# Two types of speaker's uncertainty over the epistemic space in Korean

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# Main goal

- The main goal of this paper is to propose a novel paradigm of the split **epistemic uncertainty** in Korean (*i*)*nka* variants.

(1)  nwukwu-**inka**      wusungha-ess-ta.                    [*inka*-indefinite]
     who-INKA            win-Past-Decl
     **'Someone (I don't know who he is)** won.

(2)  con-i                wusungca-i-**nka?**                  [*nka*-question]
     John-Nom            winner-be-NKA
     'Maybe John is the winner, maybe not?
       ≈ John might be the winner or it might not.'

(3)  wusungca-nun    John-**inka**    Bill-i-ta.              [*inka*-disjunction]
     winner-Top      John-or          Bill-be-Decl
     'The winner is **possibly** John or Bill.'

# *Wh-inka* as an anti-specificity marker

- The speaker is unable to identify the precise referent in a given question
  -- No particular individual in speaker's mind!

(4)  nwukwu-**inka**　　　wusungha-ess-ta.　　　　　[*inka*-indefinite]
　　　who-INKA　　　　win-Past-Decl
　　　'Someone (I don't know who he is) won.'

- Anti-specific *wh-inka*: an indicator of the speaker's *epistemic uncertainty*

# *Nka* as a modalized question marker

- *Nka* attaches at the end of the clause and marks a non-factual question.

(5) *Context: Mary, a reporter, was waiting for John and Bill who were competing with each other for the win in the finals of the chess competition. She was ready to interview Bill, because Mary was told from her boss that Bill was the strong front runner of the competition. After the match, John and Bill came out of the room. John had a very subtle smile and Bill had a poker face. Given their facial expressions, she inferred that John might have won. But at the same time, John is unlikely to be the winner given her boss's comment. With full of uncertainty about her inference, Mary says:*

    Con-i        wusungca-i-**nka?**                      [*nka*-question]
    John-Nom   winner-be-NKA
    'Maybe John is the winner, maybe not?
      ≈ John might be the winner or it might not.'

# *Nka* as a modalized question marker

(6) Con-i       wusungca-i-**nka?**                           [*nka*-question]
      John-Nom     winner-be-NKA
      'Maybe John is the winner, maybe not?
        ≈ John might be the winner or it might not.'

- It is a question about the *possibility* of the content of proposition.

- By using *nka*, the speaker specifies the degree of her certainty about a proposition, just like an epistemic modality.

- *Nka*-Q: a *modalized question* (MQ, henceforth).

# *Inka* as a (modalized) disjunction marker

- *Inka* coordinates two DPs.

(7)  Wusungca-nun    John-**inka**    Bill(-**inka**)-i-ta.
     winner-Top        John-or        Bill-or-be-Decl
     'The winner is possibly John or Bill.                    [*inka*-disjunction]

- *Inka*-disjunction is a disjunction without overt modals (Zimmermann 2001), marking irrealis value (Kang 2017).

# Big Question

Given the multifunctionality, should we pursue a separate or unified analysis?

# Interrogative-disjunctive-indefinite affinity 1

**Malayalam**

(8)  a.  John-**oo**       Bill-**oo**       Peter-**oo**     wannu.                    [*oo*-disjunction]
        John-Disj       Bill-Disj       Peter-Disj     came
        '**John or Bill or Peter came.'

    b.  Aar-**oo**         wannu.                                          [*oo*-indefinite]
        Who-Disj       came
        'Someone came.'

    c.  Mary      wannu-**oo**?                                      [*oo*-question]
        Mary      came-Q
        'Did Mary come?'

                                (Jayaseelan 2001: (19),  Jayaseelan 2008: (2)-(3))

# Interrogative-disjunctive-indefinite affinity 2

**Japanese**

(9) a.      John-**ka**      Bill-(ka)-ga      hon-o      katta.      [*ka*-disjunction]
         John-Disj      Bill-Disj-Nom      book-Acc      bought
         'John or Bill bought books.'

     b.      Dare-**ka**-ga      hon-o      katta.      [*ka*-indefinite]
         Who-Disj      book-Acc      bought
         'Someone bought books.'

     c.      Dare-ga      kimasu-**ka**?      [*ka*-question]
         Who-Nom      come-Q
         'Who is coming?'

