ISVL 6

Vietnamese plural markers *các-những* and the homogeneity effects

Cao Thành Việt

Faculty of Linguistics and Vietnamese Studies

VNU University of Social Sciences and Humanities, Hanoi

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Section 1

Background

Syntactic structures of Vietnamese nominals

(1) **The surface structure**
Q - $\boxed{\textbf{PL}}$ /Num - **cái** - CLF - Noun - AttrP - PossP - RC - DEM.
(Phan & Lâm 2021)

(2) a. ***Bút*** *trên bàn là của-tôi.*
pen on table COP mine
'The pen(s) on the table is/are mine.' (inclusive plural)

b. ***Cây bút*** *trên bàn là của-tôi.*
CLF pen on table COP mine
'The pen on the table is mine.' (singular)

c. $\boxed{Các/những/mấy}$ ***cây bút*** *trên bàn là của-tôi.*
PL CLF pen on table COP mine
'The pens on the table are mine.' (exclusive plural)

d. ***Tất-cả*** *?(Các/những/mấy)* ***cây bút*** *trên bàn là của-tôi.*
all PL CLF pen on table COP mine
'All the pens on the table are mine.' (universal)

How similar/different are *các* and *những*?

Table 1: Revisiting syntactic distributions of Vietnamese PMs *các* vs. *những*
(Bui M.H. 2000, Le & Schmitt 2016, among others)

Distributional features	NHỮNG	CÁC
Co-occur with quantifiers '*all/most*'	+	+
Co-occur with other quantifiers '*every/several*'	−	−
Co-occur with cardinal numerals	−	−
Require classifiers	+	+
Require *D(iscourse)*-linking contexts	+	+
Require restrictions on the NP subject	+	−
Co-occur with *wh*-elements	+	−
Compatible with existential environments	+	?
Allow generic/kind readings	+	+
Co-occur with relational nouns	−	+

Research questions (addressed in Cao's (2025) Chapter 4)

- Are plural markers (**PM**s) *các* and *những* quantifiers or articles or what?
- How to capture their diverse distributions and interpretations (see Table 1) by compositional semantics?

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The Proposal in a nutshell

(3) *Nam và Mi là **những/các** sinh-viên.*
nam and Mi cop pl student
'Nam and Mi are students.' (predicative)

(4) *Có **những/?các** cuốn sách trên bàn.*
have pl clf book on table
'There are books on the table.' (existential)

(5) ***Các** phương-tiện không được phép rẽ trái.*
cac vehicle neg allow turn left
'All the vehicles are not allowed to turn left.' (universal)
or 'The vehicles are not allowed to turn left.' (maximal)

My proposal

- Both *các* and *những* are best to be analyzed as syntactically **modifying PMs** and semantically instantiations of **the inclusive PL operator**.

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The Q-analysis: Thompson (1988:180)

"***Các*** implies that all of a given set of entities are involved, while ***những*** suggests that only certain of the total possible number are referred to."

(6)   The D-analysis of *các* and *những* (Nguyễn H.T. 2004:42)

   a.   ***một*** 'one/a'   [−Plural, − Definite]
   b.   ***những*** 'plural marker'   [+Plural, −Definite]
   c.   ***các*** 'plural marker' (< Chinese 各 'each')   [+Plural, +Definite]

Main finding

- Their quantifier-alike (or determiner-alike) behaviors are due to the 'all or nothing' effect involving definite plurals and the presence of covert operators, not by means of the (in)definiteness encoded in *các* or *những*.

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Roadmap for today

1 Background

2 Observations

3 Literature review

4 My proposal

5 Bottom lines

Section 2

Observations

The homogeneity effects

(7)   **Các** phương-tiện không được phép rẽ   trái.
      CAC vehicle   NEG allow   turn left
      'All the vehicles are not allowed to turn left.'   (universal)
      or 'The vehicles are not allowed to turn left.'   (maximal)

(8)   Nam có   ba   sinh-viên nhưng tôi chưa gặp mặt **các/những**
      Nam have three student   but   1SG NEG meet face PL
      sinh-viên đó.
      student   DEM
      'Nam has three students but I haven't met those students in person.'
      ↝ I haven't met any of Nam's students in person.   (¬∃)

Homogeneity effects (Krifka 1996, Križ 2016, Križ & Spector 2021, a.o.)

Definite plurals cross-linguistically behave like ∀-QPs in UE environments
and like ∃-QPs in DE ones.

