Overt Evidence from Left-Branch Extraction in Polish for Punctuated Paths

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1. Outline. In Polish, *wh*-questions are formed by pied-piping of an entire *wh*-NP or by the extraction of a left-branch *wh*-phrase (LBE). A question formed by a fronted *wh*-NP is given in (1a). In this paper we argue that an NP stranded by a *wh*-phrase marks a position in which a *wh*-NP has been merged in its derivational history. There can be three such positions, all marked by a stranded NP: the base generated position of the *wh*-NP (1b); the left edge of the vP (1c); and – in the case of long distance *wh*-movement – the left edge of the embedded CP (2). Interestingly, a percentage of speakers also accept a long-distance *wh*-question construction in which an NP is stranded at the edge of the upper vP (3). Constructions in which the movement of the left branch strands the NP in a fronted position then provide new evidence for successive-cyclic movement and, more broadly, for punctuated paths in syntax. In this paper, apart from revealing constructions like in (1c), (2), and (3), we show that positions marked by the stranded NP are indeed edges of phases, vP and CP.

2. The position of arguments in Polish. Polish is a consistent head-initial language. Witkoś (2003, 2007), a.o., on the basis of binding, reconstruction, clitic positions, idioms, and VP-adverbs argues that (*i*) the basic (unmarked) word order in Polish is S-V-IO$_{DAT}$-DO$_{ACC}$ (as in (4b)) and (*ii*) that the vP-structure is as in (4a) with the lexical verb in V^0 raising overtly to the little v^0. Accordingly, we will continue to assume that the basic position of both objects is post-verbal and the verb occupies v^0.

3. *Wh*-fronting. Polish is a multiple *wh*-fronting language, which allows for Superiority violations. However, none of the *wh*-phrases moves to Spec-CP in questions, but to a projection between the CP and the subject in Spec-IP (cf. Citko & Grohmann 2001). This is indicated by the overt complementizer *że* `that', which always precedes all fronted *wh*-phrases (cf. (5a)); examples in (5b,c) are ruled out by the Doubly Filled Comp Filter (DFCF). Single *wh*-questions can also be construed by the subextraction of the *wh*-phrase from the *wh*-NP, as in the synonymous examples in (6a,b).

4. LBE from fronted *wh*-NPs. Consider (7), where the *wh*-NP *jaki samochód* `what car' is split by the extraction of the *wh*-word *jaki* `what'. In (7a), the *wh*-word strands the NP in its base-generated position. In (7b), the NP is stranded in a fronted position, which arguably corresponds to the edge of the vP, given what has been established about the structure of (4b). Since a well-formed *wh*-question involves movement of either an extracted *wh*-phrase or an entire *wh*-NP, a construction like in (7b) provides visible evidence for intermediate derivational stages. In embedded questions, the NP can also be stranded at the edge of the embedded vP (8). A percentage of speakers also accept long-distance *wh*-questions, in which the NP can be stranded in its base-generated position (9b), at the edge of the embedded vP (9c), or at the edge of the embedded CP (9d). The variant with a pied-piped *wh*-NP is given in (9a) and is synonymous with (9b,c,d). In (9c), the extraction of the *wh*-word takes place from the *wh*-NP fronted to a position between the Subject and the verb in v^0, which arguably corresponds to the edge of the vP. In (9d) we also see that the stranded NP at the edge of the embedded clause cannot be followed by an overt complementizer, as this is prohibited by the DFCF (cf. (5b,c)). (It must be noted that long distance *wh*-questions with stranded NPs like in (9b-d) receive a slightly forced reading and their acceptability among speakers vary).