# Interrogative-disjunctive-indefinite affinity 3

**Yucatec maya**

(10) a.  T-u        yuk'-aj          le   sa'-o'           Juan      **wáa**      Daniel. [*wáa*-disjunction]
         PFV-A.e   drink-Status   the  stole-distal    Juan       Disj        Daniel
         'Juan or Daniel drank the atole.'

  b.  Tal   in   jantik   **wáa**     ba'ax.                                        [*wáa*-indefinite]
      want   A.1  eat  Disj       what
      'I want to eat something or other.'

  c.  Táan-**wáa**     u    yuk'-ik          le   sa'-o'           Juan.                        [*wáa*-question]
      Prog-or          A.3  drink-Status  Def  stole-distal    Juan
      'Is Juan drinking the atole (or not)?'

(Anderbois 2012: pp. 352, 357)

# Unified analysis: Alternative Semantics

- The phenomenon of interrogative-disjunctive-indefinite affinity:

  There is a semantic relation between interrogative markers, disjunction and indefinites by introducing a set of *propositional alternatives* (*Alternative Semantics*: Kratzer & Shimoyama 2002; Kratzer 2005; Alonso-Ovalle 2006 a.o.).

# Alternative Semantics

(11) Ann sings, or Bill sings, or Charles sings:          [disjunction]
    {{w: sing(ann)(w)}, {w: sing(bill)(w)}, {w: sing(charles)(w)}}

(12) a.  Who sings? :                                 [question]
     {p: p = {w: sing(ann)(w)} ∨ p = {w: sing(bill)} ∨ p = {w: sing(charles)}...}
  b.  "Ann sings," or "Bill sings," or "Charles sings," ...:
    {{w: sing(ann)(w)}, {w: sing(bill)(w)}, {w: sing(charles)(w)},...}

(13) Where A is a set of the proposition, we have:
  a.  [∃](A) = {the proposition that is true in all worlds in which a       [*wh*-indefinite]
     proposition in A is true}
  b.  ([[who-indeterminate came]]$^{w,g}$) = {there is at least one person that
     came in w}

# Unified analysis → NO!

- We challenge these claims!

- There is a novel paradigm of epistemic uncertainty, which is NOT captured by means of propositional alternatives.

# Proposals

*1. Nka* and *inka* convey differing semantic function;

2. The crucial **difference** arises from <span style="color:red">distinct epistemic alternatives</span>;
    i. *wh-inka* expresses speakers uncertainty on <span style="color:green">the value of *x*</span>
    ii. *nka* conveys speaker's uncertainty on <span style="color:blue">the truth of proposition</span>

3. There is a **commonality**: they are relativized to the epistemic state of the speaker, M(*i*) (Giannakidou 1995 et seq.) under the notion of:
    i. *referential vagueness* for *wh-inka* (Giannakidou & Quer 2013; Giannakidou & Yoon 2016)
    ii. *non-veridical equilibrium* for *nka*-Q (Gianakidou 2013; Giannakidou & Mari 2016)

# Outlines

1. Introduction
2. Empirical motivations on distinct types of epistemic alternatives
3. Anti-specific indefinite *wh-inka* with referentially vague condition
4. Modalized question marker *nka* with non-veridical equilibrium
5. Path to grammaticalization from MQ to RVI
6. Theoretical implications

# Empirical motivations

**For *wh-inka*, Alternative Semantics is refuted!**

- *Wh-inka* never receives a wh-question meaning:

(14) Nwukwu-**inka**-ka            o-ass-ni?
    who-INKA-Nom      come-Past-Q
    'Did Someone (I don't know who it is) come in?'
   ~~'Who came in?'~~

- How do we explain the lack of the *wh*-question interpretation?
→ *wh-inka* is a non-*wh*-item!

