

# *Wh-kin* structures in Finnish

Karoliina Lohiniva

Université de Genève, University of Delaware

Supervised by Anne Vainikka

SySel, University of Delaware: June 28, 2017

## Basic ingredients

- Two wh-phrases; focus clitic KIN on the rightmost one
- Wh-kin interrogatives (1) and wh-kin declaratives (2)

(1) **Missä** Joni asui **milloinkin**?  
 where.INE Joni.NOM lived when.KIN  
*"Where did Joni live when?"*

(2) Joni asui **missä milloinkin**  
 Joni.NOM lived where.INE when.KIN  
*"Joni lived in different places at different times"*

Note that Finnish does not have wh-indefinites (elsewhere...)

## Basic ingredients: KIN

Holmberg 2014: KIN is a focus clitic that can attach "virtually anywhere"

Uses (my thesis):

- Standard [like English *also/even*]
- Host-dissociated [like *even* but host is not F-marked]
- Polar [like *even* but on polar alternatives]
- Confirming [related to polarity focus]
- Thematic [related to CTs]
- **Wh-kin** [multiple-wh structures]

Goal: a syntax and semantics for KIN that covers all uses

## Basic questions

- What are the syntax and semantics of wh-kin interrogatives and declaratives?
- What is the role of KIN?
  - Is it possible to give wh-kin structures a syntax/semantics that uses the syntax/semantics of KIN in its other uses?

## Today we will use...

- Hamblin-Karttunen question semantics
  - Wh-expressions are existential quantifiers
  - Questions denote sets of possible answers (a set of propositions)
- Kripke-style semantics for the OP related to KIN
  - The OP is essentially anaphoric: it presupposes that there is some focus alternative to the prejacent in the common ground
  - The OP has no truth-conditional import; we will gloss over scalarity
- Kratzer's focus assignment functions for the interpretation of focus
  - Focus functions are functions that take a focus index and return an alternative denotation for the constituent bearing the index
  - Quantification over focus functions is the job of focus-sensitive operators (like our OP)
- A tweaked semantics of the wh-kin-phrase so that it is focus-sensitive

# Terminology

## SP (single-pair)

- Answer consisting of one pair of linked values ( $x, y$ )

## PL (pair-list)

- Answer consisting of a list of pairs of linked values ( $x, y; z, y...$ )

## Terminology

### Wh-list questions

- (3) **Missä** Joni asui **milloinkin**?  
 where.INE Joni.NOM lived when.KIN  
*"Where did Joni live when?"*

### Wh-pair questions

- (4) **Missä** Joni asui **milloin**?  
 where.INE Joni.NOM lived when  
*"Where did Joni live when?"*

### Wh-declaratives

- (5) Joni asui **missä milloinkin**  
 Joni.NOM lived where.INE when.KIN  
*"Joni lived in different places at different times"*

## Previous work: Huhmarniemi & Vainikka 2011

Comparison of wh-lists and wh-pairs:

### Semantics

- ① Wh-lists require pair-list answers; wh-pairs do not

### Syntax

- ② Wh-pairs are subject to Superiority; wh-lists are not
- ③ Wh-pairs require internal movement within islands; wh-lists do not



# ① SP and PL answers: wh-list

- (6) a. **Kuka** maistoi **mitäkin** **kakkua?**  
who.NOM tasted which.PAR.KIN cake.PAR  
*"Who tasted which cake?"*
- b. #Porkkanakakkua maistoi Joni  
carrot cake.PAR tasted Joni.NOM  
*"Joni tasted the carrot cake"*
- c. Porkkanakakkua maistoi Joni, ja suklaakakkua  
carrot cake.PAR tasted Joni.NOM and chocolate cake.PAR  
maistoi Mari  
tasted Mari  
*"Joni tasted the carrot cake, and Mari tasted the chocolate cake"*