Despite the fact that *wh*-phrases in Polish do not move to Spec-CP but to a projection below the complementizer ("ΣP"), stranding the NP in the ΣP is impossible even for speakers who accept (9b-d), as indicated by (10). This shows that before the NP is stranded, the full *wh*-NP is fronted to the phonological edge of the clause, not to the intermediate ΣP. Note that at the same time the presence of the overt complementizer *że* `that' is obligatory in embedded declarative clauses (11), and there is no *that*-trace effect in Polish (cf. Szczegielniak 1999). (9d) then provides evidence for successive-cyclic movement through the edge of the CP phase in a language in which *wh*-phrases do not target CPs in clause-bounded *wh*-questions. What is also particularly interesting is the fact that a percentage of speakers accept also long-distance *wh*-questions as in (12), where the NP is stranded at the vP-edge of a *matrix* clause.

5. Successive-cyclic movement, not scrambling. It remains to be shown whether the dislocations of *wh*-NPs to the edges of phases indeed provide evidence for successive-cyclic movement and are not instances of scrambling. This needs to be unambiguously determined since there does not exist a prima facie argument against a scenario in which a subextraction of a *wh*-phrase is preceded by scrambling of a *wh*-NP to the phase edge. Nevertheless, (12) already provides strong evidence for successive-cyclicity. The *wh*-NP is fronted here to the edge of the vP of the upper clause, while scrambling in Polish is strictly clause-bound, as shown for instance in (13). Scrambling of the direct object is felicitous across any constituent, as long as it does not cross the CP-boundary. Since NPs do not scramble across the CP-boundary, it appears that *wh*-NP-fronting which targets intermediate phase edges en route to the matrix ΣP is induced by successive-cyclic movement. LBE from displaced *wh*-NPs in Polish then provides overt evidence for punctuated paths in syntax.

Examples:

(1) a. **Jaki samochód** Paweł   kupił   swojej żonie t ?
what car-ACC   Paweł-NOM bought his   wife-DAT
    b. **Jaki** Paweł   kupił   swojej żonie   __**samochód**?
what Paweł-NOM bought his   wife-DAT car-ACC
    c. **Jaki** Paweł   __**samochód** kupił   swojej żonie t ?
what Paweł-NOM car-ACC   bought his   wife-DAT
"What car did Paweł buy his wife?"

(2) **Jaki** *pro* myślisz   __**samochód** (*że) Paweł   kupił   swojej żonie t ?
what *pro* think-2SG.MSC car   that Paweł-NOM bought his   wife-DAT
"What car do you think that Paweł bought his wife?"

(3) %**Jaki** Maria   __**samochód** myślała, że   Paweł   kupił żonie t ?
what Mary-NOM   car-ACC   thought   that Paweł-NOM bought wife-DAT
"What car did Mary think Paweł bought his wife?"

(4) a. …$[_{vP}$ V^0+v^0 $[_{VP}$ NP-DAT $[_{V'}$ t_{V^0} NP-ACC]]]
    b. $[_{IP}$ Jan $[_{vP}$ szybko $[_{v'}$ posłał $[_{VP}$ Marii $[_{V'}$ t_{V^0} książkę]]]]]
        Jan-NOM quickly   sent   Mary-DAT   book-ACC

(5) a. Jan   myślał $[_{CP}$ że $[_{\Sigma P}$ **co**$_2$ **komu**$_1$ Paweł   kupił t_1 t_2]]?
Jan-NOM thought   that   what whom Paweł-NOM bought
"Jan thought that what car Paweł bought to whom?"
    b. *Jan   myślał $[_{CP}$ **co**$_2$ że $[_{\Sigma P}$ **komu**$_1$ Paweł   kupił t_1 t_2]]?
Jan-NOM thought   what that   whom Paweł-NOM bought
    c. *Jan   myślał $[_{CP}$ **jaki samochód**$_2$ że $[_{\Sigma P}$ **komu**$_1$ Paweł   kupił t_1 t_2]]?
Jan-NOM thought   what car   that   whom Paweł-NOM bought

(6) a. **Jaki samochód** Paweł   kupił   swojej żonie t ?
what car-ACC   Paweł-NOM bought his   wife-DAT?
    b. **Jaki** Paweł   kupił   swojej żonie __**samochód**?
what Paweł-NOM bought his wife-DAT   car-ACC
"What car did Paweł buy his wife?"