- Therefore, Alternative Semantics is an unattractive option.

# *Wh-inka* as a Kamp/Heim-style indefinite

- Suggestion: the classical treatment of indefinites as Heimian variables
  (à la Nishigauchi 1990; Cheng & Huang 1996, a.o.).

- *Wh*-words do not have an inherent quantificational force, but the particles are the binders:

(15) Q[w,x] [. . . indefinite-D NP (x,w). . . VP]

- The wh-set undergoes operations on individual domain in accordance with the individual-based variation.

- The anti-specificity marker *inka* occupies the D position.

# Summing up:

1. The common denominator of *nka* and *inka* is that they both express speaker's epistemic indeterminacy;

2. The crucial difference arises from a strict dichotomy between the types of alternatives that *nka* and *inka* introduce:
       i. *wh-inka* expresses speakers uncertainty on the value of individual $x$
       ii. *nka* conveys speaker's uncertainty on the truth of proposition $p$

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# *Wh-inka* as a referentially vague indefinite

- Morphologically 'marked' indefinite Ds:

(16)  **A certain** student came to see me.                                      (specific)
     **Any** student can come to see me.                              (free choice)
     **Some (or other)** student came to see me.              (referential vagueness)

In (16), the speaker intends to convey something more than just existential ∃.

- The marked determiners are the place where <u>the speaker's epistemic state is reflected.</u>

# Referential Vagueness Condition
(Giannakidou & Quer 2013; Giannakidou & Yoon 2016):

1. Indeterminacy of reference
2. Non-exhaustive variation (=anti-singleton constraint)
   (i.e. there are at least two alternatives, and the absence of domain
   exhaustivity)

(17) **Referential vagueness** (Giannakidou & Quer 2013):

A sentence containing a referentially vague indefinite $\alpha$ will have a truth value iff:

$\exists w_1, w_2 \in W: [\![\alpha]\!]^{w1} \neq [\![\alpha]\!]^{w2}$ ; where $\alpha$ is the referentially vague variable.

# Referential vagueness of *wh-inka*: Non-identifiability

(18) Na-nun     kyoswu     nwukwu-**inka**-lul     manna-kosiph-ta.                    [Naming]
    I-Top          professor  who-INKA-Acc          meet-want-Decl
    #kuuy         ilum-un    con-i-ta.
    his              name-Top John-be-Decl
    'I want to meet some professor or other. #His name is John.'

(19)  Na-nun    kyoswu     nwukwu-**inka**-lul     manna-kosiph-ta.                   [Ostension]
    I-Top          professor  who-INKA-Acc          meet-want-Decl
    #Kukes-un        ceki ce         namca-i-ta.
    it-Top             there that   guy-be-Decl
    'I want to meet some professor or other. #It's that guy over there.'

(20)  Na-nun   kyoswu     nwukwu-**inka**-lul     manna-kosiph-ta.                   [Description]
    I-Top          professor  who-INKA-Acc          meet-want-Decl
    #ku-nun pwulkun    meli-i-ta.
    he-Top    red          haired-be-Decl
    'I want to meet some professor or other. #He is red haired.'

# Referential vagueness of *wh-inka*: Non-exhaustive variation

Context: *The family is in a dire financial situation and Mary must save face for the family by marrying a rich guy. Lawyers are rich guys, so she needs to marry some lawyer or other, a member of the set 'lawyer'.*

(21) a.  #Maria-nun  pyenhosa    **nwukwu-na**-hako      kyelhonhay-yaha-n-ta.
          Mary-Top    lawyer      who-or-with            marry-must-Pres-Decl
          'lit. Maria must marry any lawyer.'
     b.  Maria-nun  pyenhosa    **nwukwu-inka**-hako    kyelhonhay-yaha-n-ta.
          Maria-Top   lawyer      who-INKA-with          marry-must-Pres-Decl
          'Maria must marry a lawyer, some lawyer or other.'

