The possessive dative and the syntax of affected arguments*

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Abstract

The goal of this paper is to provide an analysis of possessive dative constructions which explains the relationship between possessive datives and inalienable possession relation, on the one hand, and possessive datives and affectedness, on the other hand. I assume that inalienable possession is a kind of part-whole relation syntactically configured as a predication relation headed by a locative preposition. Under this assumption, I propose that the argument denoting the whole can be licensed by an extra verbal projection associated with the semantic feature of affectedness and able to give structural dative case. The analysis can explain some facts of Spanish dative constructions: the existence of diathetical alternations in transitive and unaccusative predicates (between dative/oblique adjunct and nominative/oblique adjunct, respectively), and the existence of (locative) datives within ergative predicates.

1. The problem

The so-called possessive dative (cf. Bally 1926; Delbecque & Lamiroy 1996a, b among many others) denotes the possessor of the internal argument of a predicate, be it a direct object as in (1a) or a subject (as in (1b)):

(1) a. *El* gato le *arañó* la cara.
   the cat him.DAT scratched the face
   ‘The cat scratched his/her face.’

   b. A Juan le *duele* el brazo.
   to John him.DAT hurts the arm
   ‘His arm hurts.’

Possessive dative constructions are common to other languages, like romance languages and German. (2) are examples of transitive constructions analogous to (1a); (3) are examples of unaccusative constructions analogous to (1b):

(2) a. ESP. Yo le *corté* los cabellos.
   I him.DAT cut the hair
   ‘I cut his hair.’

   b. FR. Je lui *ai coupé* les cheveux.
   she wash her.DAT the feet
   ‘She washed her feet.’

   c. IT. Io gli *ho tagliato* i capelli.
   I him.DAT cut the hair
   ‘I cut his hair.’

   d. CAT. Le vaix tallar un pel.
   ‘His arm hurts.’

   e. RUM. I- au taitat un deget.
   I him.DAT cut the hair
   ‘I cut his hair.’

   f. GER. Sie wusch ihm die Füsse.
   she wash her.DAT the feet
   ‘She washed her feet.’

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1 Dative forms of romance languages can be feminine or masculine. Masculine gloss ‘him’ will be used for simplicity.
In all these languages, possessive dative constructions have two other related phenomena: the inalienable possession relation and the use of the article in place of the possessive pronoun. With respect to the first one, since Lévy-Bruhl (1916) it is known that languages have different ways to denote a possession relation according to the alienable or inalienable nature of the possessed object. Inalienable possession includes nouns denoting body parts, family relations or familiar objects. Since Bally (1926) the grammar of inalienability in Indo-European languages is linked to the possessive dative as a specific way to grammaticalizing inalienable possession. Although in many languages, Spanish among them, the family nouns and the familiar object nouns behave similar to the body part names, I will focus on the latter here, and leave the rest aside.

With respect to the second phenomenon, it is well known that when a dative is used, the possessive pronoun becomes superfluous, as in (4):

(4) a. El gato arañó su cara / El gato le arañó la cara.
the cat scratched his face / the cat him.DAT scratched the face

b. ??El gato le arañó su cara.
the cat him.DAT scratched his face

Studies on possessive dative have focused on the relation between sentences in (4a), specifically on the pragmatic and semantic differences between them (see Hatcher 1944a, 1944b; Kliffer 1987; Manoliu-Manea 1990; Dumitrescu 1990a, b; Lamiroy 1997, among others) and on the properties that legitimate the use of the article at the place of the possessive pronoun (see Kayne 1975; Guéron 1983, 1984; Demonte 1988; Authier 1990, 1992; Verngaud & Zubizarreta 1992 and Köenig 1999). The common point to all of them is that, in romance languages, the definite article (or a covert subject in its NP) has pronominal features which are licensed via local binding by the dative pronoun (Kayne, Guéron, Demonte, Authier) or via predication (Verngaud & Zubizarreta). This analysis explains, in fact, the well known locality restrictions constraining dative possessive constructions.

This point of view has, instead, two problems. One is that it is based on the relation between possessive dative and possessive article. However, there is empirical evidence that possessive datives and possessive articles are only relatively interdependent. In many dialects of Spanish, such as Mexican Spanish, sentences like (5a) are frequent, and it is not rare to hear sentences like (5b). In both cases, there is a spurious or expletive emphatic possessive pronoun.

(5) a. Me duele mi cabeza.
me.DAT hurts my head

b. En el entrenamiento, al futbolista le golpearon su pierna izquierda.
in the training to.the footballer him.DAT hit.3PL his leg left
‘In the training, somebody hits the left leg of the footballer.’

Furthermore, the possessive theta-role is not ‘independent’ in the sense that it is coexistent with other selected thematic relations. For instance, in (6) the possessive is at the same time an obligatory experiencer. Thus, the possessive determiner and the possessive dative are not in
complementary distribution, as could follow from an analysis which transformationally derives
the possessive dative from a nominal modifier (as, i.e. Kempchinsky 1990):

(6) a. Me duele la cabeza. / *Mi cabeza duele.
   me.DAT hurts the head / my head hurts
   ‘I have a headache.’

   b. Le lloran los ojos. / *Sus ojos lloran.
   him.DAT water.3PL the eyes / his eyes water.3PL
   ‘His eyes water.’

These facts suggest that we need an explanation regarding the exact nature of both the dative
argument and the body-part DP beyond the anaphoric binding relation between them. The
crucial questions, then, are the following: (a) which kind of argument, if any, could that be?; (b)
what relation does it maintain with the body-part name? and (c) why is it in dative case? To
shed some light on these questions, I will explore some locative alternations in possessive dative
constructions, exemplified in (7):

(7) a. Lo golpeé en el brazo.
   him.ACC hit.1SG in the arm
   ‘I hit him in the arm.’

   a’. Le golpeé el brazo.
   him.DAT hit.1SG the arm
   ‘I hit his arm.’

   b. Me duele en esta parte del brazo.
   me.DAT hurts in this part of the arm
   b’. Me duele esta parte del brazo.
   me.DAT hurts this part of the arm
   ‘This part of my arm hurts.’

