

Circumventing Shortest with the Additive *-kin* in Finnish Binary *Wh*-questions

Karoliina Lohiniva and Anne Vainikka

1. Introduction

In binary *wh*-questions, the relative order of the *wh*-phrases in surface syntax is regulated by *Shortest* (Richards, 1997), which can be reduced to two principles. The first principle, *Shortest Attract*, states that when the establishment of Agree leads to movement, it is always the nearest goal that moves to the attractor. In *wh*-questions, the visible effects of Shortest Attract correspond to Superiority effects (Chomsky, 1973), which are illustrated with a pair of English examples in (1).

- (1) a. Who_{*i*} *t_i* sees what?
b. *What_{*i*} does who see *t_i*?

The second principle states that all subsequent movement to the attractor – be it overt or covert – must be as short as possible (*Shortest Move*). The effects of Shortest Move have been argued to be visible in multiple-*wh*-fronting languages such as Bulgarian (Rudin, 1988; Richards, 1997), where *wh*-phrases that move after the first-moved *wh*-phrase ‘tuck in’ under the first-moved *wh*-phrase (2).

- (2) a. Koj_{*i*} kakvo_{*j*} *t_i* vižda *t_j*?
who what sees
‘Who sees what?’
b. *Kakvo_{*j*} koj_{*i*} *t_i* vižda *t_j*?
what who sees

In this paper, we discuss binary *wh*-questions in Finnish. In Finnish, binary *wh*-questions come in two morphosyntactically distinct types: either the *wh*-phrase that stays in situ in surface syntax is bare, or it carries the additive clitic *-kin* (Huhmarniemi & Vainikka, 2011). We show that only the former type complies with Shortest, and offer an intervention-based analysis of this difference.

This paper is structured as follows. In section 2, we begin by presenting the general syntactic and semantic properties of the two types of binary *wh*-questions in Finnish, and outline Huhmarniemi & Vainikka’s (2011) analysis. We then discuss some commonalities and differences between the two types, partly arguing against Huhmarniemi & Vainikka. In section 3, we present an analysis of Finnish *wh*-questions couched within the *Q*-particle approach (Hagstrom, 1998; Cable, 2010; Kotek, 2014), and put forth an intervention-based analysis of the non-applicability of Shortest with the *wh-kin* type, as well as a topicality-based analysis of the high landing position of *wh-kin*-phrases. Section 4 concludes.

* Karoliina Lohiniva, University of Geneva/University of Delaware. Anne Vainikka, University of Delaware. The corresponding author is Karoliina Lohiniva (karoliina.lohiniva@unige.ch).

This paper is dedicated to the memory of Dr. Anne Vainikka, a pioneer of Finnish syntax and a most wonderful person, who, to the deepest sorrow of all who knew her, passed away in June 2018.

The first author would like to thank the audiences of WCCFL 36 at the University of California Los Angeles and the SySel seminar at the University of Delaware for the many comments and questions that led to the improvement of this paper, the organisers of WCCFL 36 for their support, and Saara Huhmarniemi for her help in finalising this paper. All remaining errors are the responsibility of the first author.

This research was made possible by funding from the Swiss National Science Foundation (grant n:o 171714).

2. The syntax and semantics of binary *wh*-questions in Finnish

2.1. Two ways to form binary *wh*-questions

Finnish, like English and unlike Bulgarian, requires the overt movement of exactly one *wh*-phrase to the CP in information-seeking *wh*-questions (Vainikka, 1989; Vilkuna, 1995; Huhmarniemi, 2012). Typically, the landing position of this movement is assumed to be the specifier of a focus projection, FocP, which also houses fronted, contrastively focused constituents (Vilkuna, 1995). Thus, in binary *wh*-questions, one *wh*-phrase fronts to the left periphery, while the other stays in situ in surface syntax.

The particularity of Finnish is that the non-fronted *wh*-phrase may appear either bare, as in (3a), or carrying the additive clitic *-kin*, as in (3b) (Huhmarniemi & Vainikka, 2011). In this paper, we distinguish the two types of binary *wh*-questions based on this morphosyntactic criterion, and refer to the first as the bare type, and the second as the *wh-kin* type.

- (3) a. Kuka_i t_i puhui kenelle? [bare]
 who-NOM spoke who-ALL
 ‘Who spoke to whom?’
- b. Kuka_i t_i puhui kenelle**kin**? [wh-kin]
 who-NOM spoke who-ALL.ADD
 ‘Who spoke to whom?’

Huhmarniemi & Vainikka (2011) propose that the two types of binary *wh*-questions differ in the level of ‘syntactic activity’ that the non-fronted *wh*-phrase shows: while bare *wh*-phrases are ‘active’, *wh-kin* phrases are ‘inactive’. In essence, the proposal is that *-kin* (or some functional projection associated with it) deletes the focus feature that is relevant for *wh*-movement on its host *wh*-phrase, and that the *wh-kin* phrase stays in situ both in surface syntax and at LF. Indeed, the central observation about *wh-kin* phrases is that they are simply unable to undergo overt *wh*-movement – meaning that they cannot Agree with Foc^o – as the single-*wh* question in (4b) shows.