## ② Superiority

In both examples below, (a) respects and (b) violates Superiority

- (7) a. **Kuka** maistoi **mitäkin** **kakkua**?  
 who.NOM tasted which.PAR.KIN cake.PAR  
*"Who tasted which cake?"*
- b. **Mitä** **kakkua** **kukakin** maistoi?  
 which.PAR cake.PAR who.NOM.KIN tasted  
*"Which cake did who taste?"*
- (8) a. **Kuka** maistoi **mitä** **kakkua**?  
 who.NOM tasted which.PAR cake.PAR  
*"Who tasted which cake?"*
- b. \***Mitä** **kakkua** **kuka** maistoi?  
 which.PAR cake.PAR who.NOM tasted

### ③ Internal movement within islands

(Huhmarniemi 2012 on islands, edges, and snowball movement in Finnish)

- (9) a. **Kuka** hymyili [maistaessaan **mitäkin** **kakkua**]?  
 who.NOM smiled tasting which.PAR.KIN cake.PAR  
*"Who smiled while tasting which cake?"*
- b. ?**Kuka** hymyili [**mitäkin** **kakkua** maistaessaan \_]?  
 who.NOM smiled which.PAR.KIN cake.PAR tasting
- (10) a. ??**Kuka** hymyili [maistaessaan **mitä** **kakkua**]?  
 who.NOM smiled tasting which.PAR cake.PAR  
*"Who smiled while tasting which cake?"*
- b. **Kuka** hymyili [**mitä** **kakkua** maistaessaan \_]?  
 who.NOM smiled which.PAR cake.PAR tasting

# H&V 2011: Analysis

## Semantics

- Earlier version of H&V 2011, after Hakulinen et al. 2004:  
wh-kin-phrases are **distributive universal quantifier phrases**  
that take scope over the fronted wh-phrase  $\Rightarrow$  pair-list answer  
semantics

- (11) a. [mitäkin kakkua [Kuka maistoi \_]]?  
which.PAR.KIN cake.PAR who.NOM tasted  
b. For each cake, tell me who tasted it

We will argue that this is not the case.

# H&V 2011: Analysis

## Syntax

- Wh-pair  $\Rightarrow$  both wh-phrases agree with interrogative C; one fronts overtly and the other at LF
- Wh-list  $\Rightarrow$  fronted wh-phrase agrees with interrogative C and binds in situ wh-kin-phrase, whose focus feature is deleted by KIN

We will not discuss wh-pair at all; the proposal at least partly agrees with H&V 2011.

## More observations: semantics

- ① The in-situ wh does not behave like English in-situ whs in multiple-wh interrogatives (in terms of Exhaustivity and Uniqueness, Dayal 1996)
- ② The wh-kin-phrase does not behave like a universal quantifier

# ① Pair-list presuppositions

Dayal (1996: 105-108) for multiple-wh interrogatives with a pair-list reading:

- **Exhaustivity:** Each value of the subject-wh must be paired with a value of the in-situ object-wh
- **Uniqueness:** Each value of the subject-wh must be paired with only one value of the in-situ object-wh
- Possibilities:
  - 1-to-1
  - many-to-1
  - \*1-to-many

# ① Exhaustivity: map 3 to 4

Dayal 1996: 105

- (12) Context: We're organizing singles tennis games between men and women. There are three men interested in playing against women, namely Bill, Mike, and John. But there are four women interested in playing against men, namely Mary, Sue, Jane, and Sarah.
- So, which man is playing against which woman?
  - Kuka miehistä pelaa ketäkin naista vastaan?  
who.NOM men.PAR plays who.PAR.KIN woman.PAR against



# ① Exhaustivity: #map 4 to 3

Dayal 1996: 106

- (13) Context: We're organizing singles tennis games between men and women. There are four men interested in playing against women, namely Harry, Bill, Mike, and John. But there are three women interested in playing against men, namely Mary, Sue, and Jane.
- #So, which man is playing against which woman?
  - Kuka miehistä pelaa ketäkin naista vastaan?  
who.NOM men.PAR plays who.PAR.KIN woman.PAR against

In (13), a many-to-1 should be acceptable by Exhaustivity – but only if a woman can play twice. Hence, the weirdness of (13) might not be due to grammar.