# Referential vagueness of *wh-inka* (Kang & Yoon 2016a):

- Referential vague indefinite *wh-inka* expresses:
  (i) the speaker's uncertainty about the value of the indefinite;
  (ii) it needs a condition of minimal variation requiring that there be at least two values in M($i$).

(22) Referential vagueness of *wh-inka*:

$\exists w1, w2 \in W$: $[[\alpha]]^{w1} \neq [[\alpha]]^{w2}$; where $\alpha$ is the referentially vague variable;

[[*wh-inka* came]] will be defined in c, only if: $\exists w1, w2 \in W$:

if defined, [[*wh-inka* came]] is true if there is at least one assignment

g that verifies the condition someone (x) & came (x).

# Referential vagueness of *wh-inka* (Kang 2016; Kang & Yoon 2016a):

(23) No particular individual in mind = no fixed value in $M_B(s)$:
    w1 → John, w2 → Bill, w3 → Charles …

The worlds w1, w2 are epistemic alternatives of the speaker: w1, w2   M(speaker), where M(speaker) is the speaker's belief state, the set of worlds compatible with what he or she believes/knows.

Variation is modeled as different values in at least two worlds.

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# *Nka*-MQ as nonveridical equilibrium

(24) *Context: Mary, a reporter, was waiting for John and Bill who were competing with each other for the win in the finals of the chess competition. She was ready to interview Bill, because Mary was told from her boss that Bill was the strong front runner of the competition. After the match, John and Bill came out of the room. John had a very subtle smile and Bill had a poker face. Given their facial expressions, she inferred that John might have won. But at the same time, John is unlikely to be the winner given her boss's comment. With full of uncertainty about her inference,* **Mary asks John**:

  a.  #Ney-ka      wusungca-i-**nka**?                    [Modalized question]
      you-Nom    winner-be-NKA
      'lit. Maybe you are the winner, maybe not?
      ≈ #(I am asking you whether/) maybe you are the winner, maybe not.'
  b.  Ney-ka       wusungca-i-**ni**?                     [Ordinary question]
      you-Nom    winner-be-Q
      'Are you a winner?'

*Nka*-MQ concerns speaker's own knowledge and issues, reporting on the *speaker's* consideration of possibilities of the given propositional content:

(5')  Con-i          wusungca-i-**nka?**                              [*nka*-MQ]
      John-Nom     winner-be-NKA
      'Maybe John is the winner, maybe not?
        ≈ John might be the winner or it might not.'

(25) (5'): {{**Maybe** the winner is John}, {**Maybe** the winner is **not** John}}


→ Our main claim is that Korean MQ marker *nka* is distinct from ordinary question marker so it has distinct semantics of Hamblin semantics.

# Modalized question crosslinguistically

(26)  a. *John-ga      kuru      darou.*                                      [Japanese]
          John-NOM   come          DAROU
          'John is coming, I bet. ≈ Probably, John is coming.'
    b. *John-ga      kuru      ka.*
        John-NOM   come          Q
        'Is John coming?'
    c. *Yurie-wa      wain-o      nomu      darou-ka.*
        Yurie-TOP    wine-ACC   drink      DAROU-Q
        'I wonder if Yurie drinks wine.'

                   (Hara and Davis 2013; (2),(1),(7))

# Modalized question crosslinguistically

(27) a. *lán=**k'a**                kwán-ens-as        ni=n-s-mets-cál=a.*       [St'át'imcets]
already=INFER     take.DIR-3.ERG    DET.ABS=1sg.POSS-NOM=write-ACT=EXIS
'She must have already got my letter.'

    b. *lán=**ha**                 kwán-ens-as        ni=n-s-mets-cál=a.*
already=YNQ       take.DIR-3.ERG    DET.ABS=1sg.POSS-NOM=write-ACT=EXIS
'Has she already got my letter?'

    c. *lan=**as**=**há**=**k'a**                  kwán-ens-as      ni=n-s-mets-cál=a.*
already=3.SUBJ=YNQ=INFER    take.DIR-3.ERG    DET.ABS=1sg.POSS-NOM=write-ACT=EXIS
'I wonder if she's already got my letter.'
'I don't know if she got my letter or not.'

