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Spatial prepositions: From language to cognition

Undressing *Path* and *Place*:

Places and Displaces

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0. Preliminary questions and goals

Goal: To explore the properties of locative constructions in Spanish in order to explain the differences between the internal syntactico-semantic structure of Spanish lexical items *a/en* (\approx ‘at, in’) and *abajo/debajo* (\approx ‘down, under’)

Main questions:

a) *a* in locative constructions:

Why can *a*, which is generally used for directional cases in Spanish, appear in certain locative constructions?

- (1) a. El vaso está **en** la mesa
b. *El vaso está **a** la mesa
‘The glass is on the table’

c. El vaso está **en** el borde de la mesa
d. El vaso está **al** borde de la mesa
‘The glass is at the table’s edge’

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b) *en* in directional constructions:

Why can't *en* combine with directional Vs like *ir* ('to go')?

- (2) a. Juan fue **a** la biblioteca
- b. *Juan fue **en** la biblioteca
- 'Juan went to the library'

c) *abajo* (≈ 'down') and *debajo* (≈ 'under')

What are the differences between elements like *abajo* and elements like *debajo* due to?

- (3) a. La caja está debajo (de la mesa)
- 'The box is under the table'
- b. La caja está abajo (*de la mesa)
- 'The box is down there'

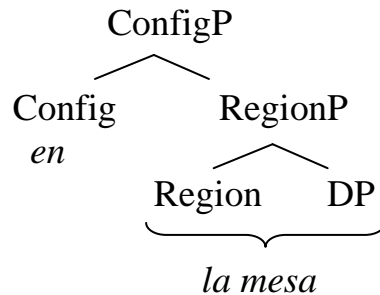
- (4) La caja está más {abajo/*debajo}
- 'The box is further down'

→ There is a feature *Displace* that can explain the main differences between these elements.

→ *Displace* takes a point in the space and makes it be understood as an arrival (or departure) point. In other words, a place in which the Figure doesn't stay during the whole event.

1. Introduction: The structure of location

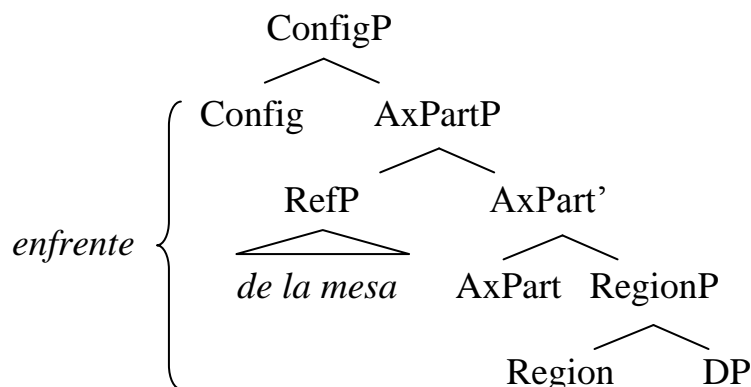
(5) *en la mesa* ('in/on the table'):



Region: a function that gives the set of points in the space that the Ground occupies.
 → *eigenplace* function (Wunderlich 1991)

Config(uration): it gives a spatial configuration, the location with respect to a Region. Here, notions as containment, attachment and support are encoded.

(6) *enfrente de la tienda* ('in front of the store')



Ax(ial)Part: it gives a location defined as a subpart of a referential point in the space.

→ Svenonius (2006), based on Jackendoff (1996) and Marr (1982)

→ Svenonius (2010:132): “a function from eigenplaces to subparts of them”

Ref(erential): it gives the referential point.

2. *A* and *en* → *Displace* against *Place*

- (7) a. El vaso está {en/*a} la mesa
'The glass is on the table'
- b. El vaso está {en/a}el borde de la mesa
'The glass is at the table's edge'

Other locative cases in which *a* is possible:

- (8) lado 'side', límite 'limit', margen 'margin', fondo 'end, bottom', término 'terminal', vera 'side of a river', entrada 'entrance', salida 'exit', frente 'front', norte 'north', derecha 'right'...

