# Variation in *P*

The path to no *Path*
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1. Goal:

To show that a **cartographic** and, at the same time, **minimal** structure is the best way to analyze the properties of spatial *Ps* in one language and the variation across languages.

2. Main ideas:

→ There is no projection *Path* over *Place* in the functional sequence (*fseq*, cf. Starke 2004), against Jackendoff (1983):

(1)

~~PathP~~
        ~~Path~~   PlaceP
                 Place   DP
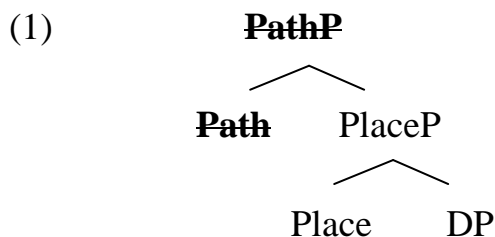
→ The notion of *Path* is interpreted by means of modifiers of *Place*:
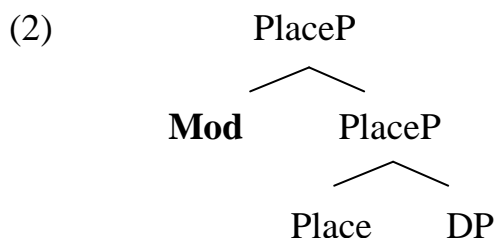
(2)

PlaceP
        Mod   PlaceP
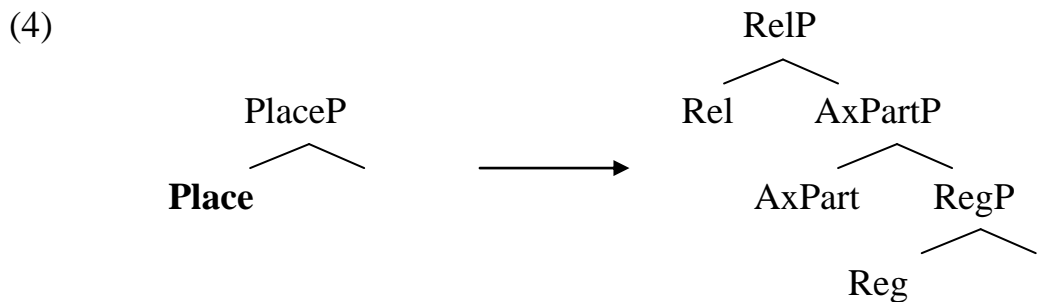   Place   DP

→ This way it is possible to explain:

- why directional *Ps* appear in locative constructions

- why directional *Ps* denote punctual locations, although they entail a scale

(3)   The door is **to** the left of the oven.
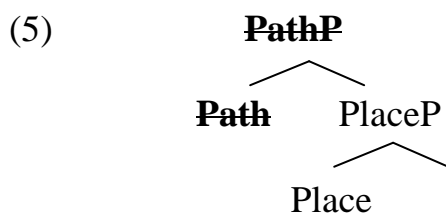
3. Cartographic, but minimal:

- Cartographic (in line with Rizzi 2004, Belletti 2004, Cinque and Rizzi 2010; and Cinque 2010, Den Dikken 2010, Svenonius 2010, Terzi 2010, Pantcheva 2011, etc. for *Ps*):
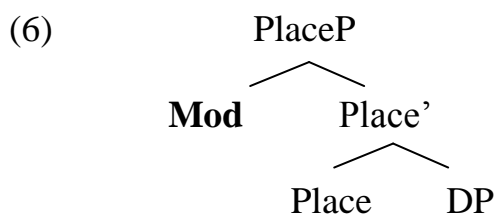
(4)

```
                                              RelP
                                             /    \
        PlaceP                            Rel      AxPartP
        /    \                                     /    \
    Place            ─────────►            AxPart      RegP
                                                       /    \
                                                    Reg
```

cf. Romeu (to appear)

- But minimal (in line with Chomsky 1995):

(5)   ~~PathP~~
          /   \
      ~~Path~~   PlaceP
                 /   \
              Place

→ The meaning related to *Path* is encoded as a modifier:

(6)   PlaceP
          /   \
      Mod   Place'
                 /   \
              Place   DP

→ Only indecomposable primitives in the *fseq*

4. What is *Path*?

- A set of points? Directionality? Both?

*Despite the decomposition of *Path-Place*, there is still a projection related to *Path* in works like Fábregas (2007), Gehrke (2008), Koopman (2010), Svenonius (2010), Pantcheva (2011).

- *Path* is generally associated to **directionality** (cf. Gehrke 2008, P_{DIR} in Den Dikken 2010, a.o.)