In the examples in (7), it can be observed that two DPs in a part-whole relation can have a
different syntactic status: the body part noun can be either an internal argument or an oblique
adjunct. I will propose an analysis of possessive dative based on these alternations. My
hypothesis is that the body-part noun and the whole noun are in a locative predication relation.
The alternations in (7) are the result of the different possibilities of realizing the locative
predication. Possessive dative construction is the result of the promotion of the argument
denoting the whole and its licensing via dative case; this promotion takes place when the
locative denoting the body-part has a holistic affectionation reading.

The paper is organized as follows. In section 2, data about locative alternations in
possessive dative constructions are presented. Section 3 deals with the analysis of the data
above: in 3.1 I will propose that the DPs in part-whole relation are related by a locative
predication; in 3.2 and 3.3, an explanation for the semantic and structural properties of dative
construction is proposed; in 3.4 I extend the analysis to unergative constructions with locative
datives. Although the paper focuses on Spanish data, I would like to propose that the analysis
can be extended to other languages with possessive dative constructions.

2. Locative alternations in possessive dative constructions

2.1. Possessive dative with transitive verbs

Let us begin with the alteration in (7a and 7a’), repeated below:

(7) a. Lo golpeé en el brazo.
   him.ACC hit.1SG in the arm
   ‘I hit him in the arm.’
a’. Le golpeé el brazo.
\[\text{him.DAT hit.1SG the arm}\]
‘I hit his arm.’

In both sentences, the verb golpear ‘to hit’ has two arguments in a part-whole relation. In (7a), the DP denoting the whole is a direct object in accusative case and the DP denoting the body-part is a locative oblique complement. This locative denotes the ‘concerned part’ by the verbal process, i.e., it specifies which part of the direct object is specifically affected by the action of beating. In (7a’), instead, the DP denoting the whole is a(n indirect) dative complement and the DP denoting the body-part is a direct object in accusative case. The alternation can be viewed in the scheme in (8):

(8) a. DP\textsubscript{subj.} V DP-ACC\textsubscript{whole} PP\textsubscript{body-part}

b. DP\textsubscript{subj.} V DP-DAT\textsubscript{whole} DP-ACC\textsubscript{body-part}

This alternation is common to other transitive verbs. Verbs in (9a) admit both constructions; verbs in (9b), instead, only admit (7a) and verbs in (9c) only admit (7a’):

(9) a. Le mordí la mano / lo mordí en la mano ‘I bit his hand’; le miré la cara / lo miré a la cara ‘I looked at his face’; le agarré el cuello / lo agarré del cuello ‘I grasped his neck’; le corté una pierna / lo corté en una pierna ‘I cut his leg’; le observé la espalda / lo observé por la espalda ‘I observed his back’.

b. Le amputé un brazo/*lo amputé en el brazo ‘I cut off his leg’; le corté el pelo/*lo corté en el pelo ‘I cut off his hair’.

c. #Le tiré el pelo/lo tiré del pelo ‘I tugged at the hair’; *Le escupí la cara/lo escupí a la cara ‘I spat in his face’; *Le arrastré los pelos/lo arrastré de los pelos ‘I dragged him by the hair’.

The crucial fact which underlies the alternation in (8) is the ‘complete affectedness’ of the body-part noun: it must have a holistic reading in order to be an internal argument in accusative case; this is the reason why the verb cortar ‘to cut’ has two interpretations in (10):

(10) a. Le cortaron la cabeza.
\[\text{him.DAT cut.3PL the head}\]
‘They cut off his head.’

b. Lo cortaron en la cabeza.
\[\text{him.ACC cut.3PL in the head}\]
‘They cut him in the head.’

At the same time, we would expect that verbs which imply a holistic reading, like amputar ‘to amputate’, do not admit a locative of ‘concerned part’, while verbs which cannot have such a reading do not admit the locative becomes a direct object:

(11) a. Al enfermo le amputaron {la pierna / *en la pierna}.
\[\text{to.the patient him.DAT cut off {the leg / *in the leg}}\]
‘They cut off {patient’s leg/ *the patient in the leg}.’

b. La arrastró {*los pelos / de los pelos}.
\[\text{her.ACC dragged {*the hair / by the hair}}\]
‘He dragged her by the hair.’

Observe, finally, the following contrast: the verb romperse ‘break’ implies a holistic affectedness of the object. This can be the reason for the contrasts in (12). The 3rd person reflexive pronoun is homophonous in its accusative and dative form. The holistic construction allows us to interpret it like dative in (12a); accusative is not available since this would imply that the subject is completely broken, which is not the case. Only in the holistic interpretation can se be a dative, as in (12b):
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(12) a. *María se rompió {*por el brazo / el brazo}. Mary herself.DAT broke.3SG {by the arm / the arm} ‘Mary’s arm broke.’

b. La jarra se rompió {por el asa / *el asa}. the vase itself.ACC broke.3SG {by the handle / the handle} ‘The handle of the vase broke.’

Finally, it is important to underline that only verbs involving some kind of affectedness process can enter into one of the three possibilities above (i.e, allowing both (8a) and (8b), only (8a) or only (8b)). As has been noted by Picallo and Rigau (1999), verbs which do not take affected arguments prevent the dative possessive construction, as shown in (13).² Interestingly, they also prevent locatives of ‘concerned part’, as shown in (14):

(13) a. *Le odio el carácter. him.DAT hate.1SG the character ‘I hate his character.’

b. *Le escucho la voz. him.DAT hear.1SG the voice ‘I hear his voice.’

c. *Le temo la reacción. him.DAT fear.1SG the reaction ‘I fear his reaction.’

(14) a. *Lo odio en el carácter. him.ACC hate.1SG in the character ‘I hate his character.’

b. *Lo escucho en la voz. him.ACC hear.1SG in the voice ‘I hear his voice.’

c. *Lo temo en la reacción. him.ACC fear.1SG in the reaction ‘I fear his reaction.’

So, we can conclude that verbs allowing the alternations in (8) have an accusative internal argument with the role ‘affected object’, and, optionally, a locative expressing the part of this internal argument concerned by the affectation process. The crucial fact is that this locative can become an accusative internal argument if it has a holistic reading. The original direct object is then promoted to a higher position in the VP and marked with the dative case. The hierarchical relationship between the DP denoting the whole and the DP denoting the body part is the same in both cases.