# ① Exhaustivity: determined by wh-kin

In (12) and (13), each of the members of the **lower** wh-kin-phrase must be mapped to some member of the **fronted** wh-phrase.

- (14) a. Marya vastaan pelasi Harry, Sueta vastaan pelasi  
Mary-PAR against played Harry Sue-PAR against played  
Bill, ja Janea vastaan pelasi Mike  
Bill and Jane-PAR against played Mike  
*"Harry played against Mary, Bill played against Sue, and  
Mike played against Jane"*
- b. #Marya vastaan pelasi Harry, ja Sueta vastaan  
Mary-PAR against played Harry and Sue-PAR against  
pelasi Bill  
played Bill  
*"Harry played against Mary and Bill played against Sue"*

# ① Uniqueness: predictions for wh-kin

Let us say uniqueness requires any value of the **fronted** wh-phrase to be linked to at most one value (\*one-to-many) of the **lower** wh-phrase (independently of the fronted wh being a subject or an object).

We predict that in (a), no answer has one person taste more than one cake, while in (b), no answer has one cake be tasted by more than one person.

- (15) a. **Kuka** maistoi **mitäkin** **kakkua**?  
 who.NOM tasted which.PAR.KIN cake.PAR  
*"Who tasted which cake?"*
- b. **Mitä** **kakkua** **kukakin** maistoi?  
 which.PAR cake.PAR who.NOM.KIN tasted  
*"Which cake did who taste?"*

# ① Uniqueness: predictions not borne out

People = {Joni, Mari, Jesse}

Cakes = {carrot cake, chocolate cake, angel cake}

(16) a. **Kuka** maistoi **mitäkin** **kakkua**?

who.NOM tasted which.PAR.KIN cake.PAR

"Who tasted which cake?"

b. **Porkkanakakkua** maistoi **Jesse**, **suklaakakkua**

carrot cake.PAR tasted Jesse.NOM chocolate cake.PAR

maistoi **Mari**, ja **enkelikakkua**(kin) maistoi

tasted Mari.NOM and angel cake.PAR.KIN tasted

**Jesse**

Jesse.NOM

"Jesse tasted the carrot cake, Mari tasted the chocolate cake, and Jesse (also) tasted the angel cake"

# ① Uniqueness: predictions not borne out

People = {Joni, Mari, Jesse}

Cakes = {carrot cake, chocolate cake, angel cake}

(17) a. **Mitä** **kakkua** **kukakin** maistoi?

which.PAR cake.PAR who.NOM.KIN tasted

"Which cake did who taste?"

b. **Joni** maistoi **suklaakakkua**, **Mari** maistoi

Joni.NOM tasted chocolate cake.PAR Mari.NOM tasted

**porkkanakakkua**, ja **Jesse**(kin) maistoi

carrot cake.PAR and Jesse.NOM.KIN tasted

**suklaakakkua**

chocolate cake.PAR

"Joni tasted the chocolate cake, Mari tasted the carrot cake, and Jesse tasted the angel cake"

## ② Unlike $\forall$ : PL in wh-questions with two objects

Baseline: DO- $\forall$  may not scope over IO- $\exists$  in Finnish (cf. Bruening 2001)

- (18) a. **Minkä** **kirjan** Joni antoi joka oppilaalle?  
 which.ACC book.ACC Joni.NOM gave every student.ALL  
*"Which book did Joni give to every student?"*  
 $\Rightarrow \exists > \forall, \forall > \exists$
- b. **Mille** **oppilaalle** Joni antoi joka kirjan?  
 which.ALL student.ALL Joni.NOM gave every book.ACC  
*"Which student did Joni give every book?"*  
 $\Rightarrow \exists > \forall, \underline{\underline{* \forall > \exists}}$

Nb. compare with *each*

## ② Unlike $\forall$ : PL in wh-lists with two objects

Compare: DO-wh-kin gives rise to PL readings

- (19) a. **Minkä kirjan** Joni antoi **millekin**  
 which.ACC book.ACC Joni.NOM gave which.ALL.KIN  
**oppilaalle?**  
 student.ALL  
*"Which book did Joni give to which student?"*  
 $\Rightarrow$  PL OK
- b. **Mille oppilaalle** Joni antoi **minkäkin**  
 which.ALL student.ALL Joni.NOM gave which.ACC.KIN  
**kirjan?**  
 book.ACC  
*"Which student did Joni give which book?"*  
 $\Rightarrow$  PL OK too