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Require restrictions on the NP subject	+	−
Co-occur with *wh*-elements	+	−
Compatible with existential environments	+	?
Allow generic/kind readings	+	+
Co-occur with relational nouns	−	+

Convergences between *những* and *các*

(9)   **Incompatibility with numerals**

    a.   **hai   [*các/những*]   *chiếc thuyền gỗ*
           two PL   CLF   boat   wood
           Intended: 'two wooden boats'

    b.   **hai chiếc [*các/những*] *thuyền gỗ*
           two CLF PL   boat   wood
           Intended: 'two wooden boats'

(10)   **Co-occurrence with classifiers**

    a.   [*các/những*]   **(con) chó đó*
           PL   CLF   dog DEM
           'those dogs'   (obligatory)

    b.   [*các/những*] *(căn) phòng trong ngôi-nhà này*
           PL   CLF room in   house   DEM
           'the rooms in this house'   (optional)

Convergences between *những* and *các*

(11) **Predicative uses**

    a. *Nam và Mi là* **những/các** *sinh-viên (rất xuất-sắc).*
        Nam and Mi COP PL   student very talented
        'Nam and Mi are (very talented) students.' (predicative in Obj.)

    b. **Những/các** *con mối đã gặm hai cuốn sách của Nam.*
        PL   CLF termite PST gnaw two CLF book POSS Nam
        'Termites have gnawed two books of Nam.' (existential in Sub.)

(12) **Generic uses**

    a. **Các/những** *con khủng-long đã bị tuyệt-chủng.*
        PL   CLF dinosaur PST PASS extinct
        'Dinosaurs are extinct.' (kind reference)

    b. **Các/những** *con chó rất hung-dữ khi chúng bị đói.*
        PL   CLF dog very dangerous when they PASS hungry
        'Dogs are dangerous when they are hungry.' (generic generalization)

Definiteness effects involving *những* and *các*

(13) [Anaphoric context: *Đầu năm mẹ mua cho Nam rất nhiều sách...*
'Early this year, Mom bought for Nam many books (of many kinds)']

    a. *Tất-cả* $\boxed{các}$ *cuốn sách ?(này) rất thú-vị.*
      all   CÁC   CLF   book DEM   very interesting
      'All these books are very interesting.'

    b. *Tất-cả* $\boxed{những}$ *cuốn sách *(này) rất thú-vị.*
      all   NHỮNG   CLF   book DEM   very interesting
      Intended: 'All these books are very interesting.'

(14) [Immediate situation: no-turn-left instruction on a traffic sign]

    Các *phương-tiện không được phép rẽ trái.*
    CAC vehicle   NEG allow   turn left

    'All the vehicles are not allowed to turn left.'
    or 'The vehicles are not allowed to turn left.' (universal/maximal)

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   a. *Tất-cả* [*các*] *cuốn sách ?(này) rất thú-vị.*
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       'All these books are very interesting.'

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Divergences between *những* and *các*

(15) Existential *có*-constructions **(not so obvious)**

    a.   *Có*   **những** /*?**các** cuốn sách trên bàn.*
          have PL   CLF book on table
          'There are books on the table.'

    b.   *Nơi-đây xưa-kia thường   có*   **các** *cuộc hát ghẹo trong*
          here   long.ago commonly have CÁC   event sing tease in
          những ngày-lễ.
          NHỮNG holiday
          'A long time ago, there commonly were sing-to-tease events in
          the holidays here.'[1]

(16) *Cô-ấy đã đi* **những/*các** *đâu?*
      3.SG.F PST go PL   where
      'Where did she visit?'   (implied: she visited more than one place)

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[1]Data retrieved from the corpus of Vietlex.

A summary: observations to be captured

Table 2: Summary of interpretations of *các/những*-plurals

Use	*các*	*những*	Notes
(i) Predicative use	+	+	*có*-sentences, Obj position, Sub of potential kind terms
(ii) Definite/anaphoric use	+	+	*những* requires restrictions in Sub/Restrictor position
(iii) Generic use	+	+	Sub/Obj in generic contexts
(iv) Wh-element use	−	+	only *những*

Section 3

Literature review

The Q-analysis of *các-những*

(17) *Tôi muốn mua **các/những** cuốn sách.*
      I   want buy PL   CLF book
      'I would like to buy books.'   (Vietnamese)

(18) *Dặn dò   hết   **các** mọi đường*
      'leave.advice exhaustively every   path'
      'After carefully leaving advice on every aspect, (they sailed with the
      wind to the pier of Tề on a small boat).'   (The Tale of Kiều, lines
      #1625–1626)

The peculiar[2] co-occurrence between classifiers and *các/những*, as well as
some token of *các* in complex quantifiers like *hết các mọi* 'every' above, has
led many authors to assume them to be quantifiers (Trương V.K. 1924:40,
Thompson 1987:180, Nguyễn Đức Dân 2021, among others).