(Littell et al. 2009: (1))

# Modalized question crosslinguistically

(28)  a. *isos*  ***Na***  *kimate*  *o Nicholas.*  [Greek]
  maybe SUBJ  sleep-3sg  the Nicholas
  'Maybe Nicholas is asleep.'

  b. *tou*  *milise*  ***(arage)?***
  him  talked-3sg  Q
  'Did she talk to him?'

  c. ***na***  *tou milise*  ***(arage)?***
  SUBJ  him  talked-3sg Q
  'Might she have talked to him?'

(Giannakidou 2017: (55), (61), (60))

# Core characteristics of *nka*

Our discussion on *nka* crucially hinges on the question of

(i) how the semantic categories of MQs can be distinguished within the traditional domain of modality, and how they can be defined,

(ii) how the seemingly distinct notions of disjunction, modal effect, and question are amalgamated in the single element *nka*.

## *Nka*-MQ as nonveridical equilibrium (Kang & Yoon 2016b)

1. *Nka* is an indicator of the presence of non-homogenous modal space
2. *Nka* restricts the modal spaces to nullify the bias.

# Manipulating modal base into non-based epistemic states

Table 1. Central epistemic modal constructions of Korean

| epistemic | modal verbs | meaning |
|---|---|---|
| possibility | -(u)l swu iss-ta | 'might/be possible that' |
| | -(ul) kes kath-ta | 'may' |
| necessity | -(ul) kes i-ta | 'must' |
| | -keyss-ta | 'must' |

(29) *Con-i*          *(eccemyen/hoksi)*          *wusungca-i-l.swu.iss-ta.*
     John-Nom     maybe/by.any.chance     winner-be-can-Decl
     'John can maybe be the winner.'

(30) *Con-i*          *(eccemyen/?hoksi)*          *wusungca-i-l.kes.kath-ta.*
     John-Nom     maybe/by.any.chance     winner-be-may-Decl
     'John may (maybe) be the winner.'

(31) *Con-i*          *(*eccemyen/*hoksi)*          *wusungca-i-l.kes.i-ta.*
     John-Nom     maybe/by.any.chance     winner-be-must-Decl
     'John must (#maybe) be the winner.'

(32) *Con-i*          *(*eccemyen/*hoksi)*          *wusungca-i-keyss-ta.*
     John-Nom     maybe/by.any.chance     winner-be-must-Decl
     'John must (#maybe) be the winner.'

# Manipulating modal base into non-based epistemic states

- *Nka* can co-occur with other overt modal verbs and no bias is detected:

(33) *Con-i*          *(eccemyen/hoksi)*          *wusungca-i-l.swu.iss-nu.**nka**?*
      John-Nom      maybe/by.any.chance      winner-be-can-NKA
      'Maybe John can be the winner, maybe not?'

(34) *Con-i*          *(eccemyen/hoksi)*          *wusungca-i-l.kes.kath-un.**nka**?*
      John-Nom      maybe/by.any.chance      winner-be-may-NKA
      'Maybe John might be the winner, maybe not?'

(35) *Con-i*          *(eccemyen/hoksi)*          *wusungca-i-l.kes.i-**nka**?*
      John-Nom      maybe/by.any.chance      winner-be-must-NKA
      '#Maybe John must be the winner, maybe not?'

(36) *Con-i*          *(eccemyen/hoksi)*          *wusungca-i-keyss-nu.**nka**?*
      John-Nom      maybe/by.any.chance      winner-be-must-NKA
      '#Maybe John must be the winner, maybe not?'

- *Nka*-MQ  is based on the modal spread structure.

# Modal spread

- **Modal spread** (Giannakidou & Mari 2017): The use of adverb is contentful. Modal verbs and adverbs with opposing forces can co-occur with a single modality reading.

