive pronouns can resume the Nominative-possessor when the verb is unaccusative, but not when it is inchoative:

(42) A Maria queimou o pé dela na fogueira.  
the Maria burned.3SG the foot of.her in.the bonfire  
‘Maria burned her foot in the bonfire.’

(43) *O nenê caiu o cabelinho dele.  
the baby fell.3SG the hair.DIM of.him  
(‘The baby lost his/her baby hair.’)

Based on these research results, we suggest that the argument structure projected by unaccusative verbs contains a DatP, as proposed by Kato & Ordóñez (2019) and Rodrigues (2020), but the argument structure projected by inchoative verbs does not. Therefore, there are two possible derivations for Nominative-possessors in raising configurations, namely, (44) and (45). Choosing one or the other depends on the event structure projected by the verb.
This analysis provides an explanation for the structural position of floating quantifiers in Nominative-possessor structures. As shown in (46), in control configurations, a quantifier associated with the possessor can float in a position between the future modal verb, which is in T, and the main verb, which is arguably adjoined to little v. Thus, the quantifier is mostly likely in Spec-vP.

(46) As mulheres, vão todas dançar com os maridos na festa. 'All the women will dance with their husbands at the party.'
In raising configurations with unaccusative verbs, a similar linear sequence is obtained, with the quantifier floating between the future modal and the main verb, as (47) exemplifies. Since these are not agentive structures, the quantifier is in a higher position within the vP, but it is not Spec-vP. We take it to be Spec-DatP.

(47) Essas crianças, vão todas, queimar o pé na fogueira.

these children will.3PL all.PL burn.INF the foot in.the bonfire

‘All these children will burn their feet in the bonfire.’

Unsurprisingly, in raising configurations with inchoatives predicates, a floating quantifier between the future model and the main verb is not fully acceptable.4

(48) ?*Essas crianças, vão todas, cariar os dentes nesse verão.

the.PL children will.3PL all.PL decay.INF the teeth in.this summer

(‘All the children will get cavities this summer.’)

Lunguinho (2006) and Cançado & Negrão (2010) propose that a raised possessor escapes the possessive DP passing through Spec-DP, where a quantifier may get stranded. Taking this to be a possibility, let us add, however, that this analysis does not account for the contrast above, which indicates a structural distinction between unaccusative and inchoative predicates.

To close this section, let us consider distributive effects. Vergnaud & Zubizarreta (1992) pointed out that in Dative-possessors where the possessor is plural (49), a possessum denoting a body-part is interpreted as a plurality even though it is morphologically singular. Although this effect is quite strong in Dative-possessors, it seems unrelated to the Dative position itself. As shown

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4 One of the reviewers made two observation about (47) and (48). We will go through them separately. Firstly, it was observed that some speakers of BP pointed out that cariar is not a frequent verb. This might be a dialectal difference. In my dialect, cariar is a regular verb. (i), for example, is a perfect sentence.

(i) Cara, eu estou com alguma coisa. Todos os meus dentes cariaram.

man, I am with some thing. all.PL the.PL my.PL teeth decayed.3PL

‘Man, I have something (= I am sick). My teeth decayed all at once.’

Secondly, the very same native speakers did not judge (48) significantly worse than (47). The reviewer, thus, suggested that in (47) and in (48), the floating quantifier might be in a position higher than vP, given that quantifiers can also float in sentences like (ii) and (iii). This is potentially interesting and indicates that careful research on floating quantifiers in different dialects of BP is in order. Neither (ii) nor (iii) is grammatical in my dialect. Thus, it might be that we reject (48) because we cannot float a quantifier in a position outside vP.

(ii) Com certeza as mulheres vão todas ter dançado com os maridos.

for sure the.PL women will.3PL all.PL have.INF danced with the husbands.

‘For sure, all the women will have danced with their husbands.’

(iii) Com certeza as mulheres vão todas estar dançando com os maridos.

for sure the.PL women will.3PL all.PL be.INF dancing with the husbands.