- (4) a. Kenelle_i Mari puhui t_i?
 who-ALL Mari-NOM spoke
 ‘Who did Mari speak to?’
- b. *Kenelle**kin**_i Mari puhui t_i?
 who-ALL.ADD Mari-NOM spoke

In this paper, we adopt Huhmarniemi & Vainikka’s general idea of ‘inactivity’, but implement it differently, using intervention in the sense of featural Relativised Minimality (see section 3; Rizzi, 1990, 2010; Starke, 2001). Moreover, we argue against Huhmarniemi & Vainikka’s claim that *wh-kin* phrases remain in situ at LF. This argument is based on data from island-sensitivity (section 2.2.1) and the determination of ‘sorting keys’ (section 2.3.2).

The rest of this section is dedicated to a discussion of the commonalities and differences between the two types of binary *wh*-questions.

2.2. Commonalities

2.2.1. Island sensitivity

The first commonality between bare and *wh-kin* binary *wh*-questions comes from their island-sensitivity. Here we disagree with Huhmarniemi & Vainikka (2011), who argue that only the bare type is island-sensitive, and therefore only the bare type involves covert movement of the non-fronted *wh*-phrase. The authors restrict their attention to temporal *-essa* adjuncts (Huhmarniemi, 2009, 2012), the islandhood of which is established in (5) (Huhmarniemi & Vainikka, 2011):

- (5) a. Pekka kompastui [auttaessaan Merjaa]
 Pekka-NOM fell helping-ESSA Merja-PAR
 ‘Pekka fell while helping Merja’
- b. *Ketä_i Pekka kompastui [auttaessaan t_i]?
 who-PAR Pekka-NOM fell helping-ESSA
 Int. ‘Who did Pekka fell while helping?’

The relevant data for the two types of *wh*-questions is shown in (6). Huhmarniemi & Vainikka argue that the relative markedness of the bare-type (6a) when compared to the *wh-kin*-type (6b) shows that bare *wh*-phrases, but not *wh-kin* phrases, move covertly; therefore, only the bare type shows island-sensitivity.

- (6) a. ??Kuka kompastui [auttaessaan ketä]? [bare]
 who-NOM fell helping-ESSA who-PAR
 ‘Who fell while helping whom?’
- b. Kuka kompastui [auttaessaan ketäkin]? [wh-kin]
 who-NOM fell helping-ESSA who-PAR.ADD
 ‘Who fell while helping whom?’

There is reason to doubt that the two types show differential island-sensitivity, however. To see this, consider first the baselines for relative clause islands (7) and complex NP islands (8).

- (7) a. Joni söi hedelmän [jonka Mari osti rautatieasemalta]
 Joni-NOM ate fruit-ACC that-ACC Mari-NOM bought train.station-ABL
 ‘Joni ate the fruit that Mari bought at the train station’
- b. *Mistä_i Joni söi hedelmän [jonka Mari osti t_i]?
 where-ELA Joni-NOM ate fruit-ACC that-ACC Mari-NOM bought
 Int. ‘Where did Joni eat the fruit that Mari bought?’
- (8) a. Joni muisti väitteen [että Mari kävi Helsingissä]
 Joni-NOM remembered claim-ACC that Mari-NOM visited Helsinki-INE
 ‘Joni remembered the claim that Mari visited Helsinki’
- b. *Missä Joni muisti väitteen_j [että Mari kävi t_i]?
 where-INE Joni-NOM remembered claim-ACC that Mari-NOM visited
 Int. ‘Where did Joni remember the claim that Mari visited?’

As (9) shows, neither the bare nor the *wh-kin* type allows the non-fronted *wh*-phrase to be located within a relative clause island (9a) or a complex NP island (9b).

- (9) a. *Kuka t_i söi hedelmän [jonka Mari osti mistä(kin)]?
 who-NOM ate fruit-ACC that-ACC Mari-NOM bought where-ELA.(ADD)
 Int. ‘Who ate the fruit that Mari bought where?’
- b. *Kuka t_i muisti väitteen_j [että Mari kävi missä(kin)]?
 who-NOM remembered claim-ACC that Mari-NOM visited where-INE.(ADD)
 Int. ‘Who remembered the claim that Mari visited where?’

We take the data from relative clause and complex NP islands to indicate that both ways of forming binary *wh*-questions involve covert movement of the non-fronted *wh*-phrase. The main difference in island effects is therefore not between the two types of binary *wh*-questions, but between temporal adjunct islands on the one hand, and relative clause and complex NP islands on the other; for some reason that we do not speculate about here, only the latter show real island effects. In other words, we consider that the relative clause and complex NP islands show the island-sensitivity of binary *wh*-questions more reliably than temporal adjuncts.¹

¹ Saara Huhmarniemi (p.c.; see Huhmarniemi, 2012) notes that bare *wh*-phrases must move to the edge of the

2.2.2. Answer profiles

The second commonality between the bare and *wh-kin* types of binary *wh*-questions concerns the availability of pair-list (PL) answers. Here we again disagree with Huhmarniemi & Vainikka (2011), who argue that the *wh-kin* type only allows PL answers, while the bare type only allows single-pair (SP) answers. We argue that both types in fact allow PL answers; however, we agree that the *wh-kin* type does not allow SP answers. The relevant answer profiles are shown in (10) and (11).