² These authors noted that examples such as the following can be acceptable:

(i) Le envidio el carácter. him.DAT bid.1SG the character ‘I bit his character’

(ii) Le conozco la voz. him.DAT know.1SG the voice ‘I know his voice’

What could explain these exceptional cases is the different degree of affectedness undergone by the object: while knowing someone’s voice implies knowing somebody, listening to someone’s voice does not imply listening to the person as a whole.
2.2. Possessive datives with unaccusative verbs

Let us now examine verbs of the type of *doler* ‘to hurt’. These verbs are unaccusative. They select for a higher dative argument with the role of ‘experiencer’ and also for an internal argument with the role of ‘source’ which is not licensed with accusative case. If both arguments are in a part-whole relation, the verb *doler* exhibits the alternation shown in (15), consisting crucially in a) the different status of the second argument, which can be realized either as an oblique prepositional complement or as a nominative subject, and b) the holistic reading of this argument if it is a nominative subject:

(15) a. *Me duele en la cabeza.*
   me.DAT ache.3SG in the head
   ‘I have a headache.’

b. *Me duele la cabeza.*
   me.DAT ache.3SG the head.NOM
   ‘I have a headache.’

What is relevant in these cases is that the ‘source’ internal argument represented by the DP denoting a body-part is affected by the verbal process which it is causing. The semantic difference between the alternant constructions consists in the fact that this argument can be seen as the entity acting as a source (in this case, it will be a nominative argument), or as the location where the entity acting as a source is (in this case, it will be a prepositional complement). I will return to this point in subsection 3.3. At this point, I would like to resume both possibilities in the schema in (16):

(16) a. DATwhole V (DP-subject) PPbody-part
    b. DATwhole V DP-subjectbody-part

As in transitive constructions, it is important to underline that unaccusative verbs with two arguments, a higher one in dative case and a lower one in nominative case, do not admit an ‘possessive reading’ of the first one if this is not an ‘affected’ experiencer, i.e., if the VP does not denote an affectedness process. Unaccusative stative verbs, like psychological verbs *admirar* ‘to admire’, *agradar* ‘to please’, *complacer* ‘to oblige’, *constar* ‘to have evidence’, *desagradar* ‘to dislike’, *satisfacer* ‘to satisfy’, *gustar* ‘to like’, cannot enter into this construction. This explains why in (17a), but not in (17b), the internal subject must be understood as possessed by the dative argument. Hence, the possessive determiner in (17a) is not acceptable, since it is redundant, while it is necessary in (17b) in order to denote the possessor of the subject argument. As we would expect, this kind of verbs does not admit any kind of locative alternation, as shown in (17c):

(17) a. *Me duele {la cabeza / *mi cabeza}.*
   me.DAT hurts {the head / *my head}
   ‘I have a headache.’

b. *Me gusta {el pelo / mi pelo}.*
   me.DAT likes {the hair / my hair}
   ‘I like my hair.’

c. *Me gusta en {el / mi} pelo.*
   me.DAT likes in {the / my} hair

So, both the possessive reading of a dative argument and the possibility that the internal argument alternates with an oblique adjunct are constrained to unaccusative verbs which involve some kind of affectionation process. As we should expect, these verbs are also lexically constrained with respect to their ability to enter into one or two of the alternant constructions in (16). Few verbs admit both constructions, like those of (18a), some only admit (16a), like those in (18b), and some others only admit (16b), like those in (18c):
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(18) a. *doler* ‘to hurt’, *picar* ‘to itch’, *escocer* ‘to smart’.

b. PRONOMINAL VERBS: *iluminarse (la mirada)* ‘to light up (the look)’, *enrojecerse (el rostro)* ‘to flush (the face)’, *hincharse (los pies)* ‘to swell (the feet)’, *caerse (el pelo)* ‘to hang down (the hair)’, *secarse (la boca)* ‘to dry (the mouth)’, *taponearse (los oídos)* ‘to stop up (the ears)’, *mudarse (el color)* ‘to alter (the colour)’, *torcerse (un pie)* ‘to twist (a foot)’, *levantarse (el estómago)* ‘to rise (the stomach)’; NON PRONOMINALS VERBS: *sangrar (la nariz)* ‘to bleed (the nose)’, *estallar (la cabeza)* ‘to burst (the head)’, *llorar (los ojos)* ‘to water (the eyes)’, *sudar (la frente)* ‘to sweat (the forehead)’.

c. *doler algo (en el alma)* ‘to hurt something (in the spirit)’, *venirse las lágrimas (a los ojos)* ‘to well up the tears (to the eyes)’, *pasarse algo (por la cabeza)* ‘to pass something (by the mind)’, *subirse algo (a la cabeza)* ‘to go up something (to the head)’, *entrar algo (en la cabeza)* ‘to enter something (in the head)’, *pesar algo (en el alma)* ‘to weigh something (on the spirit)’.

The most interesting verbs are the ones in (18a). The few verbs of the kind of *doler* ‘to hurt’ are the only unaccusative verbs which can undergo an alternation as the one showed in (16). This is a straightforward alternation since if the location is oblique, the construction becomes impersonal: there is not a nominative subject since the position of the internal argument is filled by an oblique element, being this one a PP, an adverb or an interrogative element:

   me.DAT {hurts / itch / smarts} in the leg

   me.DAT {hurts / itch / smarts} here

c. ¿Dónde te {duele / pica / escuece}?  
   where you.DAT {hurts / itch / smarts}

Verbs of the group (18b) are of two different kinds: some are pronominal verbs which select for an obligatory accusative clitic in addition to the dative argument; while others are not pronominals. In both cases, these verbs have no locative alternation: the DP denoting the body-part is always an internal subject and the DP denoting the whole is a dative. I think it is not surprising, since what we would expect is precisely the locative to be always completely affected. In other words, the verbs in (18b) are all verbs which denote a change of state or location. They select for an internal argument which is a completely affected source. The proof is that this kind of verbs typically shows causative alternation: they have a causative counterpart with a ‘cause’ like external nominative subject and an ‘affected theme’ as accusative internal object:

(20) a. *A Juan se le enrojeció la cara.*
   to John 3SG.REFL him.DAT reddened the face
   ‘John blushed.’

b. *El calor le enrojeció la cara.*
   the heat him.DAT reddened the face

c. *El calor lo enrojeció en la cara.*
   the heat him.ACC reddened in the face
   ‘Heat made him blush.’