## ② Unlike $\forall$ : Functional answers

In English (and in Finnish) wh-questions with a  $\forall$ -quantifier, S- $\forall$  permits a functional answer but DO- $\forall$  does not (Chierchia 1991, 1993):

(20) a. **Ketä** jokainen lapsi<sub>i</sub> rakastaa?  
 who.PAR every.NOM child.NOM loves  
*"Who does every/each child<sub>i</sub> love?"*

b. Sisarustaan;  
 sibling.PAR.PX/3SG  
*"His/her<sub>i</sub> sibling"*

(21) a. **Kuka** rakastaa jokaista lasta<sub>i</sub>?  
 who.NOM loves every.PAR child.PAR  
*"Who loves every/each child<sub>i</sub>?"*

b. ?\*Sisaruksensa;  
 sibling.NOM.PX/3SG  
*"His/her<sub>\*i</sub> sibling"*



## ② Unlike ∀: Functional answers

In wh-lists, a functional answer is marginal at best in either configuration:

- (22) a. **Ketä** kukakin<sub>i</sub> rakastaa?  
 who.PAR who.NOM.KIN loves  
*"Which person does which person love?"*
- b. ??Sisarustaan;  
 sibling.PAR.PX/3SG  
*"His/her sibling"*
- (23) a. **Kuka** rakastaa ketäkin<sub>i</sub>?  
 who.NOM loves who.PAR.KIN  
*"Which person loves which person?"*
- b. ??Sisaruksensa;  
 sibling.NOM.PX/3SG  
*"His/her sibling"*

## Summary

- The wh-kin phrase is not a universal quantifier that scopes over the fronted wh-phrase in order to yield a PL reading, as proposed in Hakulinen et al. (2004)
- The wh-kin phrase does not behave like the in-situ wh-phrase of English multiple-wh interrogatives
  - Exhaustivity and uniqueness hold of the (lower) wh-kin phrase and not the fronted wh
- The earlier work dismisses the contribution of KIN by giving it a different role than the one it has in its other uses in Finnish

## More observations: syntax

- ① Lonely wh-kin-phrases are unacceptable: an accompanying wh-phrase is required
- ② Long-distance wh-kin declaratives are unacceptable
  - Long-distance = the wh-phrases are separated by an island boundary

# ① An accompanying wh-phrase is required

(24) a. \***Mitäkin** **kakkua** Joni maistoi?  
 which.PAR.KIN cake.PAR Joni.NOM tasted

b. \*Joni maistoi **mitäkin** **kakkua**  
 Joni.NOM tasted which.PAR.KIN cake.PAR

(25) a. \*Joni käytti skootteriaan [paetakseen  
 Joni.NOM used scooter.PAR.PX/3SG in order to escape  
**ketäkin**  
 who.PAR.KIN

## ② Long-distance declaratives are \*

- (26) a. **Mitä** **kulkuvälinettä** Joni käytti \_  
 which.PAR vehicle.PAR Joni.NOM used  
 [paetakseen **ketäkin**?]  
 in order to escape who.PAR.KIN  
*"Which vehicle did Joni use in order to escape whom?"*
- b. \*Joni käytti **mitä** **kulkuvälinettä**  
 Joni.NOM used which.PAR vehicle.PAR  
 [paetakseen **ketäkin**]  
 in order to escape who.PAR.KIN

## Summary

- A lonely wh-kin-phrase does not function as a normal wh-phrase: it cannot front to CP for purposes of clause typing
- A lonely wh-kin-phrase does not survive on its own in declaratives
- A lonely wh-kin phrase does survive on its own inside an island if the matrix clause is wh-interrogative
  - This last point is a potential counterargument to an analysis that relies on a functional dependency between the wh-phrases (Dayal 1996, etc.): the two wh-phrases never cross paths
  - We will not discuss this point in detail here