‘For sure, all the women will be dancing with their husbands.’
in (50)-(52), in BP the same distributive effect is obtained for Nominative-possessors in general: control (50), raising with unaccusative predicate (51) and raising with inchoative structure (52). In all these sentences, the possessum is forcedly singular. The presence of a plural possessum leads to a somewhat awkward interpretation. Thus, it seems to us that in constructions with external possessors, the distributive reading is a reflex of the possessor having scope over the possessum.

(49) Le médecin luer a radiographié l’ estomac.
    the doctor 3PL.DAT had.3SG x-rayed the.SG stomach.SG
    ‘The doctor x-rayed their stomach.’

(50) a. Os cantores pintaram o rosto antes do show.
    the.PL singers painted.3PL the face before of.the concert
    b. #Os cantores pintaram os rostos antes do show.
    the.PL singers painted.3PL the.PL face.PL before of.the concert
    ‘The singers painted their faces before the concert.’

(51) a. Os meninos quebraram o nariz na luta.
    the.PL boys broke.3PL the nose in.the fight
    b. #Os meninos quebraram os narizes na luta.
    the.PL boys broke.3PL the.PL nose.PL in.the fight
    ‘The boys had their noses broken during the fight.’

(52) a. Os filhotes de lagartixa cresceram o rabo no inverno.
    the.PL offspring of lizard grew.3PL the tail in.the winter
    b. #Os filhotes de lagartixa cresceram os rabos no inverno.
    the.PL offspring of lizard grew.3PL the.PL tail.PL in.the winter
    ‘The lizard offspring grew their tails in the winter.’

Summarizing, in BP Nominative-possessor raising configurations involve movement to an intermediate position (Spec-DatP) in unaccusative argument structures. In inchoative structures, this intermediate movement does not occur; the possessor moves directly to Spec-TP. As we do not have a full understanding of the syntax and semantics of affectedness yet, in this paper we remain neutral with respect to the thematic status of Spec-DatP, but we revisit the issue in the following section, providing some insights on its nature.

Next section, we focus on the pragmatic import of Spec-DatP, showing that movement through it alters information structure.

4 Spec-DatP and contextual confinement

Uriagereka (2000) observes that Spanish possessive constructions like (53) have two layers of semantic information: a conceptual one related to the expression of an inalienable possession
(i.e., the relation between she/ella and the umbilical cord) and an intentional one, relating the seeing event and the umbilical cord. (54), with a dative-clitic possessive, adds another type of intentional information: this proposition is not about any umbilical cord, but about an umbilical cord that was attached to its owner (ella) when the sight event took place. That is, double dative-possessors force an integral possessum-possessor (part-whole) reading that canonical possessives do not. Although (53) forces an inalienable possession reading, it is felicitous even in a situation in which the sight event took place when the umbilical cord was not attached to its owner.

(53) (Yo) vi su cordón de ella.
    I saw.1SG her cord of her
    ‘I saw her umbilical cord.’

(54) (Yo) le vi el cordón a ella.
    I 3SG.DAT saw.1SG the cord to her
    ‘I saw her umbilical cord.’

Uriagereka, building on Higginbotham (1988), assumes that predicates, including nominals, introduce contextual variables, which are set pragmatically by the speaker, and these variables can ground each other in a process of contextual confinement. The intuitive integral reading of (54) is a consequence of this. The speaker confines the context of the possessum (cord) to that of the possessor (her) at the time of the sight event. Assuming a neo-davidsonian semantics, (55a) (translated as (55b)) is, thus, assigned to (54), where X, Y and Z are free contextual, second order variables predicated of e, e′, and x respectively.