Observe that in the causative construction in (20b) the DP denoting the whole is a dative, since the DP denoting the body part is completely affected by the change of state. The ungrammaticality of (20c) is then predicted.

Finally, verbs in (18c) show the opposite side: the DP denoting the body-part is always a locative adjunct. The reason is that there is another type of internal argument not linked to either

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3 See Fernández Soriano (1998) about other verbs which allow this kind of impersonality.
the dative or the locative by a whole-part relation. This internal argument fills the position to which the affected locative could internalize, hence the realization of the affected locative argument as an internal argument is impossible:

(21) a. Nunca se me había pasado esa idea por la mente.
    never 3SG.REFL me.DAT had passed that idea by the mind
    ‘That idea never passed by my mind.’

b. A menudo se le sube la cerveza a la cabeza.
    often 3SG.REFL him.DAT goes up the beer to the head
    ‘Beer often goes to his head’, ‘Beer often makes him to get drunk.’

In addition, these examples are special in that the preposition is not the locative en ‘in’ that appears in the other alternations. In most cases, the preposition corresponds to the one selected by the verb, since locative complements are in the thematic structure of the verb. This makes the constructions in (21) very different from the others. Hence, I will not address them in this paper.

So, unaccusative verbs can allow for two alternating constructions when they denote an affectation process and their arguments are in a whole-part relation. In the following section, I will propose an analysis for data described until now.

3. Analysis

In the preceding section, two kinds of alternations have been described: transitive predicates of affectation can allow for both AC-whole/LOC-bodypart and DAT-whole/AC-bodypart constructions; unaccusative predicates of affectation can allow for both DAT-whole/LOC-bodypart and DAT-whole/NOM-bodypart. Both transitive and unaccusative constructions have the following common properties: a) the predicates involved take affected arguments; stative verbs are incompatible not only with possessive datives but also with oblique adjuncts of concerned part; b) there is a part-whole relation between the arguments involved in the alternations; and c) the licensing of the DP denoting the body-part with a structural case (AC or NOM) is associated with a holistic affectation reading. In this section I will propose an analysis of these facts.

3.1. Affected arguments and the part-whole relation

I will assume that the possession relation is a particular kind of inclusion relation. Within this inclusion relation the part is included in the whole in a similar way to that of the possessed object which belongs to the possessor. This point of view is evident in an inalienable possession relation, as in the cases examined here: in the dative possessive constructions, the dative is not a mere possessor of some other argument, but it has a more indissoluble part-whole relation with it. In other words, the possessed entity does not really belong to the possessor, but is within the possessor.

An idea that has been largely exploited is this: the possessive relation must be treated as a locative relation (see Guéron 1983, 1984; Freeze 1992; Uriagereka 1994; Harley 1995; Rigau 1995; Longa, Lorenzo and Rigau 1998, among many others). This approach goes back to Benveniste (1966). I will assume that the locative predication implies the following structure:

(22) PP
    /     \
   DP P'  DP
    /     \
   P  DP

central coincidence
preposition
According to the structure in (22), the spatial relation between two entities is implied by a ‘central coincidence’ preposition (Hale & Keyser 1993a, b). The preposition of central coincidence can be either overt or covert; subject and complement DPs correspond to the arguments in locative (or possessive, or part-whole) relation. I will propose that the mapping between these two arguments and the structural places in (22) is not a constant, but have two possibilities. The first one is that the higher DP denotes the ‘located’, ‘possessed’ or ‘part of’ argument and the lower DP corresponds to the ‘location’, ‘possessor’ or ‘whole’ argument; in this case the central coincidence preposition shows up as covert, according to the scheme in (23) below. This covert preposition is related by Hale & Keyser (1993a: 98) to the English preposition with in its possessive use. The second one is that the higher DP denotes the ‘location’, ‘possessor’ or ‘whole’ argument and the lower DP corresponds to the ‘located’, ‘possessed’ or ‘part’ argument; in the cases we are considering here, the central coincidence preposition shows up then as the typical locative preposition en ‘in’ according to the scheme in (24):4

(23) PP
    DP
     el brazo
   ‘the arm’
P
  DP
   el chico
‘the boy’

(24) PP
    DP
     el chico
   ‘the boy’
P
  DP
   en
  ‘in’
el brazo
‘the arm’

Two comments are relevant on these structures. Firstly, it follows from the analysis that the DP subject of both structures must be an ‘entity’ while the DP complement is a locative predicate. We will return to this remark in the following section, since it is behind the explanation of the locative alternations I will propose. Secondly, it is important to note that the relations between the DPs in (23) and (24) is not symmetrical; this asymmetry shows up in the different form of the central coincidence preposition (cover in (23), over in (24)). This is precisely what we would expect, since the locative (or possessive, or part-whole) relation is an inclusion relation which is asymmetrical in nature: if A is included in B, then B cannot be included in A, unless they are correferent, which is not the case.

In the following section, I will propose that predicates of affectation can take as internal argument a locative predication structure, being this either (23) or (24) according to the status of the ‘part’ as an entity—which is the case when it has a holistically affected reading—or as a location.

4 The idea that locative predication can enter into two different structures is not new. Against Freeze (1992), who proposes that the basic locative predication is as in (23), Harley (1995) gives two different structures according to the status of the head: she proposes a structure like (23) for a predication headed by LOC and a structure like (24) for a predication headed by the verb have. Two different structures have also been proposed by Rigau (1995) and Longa, Lorenzo & Rigau (1998) in locative sentences in the Iberian languages.
3.2. Dative-locative alternations in transitive predicates

In this section, I will propose that predicates of affectation can take as direct complement a locative predication structure between an argument and one of their constitutive parts. If the location has the form in (24), the result will be the construction with the DP denoting the whole as an accusative complement and the DP denoting the part as an oblique locative complement. Then, the analysis of (25a) would be as in (25b):

(25) Simple (locative) predicate: Accusative-whole + locative-body-part

a. Ex.: Yo lo golpeé (a Juan) en el brazo.
   I him.ACC hit to John in the arm
   ‘I hit John in the arm.’