(Fábregas 2007)

→ What all these elements have in common is that they can lexicalize *Ax(ial) Part*

- *a* vs. *en* in Fábregas (2007:178):

- (9) Locative *en* expresses a place relationship where the figure is contained in the ground or supported by it.

- (10) Locative *a* denotes a place relationship where the figure is in contact with (at least) one point of the **boundary** of the ground.

With <i>a</i> , these elements indicate a displacement from a contextual referential point

→ *Displace*: it gives a point understood as an arrival (or departure) point. In other words, a place in which the Figure doesn't stay during the whole event.

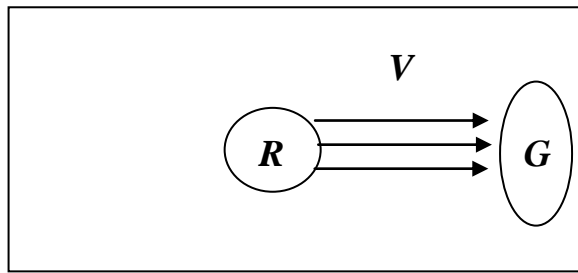
For *Displace* to be present it must be possible to interpret at least two different points in the event. This is easy in directional constructions:

- (11) a. John went (from Madrid) to Barcelona.
b. Juan fue (de Madrid) a Barcelona.

How is it possible to have two locations in a single event in locative constructions?

→ *AxParts* provide two points: the *Ground* and the *Referential point*

(12)

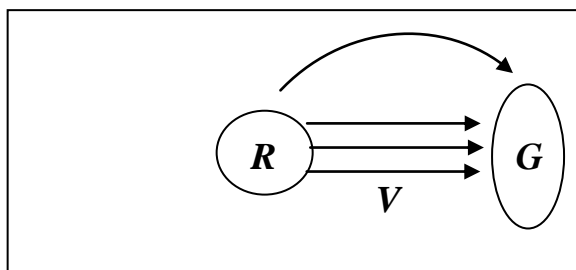


R = Referential point
 G = Ground
 V = Vectors

- Cinque (2010): “[AxParts] define a place by projecting vectors onto one of the possible axes that depart from the object that provide the reference point”.

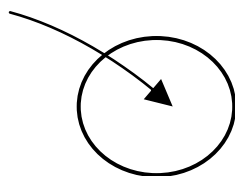
→ With *Displace* the Ground is interpreted as a Displacement from the Referential point:

(13)



However, a displaced point doesn't need movement in the event. It just needs that a previous movement is interpreted:

(14)



Now we can explain the difference between *a* and *en* in Spanish:

Only *a* and not *en* can lexicalize *Displace* in Spanish.

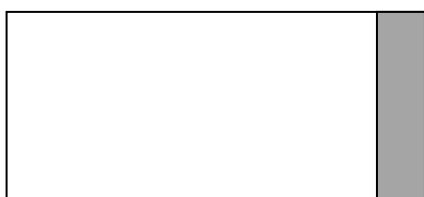
This includes the boundary cases in Fábregas, but also non-boundary cases:

- (15) a. La biblioteca está **a** la vuelta de mi casa.
‘The library is around my house’
b. La iglesia está **a** mitad de camino.
‘The church is half-way’

Cases with *en* → independent grounds:

- (16) El vaso está en el borde de la mesa
‘The glass is on the table’s edge’

(17)



→ Measure:

- (18) El vaso está 5 cm. más {a/*en}el borde
‘The glass is 5 cm. more to the edge’

→ Modification:

- (19) María está {en/*a} el peligroso borde de la piscina.
‘Mary is on the dangerous edge of the swimming-pool’

→ Obligatory isolation of the Ground → only *en*:

- (20) La mesa está {en/*a} la parte derecha de la habitación.
‘The desk is on the right side of the room’

→ Other cases:

Scales:

- (21) El agua está **a** 5 grados.
‘The water is 5 degrees’