  → *Path* elements can't combine with verbs like *remain* or *stay*:

  (7)   a. The box stayed in / on / under / behind the table.
          b. *The box stayed to / into / onto / from the table.
  <div align="right">Gehrke (2008:8)</div>

  *1st **problem** → *Path* elements in locative constructions:

  (8)   a. La puerta está **a** la izquierda del horno.
          b. The door is **to** the left of the oven.

    → *PathPs* **are stative**

- *Path* associated to a **set of points**

  - sequences of locations (Bierwisch, 1988; Verkuyl and Zwarts, 1992; Nam, 1995):

  (9)   a bridge out of San Francisco (Fong 1997:2)

    → Goal paths in Pantcheva (2011) represent sequences of points, in line with Zwarts (2008):

  (10)   -----+++++

∗**2nd problem**: *Path* elements denote single points:

(11)   The door is **to** the left of the oven.

→ *PathPs* **are punctual**

- Different elements can lexicalize *Path* in Fábregas (2007): *Vs* like *correr* ('run'), or *Ps* like *hasta* ('up to') and *hacia* ('towards').

∗3rd problem: What does it mean that all these elements can lexicalize *Path*?

As *Path* elements are inherently **stative** and **punctual**:   → Directionality must be given in the context.

- One possible solution: (Extended) Structural Ambiguity Hypothesis (Gehrke 2008, Real Puigdollers 2010):

(12)   For any spatial preposition that can be interpreted as locative, it is only locative. Any ambiguity between a directional and a locative meaning is structural.

                              (Real Puigdollers 2010:129)

- In these works, the directional interpretation is *PP*-external:

(13)   In the house John ran → locative/∗directional
   Gehrke (2008:106)

∗**Problem: *a* in Spanish**

(14)   A la biblioteca Juan corrió → directional/∗locative
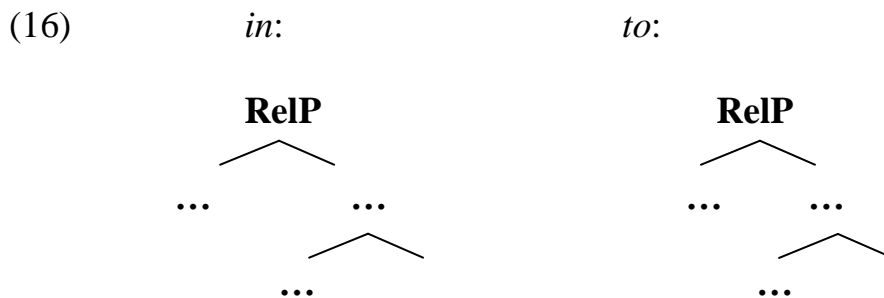   'To the library Juan ran'

    → In the structure of *a* there is something related to directionality

4

5. The proposal → modifiers of *Rel* that give at least two points

- *RelP* introduces a relationship between the *Figure* and the *Ground* (cf. Romeu, to appear), in line with *p* in Svenonius (2010):

(15)
```
              RelP
             /    \
        Figure    Rel'
                 /    \
               Rel    Ground
```
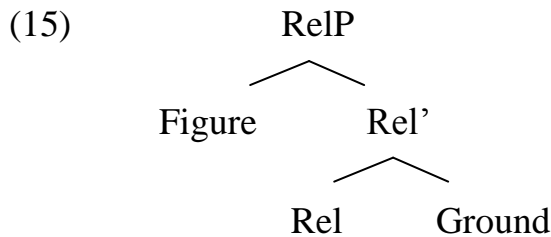
- a relationship is punctual and stative or atemporal

- The highest projection of the basic structure of both *Path* and *Place* elements is *RelP*:

(16)   *in*:   *to*:

```
        RelP                      RelP
       /    \                    /    \
     ...    ...               ...    ...
            /  \                     /  \
          ...                      ...
```

*Then, what is the difference between "directional" and "locative" Ps?

→ The presence of **modifiers**[2] that give the interpretation that there are other locations in the event → *Disjoint* **and** *ScalarPoint*:[3]

(17)
```
              RelP
             /    \
          Mod     Rel'
                 /    \
               Rel
```

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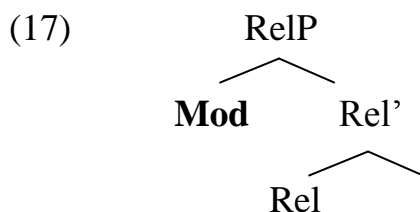
[2] **Modifier:** non-terminal element of the structure that alters the properties of the head it combines with. In line with the notion of 'modifier' in Zwarts and Winter (2000). In this work a modifier is the element that applies to an element (BP or B-bar) and gives the same element (BP or B-bar).