b. \[ vP \]
   Subj
   \[ v' \]
   v
   VP
   \[ v \]
   V
   PP
   \[ DP_{\text{whole}} \]
   a Juan
   P
   \[ DP_{\text{body-part}} \]
   en el brazo

The analysis in (25) predicts that locative complements of ‘concerned part’ are not true adjuncts, this is to say, adjuncts which ‘are part of the situational interpretation, not tied to any particular lexical item’s semantic representation’ (Pustejovsky 1995: 64). In other words, these locatives do not modify the event but a part of the subevent structure that is involved in the affectation of one of their arguments. In very intuitive terms, the locative complement in (26a) below represents a spatial location of the event denoted by the VP, while the locative complement in (26b) represents a spatial location of the affectation process undergone by the argument with which it is in a part-whole relation. This is the reason why a sentence can contain two locative complements, being one a true adjunct and other a locative of ‘concerned part’, but not two locative complements of the same kind, as shown in (27):

(26) a. Algunos chicos lo golpearon en la clase.
   some boys him.ACC hit.3PL in the classroom

b. Algunos chicos lo golpearon en la cara.
   some boys him.ACC hit.3PL in the face

(27) a. Algunos chicos lo golpearon en la cara en la clase.
   some boys him.ACC hit.3PL in the face in the classroom

b. *Algunos chicos lo golpearon en la cara en el ojo.
   some boys him.ACC hit.3PL in the face in the eye

c. *Algunos chicos lo golpearon en la clase en la escuela.
   some boys him.ACC hit.3PL in the classroom in the school

The relevant question now is: what kind of an adjunct or an argument is the locative of the ‘concerned part’? I will propose that this locative can be considered a ‘default argument’ in the same sense of Pustejovsky’s use of the term. Pustejovsky (1995: 63) defines the default arguments as those ‘parameters which participate in the logical expression in the qualia, but which are not necessarily expressed syntactically’. In fact, the qualia structure of the argument
representing a whole contains a ‘constitutive qualia’ which predicts the inclusion relation between it and its constitutive parts. These parts are ‘default’ arguments in the sense that they are involved in the event in the same way that the whole to which they belong is. For example, my head is partially concerned if I am beaten because the constitutive qualia of ‘me’ includes my head and all the others parts of me. This being the case, these ‘default’ arguments cannot be relevant, and in this case they remain hidden, but also they can be relevant in the sense that they specify the part concerned in the event. In this second case they become overt, and are expressed syntactically as locative complements. It seems reasonable that only affected arguments can take a kind of complement denoting the part concerned by the affectation process. This would explain that this kind of locatives is not acceptable with stative predicates.

Let us turn now to the dative constructions. As we have already seen, the crucial semantic difference is that the DP denoting the body part has a holistic affectedness reading. I will assume that this semantic feature is responsible for considering it not as a location but as an entity, which is the true argument of the affectation processes.\(^5\) By this reason, it becomes the subject of the locative structure in (23). Nevertheless, the inclusion relationship with the entity of which it forms part predicts that this relation could be syntactically realized as a locative predicate. So, the affectation verb also takes in this case a locative relation as its internal argument, but not as (24) but rather as (23). The analysis would be as follows:

\[(28)\] Complex predicate: Dative-whole + accusative-body part

a. Ex.: Yo le golpeé el brazo.
   I him.DAT hit the arm
   ‘I hit his arm.’

b. \[
\begin{array}{c}
   \text{Subj} \\
   \text{vP}
   \end{array}
\]

\[
\begin{array}{c}
   \text{v'} \\
   \text{VP} \\
   \text{DP}_\text{whole} \\
   \text{V}_1' \\
   \text{le} \\
   \text{V}_1 \\
   \text{VP}_2 \\
   \text{V}_2 \\
   \text{PP} \\
   \text{DP}_\text{body-part} \\
   \text{el brazo} \\
   \text{P} \\
   \text{DP}_\text{whole}
   \end{array}
\]

The crucial fact is that the locative predicate within the PP is not licensed by an inherent (oblique) case but by dative case. This is possible because the affectedness feature of the predicate projects a complex predicate in the sense of Marantz (1993), Pesetsky (1995), Arad (1998) and Bruening (2001). All of these works agree that complex predicates involve an extra level of structure. Bruening (2001) proposes that Marantz’s extra verbal projection \(V_1\) in (28)

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\(^5\) This reasoning is not new. Jackendoff (1990: 178) observe that locative arguments stand for a ‘reference object’ if they have a ‘holistic’ or ‘completive’ reading:

(i) Bees swarmed in the garden.
(ii) The garden swarmed with bees.

In Jackendoff’s examples, the object denotation is linked to a distributive place function. In the cases studied here, the place becomes an object within a ‘holistic affectation function’.
can host a null affix—as the English null verbal head—or an over applicative morpheme—as in Bantu languages—. In both cases, it introduces the semantic of affectedness. Adopting this analysis here, I will propose that in Spanish this extra verbal projection is occupied by the dative clitic. The idea is that (object) clitics are verbal morphemes or functional heads with uninterpretable features (phi-features) and interpretable features (affectedness) which are related to the assignment of a structural dative case.6 Being this the case, the DP_{whole} is marked with dative structural case in the Spec of V_1, while the DP_{body-part} is marked with structural accusative case by V_2. V_2 moves from its position to the head V_1—and it attaches the dative clitic—and then to v.

That complex predicates involve the semantic feature of affectedness has been argued for independently in many works. Double object constructions and the with variants of spray-load verbs in English, see (29a) and (30a), both involve an affected interpretation of the (first) object that is lacking in its non complex counterpart (cf. (29b) and (30b)):

    b. John gave a book to Mary.

(30) a. John sprayed the wall with paint.
    b. John sprayed the paint on the wall.

In double object constructions, ‘affectedness’ involves the transfer of the object book from the subject to the ‘goal’ argument; in with variants of spray-load verbs ‘affectedness’ involves the ‘change of state’: (30a) means that the wall becomes completely painted, which is not the case for (30b). In both cases, the (first) object of the complex predicate (cf. Mary and the wall, respectively) has a semantic feature it lacks in the non complex variant.