## The kin of KIN

### Previous work:

- Karttunen & Karttunen 1976: Montagovian syntax-semantics for an additive/ scalar meaning (*also, even*) [standard use only]
- Vilkuna 1984: A Carlsonian approach [standard and thematic uses]
- Holmberg 2014: KIN is a clitic that can attach "virtually anywhere" [syntax-focused/standard use only]

### Uses:

- Standard [like English *also/even*]
- Polar [like *even* but on polar alternatives]
- Host-dissociated [like *even* but host is not F-marked]
- Confirming [related to polarity focus]
- Thematic [related to CTs]
- **Wh-kin** [multiple-wh structures]

## Examples: standard, polar, host-dissociated

- (27) Joni maistoi [suklaakakkua]<sub>F</sub>-**kin**  
 Joni.NOM tasted chocolate cake.PAR.KIN  
*"Joni also/even tasted [the chocolate cake]<sub>F</sub>"* (STANDARD)
- (28) Joni [maistoi]<sub>F</sub>-**kin** suklaakakkua  
 Joni.NOM tasted.KIN chocolate cake.PAR  
*"Joni also/even [tasted]<sub>F</sub> the chocolate cake"* (STANDARD) or  
*"Joni [tasted]<sub>F</sub> the chocolate cake (although he was expected not to)"* (POLAR)
- (29) Joni maistoi**kin** [suklaakakkua]<sub>F</sub>  
 Joni.NOM tasted.KIN chocolate cake.PAR  
*"Joni tasted the chocolate cake (although he was expected to taste some other cake)"* (HOST-DISSOCIATED)



## Examples: confirming, thematic

- (30) Joni sano i maistavansa suklaakakkua, ja niin hän  
 Joni.NOM said taste.PRT chocolate cake.PAR and so he  
 [maistoikin]<sub>F</sub>  
 tasted.KIN  
*"Joni said he would taste the chocolate cake, and so he [did]<sub>F</sub>"*  
 (CONFIRMING)
- (31) Juhlat olivat ihanat. Joni leipoi  
 parties.NOM were lovely.NOM Joni.NOM baked  
 suklaakakun, ja Marikin toi kukkia  
 chocolate cake.ACC and Mari.NOM.KIN brought flowers  
*"The party was lovely. Joni baked a chocolate cake, and Mari brought flowers"* (THEMATIC)

## Standard semantics for additive/scalar operators

(Karttunen & Peters 1979; Rooth 1985, 1992; etc.)

- (32) a. [John]<sub>F</sub> left too  
 b. Even [John]<sub>F</sub> left

- (33) a.  $p$  = John left  
 b.  $F_{alt}(p) = \{\text{John left, Mary left, Sue left, ...}\}$

Presuppositions between dots:

- (34) a.  $\llbracket \text{ADD} \rrbracket = \lambda p. \exists q \in F_{alt}[q \neq p \wedge q \text{ is true}].p$   
 b.  $\llbracket \text{SCAL} \rrbracket = \lambda p. \forall q \in F_{alt}[q \neq p \rightarrow p <_{\text{likely}} q].p$

## Kripke's counterargument

(35) #[John]<sub>F</sub> is having dinner in New York tonight, too

There is always someone other than John that is having dinner in New York.

## Focus-sensitivity

While the meaning KIN comes with is not always amenable to the standard presuppositions spelled out for *even* or *also*, KIN-sentences always make reference to **alternatives** (Rooth 1985, etc.)