(37) a.   ***Può***          ***probabilmente/sicuramente***   *essere*    *partito*   *presto.*   [Italian]
         can.3sg.pres   probably/certainly         be      left      early
         '#He may have probably/definitely left early.'
    b.   *Le*   *luci*   *sono*      *accese.*          *Gianni*   ***deve***     ***forse***     *essere*   *a*     *casa.*
         the   lights         are   switch-on     Gianni   must      maybe   be      at   home
         'The lights are on. John must (#maybe) be at home.'

                                                (GM 2017: (9)(14))

Table 2. Modal spread with universal and existential modals

|  | *definitely* | *maybe* | *probably* |
|---|---|---|---|
| *must* | strengthening | weakening | default |
| *may* | strengthening | default | strengthening |

# Modal spread

Table 3. Modal spread with epistemic modal verbs and *nka*:

| epistemic | modal verbs | meaning | information of *nka* on modal force |
|---|---|---|---|
| necessity | *-(ul) kes i-ta* | 'must' | weakening |
|  | *-keyss-ta* | 'must' |  |
| possibility | *-(u)l swu iss-ta* | 'might/be possible that' | default |
|  | *-(ul) kes kath-ta* | 'may' |  |

- In modal force, *nka ≈ forse* in Greek

# *Nka* in the modal structure

- The function of *nka* is constrain the modal base, just as modal adverbs do.

- Modal adverbs take the modal base as input to deliver the support set and operate on the size of modal base.

- *Nka* partitions the modal base into equilibrium, p ∨ ¬p, and annuls the bias.

- We posit an implicit possibility modal.