- (10) a. Kuka_i t_i puhui kenelle? [bare]
 who-NOM spoke who-ALL
 ‘Who spoke to whom?’
- b. Mari puhui Jonille [SP answer]
 Mari-NOM spoke Joni-ALL
 ‘Mari spoke to Joni’
- c. Mari puhui Jonille, ja Mika (puhui) Ainolle [PL answer]
 Mari-NOM spoke Joni-ALL and Mika-NOM spoke Aino-ALL
 ‘Mari spoke to Joni, and Mika (spoke) to Aino’
- (11) a. Kuka_i t_i puhui kenelle**kin**? [wh-kin]
 who-NOM spoke who-ALL.ADD
 ‘Who spoke to whom?’
- b. #Mari puhui Jonille [SP answer]
 Mari-NOM spoke Joni-ALL
 ‘Mari spoke to Joni’
- c. Mari puhui Jonille, ja Mika (puhui) Ainolle [PL answer]
 Mari-NOM spoke Joni-ALL and Mika-NOM spoke Aino-ALL
 ‘Mari spoke to Joni, and Mika (spoke) to Aino’

The availability of a PL reading for a given question can be tested by embedding it under a ‘list-verb’, which selects a *wh*-question complement that has more than one answer (Schwarz, 1995; Kitagawa et al., 2004). The example² in (12) shows that both types of binary *wh*-questions may be embedded under a list-verb in Finnish, which means that a PL reading is available with two singular *wh*-phrases even in the absence of *-kin*. However, there is a slight preference for *wh-kin* in (12), perhaps because a PL reading is the only available reading for this type, and the context of (12) supports a PL reading. (That only the bare type allows SP answers is not discussed again in the next subsection.)

- (12) Noh, lopulta proffaa sai jaettua opiskelijat ryhmiin ja luetteli,
 well finally professor-NOM managed divide students-ACC groups-ILL and listed
 kuka tenttisi missä(kin)
 who-NOM take.exam-COND where-INE.(ADD)
 ‘Well, finally, the professor managed to divide the students into groups and listed who would take the exam where’

temporal adjunct whenever the whole adjunct undergoes *wh*-movement, as shown in (i), and they also prefer to do so when the whole adjunct does not move, which explains the markedness of (6a). *Wh-kin* phrases sometimes undergo optional scrambling to the same position, but are never required to.

- (i) a. [Ketä_i auttaessaan t_i]_j Pekka kompastui t_j?
 who-PAR helping-ESSA Pekka-NOM fell
 Lit. ‘While helping whom did Pekka fell?’
- b. *[Auttaessaan ketä]_j Pekka kompastui t_j?
 helping-ESSA who-PAR Pekka-NOM fell

² Attested example with *-kin* from <https://sitahyvaaelamaa.wordpress.com/tag/opiskeluhajoulu/>

2.3. Differences

2.3.1. Shortest Attract

The clearest syntactic difference between the two types of binary *wh*-questions is that while the bare type does not allow the extraction and movement of a hierarchically lower *wh*-phrase over a higher one, the *wh-kin* type does. This means that only the former shows Superiority effects (Huhmarniemi & Vainikka, 2011), and is thus subject to Shortest Attract. The relevant data is shown in (13).

- (13) a. *Kenelle_i kuka puhui t_i? [bare]
 who-ALL who-NOM spoke
 Int. 'Who spoke to whom?'
 b. Kenelle_i kukakin puhui t_i? [wh-kin]
 who-ALL who-NOM.ADD spoke
 'Who spoke to whom?'

2.3.2. Shortest Move and sorting keys

As mentioned at the beginning of this section, Huhmarniemi & Vainikka (2011) argue that *wh-kin* phrases are syntactically inactive, and remain in situ at LF. In subsection 2.2.1, we showed that island-sensitivity data in fact indicates that both bare and *-kin*-carrying *wh* phrases *do* move at LF. In this section, we provide another argument for the covert movement of *wh-kin* phrases, and show that the positions targeted by the LF-movement of bare *wh*-phrases and *wh-kin* phrases differ: the former land below the fronted *wh*-phrase (in accordance with Shortest Move), while the latter land above it.

The relevant diagnostic for the relative order of the *wh*-phrases at LF comes from determining which of the two *wh*-phrases functions as the 'sorting key' in the answer. In binary *wh*-questions requiring a PL answer, the *wh*-phrase that is hierarchically highest at LF must be exhaustively and pointwise-uniquely mapped to the lower *wh*-phrase (Dayal, 1996, 2002). In English, the surface order of the *wh*-phrases corresponds to their order at LF: the leftmost *wh*-phrase is also the highest one. Thus, PL-answering a question such as (14) requires mapping each student (exhaustivity) to exactly one cake (uniqueness).³ These requirements are often modelled as presuppositions of the question (see e.g. Kotek, 2014).

- (14) Which student baked which cake?