- KIN reveals the presence of a focus-sensitive operator, but KIN is not the operator itself
  - This way we preserve a connection to most work on focus-sensitive operators
- I give the operator a Kripke-style "additive" semantics (1990/2009)
  - Essentially, the OP is *anaphoric*: it searches for a focus alternative antecedent in the common ground (cg) for the prejacent
  - We will not discuss the scalar presupposition or its status

## The interpretation of focus

We will use focus functions (Kratzer 1991, Erlewine 2014):

A focus assignment function  $h$  takes a focus index  $F_i$  and returns an alternative denotation for the constituent marked with  $F$

(36)  $[Joni]_{F_1}$

- $h_0(F_1) = \text{Joni}$
- $h_1(F_1) = \text{Mari}$
- $h_2(F_1) = \text{Jesse}$

We will always use  $h_0$  for the focus function that gives us the value we have in the prejacent

The range of  $H$  must be contextually given

## A sketch

The additive component (after Kripke 1990/2009, using focus functions as in Kratzer 1991, Erlewine 2014):

$$\llbracket \text{OP} \rrbracket_{\langle t, t \rangle} = \lambda p. \exists h \neq h_0 \exists q \in cg [q = \wedge p(h)].p$$

Presupposition: there is a focus function  $h$  distinct from the one used to get the prejacent such that if you apply  $h$  to the sentence and then lift to an intension (the set of worlds where  $p(h)$  holds = the proposition  $p(h)$ ), that proposition is in the common ground

Or, there is a proposition corresponding to the intension of a focus-alternative of  $p$  in the common ground

(The scalar component is not discussed here)

## Example

- $h_0(F1) = \text{Joni}$
- $h_1(F1) = \text{Mari}$
- $h_2(F1) = \text{Jesse}$

- (37) a. [Jonikin]<sub>F</sub> lähti  
           Joni-NOM.KIN left  
           "Joni left, too"
- b. OP ( $h(F1)$  left in  $w$ )
- c. PS =  $\lambda w. h_1(F1)$  left in  $w$  or  $\lambda w. h_2(F1)$  left in  $w$  is in  $cg$

# Syntax

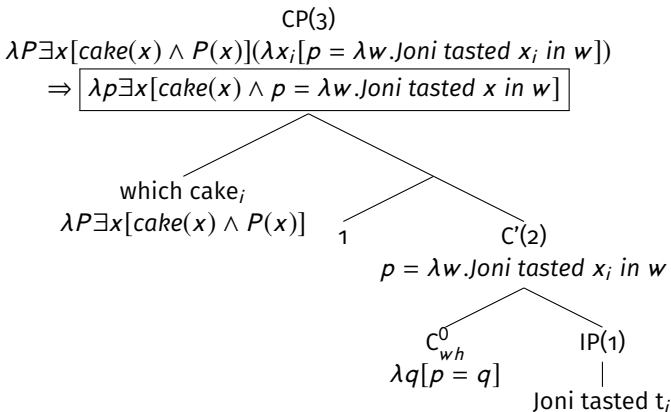
- The OP takes an argument of type  $t$ : we assume it attaches to vP
  - This is because of the word order in *wh*-kin declaratives (where the finite verb precedes both *wh*-phrases)
  - Another option would be to use IP/FP (nothing crucial hinges on this as long as we allow QR to adjoin to vP)
- The OP must c-command an F-marked associate, but that associate is not required to be the host of KIN

We won't go into the details of how KIN is generally attached to its host here, but the relevant process could be head-adjunction (cf. Benjamin Bruening's work)



## Hamblin 1973/Karttunen 1977 question semantics

- (38) a. Which cake did Joni taste?  
 b. [that Joni tasted the carrot cake, that Joni tasted the chocolate cake, that Joni tasted the angel cake]



## F-sensitivity

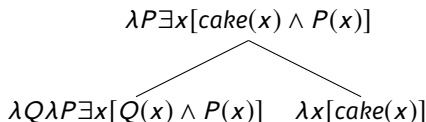
In order for OP to be applicable, we need something inside its sister  $p$  to be F-marked.

F-marking the (explicit or implicit) restriction of  $\exists$  results in alternatives of the wrong level ( $\text{cake}_F \Rightarrow \text{cupcake, pie, ...}$ ).

