Straight to the point: Modified PPs in FDG

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1 Introduction

Over the last decades there has been some debate in FDG about the status of adpositions: are they lexical or grammatical, and how can we tell? As far as English spatial prepositions are concerned, it is generally assumed that most are lexical, but that some are better regarded as grammatical, even if there is no consensus on exactly which prepositions are lexical or grammatical (e.g. Mackenzie (1992, 2013) vs. Keizer (2008)). One of the reasons for this lack of consensus is that application of the most commonly used criteria for lexical/grammatical status (e.g. modifiability, predicative use, focalizability, combinability, etc.) does not yield an unequivocal result.

In this squib I'm not going to resolve (or even address) this issue. Instead, I will focus on some problems arising from the application of one of the most important tests for lexical status, modifiability, to prepositional phrases (PPs) with grammatical prepositions. In particular, I will be looking at examples involving the English prepositions *to* and *from*, such as:

(1) a. *milk straight from the cow*, *a train straight from/to the station*
b. *a house two kilometers from the city*

Some attested examples of these constructions are given in (3). Note that, since in all these examples the modified PP is part of a noun phrase, the element *straight* cannot be interpreted as scoping over a higher unit (such as the SoA, as in *I took the money straight to the bank*).

(2) a. *If you live near a dairy farm,* ***milk straight from the bulk tank*** *is sure to be fresher.* (COCA, magazine)
b. *A thief's poor sense of a direction earned him* ***a trip straight to the city*** *jail.* (COCA, web)

(3) a. *In Holland we owned* ***a house 20 miles from the capital*** *in a small town worth 50.000 in 1990.* (GloWbE, IE)

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b. *For our first event Dan wanted to throw us off* ***a roof 200 meters from the ground****.* (GloWbe, GB)

2 So what's the problem?

The problem is that providing an FDG analysis of the expressions exemplified in (1)-(3), i.e. modified PPs with a grammatical preposition, turns out to be far from straightforward. If the PP is headed by a lexical preposition (e.g. *under*, *in*, *in front of*), analysing expressions with the modifier *straight* is unproblematic, irrespective of whether the modifier is taken to scope over the PP as a whole (e.g. Keizer 2008: 226, 229) or over the preposition alone (e.g. Giomi 2023: 333). Neither analysis can, however, be extended to those cases where the PP contains a grammatical preposition, as in examples (1b) and (2). I'll discuss this problem in Section 2.1 below.

The examples in (3) pose an additional problem. In previous analyses, expressions such as *two kilometres under the ground* have been analysed as locative expressions containing a quantifying element (q) modifying either the location as a whole (Mackenzie 2013: 84) or just the preposition (Giomi 2023: 334-335). In (1b) and (3), however, we have a grammatical preposition; in addition, unlike in the case of *straight*, in these examples the measure phrase cannot be left out:

(4) a. **a house from the capital*
b. **off a roof from the ground*

This issue will be addressed in Section 2.2.

2.1 Straight

In analysing the PPs in (1a) and (2), the question for FDG is where to put the modifier *straight*. Since it is clearly truth-conditional, it will have to be represented at the Representational Level. But which layer does it belong to? If *from* and *to* are grammatical (the prevalent view in FDG; e.g. Hengeveld & Mackenzie 2008: 252; Mackenzie 2013), *straight* cannot modify the preposition. Assuming a wide-scope analysis, however, is also problematic. In FDG, PPs with a grammatical preposition are analysed as an Individual (x) or Location (l)[1] provided with a semantic function (e.g. Allative, Ablative) triggering the preposition, as illustrated in (5):[2]

[1] Note that the embedded NP can be anaphorically referred to as *it*/*what* (x) or *there*/*where* (l).
[2] The symbol – indicates the presence of further internal structure not relevant for the current discussion.

(5) a. *from the station* $(x_i/l_i$: –station– $(x_i/l_i))_{Abl}$
b. *to the station* $(x_i/l_i$: –station– $(x_i/l_i))_{All}$

Such an analysis leaves no room for the modifier *straight*. Modifiers restrict the head of an expression, and as such fall within the scope of functions. In this case, however, the modifier *straight* scopes over the entire expression, including the function: it is not the station that is straight, but the path denoted by the PP as a whole. This cannot be captured in the representations in (5).

We could, of course, avoid the problem by assuming that the preposition from is lexical. In that case, modification of the entire PP would be unproblematic, as shown in (6), where we have a Configurational Property (f^c_i) consisting of a prepositional predicate (f_j) and its argument (x_i), and where *straight* is analysed as modifying this Configurational Property:

(6) $(f^c_i$: $[(f_j$: from $(f_j))$ $(x_i$: –cow– $(x_i))_{Ref}]$ (f^c_i): $(f_k$: straight $(f_k))$ $(f^c_i))$[3]

However, this does not solve the problem, since languages in which the allative and ablative functions are expressed grammatically allow for the same kind of modification, as shown in (7) and (8) for Hungarian (Lotti Viola, personal communication):

(7) *egy vonat egyenes-en az állomás-ig*
a train straight-ADVR the station-ALL
'a train straight to the station'

(8) *egy vonat egyenes-en az állomás-tól*
a train straight-ADVR the station-ABL
'a train straight from the station'

An alternative solution would be to provide the representation with an additional Property layer, thus turning the Individual/Location, together with its semantic function, into a Property (cf. Keizer 2008: 218). Note that a similar strategy is employed by Hengeveld & Mackenzie (2008: 190) in their analysis of relational non-verbal Properties. Thus, in (9), the ablative expression functions as the head of the Property f_j, which functions as the non-verbal predicate:

(9) a. *This tea is from Sri Lanka*.