(55) a. (e: X(e)) [(e′: Y(e′))
  [EXPERIENCING(e) & Subject (I, e) & Object (e′, e)
  [(x: Z(x)) SIGHT(e′) & cord(x) & Subject (x, e′) &
  Part (cord, x) & Whole (her, x)]]]

  b. There is a sub-event e of EXPERIENCING, a sub-event e′ of SIGHT, and a relation x such that I is the subject at e and e′ is the object at e, and x is the subject at e′, and cord is a part at x for her a whole at x, where the speaker confines the range of the quantification over e′ to contexts Y defined over her. (Uriagereka 2000: 410)

Clearly, the pragmatic process at issue is not an extra-linguistic phenomenon, as it depends on the syntactic structure projected within the vP shell, and, most important to our present discussion, it involves a double-possessor structures with a dative clitic. (54), but not (53), triggers contextual confinement. That is to say that the internal structure of a possessive DP translates into conceptual information relative to possession, while the internal structure a vP containing a filled Dative translates into an intentional information relative to contextual grounding.

In Uriagereka’s syntactic analysis, (54) involves movement of the possessor to Spec-vP. Thus, although (54) is an instance of clitic doubling, Uriagereka’s analysis, *mutatis mutandis*, is
similar to ours in (44). Both analyses posit a copy of the possessor at the edge of the vP domain. Therefore, contextual confinement is expected to occur in BP possessor raising.

Contextual confinement is indeed observed in external possessive constructions in BP, but not in all of them. It applies to Dative-possessors. (56a), for example, is appropriate only if the hair forms an integral part-whole with its owner, the 2SG dative-clitic. This is not observed in (56b), for which a non-integral reading is equally possible. The utterance in (56b) is appropriate even if we are talking about painting a bunch of loose hair that the previous owner had donated to a cancer institution.

(56) a. Eu vou te pintar o cabelo.  
I will.1SG 2SG.DAT paint.INF the hair  
b. Eu vou pintar seu cabelo.  
I will.1SG paint.INF your hair  
'I will dye your hair.'

Accusative-possessors also display obligatory contextual confinement. (57a), as opposed to (57b), cannot be used in a situational context in which I have a mechanical leg that is not attached to me when the shot hit it. This suggests, given the analysis above, that what we are calling Accusative-possessors in this paper, similar to Dative-possessors, is spelled out in a high position within the vP.\(^5\)

(57) a. A bala me acertou na perna.  
the bullet 1SG.ACC hit.3SG in.the leg  
'The bullet hit me in the leg.'  
b. A bala acertou na minha perna.  
the bullet hit.3SG in.the my leg  
'The bullet hit my leg.'

As for Nominative-possessors, the integral reading depends on the structure. In obligatory control configurations, it is not forced. If, the verb pintar is used transitively, as in (58), with the DP

\(^5\) A reviewer pointed out that the reading contrast between (57a) and (57b) does not emerge in Spanish. According to them, (57a) can refer to a mechanical leg. We acknowledge this observation, but emphasize that contextual confinement is a tricky matter in that it requires making reading judgments under a particular, well-set situational context, as we will exemplify shortly. Our point is that (57a), in comparison to (57b), is infelicitous only if the mechanical leg under consideration is NOT attached to its owner’s body (I) at the time it was hit by the bullet. Consider, for instance, the oddness of (i), uttered by a driver, sitting in the driver’s seat when the implied shooting event took place.

(i) #A bala me acertou na perna mecânica que estava guardada no banco traseiro  
the bullet 1SG.ACC hit.3SG in.the leg mechanical that was.3SG stored in.the seat back  
do carro.  
of.the car  
(#'The bullet hit me in my mechanical leg that was placed in the back seat of the car.')
subject being interpreted as the possessor and the agent, then neither (58a) nor (58b) forces an integral reading. There is no context grounding here.

(58) a. A Maria pintou o cabelo.
   the Maria painted.3SG the hair

   b. A Maria pintou o cabelo dela.
   the Maria painted.3SG the hair of her

   'Maria dyed her hair.'