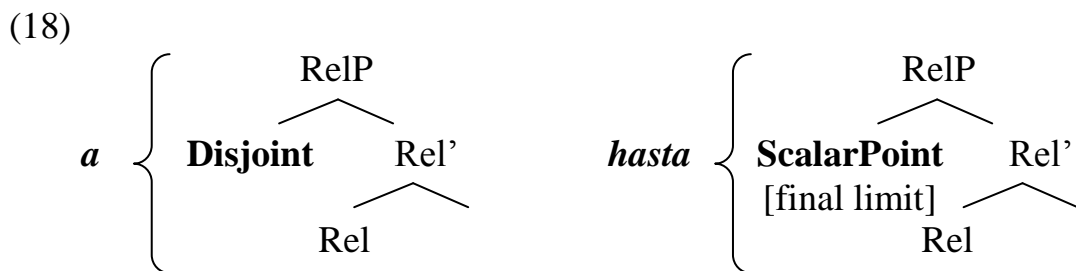[3] *Displace* and *SetPoint* in Romeu (2013).

→ **Disjoint** gives the interpretation that the element it modifies is the second of an interval:
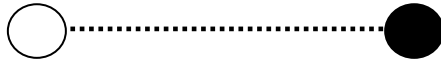
→ **ScalarPoint** gives the interpretation that the element it modifies belongs to a scale:

- In Spanish:

(18)

	RelP			RelP
a {	**Disjoint** Rel'	*hasta* {	**ScalarPoint** [final limit]	Rel'
	Rel			Rel
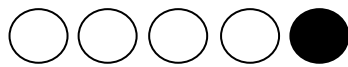
5.1. *Disjoint*

- Evidence of *Disjoint* in the case of *a*:

- Only in locative constructions in combination with an *AxPart*:

(19)   El vaso está {en/a} el borde de la mesa
       'The glass is on the edge of the table.'

(20)   Juan está {en/*a} su casa.
       'Juan is {in/to} his house.'

- Why *AxPart*? → *AxParts* entail two locations: the subpart they represent and a point of the *Ground* to which they belong:

  - *borde*: edge and a point of the entity of which it is the edge

  - The same with others (cf. Fábregas 2007):

(21)   lado 'side', límite 'limit', margen 'margin', fondo 'end, bottom', entrada 'entrance', salida 'exit', izquierda 'left', derecha 'right', norte 'north', sur 'south,', etc.

  - Something similar in English:

(22)   a. *Juan is to his house.
         b. The house is to the North.

- Evidence that they are *AxParts* (cf. Svenonius 2006):

(23)   a. Los vasos están {en/*a} los bordes de la mesa.
            'The glasses are at the table's edges'
         b. El vaso está {en/*a} el peligroso borde de la mesa.
            'The glass is at the dangerous table's edge'

- Further evidence of *Disjoint*

  → Combination with *Degree*:

(24)   El vaso está más {a/*en} el borde.
            'The glass is more to the edge'

  - It is possible to lengthen the distance between the two points of the interval
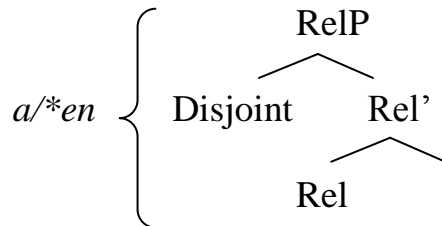
→ With verbs that obligatorily imply a change of location:

(25)   a. *Juan fue **en** la tienda.

   b. Juan fue **a** la tienda.

   'Juan went to the store'

(26)

$$a/*en \left\{ \begin{array}{c} \text{RelP} \\ \overbrace{\text{Disjoint} \quad \text{Rel'}} \\ \overbrace{\text{Rel}} \end{array} \right.$$

5.2. *ScalarPoint*

- It gives the interpretation that the element it modifies belongs to a scale.

- When combined with *ScalarPoint*, *RelP* is punctual, but a scale is entailed, in a similar way as pointed out in Ramchand (2008):

(27)   *PPs* do not themselves denote a scale, though they do give rise to one. […] In the cases of PP paths, that scale is something   like 'distance from an initial point'.

(Ramchand 2008:50)

- Evidence of *ScalarPoint*

• Counterfactual + scalar interpretation in the negation and *almost* tests (cf. Winter 2006:6) → *a* vs. *hasta*:

(28)   a. Juan no fue a la biblioteca.

      'Juan didn't go to the library'

   b. Juan casi fue a la biblioteca.

      'Juan almost went to the library'

- With *a* only the counterfactual interpretation: Juan didn't start going to the library.