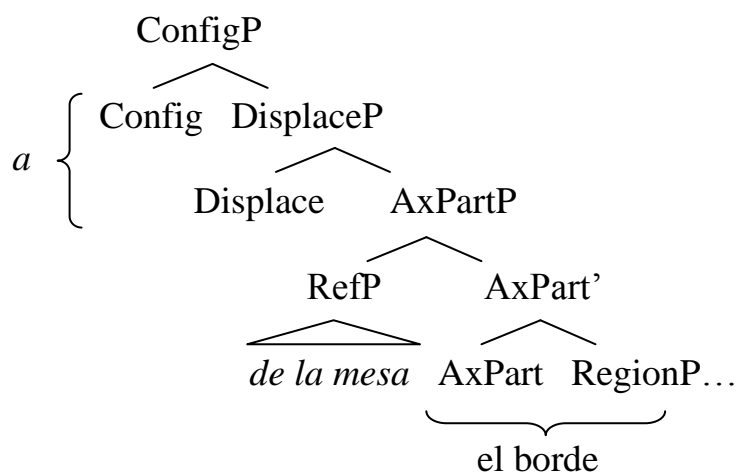
Pragmatics:

(22) piano ‘piano’, teléfono ‘telephone’, sol ‘sun’, volante ‘steering wheel’...
(Fábregas 2007:179-180)

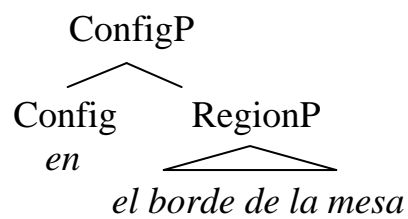
(23) Juan está al piano.
‘Juan is playing the piano’

→ In the structure:

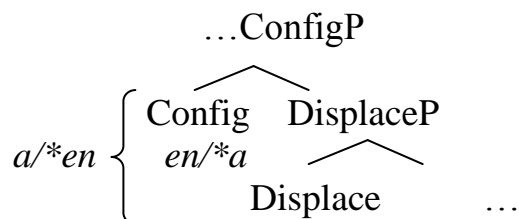
(24) *al borde de la mesa:*



(25) *en el borde de la mesa:*



(26)



3. Directional constructions:

(27) Juan fue {**a/*en**} la biblioteca
'Juan went to the library'

Inherent directed motion verbs like *ir* ('go') obligatorily need two locations

→ they need *Displace*.

Then what happens with verbs like *entrar*?

(28) Juan entró {**a/en**} la biblioteca
'Juan went into the library'

→ *en la biblioteca* is a modifier of the result state.

- Then, is *a* locative or directional?

- Locative: Fábregas (2007), Real Puigdollers (2010)
- Directional: Demonte (2011)

→ **My claim:** it is neither locative nor directional. It lexicalizes *Displace*, which is generally related to directionality.

→ *a* (obligatorily) lexicalizes *Displace* in Spanish, vs. other Romance languages as Catalan, French or Italian.

→ *en* can't lexicalize *Displace* in Spanish.

4. Debajo and abajo

(29) *debajo/abajo* (\approx under, down, below), *dentro/adentro* (\approx ‘inside’); *delante/a(de)lante* (\approx ‘in front’) *detrás/atrás* (\approx ‘behind’); *encima/arriba* (\approx ‘on (top of)’); *fuera/afuera* (\approx ‘outside’) (see Fábregas 2006)

→ *AxParts*

- (30) a. Los niños están debajo de la mesa.
‘The kids are under the table’
b. Los niños están abajo.
‘The kids are down(stairs)’

Complement? → *abajo* has a deictic complement so it can remain unpronounced

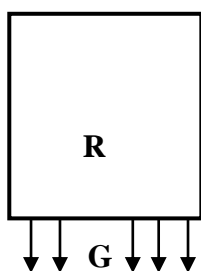
Quantification?

- (31) a. *Los niños están más debajo de la mesa.
‘The kids are more under the table’
b. Los niños están más abajo.
‘The kids are further down’

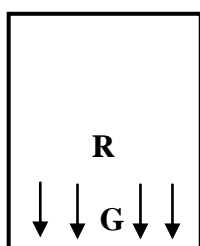
Measure?