But expectedly contextual confinement distinguishes raising in unaccusative structures from raising in inchoatives. To see this clearly, let us set an appropriate scenario. Suppose we work in a laboratory that is conducting research on new species of exoskeleton animals, including snails, which are able to leave behind their shells when they go out looking for food and mates. They also abandon old shells. Our work in the lab involves writing short sentences that accurately report everything that happens to the animals under observation. The sentences in (59) are both grammatical, but (59a) is an accurate report only if the shells were on the snails when they broke. That is, (59a), as opposed to (59b), forces a possessor-possessum integral reading. (59b), in contrast, does not have this reading restriction; its truth conditions do not depend on the shell being on the snail when it actually broke.

(59) a. Os caramujos quebraram a concha.
   the.PL snails broke.3PL the shell

   b. A concha dos caramujos quebrou.
   the shell of the.PL snails broke.3SG

   'The snails had their shells broken.'

Similarly, the report in (60a) is pragmatically odd, while the report in (60b) is not. (60a) is fine only if the snail acts as an agent, breaking its own abandoned shell, but this is irrelevant for our discussion.

(60) a. *Os caramujos quebraram a concha abandonada.
   the.PL snails broke.3PL the shell abandoned

   b. A concha abandonada dos caramujos quebrou.
   the shell abandoned of the.PL snails broke.3SG

   'The snails had their abandoned shells broken.'

With inchoative predicates, these contrasts disappear. The reports in (61a) and (61b) are equally accurate, whether or not the shell was attached to the snail when it got moldy. Accordingly, the reports in (62) are also both fine.
(61) a. Os caramujos emboloraram a concha.
   the.PL snails mildewed.3PL the shell
   b. A concha dos caramujos embolorou.
   the shell of.the.PL snails mildewed.3SG
   ‘The snails’ shells mildewed.’

(62) a. Os caramujos emboloraram a concha abandonada.
   the.PL snails mildewed.3PL the shell abandoned
   b. A concha abandonada dos caramujos embolorou.
   the shell abandoned of.the.PL snails mildewed.3SG
   ‘The snail’s abandoned shell mildewed.’

There is an interaction between the contextual confinement under discussion and the presupposition of existence presented in section 3. To see this clearly, add the following information to the laboratory-scenario set above: to avoid spreading diseases, we incinerate dead animals every single day. In this context, (63a) is a very odd report, while (63b) is fine. The possessor raised in (63a) forces an integral reading that is impossible, given that the DP *os caramujos* (*the snails*) denotes a set of no longer existent snails. This is not an unexpected observation. A possessor-possessum integral reading is congruent only if the possessor and the possessive DPs denote existent entities at the time the event denoted by the verb takes place.

(63) a. *Os caramujos incinerados ontem quebraram a concha hoje.
   the.PL snails incinerated yesterday broke.3PL the shell today
   b. A concha dos caramujos incinerados ontem quebrou hoje.
   the shell of.the.PL snails incinerated.PL yesterday broke.3SG today
   ‘The shells of the snails incinerated yesterday broke today.’

In (64) there is no reading contrast, as both sentences contain an inchoative argument structure, which does not host an intermediate copy of the Nominative-possessors.6

(64) a. Os caramujos incinerados ontem mofaram a concha hoje.
   the.PL snails incinerated yesterday mildewed.3PL the shell today
   b. A concha dos caramujos incinerados ontem mofou hoje.
   the shell of.the.PL snails incinerated.PL yesterday mildweded.3SG today
   ‘The shells of the snails that incinerated yesterday mildewed today.’

