

Squib Notule

Modifying Spatial P *A remark on Svenonius (2010)*

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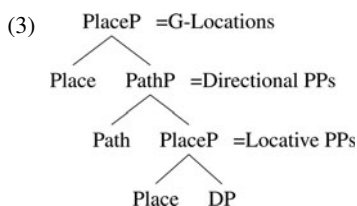
1. INTRODUCTION

Descriptions of spatial adpositions usually divide them into two classes based on their semantics: locative and directional. Generally, locative Ps (e.g., *inside*, *between*, *beside*, *above*) head PPs that describe static locations, while directional Ps (e.g., *into*, *towards*, *from*, *across*, *through*) head PPs that describe trajectories. English locative PPs, when used with manner-of-motion verbs, tend to be ambiguous between locative and directional meanings, which I refer to as located motion and directionalized locative readings, respectively. Similarly, directional PPs, when used with statives and imperfectives, are interpreted as locatives called *G-locations* (Svenonius 2010).

- (1) John ran [_{PP}between the pylons]
- a. ≈ John ran back and forth between the pylons. (located motion)
 - b. ≈ John passed between the pylons, running (directionalized locative)
- (2) A band is playing across the meadow.
- a. ≈ Strung across the meadow, a band is playing. (directional/extended reading)
 - b. ≈ At the end of a hypothetical journey across the meadow, a band is playing. (G-location)

Any formal analysis of spatial P should minimally capture the above facts.

There is a line of research stemming from Jackendoff's (1983) conceptual analysis of spatial expressions, which takes the descriptive terminology to be transparently mapped to syntactic heads. This line of research can be seen in van Riemsdijk and Huybregts (2002), Son and Svenonius (2008), Svenonius (2010, 2012), and Pantcheva (2011) among others, who propose the cartographic functional sequence shown in (3). Specifically, Svenonius (2010) proposes that (3) represents the functional sequence of spatial P in English.



It should be noted that the focus of cartographic/nanosyntactic research into spatial P tends to be on the decomposition of the individual heads as represented in (3). Svenonius (2006, 2010, 2012) proposes that (low) Place heads are a shorthand for a locative functional sequence, while Pantcheva (2011) argues the same for Path heads. This type of fine-grained analysis, however, tends to begin with the proposal that Path sequences dominate Place sequences. If this initial proposal can be shown to be problematic or false, then the analyses that rest on it will likely have to be rethought.

In this paper I offer an empirical critique of the cartographic/nanosyntactic analysis of English directionals given by Svenonius (2010, 2012). Specifically, I present a modification pattern predicted by the structure in (3), and show that it does not obtain for English.

2. MODIFYING SPATIAL P

In the spirit of Pollock (1989) and Cinque (1999) I use adverbials to assess the functional structure proposed for directional PPs. In section 2.1 I discuss the properties of *halfway* and *well*, which modify PathPs and PlacePs, respectively. In section 2.2 these modifiers are used to test for the presence of hypothesized Path and Place heads in several classes of directional PPs.

2.1 *Halfway and well*

As might be expected, directional and locative PPs differ with respect to the modification they take. The modifiers *well* (Yang 2015) and *halfway* (Bochnak 2013) are examples of PlaceP modifiers and PathP modifiers, respectively. In this section I discuss each of these modifiers, in turn, and show how I will use them to test Svenonius' analysis.

Compare the effect of *well*-modification on PlacePs, in (4), and on PathPs, in (5).

- (4) a. The ball sat (well) on the green.
 b. The dog sat (well) inside the house.
 c. Alex stood (well) behind Jamie.
- (5) a. John biked (*well) to the store.
 b. The plane flew (*well) toward Berlin.
 c. Mary ran (*well) from the building.

Well is able to felicitously modify PlacePs but not PathPs. Note, however, that there are some PlacePs that cannot be modified by *well*, as demonstrated by the deviance of the strings in (6).¹

¹An explanation of this fact would require an in-depth semantic analysis of spatial expressions and their modifiers. This, however, is beyond the scope of the current squib, so I will set it aside for now. I encourage those interested in performing such an analysis to start with Zwarts and Winter (2000) and Tortora (2008).

- (6) a. *Bill sat well beside the house.
 b. *Mary sat well near the house.

The acceptability of *well*-modification can therefore be taken as evidence of a PlaceP, but the unacceptability of *well*-modification with a particular preposition is not necessarily evidence for the absence of a PlaceP.