This analysis has some interesting consequences for the parametric variation of the

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6 This being so, it is necessary to distinguish between ‘structural dative case’, assigned by a functional projection related to a dative clitic, and the ‘inherent case’ of certain complements, assigned by a preposition semantically related to the ‘datives’ arguments (goal, beneficiary, etc.). In this sense, the complement to Mary in I gave a book to Mary would not have dative case, but an inherent case thematically related to ‘goal’ complements; this case would be assigned by the preposition to, since the V is not able to assign structural dative case. In contrast, languages such as Spanish, which have dative clitics, would be able to assign structural dative case: Le di el libro a Maria, where the a of the goal argument is not a true preposition, but a case mark, as have been proposed repeatedly. I think that this proposal is more advantageous than considering dative case as a quirky case, as i.e. Fernández Soriano (1999). Quirky case is an inherent case thematically related to an additional feature of structural case -accusative or nominative- which must move to a case position [Spec, TP] (cf. Chomsky 1998). This being so, it is possible that ‘goal’ argument in English double object constructions (i.e. I gave Mary a book) is licensed by a quirky case associated with accusative structural case, since English lacks a dative structural case associated with a dative clitic functional head. If this reasoning is on the right track, distinguishing between structural dative case associated with a clitic and the inherent case of the goal complements associated with the preposition to gives us theoretical support for explaining parametric variation in ditransitive constructions.

7 As a consequence of this analysis, the DP in the [Spec, VP] is an argument. Independent evidence for this claim comes from the fact that a possessive dative is compatible with an interest dative, but not with a subcategorized dative. If we suppose that no verb can have two ‘argumental’ datives, this is a strong prove for the argumental status of possessive dative:

(i) Por favor, no le arañes la carita al niño.
    please don’t him scratch the face to the boy

(ii) *Juan le arregló el coche.
    Juan him fixed the car

In addition, the direct object can be passivized across a subcategorized dative (iii), and over a possessive dative (iv), but not over the so-called interest dative (v):

(iii) El premio Nobel le fue concedido a Cela el año pasado. [cf. Demonte 1994]

(iv) La pierna le fue vendada a Pedro cuidadosamente por el doctor.

(v) *Mi niño me ha sido suspendido otra vez por ese profesor.

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phenomenon. It predicts that only languages having a structural dative case will be able to have possessive-dative constructions. This is in fact what happens. Romance languages and German have dative possessive constructions, as shown in (2), repeated below:

(2) a. ESP. Yo le corté los cabellos.
b. FR. Je lui ai coupé les cheveux.
c. IT. Io gli ho tagliato i capelli.
d. CAT. Le vaix tallar un pel.
e. RUM. I- au tait un deget.
f. GER. Sie wusch ihm die Füsse.

I him.DAT cut the hair
‘I cut his hair.’

On the contrary, languages which lack a structural dative case associated with dative clitics have no possessive dative at all. This is the case for English, and probably for Classical Latin too, where the internalization of a ‘holistically affected locative’ took place by assigning this argument a second accusative case, named ‘accusative of relation’ by traditional grammarians. This possibility is shown in the examples below:

(31) a. Ut te... Venus eradicet caput [Plauto, Rudens, 1346, apud Lapesa (1964: 87)].
that you.ACC Venus pull off head.ACC
‘That Venus pull off your head.’
b. Defricabis eum manibus, totum corpus [Mulomed, Chir., 386; ibidem].
rub him.ACC with the hands all.ACC body.ACC
‘You will rub his body with your hands.’
c. Si quis... servum... brachium... transforaverit [Anón.s.VIII; ibidem].
if someone slave.ACC arm.ACC would go through
‘If someone would go through slave’s arm.’

Which is different in Classical Latin is the fact that both the DP-whole and the DP-bodypart are licensed by an accusative case. The development of dative clitics in romance languages and the simplification of the casual system would explain the variation between one language and another.8

One could ask the following question: why cannot the DP denoting a whole be licensed within the locative predicate with an inherent case assigned by a preposition, in a similar way to the DP denoting a body part in (25)? I do not have the answer to this question, but it is possible that a hierarchical requisite between two entities in a part-whole inherent relation could be proposed. Recall that locative and existential constructions involving two arguments in a locative (non inherent) relation admit a number of possibilities of expression where the c-command of one of them does not seem to be a determining factor:

(32) a. El jardín tiene flores.
‘The garden has flowers.’
b. Hay flores en el jardín.
‘There are flowers in the garden.’

8 I will not deal here with why English does not have complex predicates with two accusative arguments in part-whole relationship similar to the ones with a ditransitive verb, like give (i.e. John gave Mary a book). A possible answer is that the quirky case which licenses the second object in double object constructions can be only assigned to ‘true’ arguments—namely, the two ones selected for by verbs of transfer like give—but not to non selected arguments such as the body-part denoting NP. Nevertheless, this question must remain open.
c. *Las flores están en el jardín.
   ‘The flowers are in the garden.’

By contrast, when there is an ‘inherent’ locative relation between two arguments, the possibilities of expression are constrained by the obligatory c-command of the whole over the part:

(33) a. *María tiene ojos azules.
    ‘Mary has blue eyes.’

b. Hay ojos azules en María.
   ‘There are blue eyes on Mary.’

c. Los ojos azules están en María.
   ‘The blue eyes are on Mary.’

As a result of the proposed analysis, we can conclude that possessive dative is nothing but a locative argument licensed by structural case. The locative argument is part of a locative predication with an affected argument. This explains some really surprising data with possessive dative and stative verbs. In section 2.1 we have seen that stative verbs do not admit possessive dative (nor locatives of a concerned part). Recall now that verbs of physical perception are special because they allow for possessive dative constructions in spite of the fact they are not predicates of affectation:

(34) Le vi los calzones. [quoted by Maldonado (1999: 132)]
    him.DAT saw.1SG the shorts
    ‘I saw his shorts.’

The only possible reading for (34) is that the shorts belongs to him (i.e., le is a ‘possessive dative’) and he is wearing the shorts (i.e. there is a locative relation between the two arguments). The ability of verbs of physical perception to legitimate such a construction is due to the fact that they always select for a small clause involving a predication relation between two arguments. This small clause can be, among other things, a locative predicate. What is very relevant for us is that dative licensing is possible when the predicate of this clause is a locative predicate in a part-whole relation with its subject.