# The structure of MQ

The structure of Korean MQ
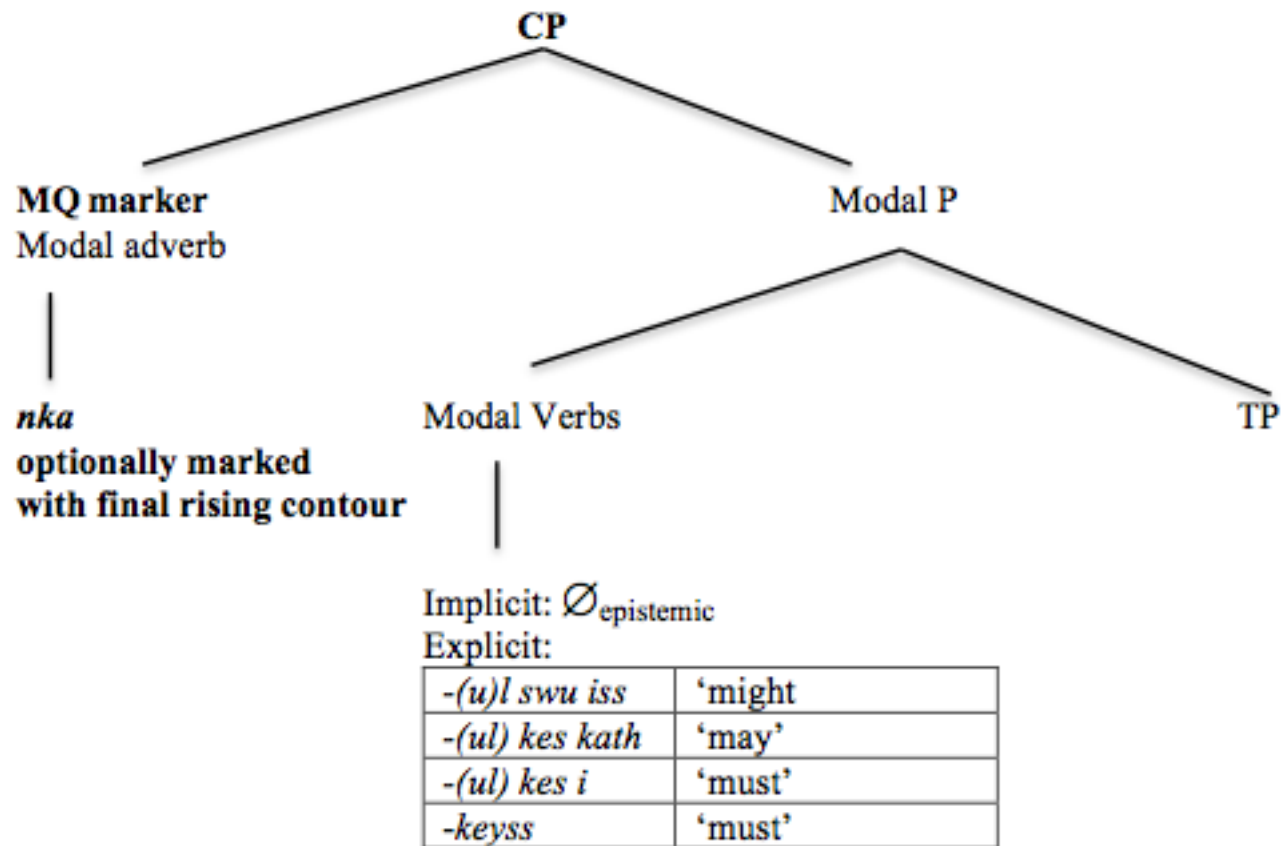


→ The speaker's perspective is an integral part of the modal structure.

# Medium possibility of MQ

Consequently, *nka* indicates an equal possibility of each modal space given what the speaker's doxastic world is.

(38) imsin-i-nka?
     pregnancy-be-NKA
     'Is it possibly a pregnancy?'

(39) **MQ and Degree of Certainty**
   a.  High-possibility context (80-100%): It has been 1 year since my sister got married. One day, I visited her. She wanted to tell me about the surprise news. She showed me her pregnancy test kit. There were two lines on it. I say: continuation (35): #

   b.  Medium-possibility context (50%): It has been 1 year since my sister got married. One day, I visited her. She showed some symptoms that she was suffering from nausea, and craved something sour. I say: continuation by (35): o.k.

   c.  Low-possibility context (0-20%): It has been 1 year since my sister got married. One day, I visited her. She told me that she wants a baby. There was nothing to make me infer about her pregnancy. I say: continuation by (35): #

# Non-veridial equilibrium (Giannakidou 2013; Giannakidou & Mari 2016)

(40) The Nonveridicality Axiom of modals (Giannakidou & Mari 2016: (27)): MODAL(M)($p$) can be defined only if the modal base M is nonveridical, i.e. only if M contains $p$ and non-$p$ worlds.

(41) Veridical, nonveridical modal spaces (sets of worlds) (Giannakidou 2014)
   (i) A set of worlds M is veridical with respect to a proposition $p$ iff
     all worlds in M are p-words (Homogeneity)
     $\forall w'(w' \in M \rightarrow p(w'))$
   (ii) A set of worlds M is nonveridical with respect to a proposition $p$ iff
     there is at least one world in M that is a non-p world. (Non-homogeneity)
     $\exists w', w'' \in M \, (w' \neq w'' \wedge (p(w') \wedge \neg p(w'')))$
   (iii) A set of worlds M is antiveridical with respect to a proposition $p$ iff M and $p$
     are disjoint.
     $M \cap p = \varnothing$

# Non-veridical equilibrium (Giannakidou 2013; Giannakidou & Mari 2016)

If there is no bias, and the modal base is partitioned into *p* and *non-p* sets of equal size, it is a state of nonveridical equilibrium:

(42) Nonveridical equilibrium (GM 2017: (105)):

An epistemic state M is in nonveridical equilibrium iff M is partitioned into *p* and *¬p,* and there is no ordering source providing a ranking.