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6 While informing us to be insensitive to the reported contrast between (63a) and (64a), a reviewer raised the possibility of the integral relation at issue applying at different subevents in unaccusative and inchoative predicates. In unaccusatives (e.g. *quebrar*), the relation *snail-shell* must be integral in all relevant subevents, whereas in inchoatives (e.g. *mofar*), it must be integral in the subevent of molding, but not necessarily in the subevent of reporting. This is an interesting hypothesis, suggesting other types of structural variations with respect to contextual confinement, but to test it properly, we may need to go beyond the scope of the present paper. Thus, we will put it aside for the moment.
If the line of reasoning followed above is on the right track, the presupposition of existence under discussion is a consequence of assigning an affected reading to the possessor’s copy at the edge of the vP, with contextual confinement being another layer of information projected by this syntax. As already said, our current theoretical understanding of the affectedness constraint is rather nebulous. But, while acknowledging that we do not have a firm basis to discuss this issue in depth here, we should ask whether the affected-possessor interpretation at issue is somehow associated to the contextual confinement process. Is it a corollary of contextual confinement? We think the answer is yes. Here is a piece of evidence. As the ungrammatically of (65), in comparison to the grammatically of (66), indicates, external possessors seem to be available only in structures in which the possessive DP is itself interpreted as being affected by the verbal action. In contrast to all the examples of external possessor presented above, the examples in (65) are formed by verbs that do not trigger object affectedness.

(65)  a. *Eu detesto o cabelo.  
(I hate.1SG the hair)  
(‘I hate my hair.’)

b. *Eu adoço o pé.  
(I love.1SG the foot)  
(‘I love my feet.’)

(I saw.1SG the brain in.a computer of.the laboratory)  
(‘I saw my brain in one of the lab’s computers.’)

(66)  a. Eu detesto o meu cabelo.  
(I hate.1SG the my hair)  
(‘I hate my hair.’)

b. Eu adoço o meu pé.  
(I love.1SG the my foot)  
(‘I love my feet.’)

c. Eu vi o meu cérebro num computador do laboratório.  
(I saw.1SG the my brain in.a computer of.the laboratory)  
(‘I saw my brain in one of the lab’s computers.’)

Therefore, we have the following: by raising a possessor to or through of the edge of vP, speakers ground the context variable value assigned to the possessum to that assigned to the possessor, and, as a result, they conceptualize the possessum-possessor as a whole, undivided entity at the moment the (sub)event affecting the possessum occurs, as represented in (55). Consequently, under contextual confinement, the affectedness of the possessum is carried over to the possessor. In other words, external possessor configurations are similar to middles and nominal passives in
that they are formed from argument structures in which the internal argument is affected by the verbal action. Affectedness of a possessor in a dative position is not an inherent semantic feature of these configurations, but a by-product of contextual confinement.

Let us turn to another remaining issue in our discussion. There is not yet a principled explanation for why a specific syntactic configuration (presence of a copy of a possessor at the edge of vP) triggers contextual confinement. Raposo & Uriagereka (1995), working on individual level and stage level readings within small clauses, put forward an analysis according to which contextual confinement piggybacks on scope interactions between associated operator variables, as stated in (67), where X and Y are contextual variables. According to (67), in individual level interpretations, the predicate context variable is confined to that of the subject because the subject has scope over the predicate. In stage level interpretations, it is the other way around: the predicate has scope over the subject. Thus, the subject’s context variable is confined to that of the predicate.

(67) Given a structure \[ \ldots Xx \ldots Yy\ldots \ldots \], the value of Y is set relatively to the value of X only if the operator Ox takes scope over the operator Oy.  

(Raposo & Uriagereka 1995: 194)

However, as Uriagereka pointed out to me (p.c.), trying to reduce contextual confinement to scope interaction must address some problems relative to the nature of the variables at issue. While scope relations involve binding of first order variable values, contextual confinement is a relation among second order variable values, and it is an open empirical question whether or not this type of relation is subject to the same restrictions as scope relations (e.g. c-command). Furthermore, the BP data discussed above provide evidence that contextual confinement is not carried out by scope interactions. If it were, all cases of Nominative-possessors, including control and raising in inchoative structures, should trigger contextual-confinement because in all of them the possessor is spelled out in Spec-TP, having, thus, scope over the material inside vP.