- (32) a. Los libros están 5 metros debajo de la mesa.
‘The books are 5 meters under the table’
b. Los libros están 5 metros *(más) abajo.
‘The books are 5 meters (further) down’

(33) *debajo*:



abajo:

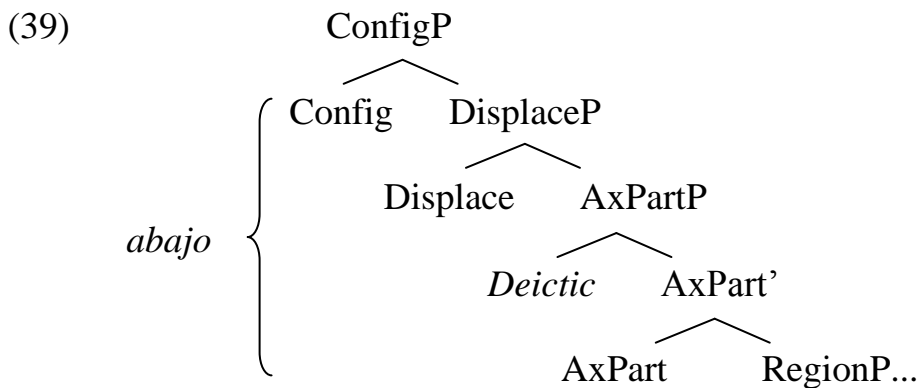


In directional contexts:

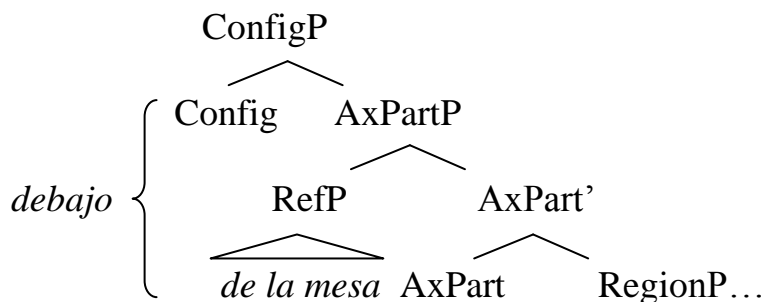
- (34) Los niños fueron {abajo/#debajo}
‘The kids went {down/under}’

- (35) a. Los niños corrieron hasta {abajo/#debajo}
 ‘The kids ran all the way to the bottom’
 b. Los niños corrieron {hacia/para} {abajo/#debajo}
 ‘The kids ran towards the bottom’
- (36) Juan se metió {debajo/*abajo}
 ‘Juan got under’
- (37) Juan miró {abajo/debajo}
 ‘Juan looked {down/under}’
- (38) Los niños corrieron montaña {abajo/*debajo}
 ‘The kids ran down the mountain’

→ Although both of them lexicalize *AxPart* only *abajo* allows *Displace*.



(40) *debajo de la mesa*:



→ Elements like *debajo* correspond to isolated areas.
 → Elements like *abajo* correspond to a displaced area from a referential one. Hence, *Displace* is possible.

Appendix → *Displace* in other languages?

- Illative in North Sámi used for locations of change of state (Svenonius 2011)²:

- (41) Nieida bissánii Romssii
girl remained Tromsø.ILL
'the girl remained in Tromsø Svenonius (2011:6)

- English use of *to* in locative constructions: *to the left* and *to the right*

- Accusative in languages like German?

- (42) a. er rannte in dem Laden → locative interpretation
 he ran in the- DAT store
 b. er rannte in den Laden → directional interpretation
 he ran in(to) the- ACC store

Den Dikken (2010:112)

- Cresswellian or G-Locations (see Cresswell 1978, Svenonius 2010)?

- (43) a. A band is playing sixty yards into the woods.
 b. I put the book into the box

Conclusions

→ A cartographic approach is useful to capture minimal semantic components within the syntactic structure.

→ A *Displace* projection in the syntactic structure that makes possible for a place to be connected to other one in a single event.

→ *Displace* can explain some minimal differences in the properties of lexical items related to location in Spanish:

- *a* and *abajo* lexicalize *Displace*.
- *en* and *debajo* can't lexicalize *Displace*.

² Something similar seems to happen in Finnish (see Svenonius 2011 and Fong 1997)

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