Refining the syntax of non-core arguments: P, applicative, and functional p

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In Preposition Incorporation (PI), where a free-standing P incorporates into a verbal complex (Baker 1988), non-core arguments (e.g., benefactive, comitative, or instrument etc.) are introduced by the P. An alternative is that they are introduced by an applicative head (Appl) that merges above VP (Pylkkänen 2008). In this paper, I show that not all non-core arguments are accounted for by PI or Appl, providing evidence from Blackfoot, an Algonquian language. Blackfoot has a non-core argument introducer, a linker (Frantz 2009) (2)-(4). I argue that the linker is the realization of functional p, neither P nor Appl, and that the pP adjoins to vP (see (10)). This analysis suggests that p, P, and Appl are distinct elements, in contrast to previous views (Baker 1988, Yabe 2007). Moreover, it indicates that the syntax of non-core arguments is more refined than the current literature has proposed.

The first objection to the Appl approach is that Blackfoot has an applicative suffix, -omo (1), which is distinct from the linkers ohp- (2), iiht- (3), and itap- (4), which are all prefixes.

(1) nit-(w)aahkan-omo-a-wa [ana issitsimaan/*ani akkssin] am-iksi si’kaan-iksi
1-sew-APPL-DIRECT-3S [DEM baby DEM bed] DEM-PL blanket-PL
‘I sewed those blankets [for the baby/*for the bed].’
(Bliss 2007)

(2) nit-ohp-waatato’to-a-yi/*wa an-iksi saahkomaap-iksi ani akiikoanyi
1-LINKER-hug-DIRECT-3PL/3S DEM-PL boy-PL DEM girl
‘I hugged those boys [with the girl].’

(3) kit-iiht-aawaakomi’taki-(*wa) niisto/ani akoopis (4) nit-itap-oo-(*wa) New York
2-LINKER-love-(3S) I /DEM soup 1-LINKER-go-(3S) New York
‘You love [by means of] me/the soup.’
‘I went [to New York].’

Moreover, the arguments of the applicative suffix and the linkers show contrasting properties in animacy and agreement. The applicative suffix allows animate arguments only: the inanimate 'the bed' is ungrammatical (1) (Bliss 2007). However, the linkers allow both animate arguments ('the girl' (2), 'I' (3)) and inanimate arguments ('the soup' (3), 'New York' (4)). An applied argument agrees with the verb, as the 3s marker wa on the verb in (1) shows. In contrast, the linker does not show agreement: in (2), it is the object 'those boys' that agrees with the verb, not 'the girl', as the ungrammaticality of wa on the verb shows. Wa is ungrammatical in (3-4) as well. These contrasts suggest that linkers and Appl are syntactically distinct. Other compelling evidence comes from person prefixes and theme (direct or inverse) markings. Unlike an applied argument (7), the argument of the linker cannot be a person prefix nit- (5): it must be an independent pronoun niisto (3). Linkers are also inert for theme marking. For instance, the inverse marker -ok, which indicates that third person acts on first person, is not possible with the linker (6), but is possible with Appl (7). As agreement, person and theme marking, and being animate are only possible with the arguments of the predicate in Blackfoot (e.g., Frantz 2009, Ritter and Rosen 2010), I propose that a linker, unlike Appl, does not contribute to the argument structure of the VP.

(5) *nit-iiht-aawaakomimm-ok-wa ana John (6) *ana John iiht-aawaakomimm-ok-wa niisto
1-LINKER-love-INVERSE-3S DEM John DEM John LINKER-love-INVERSE-3S I
‘John loves [me].’
‘John loves [me].’ (3 > 1)

(7) ana John nit-ihkiit-omo-ok-wa ani napayin
DEM John 1-bake-APPL-INV-3S DEM bread
'John bakes the bread [for me].' (3 > 1)

In PI, non-core arguments show some object properties after incorporation, such as agreement (Baker 1988); i.e., they contribute to the argument structure of the VP. However, the arguments of the linker do not (e.g., no agreement with the verb (2-4)). Another objection to the PI approach is that linkers never appear as adpositions on their own (8a) unlike P in PI. This is not possible even with the place suffix -oohtsi (8b/8c), which allows P to appear independently from the verb (e.g., P, waamis ‘up’ in (8d) vs. (9a)). Another important difference between P and linkers is that P cannot introduce any participant, as (9b) shows (cf. (9a)).