One strategy that is sometimes used to determine which *wh*-phrase acts as the sorting key involves numerally modified *wh*-phrases. In (15a), each of the three linguists (higher *wh*) may be mapped to a unique philosopher (lower *wh*). One philosopher is left over, but it does not matter: there is no requirement that the lower *wh*-phrase be 'used up' exhaustively. In the numerally-reversed (15b), however, there are not enough philosophers for the linguists to marry⁴, and the question is marked.

- (15) a. Which of the three linguists married which of the four philosophers?
 b. #Which of the four linguists married which of the three philosophers?

Curiously, it has been proposed that in Finnish *wh-kin* binary questions, it is the non-fronted *wh-kin* phrase that is the sorting key (Hakulinen et al., 2004: §755). In fact, it has even been proposed that *wh-kin* phrases should be analysed not as *wh*-phrases, but as distributive universal quantifiers taking scope over the fronted *wh*-phrase (*ibid.*). Although we do not endorse the universal quantifier analysis⁵, we do endorse the claim that *wh-kin* phrases move above fronted *wh*-phrases, and thus function as sorting keys. As expected, with the Finnish equivalents of (15) shown in (16), the judgments are reversed:

³ The sorting key is D-linked, which ensures that we are able to evaluate whether exhaustive mapping has taken place. Note that this type of D-linkedness does not require a lexical restriction on the *wh*-phrase.

⁴ At least not under the assumption of monogamy.

⁵ One reason to not do so is that universal quantifiers and *wh-kin* phrases are not semantically equivalent in questions: functional answers are available to questions with universal quantifiers (Chierchia, 1991, 1993), but not to *wh-kin* type binary *wh*-questions, as (ii) shows.

- (16) a. #Kuka kolmesta kielitieteilijästä nai kenetkin neljästä filosofista?
 who-NOM three-ELA linguist-ELA married who-ACC.ADD four-ELA philosopher-ELA
 ‘Which of the three linguists married which of the four philosophers?’
- b. Kuka neljästä kielitieteilijästä nai kenetkin kolmesta filosofista?
 who-NOM four-ELA linguist-ELA married who-ACC.ADD three-ELA philosopher-ELA
 ‘Which of the four linguists married which of the three philosophers?’

To determine the sorting key for the bare type, we embed the question under a list-verb to force a PL reading, as in (17). The judgments indicate that the leftmost *wh*-phrase is highest at LF.

- (17) a. Mari luetteli kuka kolmesta kielitieteilijästä oli nainut kenet neljästä
 Mari listed who-NOM three-ELA linguist-ELA had married who-ACC four-ELA
 filosofista
 philosopher-ELA
 ‘Mari listed which of the three linguists had married which of the four philosophers’
- b. #Mari luetteli kuka neljästä kielitieteilijästä oli nainut kenet kolmesta
 Mari listed who-NOM four-ELA linguist-ELA had married who-ACC.ADD three-ELA
 filosofista
 philosopher-ELA
 ‘Mari listed which of the four linguists had married which of the three philosophers’

In sum, the data indicates that *wh-kin* phrases move covertly above the fronted *wh*-phrase at LF, while bare *wh*-phrases tuck in. The latter case is in compliance with Shortest Move, while the former is not. Huhmarniemi & Vainikka’s (2011) claim that *wh-kin* phrases stay in situ in both surface syntax and at LF is therefore further weakened, although the data do show that *wh-kin* phrases are ‘inactive’ for purposes of *wh*-movement, and therefore exempt from Shortest Move.

2.4. Summary

The data presented in this section indicates that Finnish bare binary *wh*-questions behave much in the same way as English binary *wh*-questions do.⁶ Crucially, they are subject to both Shortest Attract and to Shortest Move, as we showed. The *wh-kin* type, however, seems to be subject to neither of these principles: bare *wh*-phrases may *wh*-front over higher *wh-kin* phrases (no Shortest Attract), and *wh-kin* phrases move covertly above fronted *wh*-phrases to function as the sorting key (no Shortest Move).

In the course of this section, we have shown that the proposal of Huhmarniemi & Vainikka (2011) is partially correct. It seems clear that *wh-kin* phrases are somehow ‘inactive’ and therefore do not compete with other *wh*-phrases for overt movement to the CP. This explains the first observation, i.e. the lack of Shortest Attract/Superiority effects: if *wh-kin* phrases are not ‘visible’ goals for Foc° , they will simply not be subject to Shortest Attract – nor to Shortest Move, which then frees them from the requirement to tuck in under the fronted *wh*-phrase, and partly explains the observation concerning the identity of the sorting key in binary *wh-kin* questions.

However, this section also shows that *contra* Huhmarniemi & Vainikka (2011), both types of binary *wh*-questions show island-sensitivity, which indicates covert movement of the visibly in situ *wh*-phrase in both types of questions. For the *wh-kin* type, this conclusion is supported by the sorting key

-
- (ii) a. Kenelle Mari lähetti jokaisen kirjan? – Omistajalleen
 who-ALL Mari-NOM sent each-ACC book-ACC owner-ALL.PX/3
 ‘Who did Mari send each book to? – Its owner’
- b. Kenelle Mari lähetti minkäkin kirjan? – #Omistajalleen
 who-ALL Mari-NOM sent which-ACC.ADD book-ACC owner-ALL.PX/3
 ‘Who did Mari send which book to? – #Its owner’

⁶ One difference that we mention in footnote 3 and again in section 3.2.1 is that the presence of a lexical restriction is not enough to override Shortest Attract in Finnish, whereas it is in English (Pesetsky, 1987).

data.⁷ Therefore, the proposal put forth by Huhmarniemi & Vainikka – namely, that *wh-kin* phrases are interpreted in situ (via long-distance binding) – is likely to be incorrect.