(7) a. $[_{CP}$ $[_{\Sigma P}$ **Jaki** $[_{IP}$ Paweł $[_{vP}$ kupił   swojej żonie __**samóchod**]]]]?
what   Paweł-NOM bought   his wife-DAT   car-ACC
    b. $[_{CP}$ $[_{\Sigma P}$ **Jaki** $[_{IP}$ Paweł $[_{vP}$ __**samochód** kupił   swojej żonie t]]]]?
what   Paweł-NOM   car-ACC   bought   his wife-DAT
"What car did Paweł buy his wife?"

(8) ? Jan   myślał, $[_{CP}$ że $[_{\Sigma P}$ **jaki** Paweł $[_{vP}$ __**samochód** kupił   swojej żonie t]]]?
Jan-NOM thought   that   what Paweł-NOM   car-ACC   bought   his wife-DAT
"Jan thought that what car Paweł bought his wife?"

(9) a. $[_{CP}[_{\Sigma P}$ **Jaki samochód** $[_{IP}$ *pro* $[_{vP}$ powiedziałeś $[_{CP}$ (że) $[_{IP}$ Paweł $[_{vP}$ kupił żonie t]]]]]]]?
what car-ACC   said-2SG.MSC   that   Paweł-NOM bought wife-DAT
    b. ? $[_{CP}[_{\Sigma P}$ **Jaki** $[_{IP}$ *pro* $[_{vP}$ powiedziałeś $[_{CP}$ (że) $[_{IP}$ Paweł $[_{vP}$ kupił żonie   __**samochód**]]]]]]]?
what   said-2SG.MSC   that   Paweł-NOM bought wife-DAT car-ACC
    c. ? $[_{CP}[_{\Sigma P}$ **Jaki** $[_{IP}$ *pro* $[_{vP}$ powiedziałeś $[_{CP}$ (że) $[_{IP}$ Paweł $[_{vP}$ __**samochód** kupił   żonie t]]]]]]]?
what   said-2SG.MSC   that   Paweł-NOM   car-ACC   bought wife-DAT
    d. ? $[_{CP}[_{\Sigma P}$ **Jaki** $[_{IP}$ *pro* $[_{vP}$ powiedziałeś $[_{CP}$ __**samochód** (*że) $[_{IP}$ Paweł $[_{vP}$ kupił   żonie t]]]]]]]?
what   said-2SG.MSC   car-ACC   that   Paweł-NOM bought wife-DAT
"What car did you say Pawel bought his wife?"

(10) *$[_{CP}$ $[_{\Sigma P}$ **Jaki** $[_{IP}$ *pro* $[_{vP}$ powiedziałeś $[_{CP}$ że $[_{\Sigma P}$ __**samochód** $[_{IP}$ Paweł $[_{vP}$ kupił   żonie t]]]]]]]]?
what   said-2SG.MSC   that   car-ACC   Paweł-NOM bought wife-DAT

(11) Maria   powiedziała, że/*Ø Robert   wygrał wybory.
Maria-NOM said   that   Robert-NOM won   election-ACC
"Maria said that Robert had won the election."

(12) %$[_{CP}$ $[_{\Sigma P}$ **Jaki** $[_{IP}$ Maria$_i$ $[_{vP}$ __**samochód** powiedziała $[_{CP}$ że $[_{IP}$ *pro*$_i$ $[_{vP}$ myślała
what   Maria-NOM car-ACC   said-3SG.FEM that   thought-3SG.FEM
$[_{CP}$ że $[_{IP}$ *pro*$_i$ $[_{vP}$ dostanie t]]]]]]]]]]?
that   receive-3SG.FUT
"What car did Maria say she thought she would receive?"

(13) Maria (*pieniądze) powiedziała, $[_{CP}$ że (✔pieniądze) Piotr (✔pieniądze) oddał   (✔pieniądze) bratu t_{NP}].
Maria money   said   that money   Piotr   money   returned money   brother
"Mary said that Piotr had returned the money to his brother."