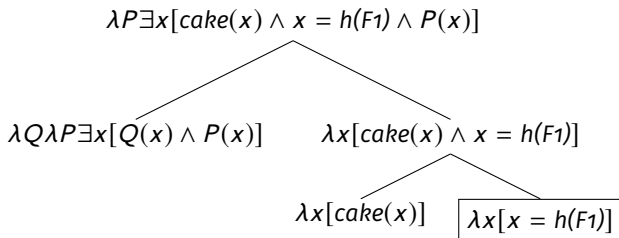
Idea: predicate modification of the restriction of the existential quantifier (inspired by Trace Conversion: Rullmann & Beck 1998, Fox 2002, Erlewine 2014)

## Two types of wh-phrases

(39) mitä kakkua

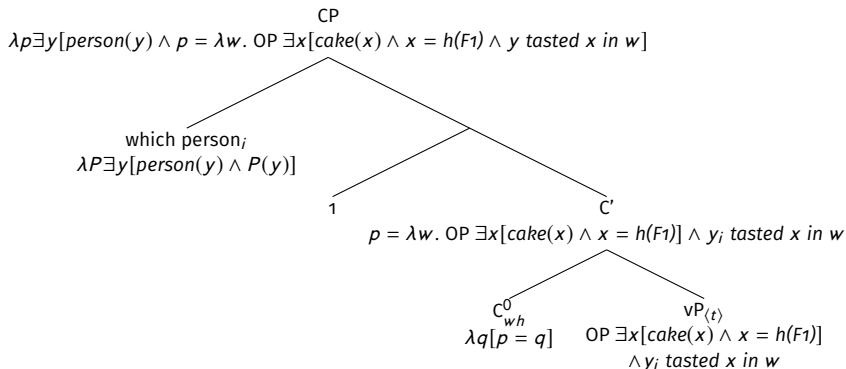


(40) mitäkin kakkua



## Wh-kin interrogative

- (41) Kuka maistoi mitäkin kakkua?  
 who.NOM tasted which.PAR.KIN cake.PAR  
*"Which person tasted which cake?"*



We have no  $h_0$  specified (the question nucleus has no value for F1):

Assume range of all  $h \in H = \{\text{carrot cake, chocolate cake, angel cake}\}$

- OP  $y$  tasted  $F1(h_i) = \text{OP } y \text{ tasted } \underline{\text{the carrot cake}}$
- OP  $y$  tasted  $F1(h_j) = \text{OP } y \text{ tasted } \underline{\text{the chocolate cake}}$
- OP  $y$  tasted  $F1(h_k) = \text{OP } y \text{ tasted } \underline{\text{the angel cake}}$

Each OP in each nucleus presupposes that there is another  $h$  than the one used such that the resulting nucleus is in the  $cg$

- We will assume for now that the presupposition functions point-wise so that two  $h$  cannot mutually satisfy each others presuppositions and hence allow infelicitous answers where one of the cakes is not paired with an eater
- OP is like glue between the nuclei
- Another possibility: existential commitment?

persons = {Joni, Mari}

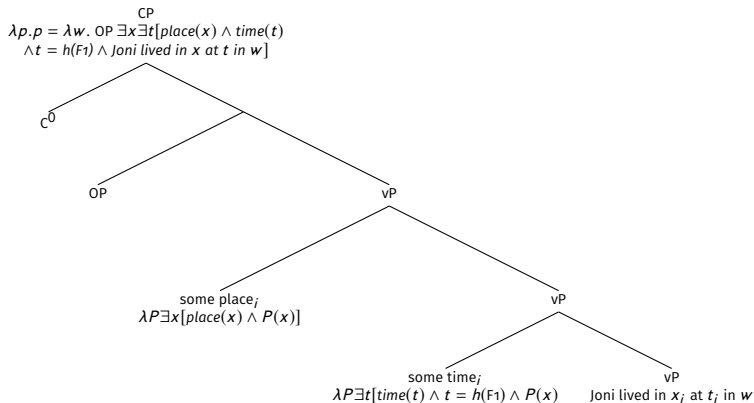
cakes = {carrot cake, chocolate cake, angel cake}

- (42) a.  $\lambda p \exists y [person(y) \wedge p = \lambda w. OP \exists x [cake(x) \wedge x = h(F1) \wedge y \text{ tasted } x \text{ in } w]]$
- b. [that Joni tasted the carrot cake, that Mari tasted the carrot cake, that Joni tasted the chocolate cake, that Mari tasted the chocolate cake, that Joni tasted the angel cake, that Mari tasted the angel cake]

- Collect propositions that we get by applying each  $h \in H$  (giving us a  $h_0$  for that proposition)
- For the  $h_0$  selected, there is another  $h$  such that  $p(h)$ , where  $p$  contains the free  $y$ , is in the  $cg$
- Hence, the answer must contain at least one proposition per cake
- Each cake was tasted by someone: who?