In contrast to *well*, *halfway* modifies both PlacePs and PathPs, but with very different interpretive effects. This is because *halfway* naturally modifies PathPs and imposes a path interpretation on the PlacePs it modifies. Compare the interpretations of *halfway*-modified PathPs in (7) with those of *halfway*-modified PlacePs in (8).

- (7) a. Ryan ran halfway to the store.
 b. Max drove halfway through the woods.
 (8) a. Ray sat halfway between the pylons.
 b. Peter lay halfway inside the house.

When *halfway* modifies a PathP, the resulting interpretation is predictably compositional: half of the trajectory defined by the unmodified PathP. *Halfway*, on the other hand, imposes trajectory interpretations on PlacePs, and the nature of those imposed trajectories depends on the choice of preposition. In (8a), the trajectory extends from one pylon to the other, while in (8b) the trajectory extends the length (or width) of Peter's body. That is, when *halfway* modifies a PlaceP, the interpretation of either the PlaceP or the Figure argument is coerced into being interpreted as a trajectory. The choice of which element is coerced, however, varies depending on which preposition heads the PlaceP.

So, having a predictably compositional interpretation under *halfway*-modification can be taken as evidence of a PathP, and having only a coerced interpretation can be seen as evidence of the absence of a PathP.

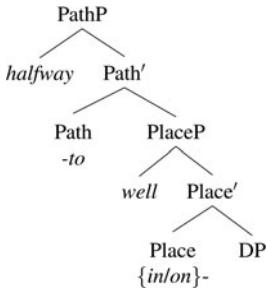
In the next section, I discuss the predictions Svenonius (2010, 2012) makes with respect to *well* and *halfway*, and test those predictions.

2.2 Modification tests

2.2.1 Into and onto

Svenonius (2010) proposes that PPs headed by the directional prepositions *into* and *onto* are PathPs that involve Place-to-Path raising of their locative components *in-* and *on-*.² With respect to *halfway*, we expect the predictable rather than idiosyncratic interpretations.

²See, for instance, Noonan (2010) for a discussion of alternative analyses of *into/onto*, though.

(9) *Predicted modification possibilities for into/onto*

Two possible outcomes are predicted for *well*. The first is that *well*-modification will be barred. The second is that *well* will surface between the preposition and its DP, just as V-to-T raising in French allows adverbs like *souvent* ‘often’ to appear between the verb and its direct object as in (10) (Pollock 1989).³

- (10) Jean embrasse souvent Marie.
 John kisses often Mary
 John often kisses Mary.

These modification tests reveal that none of the predictions made by Svenonius’ proposal are borne out for *into/onto*. First, *halfway*-modification yields idiosyncratic path interpretations.

(11) *Halfway-modification*

- a. The dog ran halfway into the house.
- b. The ball rolled halfway onto the road.

The sentences in (11) do not mean the subject traversed half of a trajectory that extends for some contextually determined start-point to *inside the house* or *on the road*. That is, the interpretations of *halfway into the house* and *halfway onto the road* are not transparently compositional. Rather, these sentences receive coerced interpretations. For instance, (11a) either entails that, after the running event, either the dog is at the center of the house, or half of the dog is inside the house. In the first interpretation, the interior of the house (a location) is construed as a trajectory, while in the second interpretation, the dog (an entity) is construed as a trajectory. Similarly, (11b) either entails that, after the rolling event, either the ball is at the mid-point of the road, or half of the ball is on the surface of the road. In the first interpretation, the surface of the road (a location) is construed as a trajectory, while in the second interpretation, the ball (an entity) is construed as a trajectory. These coerced interpretations are typical of PlacePs modified by *halfway*, which suggests that no PathP is involved in *into/onto* PPs.

Second, *well*-modification is allowed with *into/onto*, but only to the left of the preposition.

³Thanks to Benjamin Bruening for pointing out this possibility.

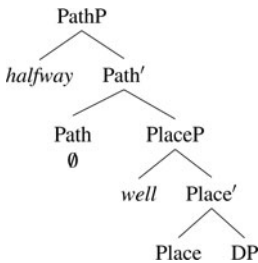
(12) *Well-modification*

- a. The dog ran (well) into (*well) the house.
- b. The ball rolled (well) onto (*well) the road.