[3] It might be argued that *straight* is a lexical operator (Keizer 2007, Hengeveld 2017: 30-31, Giomi 2023: 306-309); this does not, however, affect the problem discussed here.

b. (f^e_i: [(f_j: (l_i)$_{All}$ (f_j)) (x_i)$_{\Phi}$] (f^e_i))

Likewise, we could analyse a phrase like (10a) as in (10b):

(10) a. *milk straight from the cow*
b. (x_i: (f_i: milk (f_i)) (x_i): (f_j: (x_i: –cow– (x_i))$_{All}$ (f_j): (f_k: straight (f_k)) (f_j)) (x_i))

Now the modifier *straight* now has the right scope, modifying the Property 'from the cow' (f_j) as a whole, thus correctly indicating that it is the path from the cow that is straight.[4]

2.2 Measure phrases

In examples (1b) and (3), the PP as a whole does not denote a path, but a location, with the measure phrase indicating the distance between this location and some other entity. As mentioned above, in similar expressions with lexical prepositions, the measure phrase (a quantifying element) has been analysed either as modifying the entire Location (Mackenzie 2013: 84), as shown in (11b), or as modifying the preposition only (Giomi 2023: 334–335), as in (11c):[5]

(11) a. *two miles under the ground*
b. (l_i: (f^e_i: [(f_j: under (f_j)) (x_i: –ground– (x_i))$_{Ref}$] (f^e_i)) (l_i): (2 q_i: –miles– (q_i)) (l_i))
c. (l_i: (f^e_i: [(f_j: under (f_j): (2 q_i: –miles– (q_i)) (f_j)) (x_i: –ground–(x_i))$_{Ref}$] (f^e_i)) (l_i))

Once again, however, neither of these analyses can appropriately be applied to PPs with a grammatical preposition. Moreover, unlike in (11), the measure phrases in (1b) and (3) cannot be omitted: it is only in the presence the measure phrase that such PPs can be used to denote a location (rather than a source or path). This suggests that we are dealing not with a head-modifier, but with a predicate-argument relation, with the ablative expression *from the city* serving as

[4] It might be objected that both (9) and (10) contain an 'orphaned' semantic function, as the element assigned the ablative function has neither a head nor a predicate; as such, it is not clear from the representation what the ablative expression is the source of. In (9) the relation is between *Sri Lanka* and *this tea*, but the latter element functions itself as an argument of the non-verbal predicate *from Sri Lanka*. In (10) the intended head is the milk, but this is not captured in the analysis, since the semantic function is not assigned to the modifier as a whole, but to a component part of this modifier. A discussion of this problem is beyond the scope of this squib.

[5] I will not address the question of which of these analyses is to be preferred.

the predicate, and the measure phrase as its argument. This results in the underlying structure given in (12b):

(12) a. *(a house) two kilometres from the city*
b. $(l_i: (f^c_i: [(f_j: (x_l: \text{–city–} (x_i))_{Abl} (f_j)) (2\ q_i: \text{–kilometre–} (q_i))_{Ref}] (f^c_i)) (l_i))$

This representation seems to capture the complex semantics of the phrase, which as a whole denotes a location (l_i) headed by a Configurational Property (f^c_i) consisting of a predicate (f_j), representing the source expression *from the city*, and its argument (q_i), expressed as *two kilometres*. In other words, the representation in (12b) indicates that we have a location that is determined by a path between two entities (the house and the city, with the city denoting the starting point), and that this path has a length of two kilometres. Such an analysis would thus account for the fact that neither the source expression (as the predicate), nor the quantifying element (as the argument) can be left out: both elements are needed to trigger the location reading of the expression as a whole.

3 Conclusion

In this squib I have provided FDG analyses for two types of modified PPs containing a grammatical preposition (*to* or *from*). The first construction, containing the adverbial modifier *straight* (as in *milk straight from the cow*) is problematic because the modifier scopes over the allative/ablative function, thus violating the basic scope relations in FDG. The problem was solved by representing the PP as a Property headed by the allative/ablative expression, and by analysing the modifier *straight* as a scoping over this the Property. The second type of construction (*a house 2 kilometres from the city*) posed the problem that, unlike in similar expressions with a lexical preposition, the measure phrase cannot be left out. This problem was solved by analysing the measure phrase as an argument of the source expression, triggering a Location reading of the expression as a whole. Such an analysis would also account for the fact that neither the source expression, nor the measure phrase can be omitted.

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