Thus, the question remains: why can *wh-kin* phrases not undergo *wh*-movement, i.e. why are they disregarded by the interrogative probe, Foc° ? Huhmarniemi & Vainikka (2011) propose that this is because the additive clitic *-kin* deletes the focus feature on its host *wh*-phrase, making the *wh*-phrase invisible for probing by Foc° . If the relevant feature for *wh*-movement is indeed a focus feature, this explanation goes through. In the next section, we consider a different possibility – namely, that *wh*-movement is driven by a $[Q]$ -feature – and propose an analysis that relies on syntactic feature-based intervention in the sense of featural Relativised Minimality (fRM; Rizzi, 1990, 2010; Starke, 2001). At the end of the section, we propose a syntactic explanation for why the *wh-kin* phrase moves above the fronted *wh*-phrase at LF, and thus becomes the sorting key of the question.

3. An intervention approach to binary *wh-kin* questions

3.1. Featural Relativised Minimality

Shortest Attract can be construed as locality principle, but it is not the only one of its kind. Our analysis of *wh-kin* questions relies on featural Relativised Minimality (fRM; Rizzi, 1990, 2010; Starke, 2001). Like other locality principles, fRM imposes constraints on syntactic relationships. The particularity of fRM is that it operates on *types* or *classes* of features instead of singular features: it states that a probe-goal relationship between two entities *a* and *b* carrying the same type of feature is not well-formed if (i) there is an intervening entity *c* carrying the same type of feature as *a* and *b*, and (ii) *a* asymmetrically *c*-commands *c*, and *c* asymmetrically *c*-commands *b*. The relevant configuration is shown in (18), where $[\alpha]$ represents a feature type or class.

$$(18) \quad \underbrace{a_{[\alpha]} \dots c_{[\alpha]} \dots b_{[\alpha]}}_*$$

Anticipating our analysis of *wh-kin* questions, note now that interrogative features and focus features are grouped together under the same ‘quantificational’ type (Rizzi, 2010).

3.2. fRM-intervention and the internal syntax of *wh-kin* phrases

Our proposal for the syntax of Finnish *wh*-questions in general, and *wh-kin* questions in particular, is couched within the *Q*(uestion)-particle approach to interrogative syntax and semantics (Hagstrom, 1998; Cable, 2010; Kotek, 2014). This approach is a natural choice given that Finnish has an overt *Q*-particle, *-kO* (Holmberg, 2014). *-kO* always appears in polar interrogatives, and may also attach to *wh*-phrases (especially when accompanied by another second-position clitic, *-hAn* (Hakulinen, 1976)⁸).

On the *Q*-particle approach, *wh*-movement is driven by the deletion of an uninterpretable $[uQ]$ -feature on a left-peripheral head. This contrasts with Huhmarniemi & Vainikka’s (2011) analysis, where the relevant feature is a focus feature. Despite this difference, we assume that the relevant head for *wh*-movement is still Foc° in Finnish (perhaps due to feature inheritance from Force° ; Brattico et al., 2013).

⁷ The conclusion that *wh-kin* phrases move covertly is also supported by focus intervention data, as (iii) shows. With the bare type (example not shown), the result is slightly marked. We leave the discussion of this point for future research, and refer the reader to Beck, 2006 and Kotek, 2014 for a detailed discussion of focus intervention.

(iii) Minkä asiakirjojen vain uskottiin_F löytyvän mistäkin kassakaapista?
 which-PL.ACC document-PL.ACC only believed-PASS find-PRESPART which-ELA.ADD safe-SG.ELA
 ‘Which documents were only believed_F to be found in which safe?’

⁸ The meaning of *-hAn* may be roughly glossed as ‘I wonder’ in information-seeking *wh*-questions such as (iv).

(iv) Missäköhän_i Mari on *t_i*?
 where-INE.Q.HAN Mari is
 ‘Where is Mari (I wonder)?’

The feature that matches $[uQ]$ on Foc° , i.e. the interpretable $[iQ]$, is on the Q -particle. We assume that in Finnish, Q adjoins to a wh -KP (for *KasePhrase*; this projection can be assumed to contain a DP). Overt (and covert) wh -movement of the full wh -phrase signals that the Q -particle projects syntactically, and ‘pied-pipes’ the wh -KP when moving to the CP (Cable, 2010). The Q -based syntax for Finnish wh -movement is summarised in (19).

$$(19) \quad [_{\text{FocP}} [_{\text{QP}} Q [_{iQ}] [_{\text{KP}} \text{K}^\circ [_{\text{DP}} \text{D}^\circ \text{NP}]]]]_i \quad \text{Foc}^\circ_{[uQ]} [_{\text{TP}} \dots t_i \dots]]$$

As we claim that wh -kin phrases are indeed wh -phrases, and not universal quantifiers (see footnote 5), we assume that wh -kin phrases also contain a Q -particle. The key to understanding binary wh -kin questions then lies in understanding how the presence of $-kin$ comes to disallow Agree between Foc° and the Q -particle associated with the wh -kin phrase.