3.3. Complex predicates with unaccusative verbs

Let us go now to alternations with unaccusative predicates as those presented in 2.2. This kind of constructions is special in that it involves verbs which select for an obligatory dative argument with the theta-role of ‘experiencer’, as other verb classes whose properties are well known since Belleti and Rizzi’s (1987) work. This argument is not only obligatory (cf. (35a)), but also must be necessarily related to a dative clitic (cf. (35b)), unless it is a null object with an arbitrary or generic reading (cf. (35c)):

(35) a. *(Le) duele la cabeza.
    him.DAT hurts the head
    ‘He has a headache.’

b. *(Le) duele la cabeza a Juan.
    him.DAT hurts the head to John
    ‘John has a headache.’

c. En estos actos siempre duele la cabeza.
    in these events always hurts the head
    ‘In these kinds of events, one always has a headache.’

Since the seminal work by Belletti & Rizzi (1987), it is assumed that the experiencer argument selected by verbs having an internal non accusative argument occupies a higher position in the
structure of VP. This dative argument can be placed at the [Spec, VP₁] within a complex predicate, and is licensed via a structural dative case associated with the V₁ head. I will propose that unaccusative predicates of affectedness have in addition an internal argument which can be a locative predication structure whose predicate is an empty category correferent with the dative argument. The structure of the sentence in (35a) would be as shown in (36):

(36) Complex predicate: Dative-whole + nominative-body part

a. Ex.: *Le duele la cabeza.

b. V

| V'    

|    

|    

| le  

| V₁  

| V₂  

| PP  

| la cabeza  

| P  

| DPbody-part  

| P'  

| DPwhole  

Crucially, stative verbs like gustar ‘to like’ have not such a locative predicate argument, hence the impossibility of the possessive interpretation of the dative argument shown in (17) above. The motivation for the structure in (36) is semantic. From a semantic point of view, the experiencer argument of verbs of affectedness is not a simple receiver of a process, which is the case of psychological verbs. On the contrary, this experiencer is source or cause of the affectation process it suffers and it can be considered as a proto-cause argument, in the sense of Dowty (1991). This semantic property can be accounted for by assuming that it is associated with the empty category in the locative predicate structure.

The unaccusative status of the verb ‘doler’, and all the other related verbs, is responsible for the nominative case of the subject of the locative predicate structure. Recall that, contrary to the alternations in transitive constructions, the locative alternations with unaccusative verbs do not involve a different status of both arguments—DPwhole and DPbody-part—but only involves a change in the grammatical status of the second one. I will propose that this kind of verb always involves a complex predicate in spite of the syntactic status of the DPbody-part and will opt for a higher (dative) argument. The ungrammaticality of sentences in (37) follows from the fact that the dative case associated with the affectation feature would not be checked:

(37) a. *Mi cabeza duele.9

Recall that the presence of the possessive determiner excludes the absence of reference to the possessor as the cause of the ungrammaticality. The use of the article at the place of the possessive determiner would make the sentence grammatical only if it is interpreted that the experiencer argument is an empty category with an arbitrary reading, as in (i), where the implicit argument is correferent with the null subject PRO of the infinitive:

(i) Después de PROi estudiar durante dos horas, pro, duele la cabeza.

‘After one is studying by two hours, one has a headache.’
b. *Duele mi cabeza.
   hurts my head

When the DP denoting a body-part is an oblique locative complement, the construction becomes impersonal, as in the Roumanian and Spanish examples in (38) and (39):

(38) a. RUM. Ma doare in gat. [Manoliu-Manea (1996: 715)]
   b. ESP. Me duele en la garganta.
   me.DAT hurts in the throat
   ‘My throat hurts.’

(39) a. RUM. Ma doare in sufflet cand ul ved asa-de palid. [ibidem]
   b. ESP. Me duele en el alma quando lo veo tan palido.
   me.DAT hurts in the soul when him.ACC see so pale
   ‘My soul suffers when I see him so pale.’

Neither in (38) nor in (39) is there a nominative argument, which makes the construction impersonal. Being both Spanish and Roumanian pro-drop languages, one would expect the place of the nominative subject to be occupied by a nominative pro. Nevertheless, the impersonality of these examples is very surprising. Verbs selecting for an experiencer in the dative case allow for a null internal subject if it is a definite subject, whose interpretative features can be anaphorically recovered (as in (40a, b)). On the contrary, they do not allow for a null non definite subject, as shown in (41a, b), except for verbs like doler, which also in this case license the null subject, as shown in (41c):

(40) a. María se ha casado. Me sorprende pro, pues no me lo esperaba.
   ‘Mary is married. It surprises me, since I didn’t suspect it.’
   b. ¿Quieres este helado? No, no me gusta pro.
   ‘Do you want this ice cream? No, I don’t like it.’
   c. ¿Qué te pasa en el brazo? Me duele pro.
   ‘What happens in your arm? It hurts.’

(41) a. *Me sorprende pro, y no sé qué es lo que me sorprende.
   ‘Something surprises me, and I don’t know what that is.’
   b. *Me gusta pro, y no sé qué es lo que me gusta.
   ‘I like something, and I don’t know what that is.’
   c. Me duele aquí, y no sé qué es lo que me duele.
   ‘I have an ache here, and I don’t know what that is.’

Examples in (40) prove that it is not the licensing of a null category which makes ungrammatical the examples in (41a, b), but the identification of the interpretative features of such a category, if we assume, as usual, that licensing of null categories involves both a formal licensing and a semantic identification. The fact that a pro internal subject must be [+definite] was noted by Jaeggly (1986), and is found in some different unaccusative constructions. Whatever the reasons are for the condition of the definite features of null internal subjects, an explanation is necessary in order to elucidate the exceptionality of sentences such as (41c). I will propose that it is the configuration of the PP node which licenses a null pronoun in the subject position. The analysis of examples in (38) and (39) would be as follows:

(42) Complex predicate: Dative-whole + prepositional locative - body part
   a. Ex.: Me duele en la garganta.
      me.DAT hurts in the throat
According to this analysis, unaccusative verbs of affectedness can take as internal argument a locative predication of the form of (24) above, where the DP denoting a whole is the subject and the DP denoting the part is within the locative predicate. The second one is licensed with an inherent case assigned by the locative preposition; it results then as a locative of ‘concerned part’ similar to that in transitive constructions. What is special in this case is that the subject of the locative predicate is a null subject pro licensed by nominative case, a similar fashion that the overt nominative subject of unaccusative verbs, and identified via predication by the locative predication.