LINKER DEM girl LINKER-place LINKER-place up-place
'with the girl.' Lit. 'from-in' 'into' 'upstairs'
(9) a. nit-yaak-waamis-oo b. *nit-yaak-waamis-oo ani isspahkoyi
   1-FUT-up-go 1-FUT-up-go DEM hill
   'I will go up.' 'I will go up [the hill].'

Given the differences between the linker and P on the one hand, and the linker and Appl on the other, I argue that the linker is neither P nor Appl, but a functional p that adjoins to vP (10). The functional p is discontinuous from DP (10), like a locative linker in Blackfoot (Bliss et al. 2013). A functional element can attach to another functional element, but it cannot attach to a lexical element (Baker 2003). This is exactly the property of the linker. Evidence comes from nominalization that targets I(nner)-AspP, which appears between vP and VP (Ritter 2013) (11). The fact that the linker is not allowed in the nominalization (12a) suggests that it must attach to an element higher than I-Asp, i.e., a functional element, not the lexical element V. As Appl is functional, it is predicted to be disallowed in the nominalization, as in (12b); thus, it would appear higher than I-AspP, e.g., above vP taking the vP as a complement (Bliss 2010), like Appl in Pylkkänen (2008). p in (10) is different from Appl in that it adjoins to vP and is not an extended projection of VP. Thus, the functional p approach in (10) captures the data (2)-(6) that show that the linker does not contribute to the argument structure of VP (i.e., the absence of agreement, animacy restriction, and person and theme marking).

(10) [vP [pP p pro1] [vP v ... DP1 ... [VP V PP]]]
(11) [vP v [I-AspP I-Asp [VP V]]]

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Grammaticality of the nominalization of P provides additional support that the linker is a functional element, unlike the lexical P. P is allowed in the nominalization (12c), in contrast to the linker (12a), which suggests that P appears below I-AspP, unlike the linker (10). The consequence that p and P are discontinuous as in (10) is not surprising, as discontinuous constituents are characteristic of Algonquian languages (e.g., Dahlstrom 1987, Reinholzt 1999, Bliss 2012).

In the current analysis, p in Blackfoot introduces a non-core participant, in contrast to P. The prediction is that p will introduce a goal nominal in prepositional ditransitive constructions, as such constructions lack Appl but bear adpositional phrase (Marantz 1993). This is borne out by the (13), where the goal 'to John' is introduced by the linker p itap 'to'.

(13) nit-itap-ipsstskahtoo-p-yi ana John an-istsi sinaakia'tsisis-istsi
   1-LINKER-deliever-DIRECT-3PL DEM John DEM-PL book-PL
   'I delivered those books to John.'

Moreover, the analysis (10) that pP adjoins to vP predicts that the goal in Blackfoot would be different from goals that appear inside VP, e.g., Korean (e.g., Park and Whitman 2003). As predicted, the goal PP in Korean is allowed in the nominalization that targets VP (14a), contrary to the goal in Blackfoot (14b).

(14) a. [vP [PP Swuni-ekey]uy chayk-uy poynay]-m b. *itap-ipsstskahtoo-hsin (ana John)
   Suni-P-GEN book-GEN send-NOM LINKER-deliver-NOM DEM John
   'Sending the book to Suni'
   'Delivering (to John).'†

Another consequence of the claim that p adjoins to vP differently from P, which appears inside the VP, is that PP would be included in the VP idiom but pP would not, which is also borne out by data. A linker in Blackfoot, i.e., p (10), is never found with VP idioms (Frantz and Russell 1995). In contrast, a PP in Blackfoot (15a) can be included in a VP idiom; this is also true for Korean with a PP that appears inside VP (15b).

(15) a. yaak-[vP [PP istaaht]-oo]-wa b. [vP [PP ip-ey] mothe-lul tal-]
   FUT-under-go-3S mouth-P motor-ACC put.on
   'He will [go to Hell].'
   'speak very fast and quickly.'

The functional p approach to the linker provides an account for its distinct properties that have often been described in the Algonquian literature (e.g., Rhode 2006, 2010). Theoretically, this paper provides novel empirical support that p is distinct from Appl and P, in contrast to previous studies (Baker 1988, den Dikken 1995, Yabe 2007). Thus, the proposed analysis indicates that the syntax of non-core arguments is more refined than the current literature would suggest.