We propose that the additive clitic $-kin$ marks the presence of a functional head ADD .⁹ ADD adjoins to QP , and is therefore located in a position from where it asymmetrically c -commands Q . We also assume that ADD carries $[uF]$, and must therefore Agree with $[iF]$ in its c -command domain (Holmberg, 2014).¹⁰ We let $[iF]$ be located on the wh -determiner D° . Thus, the (non-final) schematic syntactic structure of a wh -kin phrase is as shown in (20); bare wh -phrases simply lack the outmost ADDP layer.

$$(20) \quad \text{Internal syntax of a } wh\text{-kin phrase (non-final)} \\ [_{\text{ADDP}} \text{ADD}_{[uF]} [_{\text{QP}} Q [_{iQ}] [_{\text{KP}} \text{K}^\circ [_{\text{DP}} \text{D}^\circ_{[iF]} \text{NP}]]]]]$$

From the perspective of fRM, the structure in (20) gets one thing right and one thing wrong. First, we do not want Foc° to be able to Agree with Q within the wh -kin phrase. This relationship is indeed ruled out by fRM, given that there is an intervenor ADD between Foc° and Q such that (i) the features $[uQ]$ on Foc° , $[uF]$ on ADD , and $[iQ]$ on Q are of the same quantificational type, and (ii) Foc° asymmetrically c -commands ADD , and ADD asymmetrically c -commands Q . Under our proposal, it is this fRM-effect that liberates wh -kin phrases from both Shortest Attract and Shortest Move. The problem is that in the structure shown in (20), Q fRM-intervenes between ADD and D° . This second fRM-effect is unwanted on our account, as wh -kin questions are syntactically wellformed (and therefore $[uF]$ must be deleted).

The solution we propose relies on an independently attested property of syntactic focus features: they may *project* (Selkirk, 1996; Schwarzschild, 1999). To break the fRM-configuration, $[iF]$ on D° must only project up to KP ; as Q and KP symmetrically c -command each other, $\text{KP}_{[iF]}$ may Agree with $\text{ADD}_{[uF]}$. Now the syntactic representation of a wh -kin phrase is as shown in (21).

$$(21) \quad \text{Internal syntax of a } wh\text{-kin phrase (non-final)} \\ [_{\text{ADDP}} \text{ADD}_{[uF]} [_{\text{QP}} Q [_{iQ}] [_{\text{KP}_{[iF]}} \text{K}^\circ [_{\text{DP}_{[iF]}} \text{D}^\circ_{[iF]} \text{NP}]]]]]$$

One issue of our proposal is that to ensure fRM-intervention between Foc° and Q , the uninterpretable focus feature on ADD must be present in the relevant syntactic sense: its deletion (following Agree with the projected $[iF]$) cannot take place before the $[Q]$ -Agree-relationship between Foc° and Q is attempted, or else there is no fRM-intervention, and our account of the unavailability of the wh -kin phrase as a goal for Foc° fails.

In sum, depending on which syntactic features one takes Finnish wh -movement to be based on, it is possible to devise different explanations as to why wh -kin phrases are not visible for probing by Foc° , and are therefore not required to comply with Shortest. While the proposal put forth in this section has the advantage of being based on the general Q -approach to questions, it also has its issues.

⁹ When attached to non- wh KPs, the additive $-kin$ translates to ‘too’ or ‘also’. However, $-kin$ also has other uses in Finnish where it cannot be translated in this way; for example, $-kin$ is part of the morphological make-up of certain quantifiers, such as *jokin* ‘something’. Due to reasons of space, we do not discuss the semantics of ADD here, but note that it is very likely that the use of $-kin$ in wh -kin questions is closely related to its use quantifiers.

¹⁰ As additives are focus-sensitive expressions (König, 1991; Rooth, 1992), it is not controversial to associate them with a focus feature in syntax.

3.2.1. The high-targeting covert movement of the *wh-kin* phrase

The last question that we discuss concerns the landing position of the covertly moving *wh-kin* phrase. As the sorting key data shows, the covert movement of the *wh-kin* phrase targets a position above the fronted *wh*-phrase, i.e. above FocP. The question is, what is this higher position, and why does the *wh-kin* phrase move there?

We propose that the *wh-kin* phrase targets a high Topic phrase (TopP). There is independent evidence for the availability of such a position in Finnish (Kaiser, 2006). In sentences with preposed negation or another preposed polarity element, such as the emphatic *kyllä* ‘yes’, a discourse-old topic may occupy a position above FocP. In (22a), the subject occupies this high TopP, as shown by its position with respect to the contrastively focused indirect object in FocP (in capitals). As (22b) shows, the availability of this landing position for overt movement is dependent on the preposing of negation.