3.4. Analysis extension. Locative datives revisited

Until now, I have explored the grammatical behavior of datives associated with a possessive relation, and proposed that they are locative arguments licensed by or related to a dative case. In this section, I will show that indirect support for the analysis proposed above comes from the existence of other cases of affected locative arguments licensed by dative case. Consider the alternation in (43a, b):

(43) a. Ana se sentó encima de él.
   Ana REFL sat above of him
   b. Ana se le sentó encima.
      Ana REFL him.DAT sat above

10 Similar examples exist in French, where the complement of an adverbial or pronominal phrase can become a dative internal argument, as shown in the following examples quoted by Bally (1926 [1996: 46]):

(i) On lui tombe dessus.
   one him.DAT falls on top
   ‘They are falling on top of him/her.’

(ii) Le couteau lui entre dedans.
    the knife him.DAT enters inside
    ‘The knife goes into him/her.’

Bally (1926 [1996:46]) observes that “With certain verbs of movement (courir ‘to run’, tomber ‘to fall’, etc.) the direction may be indicated by an adverb (for example dessus ‘above’) and the person who is the goal of the movement may be placed in the dative, provided that it shows the extent of involvement in the action”. Kayne (1975: 162) explains the concept of involvement, when he says "the dative plus inalienable possession construction requires that, speaking imprecisely, the dative object be envisioned as affected by the action or state referred to".
c. *Ana se sentó encima a él.
   Ana REFL sat above to him
   ‘Ana sat on him.’

The pronominal verb *sentarse* ‘to sit’ has a locative complement in (43a) which is an adverbial phrase. The complement of the adverb *encima* ‘on’ is a PP with a personal pronoun. What is crucial for us is that the personal pronoun can be realized as a complement of the verb, not of the adverb, as shown in (43b). This argument cannot receive an accusative case, since the verb is unergative and hence it must be licensed via dative case. But, as Kayne (1975: 158) already noted, this dative does not correspond to any indirect object, as (43c) shows, but to a locative internal argument. Crucially, the possibility that a locative complement can become a dative argument is constrained by similar conditions to the ones observed above. Only if it is an affected locative argument can it undergo this process. Consider the following contrast:

(44)

a. *Le pasó por delante.
   him.DAT pass in front
   ‘He passed in front of him.’

b. *Le camina delante.
   him.DAT walk in front
   ‘He walks in front of him’

c. Se le sentó encima.
   REFL him.DAT sat on
   ‘He sat on him’

d. *Le está sentado encima.
   him.DAT is seated on
   ‘He is seated on him.’

The contrasts above show that verbs denoting a change of state or position, like *pasar* ‘to pass’ or *sentarse* ‘to seat’, allow for the alternation between an internalized and a non internalized realization of the locative argument. This possibility does not exist for movement stative verbs, like *caminar* ‘to walk’, which do not imply a change in the locative relation between the involved arguments; in addition, the dative counterpart is blocked for movement verb involving a change of locative relation if it is in a stative construction, as in (44d). The crucial difference is that only the first ones involve an affectation process, which consists in a change of the spatial relationship between the entities involved in the event—namely, the subject, and the complement of the adverbial phrase—. On the contrary, stative predicates do not affect their arguments in the sense that they do not involve a change of the spatial relationship between them. By this reason, under no circumstances can a stative verb, like *estar* ‘to be’ or *tener* ‘to have’, have a locative dative, as (45) clearly shows:

(45)

   him.DAT is in front
   ‘He is in front of him’

b. *Le tiene la casa cerca.
   him.DAT has the house near

Again, the feature [+complete affectedness] is responsible for the possibility that a locative argument is realized as an internal argument with a structural case. It seems clear that movement verbs take as a complement a locative predicate (the adverbial phrase headed by *delante, encima, detrás*...etc.) involving a locative argument (the personal pronoun). I will propose that when the VP has a feature [+affectedness], it realizes as a complex predicate with an extra V projection related to the dative clitic which has non interpretable features (phi-features and probably structural dative case) and interpretable features (affectedness). The locative argument in the locative structure can then be optionally licensed by this extra dative case. Recall that if it is not licensed via dative case, the licensing is made with a default case
assigner, the preposition de ‘of’ (in delante de él ‘in front of him’). This analysis is, then, the same that in the case of datives in transitive and intransitive constructions, which can be considered a strong argument for it.11

4. Conclusion

In this paper, I have explored some unnoticed data about possessive dative in Spanish. I propose that the possessive reading of the dative is a result of a predicative locative relation. The dative argument is in fact a locative predicate in a part–whole relation with another argument in the sentence. I have proposed that predicates of affectedness can select for a locative predicate as its internal argument. This locative predication can take two different forms according to the argumental status of the elements in a part–whole relation. If the DP denoting the part is not holistically affected by the verbal process, it remains a predicate of ‘concerned part’. On the other side, if the DP denoting the part is holistically affected by the verbal process, it becomes the subject of the locative predicate; the DP denoting the whole realizes then as a predicate and it is licensed via a dative case. This analysis explains the locative alternations with transitive and unaccusative predicates, and it also explains the existence of locative dative with unergative verbs of movement.

The proposed analysis is interesting because of the following two main reasons: firstly, it implies that the possessive reading of the dative is a consequence of a predicative relation involving the part–whole relation; secondly, it explains why dative possessive constructions are constrained by the affectedness property of the predicates, as well as what kind of relation is established between the possessive dative and the so-called locative of concerned part.

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11 The parallelism is total if we consider that adverbial phrases headed by encima, delante, detrás, etc. involve a PP whose prepositional head (en, de, de) is incorporated to the external argument of the locative predicate (being this external argument a noun as cima, or another locative head as ante, tras). This analysis is consistent with the well known nominal properties of this kind of adverbs (for example, the possibility of having determiners as in encima suyo lit. his on ‘on his’). In addition, it predicts that the preposition de in encima de él is not selected by the adverbial head, but a default case marker.
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