(29)   Juan no corrió hasta su casa.
         'Juan didn't run up to his house.'

(30)   Juan casi corrió hasta su casa.
         'Juan almost ran up to his house'

- With *hasta*, both interpretations: Juan didn't start or Juan started but didn't arrive.

- Combination with manner of motion verbs:

(31)   Mary danced to the store.
                         Ramchand (2008:111)

(32)   Juan bailó {hasta/*a} la pared
         'Juan danced {up to/to} the wall'

- Why are *PathPs* punctual and atemporal?

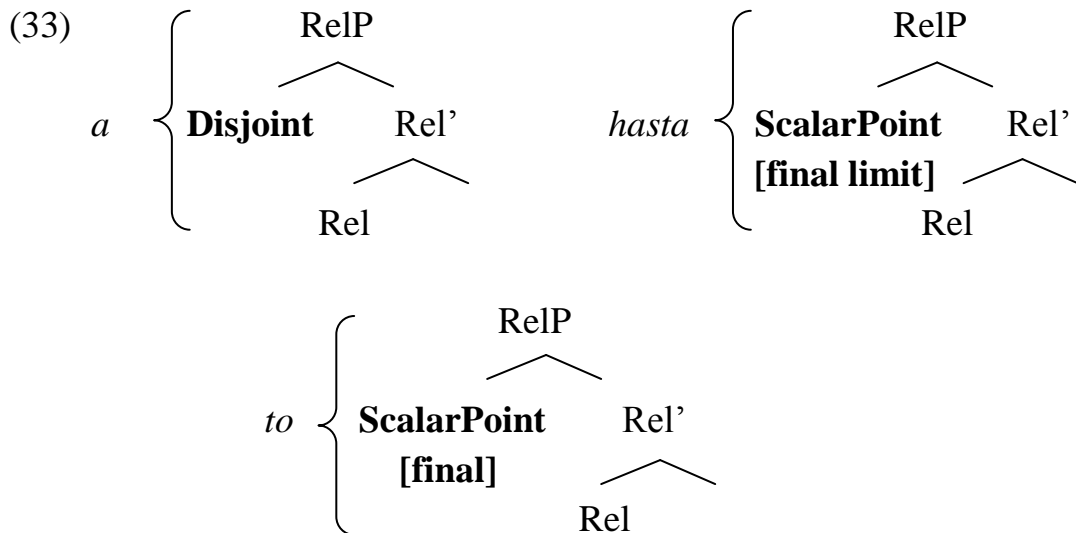   → Because *RelP* is the highest projection in the structure

- Where does the meaning of directionality come from?

    → Verb of motion + modifiers that give the interpretation that there is another location in the event (*Disjoint* and *ScalarPoint*, for example).

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6. Advantages of this model:

a. It explains (micro)variation in a subtle way:

→ By means of modifiers it is possible to keep the same basic structure in different languages and explain the differences across them:

(33)

```
            RelP                                    RelP
            ╱╲                                      ╱╲
  a ⎰ Disjoint   Rel'           hasta ⎰ ScalarPoint    Rel'
    ⎱            ╱╲                    ⎱ [final limit]  ╱╲
                Rel                                    Rel
```

```
              RelP
              ╱╲
  to ⎰ ScalarPoint   Rel'
     ⎱  [final]      ╱╲
                    Rel
```

→ As they are modifiers they are optional and they can combine with different elements: *APs*, *VPs*, etc.

  - This can explain the variation with respect to resultatives, the difference between *ser* and *estar* in Spanish, etc.

→ It also explains parameters and typologies like Talmy's (1985) in terms of the lexical items available in languages (in line with the Borer-Chomsky conjecture).

b. It solves the debate about the nature of elements like *a* in Spanish. Is it locative (cf. Fábregas 2007) or directional (cf. Demonte 2011)?

→ Locative in the sense that its highest projection is *RelP*

→ Directional in the sense that it entails two points, which is obligatory in order to have directionality

* *Disjoint* or *ScalarPoint* don't obligatorily imply directionality: locative constructions

* Directionality is possible without *Disjoint* or *ScalarPoint*: *Route* constructions

c. It is possible to keep the same structure for lexical items like *a* in locative and directional constructions.

→ In Cresswellian locations (Cresswell 1978) it is not necessary to postulate that there is a *Place* projection over a *Path* projection, as in Svenonius (2010).

Conclusions:

→ All spatial *Ps* denote a stative relationship.

→ Directionality is obtained by other means: the presence of modifiers and verbs of motion, for instance.

→ The basic structure of spatial *Ps* is the same across languages.

→ Variation comes from the presence of different modifiers.

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