## Wh-kin declarative

- (43) Joni asui missä milloinkin  
 Joni lived where when-KIN  
*"Joni lived in different places at different times"*



times = {1995, 1996... 2016}  $\Rightarrow$  range of all  $h \in H$

- (44) a. Joni asui missä milloinkin  
 Joni lived where when-KIN  
*"Joni lived in different places at different times"*
- b. [that Joni lived in some place in 1995, that Joni lived in some place in 1996, ... that Joni lived in some place in 2016]

Due to the F-marking, the denotation of the declarative is still a set of propositions — which is admittedly uncommon

Or: the denotation has no value for  $h(F_1)$  and the point of the declarative is to say that whichever  $h$  you apply, there is another  $h$  that also gives you something that is in the *cg*



## Relative order, [Foc]-feature

**Wh-kin declarative:** either the bare wh-phrase moves overtly (to the edge?) and the wh-kin phrase QRs covertly if need be, or QR-needing whs may do it overtly or covertly

⇒ No superiority?

(45) [CP-decl ... [VP **OP** [VP **wh**<sub>1</sub> [VP ... *t*<sub>1</sub> ... **wh-kin** ... ]]]]

**Wh-kin interrogative (wh-list):** bare wh-phrase continues to CP

(46) [CP-int **wh**<sub>1</sub> ... [VP **OP** [VP *t*<sub>1</sub> [VP ... *t*<sub>1</sub> ... **wh-kin** ... ]]]]

Both wh-phrases have a [uFoc]-feature that needs to be deleted by OP or C<sub>int</sub> (as in Huhmarniemi & Vainikka 2011)

⇒ Keep both whs under OP if no C<sub>int</sub>

## Accompanying wh-phrase is required

Wh-kin declarative: perhaps an insertion competition issue (wh-kin vs. existential or universal quantifier)?

(47) \* $[_{CP-decl} \dots [_{VP} \text{ OP } [_{VP} \dots \text{wh-kin} \dots ]]]$

Wh-kin interrogative: perhaps a semantic problem (wrt. OP)? Or a syntactic problem (wh-kin does not qualify as a phrase that can front to CP)?

(48) \* $[_{CP-int} \text{wh-kin}_1 \dots [_{VP} \text{ OP } [_{VP} \dots t_1 \dots ]]]$

## Long-distance wh-kin declaratives are ungrammatical

Long-distance wh-kin declarative: perhaps a syntactic problem (the [uFoc] of the bare wh-phrase is not deleted)

(49) \* $[_{CP-decl} \dots [_{VP} \dots \text{wh}_1 \dots [_{island} \text{OP} [_{VP} \dots \text{wh-kin} \dots ]]]]$

Long-distance wh-kin interrogative (wh-list)

(50)  $[_{CP-int} \text{wh}_1 \dots [_{VP} \dots t_1 \dots [_{island} \text{OP} [_{VP} \dots \text{wh-kin} \dots ]]]]$

## Conclusion

- We tried to derive the "universal flavour" of wh-kin by relying on an OP that works also for the other uses of KIN
  - We had to make stipulations about how focus functions work when there is no  $h_0$  evident from the prejacent
  - It could be that this does not do the job
- We explained the peculiar (for an in-situ wh) exhaustivity and uniqueness pattern of wh-kin
- We are not sure to have a very satisfactory analysis of the loss of Superiority

# Thank you!



FONDS NATIONAL SUISSE  
SCHWEIZERISCHER NATIONALFONDS  
FONDO NAZIONALE SVIZZERO  
SWISS NATIONAL SCIENCE FOUNDATION