- (22) a. En minä JONILLE puhunut, vaan...
 NEG.1SG I-NOM Joni-ALL spoke but
 ‘It was not JONI I spoke to, but...’
- b. *Minä JONILLE en puhunut, vaan...
 I-NOM Joni-ALL NEG.1SG spoke but
 Int. ‘It was not JONI I spoke to, but...’

In contrast to e.g. Italian (Rizzi, 1997), *wh*-phrases may never be preceded by any overt topicalised elements in Finnish. It is possible that this restriction – whatever its source – is also behind the covertness of the movement of the *wh-kin* phrase. At this point, we do not discuss this issue further, and propose simply that the TopP-targeting covert movement of the *wh-kin* phrase is driven by an uninterpretable topic feature [*uTop*] on ADD.¹¹ Assuming that Agree works downwards, this feature may only be deleted once the *wh-kin* phrase has moved to a position from which it c-commands $\text{Top}_{[i\text{Top}]}$.

- (23) Internal syntax of a *wh-kin* phrase (final)
 $[\text{ADDP ADD}_{[uF, u\text{Top}]} [\text{QP } Q_{[iQ]} [\text{KP}_{[iF]} \text{K}^\circ [\text{DP}_{[iF]} \text{D}^\circ_{[iF]} \text{NP}]]]]$

Another option is to attribute the topic feature to the *wh-KP* itself, in closer parallel to D-linking in languages such as English. However, in this case, the covert movement of *wh-kin* phrases to TopP is no longer closely tied to the presence of *-kin*. One could even imagine that bare, but D-linked *wh*-phrases (i.e. *wh*-phrases with a lexical restriction but no *-kin*) would be able to move to the high TopP. However, in Finnish, the presence or absence of a lexical restriction does not play a role in determining whether Shortest must be complied with: only *wh*-phrases carrying *-kin* are interpreted in TopP. Moreover, even D-linked *wh*-phrases that escape Shortest Attract in English are still interpreted in their surface order, in compliance with Shortest Move (Kotek, 2014). Therefore, we maintain that the covert movement of *wh-kin* phrases to a high TopP is indeed linked with a topic feature present on ADD.

4. Conclusion

In this paper, we discussed two types of binary *wh*-questions in Finnish, and showed that the type in which the visibly in situ *wh*-phrase carries the additive clitic *-kin* complies with neither Shortest Attract nor Shortest Move. Indeed, bare *wh*-phrases may Agree with Foc° and undergo *wh*-movement, while *wh-kin* phrases cannot: thus, the *wh-kin* type shows no Shortest Attract/Superiority effects. We proposed an intervention-based analysis of why this is the case. In addition to not being subject to Shortest Attract, we showed that binary *wh-kin* questions do not comply with Shortest Move; although island-sensitivity and sorting key data indicate that *wh-kin* phrases and bare *wh*-phrases both move covertly, *wh-kin* phrases are interpreted above fronted *wh*-phrases, while bare *wh*-phrases are interpreted below them. To explain

¹¹ Associating a topic feature with additives is natural, given that additives often refer back to discourse-old information (Karttunen & Peters, 1979). Moreover, the topic feature also brings *wh-kin* phrases closer to *contrastive topics*, which function a lot like sorting keys (Büring, 1997).

this pattern, we proposed that the operator associated with the appearance of *-kin* carries a topic feature, and this feature drives the covert movement of the *wh-kin* phrase to a high TopP above FocP.