5 Conclusion

Focusing primarily on Nominative-possessor in raising configurations in BP, we have shown that these configurations are syntactically heterogeneous. Their derivational history varies as a function of the argument structure built within the vP. In contrast to inchoatives, unaccusative structures provide an intermediate position for raised possessors at the edge of the vP (Spec-DatP). Although there is strong evidence that in BP, due to diachronic changes, DatP lost its ability to license 3Person dative possessors, our observations indicate that, in unaccusative structures with Nominative-possessors, Spec-DatP is filled by a non-pronounced copy of a raised possessor. This syntax has three interpretative effects. Besides conceptual information on the nature of the possessive relation, the possessor is interpreted as being affected by the action denoted
by the unnacusative verb, being, thus, subject to a presupposition existence. Also contextual confinement is forced, with the possessum-possessor being conceptualized as a whole, integral entity at the time the event takes place. On more speculative grounds, we have considered that affectedness and the resultant presupposition of existence on the possessor might be a corollary of contextual confinement.

Our conclusions contribute to research on BP grammar by reinforcing and extending the hypothesis that the so-called BP topic-subjects involve structural changes not at the left periphery of the sentence, but at the vP level. Also, although we do not yet know why movement to or through the edge of vP triggers contextual confinement (a phenomenon first observed by Uriagereka (2000) with respect to double dative-clitic possessives in Spanish), our findings contribute to the study of information structure at the vP level. We have shown that the syntax of possessor raising, particularly in structures involving Spec-DatP, alters pragmatics, adding intentional information. Hence, contextual confinement is a broad pragmatic effect, maybe universal, of A-movement through the edge of vP.

To finalize, let us bring back Nunes & Kato’s (2023) remark that resumption of a Nominative-possessor arises only in unnacusative structures, not in inchoative structures. For convenience, the relevant data are repeated in (68). The acceptability of (68a) puts unnacusative Nominative-possessors on a par with control Nominative-possessors, which support pronominal resumption as well, as shown in (69).

(68) a. A Maria queimou o pé dela na fogueira.
   the Maria burned.3SG the foot of.her in.the bonfire
   ‘Maria burned her foot in the bonfire.’

   b. *O nenê caiu o cabelinho dele.
      the baby fell.3SG the hair.DIM of.him
      (‘The baby lost his/her baby hair.’)

(69) A Maria pintou o cabelo dela.
    the Maria painted.3SG the hair of.her
    ‘Maria dyed her hair.’

This observation resurrects the hypothesis that affectedness is a theta-role. But, putting on hold the temptation to treat unnacusative Nominative-possessors as control, let us add a final note. Resumption on raised Nominative-Possessors changes the interpretation. (68a) does not force contextual confinement. It is felicitous even in a scenario in which the foot at issue was disconnected from its owner’s body (Maria) when it got burned. Under this non-integral reading, the possessor is not affected. Therefore, an analysis of (68a) as control, with the possessor DP receiving an affected theta-role, is not straightforward.
Abbreviations

1 = first person, 2 = second person, 3 = third person, ACC = accusative, DAT = dative, DIM = diminutive, FEM = feminine, INF = infinitive, PL = plural, REFL = reflexive, SG = singular

Funding information

CNPq/Brazil

Grant Number: 452812/2019-4

Acknowledgements

I am thankful to the reviewers, who provided comments and suggestions that contributed to the analysis we put forward, and to Ezekiel Panitz, who revised the final draft of the paper. Also, Andrés Saab, Jairo Nunes and Angel Jiménez-Fernández made important comments on a previous version of the paper (Rodrigues 2020). Juan Uriagereka and I exchanged several emails discussing contextual confinement and possessor raising. I am thankful to him. I have included in section 4 most of the conclusions we reached, but some other interesting issues, which are not in the immediate scope of the present paper, were put aside, saved as good baits for future research.

Competing interests

The author has no competing interests to declare.

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