The unacceptability of *well* to the right of these prepositions suggests that they do not embed a PlaceP. The acceptability of *well* to the left of *into* or *onto* suggests that they are Place heads, or are dominated by Place heads. Since the *halfway*-modification facts suggest the absence of a PathP, the most likely conclusion is that the directional prepositions *into* and *onto* are Place heads.⁴

2.2.2 *Directionalized locatives*

According to Svenonius' analysis, directionalized locatives are composed of a PlaceP embedded in a null-headed PathP. This predicts they should be modifiable by both *well* and *halfway*.

(13) *Predicted modification possibilities for directionalized locatives*

As the examples in (14) show, directionalized locatives can be modified by *well*, which provides evidence for a PlaceP in directionalized locatives.

- (14) a. The dog ran well behind the house.
- b. Charles kicked the ball well between the pylons.

If directionalized locatives are PathPs, then we expect the predictable reading under *halfway*-modification. The examples in (15), however, show that, under *halfway*-modification, directionalized locatives get an idiosyncratic, rather than a predictable path reading.

- (15) a. The dog ran halfway behind the house.
- b. Charles kicked the ball halfway between the pylons.

⁴An anonymous reviewer points out that examples like (1) suggest that *into* and *onto* project PathPs (Svenonius 2010).

- (1) a. *? The dog remains/is located into the house.
- b. *? The ball remains/is located onto the house.

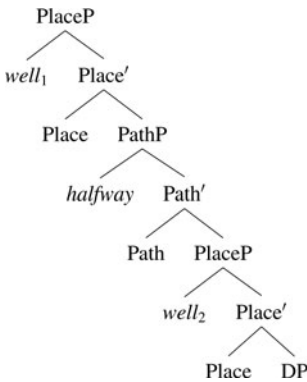
It is difficult to assess the implications of such data without an analysis of the selectional properties of *remain* and *be located*. Such an analysis being outside the scope of this squib, I leave it for later research.

Svenonius' analysis predicts that the modified PPs in (15a) and (15b) should describe half of a trajectory from some contextually determined starting point to *behind the house* or *between the pylons*, respectively. Thus, they should describe an eventuality (or situation) which ends with the Figure argument (*the dog* and *the ball*) not in the place described by the locative PP. While interpretations vary, the predicted interpretations are unavailable to every English speaker I have asked. This suggests that there is no PathP involved in directionalized locatives.

2.2.3 G-locations

G-locations are proposed to involve three layers of P heads, which predicts three distinct modification sites.

(16) Predicted modification possibilities for G-locations



Under *halfway*-modification, we expect the predictable interpretation, which is what we get.

(17) Halfway across the meadow, a band is playing.

The PP in (17) describes half of a trajectory that extends from one side of *the meadow* to the opposite side, so that the entire sentence describes an eventuality of a band playing in a location at the end of a journey halfway across the meadow. This is the expected interpretation, so we have evidence of a PathP in G-locations.

Since Svenonius proposes that these PPs contain two PlacePs, we expect two possible interpretations of *well*-modification. Consider (18).

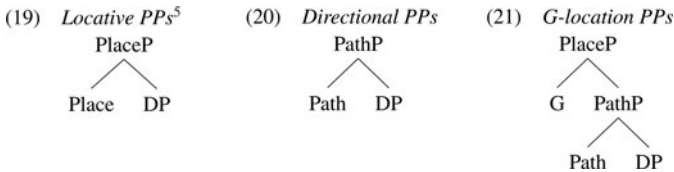
(18) Well across the meadow, a band is playing.

Since *across* is, by hypothesis, decomposable roughly into *via* and *on* we expect *well* to be able to modify that *on* component. So, (18) should be interpretable as “at the end of a journey via well on the meadow, a band is playing.” This interpretation does not seem to be available, suggesting that the proposed lower PlaceP is absent. Instead, (18) is interpreted only as “well at the end of a journey ...” which is predicted by Svenonius' proposal that G-locations involve a null-headed PlaceP that embeds a PathP.

3. CONCLUSION

The facts of *halfway*- and *well*-modification support three conclusions regarding Svenonius' (2010) proposed structures for directional PPs. First, PathPs are not derived from PlacePs; rather, Place and Path seem to be distinct subcategories of P. Second, despite the fact that *into* and *onto* appear to be morphologically derived from Place + Path heads, they pattern with PlacePs with respect to modification.

Third, Svenonius' proposal of a null G Place head dominating PathPs seems to be correct. These conclusions are represented by the trees in (19)–(21).



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⁵Including *into*, *onto*, and directionalized locatives

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