References

- Beck, Sigrid (2006). Intervention effects follow from focus interpretation. *Natural Language Semantics* 14:1, 1–56.
- Brattico, Pauli, Saara Huhmarniemi, Jukka Purma & Anne Vainikka (2013). The structure of Finnish CP and feature inheritance. *Finno-Ugric Languages and Linguistics* 2:2, 66–109.
- Büring, Daniel (1997). *The meaning of topic and focus: the 59th Street Bridge accent*. Routledge Studies in German Linguistics, Routledge, London, New York.
- Cable, Seth (2010). *The grammar of Q: Q-particles, wh-movement, and pied-piping*. Oxford University Press.
- Chierchia, Gennaro (1991). Functional WH and Weak Crossover. Bates, Dawn (ed.), *Proceedings of the 10th West Coast Conference on Formal Linguistics (WCCFL 10)*, CSLI, Stanford, CA.
- Chierchia, Gennaro (1993). Questions with quantifiers. *Natural Language Semantics* 1:2, 181–234.
- Chomsky, Noam (1973). Conditions on transformations. *A Festschrift for Morris Halle*, Holt, Rinehart and Winston, New York.
- Dayal, Veneeta (1996). *Locality in WH quantification*. Kluwer Academic Publishers.
- Dayal, Veneeta (2002). Single-pair versus multiple-pair answers: *wh-in-situ* and scope. *Linguistic Inquiry* 33, 512–520.
- Hagstrom, Paul Alan (1998). *Decomposing Questions*. Ph.D. thesis, Massachusetts Institute of Technology.
- Hakulinen, Auli (1976). Liitepartikkelin *-han/-hän* syntaksia ja pragmatiikkaa. *Reports on text linguistics: Suomen kielen generatiivista lauseoppia* 2, 3–60.
- Hakulinen, Auli, Maria Vilkkuna, Riitta Korhonen, Vesa Koivisto, Tarja-Riitta Heinonen & Erja Alho (2004). *Iso suomen kielioppi*. Suomalaisen Kirjallisuuden Seura.
- Holmberg, Anders (2014). The syntax of the Finnish question particle. Svenonius, Peter (ed.), *Functional structure from top to toe*, Oxford University Press, Oxford, UK.
- Huhmarniemi, Saara (2009). Extraction islands in Finnish. *Biolinguistica Fennica Working Papers* 1, 21–78.
- Huhmarniemi, Saara (2012). *Finnish A'-movement: Edges and islands*. Ph.D. thesis, University of Helsinki.
- Huhmarniemi, Saara & Anne Vainikka (2011). The two variants of Finnish multiple Wh-questions: Evidence for two analyses. Ms., University of Helsinki, Johns Hopkins University.
- Kaiser, Elsi (2006). Negation and the left periphery in Finnish. *Lingua* 116:3, 314–350.
- Karttunen, Lauri & Stanley Peters (1979). Conventional implicature. Oh, Choon-Kyu & David A. Dinneen (eds.), *Syntax and semantics, volume 11: Presupposition*, Academic Press, 1–56.
- Kitagawa, Yoshihisa, Dorian Roehrs & Satoshi Tomioka (2004). Multiple Wh-interpretations. Yoon, Huang-Jin (ed.), *Generative Grammar in a Broader Perspective: Proceedings of the 4th GLOW in Asia 2003*, 209–233.
- König, Ekkehard (1991). *The meaning of focus particles*. Routledge, London.
- Kotek, Hadas (2014). *Composing Questions*. Ph.D. thesis, Massachusetts Institute of Technology.
- Pesetsky, David (1987). *Wh-in-situ: Movement and unselective binding*. Reuland, Eric & Alice G. B. ter Meulen (eds.), *The representation of (in)definiteness*, MIT press, Cambridge, MA, 98–130.
- Richards, Norvin (1997). *What moves where in which language?* Ph.D. thesis, Massachusetts Institute of Technology, Cambridge, MA.
- Rizzi, Luigi (1990). *Relativized Minimality*. MIT press.
- Rizzi, Luigi (1997). The fine structure of the left periphery. Haegeman, Liliane (ed.), *Elements of Grammar*, Kluwer, Dordrecht, 289–330.
- Rizzi, Luigi (2010). Minimality. Boeckx, Cedric (ed.), *The Oxford handbook of linguistic minimalism*, Oxford University Press, 220–238.
- Rooth, Mats (1992). A theory of focus interpretation. *Natural Language Semantics* 1:1, 75–116.
- Rudin, Catherine (1988). On Multiple Questions and Multiple WH Fronting. *Natural Language & Linguistic Theory* 6:4, 445–501.
- Schwarz, Bernhard (1995). Rattling off Questions. Ms., University of Massachusetts Amherst.
- Schwarzschild, Roger (1999). Givenness, AvoidF and other constraints on the placement of accent. *Natural Language Semantics* 7, 141–177.
- Selkirk, Elisabeth O. (1996). Sentence Prosody: Intonation, Stress, and Phrasing. Goldsmith, John A. (ed.), *The Handbook of Phonological Theory*, Basil Blackwell, London, 550–569.
- Starke, Michal (2001). *Move dissolves into merge: A theory of locality*. Ph.D. thesis, University of Geneva, Geneva.
- Vainikka, Anne (1989). *Deriving syntactic representations in Finnish*. Ph.D. thesis, University of Massachusetts Amherst.
- Vilkkuna, Maria (1995). *Discourse configurationality in Finnish*. Oxford University Press, New York.

Proceedings of the 36th West Coast Conference on Formal Linguistics

edited by Richard Stockwell, Maura O’Leary,
Zhongshi Xu, and Z.L. Zhou

Cascadilla Proceedings Project Somerville, MA 2019

Copyright information

Proceedings of the 36th West Coast Conference on Formal Linguistics
© 2019 Cascadilla Proceedings Project, Somerville, MA. All rights reserved

ISBN 978-1-57473-474-4 hardback

A copyright notice for each paper is located at the bottom of the first page of the paper.
Reprints for course packs can be authorized by Cascadilla Proceedings Project.

Ordering information

Orders for the printed edition are handled by Cascadilla Press.
To place an order, go to www.lingref.com or contact:

Cascadilla Press, P.O. Box 440355, Somerville, MA 02144, USA
phone: 1-617-776-2370, fax: 1-617-776-2271, sales@cascadilla.com

Web access and citation information

This entire proceedings can also be viewed on the web at www.lingref.com. Each paper has a unique document # which can be added to citations to facilitate access. The document # should not replace the full citation.

This paper can be cited as:

Lohiniva, Karoliina and Anne Vainikka. 2019. Circumventing Shortest with the Additive *-kin* in Finnish Binary *Wh*-questions. In *Proceedings of the 36th West Coast Conference on Formal Linguistics*, ed. Richard Stockwell et al., 260-269. Somerville, MA: Cascadilla Proceedings Project. www.lingref.com, document #3470.