# Non-veridical equilibrium of *nka*-MQ

(43) $\llbracket \text{NKA}(p) \rrbracket$ = $\llbracket$that it is possible that $p\rrbracket$ ∪ $\llbracket$that it is not possible that $p\rrbracket$

(44) Nonveridical equilibrium of MQ:
    $\llbracket \text{NKA MODAL}(p) \rrbracket^{M,i}$ will be defined iff the worlds in M($i$) are not ordered; if defined,
    $\llbracket \text{NKA MODAL}(p) \rrbracket^{M,i}$ = 1 iff ∃$w'$ ∈ M($i$)$p(w')$

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# Path to grammaticalization from MQ to RVI

- *Wh* (interrogative C) *+ i* 'be' *+ nka* > RVI *wh-inka:*
  Historical reanalysis from C (i.e., *wh*-question: *wh-i-nka* '*wh*-be-Q') to non-C elements (i.e., referentially vague indefinites: *wh-inka*):

- Until the end of the 19th century, *wh*-phrases such as *nwukwu* 'who' in Korean were used exclusively as interrogative pronouns and only in questions.

- The distribution of *nwukwu*, for some reason, has been extended to non-interrogative contexts.

# Path to grammaticalization from MQ to RVI

The properties of Korean *wh*-words changed over time from the exclusively interrogative pronouns to quantificational indefinite pronouns (C-M Suh 1987; C-S Suh 1989; Kim 1992; Kim 2000, a.o.):

(45)  a.  *Wh-questions*
Ceycwu-nun        etumey  issnani-o?
Jeju.island-Top    where         be-Q
'Where is Jeju island?'                                            *Dwusienhay* 1481
   b.  *Embedded wh-questions*
Susua-ka      ku  congcek-i  etey  iss-nunci      al-ci
Susua-Nom  that      trace-Nom  where    be-Comp      know-Comp
moshan-ta.-haess-sini
don't.know-Comp-be.said
'Susua said he didn't know where the trace was.'      *Sengkyengcikhay* 1790-1800
   c.  *Indefinite with wh-words*
Mwunho-nun      etey-se  ton  o-won-ul    kwuha-ye...
Mwunho-Top      where-Loc    money  5-won-Acc    get-and...
'Mwunho got 5 won somewhere and...'                  *Sonyenui piaya* 1917

# Path to grammaticalization from MQ to RVI

Q-morphemes lost their syntactic status as interrogative C
→ reanalysis to non-C elements with existential quantifier

(46) Semantic change of *nka*:

| Stage | Conceptual schema | Function |
|---|---|---|
| Stage 1 | X encodes a partition on the proposition | Question-marker |
| Stage 2 | X encodes speaker's epistemic uncertainty on the reference | Anti-specificity marker |

Table 4. Semantic shift of the anti-specificity marker *nka*

# Path to grammaticalization from MQ to RVI

- In the historical reanalysis process, the original properties of a construction before the reanalysis may continue to constrain the use of the reanalyzed forms (Hopper and Traugott 1993).

- This can account for why the indefinite *wh-inka* conveys the speaker's ignorance: the speaker's ignorance induced by the RVI *wh-inka* came from the *wh*-questions, which is based on the original properties of a construction prior to the reanalysis.

- Therefore, the reanalyzed RVIs headed by the particle *inka*, which is originally a question marker, are unnatural in a situation where the speaker knows the identity of referent.

# Path to grammaticalization from MQ to RVI

- The crosslinguistic 'or' indefinites (e.g. Russian, Hungarian, Portugues, Basque, Latvian, Romanian, West Greenlandic (Haspelmath1997), Hausa (Zimmermann 2009)) are primarily FCIs.

- The grammaticalization from indefinites to interrogatives is considered a general path (Haspelmath 1997).

- Given this generalization, however, it is surprising to observe that the grammaticalization path of the RVI *wh-inka* seems to be in the reverse direction, i.e. from interrogative to indefinites.

- An important point that we make here is: contrary to Haspelmath's generalization, the grammaticalization of *wh-inka* shows that the change can be *bidirectional.*

# Theoretical implications

1. Korean facts bring a fresh perspective w.r.t the notion of the speaker's uncertainty over the epistemic space, M($i$).

2. We suggest the necessity of a strict dichotomy of epistemic uncertainty which gives rise to the differing semantics of *referential vagueness* and *nonveridical equilibrium.*

3. Referential vagueness and nonveridical equilibrium in Korean is strongly connected in terms of historical reanalysis process.

# 감사합니다! ☺

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