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[2]This behavior, which can be observed in many other languages, is against the
Sanches-Greenberg-Slobin generalization (cf. Her & Chen 2013:40).

The Q-analysis of *các-những*

5° *Pronoms et adjectifs indéfinis*

Mỗi, chaque.
Không ai, không nào, nul, personne, aucun.
Cũng một, même.
Mọi, tout, tous.
Các, những, tous.
Một hai, quelques.
Nhiều, plusieurs.
Họ ou *người ta*, on.

cf. Trương Vĩnh Ký (1924:40)

Problems of Q-analysis (1)

> Thompson's implicit Q-analysis (1987:180)
>
> "***Các*** implies that all of a given set of entities are involved, while ***những*** suggests that only certain of the total possible number are referred to."

BUT this faces many problems with existential quantification[3] and Q-sensitive particles:

(19) *Một-số **các** sinh-viên đã   có-mặt.*
      some   PL student PST arrive
      'Some students arrived.'   (existential + ??universal)

---

[3]Even universal quantification involving *các-những* leaves us with a doubling puzzle: how to account for the composition of multiple universal quantifiers in *Tất-cả những sinh-viên của Nam* 'all of Nam's students'.

Problems of Q-analysis (2)

(20) Diagnosis with Q-sensitive *hầu-như* 'almost'

    a. ***Hầu-như tất-cả/mọi*** *sinh-viên đã có-mặt.*
        almost   all/every   student PST show.up
        'Almost all the students arrived.'   (canonical ∀)

    b. ??***Hầu-như các*** *sinh-viên đã có-mặt.*
        almost   CAC student PST show.up
        Intended: 'Almost all the students arrived.'

    c. ??***Hầu-như những*** *sinh-viên ngôn ngữ học đã có-mặt.*
        almost   NHUNG student linguistics PST show.up
        Intended: 'Almost all the linguistics students arrived.'

Problems of Q-analysis (3)

(21) Diagnosis with Q-sensitive *ngoại-trừ* 'except'
[Context: I have five students, including Nam.]

    a.   **Ngoại-trừ** *Nam, tôi vẫn chưa nói chuyện này cho*
        Except   Nam, I   still not-yet tell affair   DEM to
        tất-cả/mọi *sinh-viên.*
        all/every   student
        'Except Nam, I still haven't told this affair to all the (five)
        students.'   (canonical ∀)

    b.   #**Ngoại-trừ** *Nam, tôi vẫn chưa nói chuyện này cho*
        Except   Nam, I   still not-yet tell affair   DEM to
        các/những *sinh-viên.*
        PL   student
        Intended: 'Except A, I still haven't told this affair to all the (five)
        students.'

Here comes the D-analysis
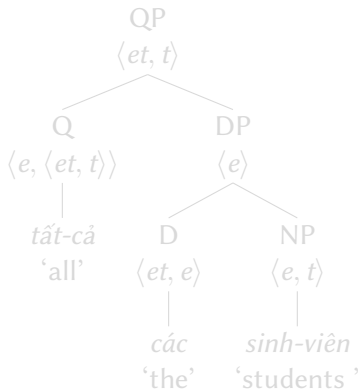
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(23)   Phan & Chierchia's (2022) counter-example (6)

   a.   *the three books*   (English)

   b.   *****các** *ba   cuốn sách*

            CAC   three CLF   book

            Intended: 'the three books'   (Vietnamese)

(24)   Co-occurrence with demonstratives

   a.   *(*the) those (*the) books*   (English)

   b.   ***những/các*** *cuốn sách ấy*

            PL   CLF   book DEM

            'those books'   (Vietnamese)

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Matthewson's (2001) theory of domain restriction

- Cross-linguistic strategies of domain restriction:
  - (i.) Covert or overt means of domain restriction (cf. von Fintel 1994; Matthewson 2001, 2013; Giannakidou 2004, a.o.)
  - (ii.) If being overt, where and how it takes place (cf. Martí 2002,2009; Stanley and Szabó 2000; Etxeberria 2005, a.o.)
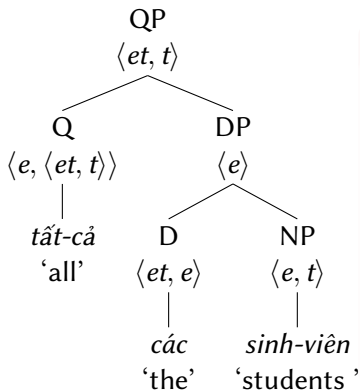
(25)

```
                    QP
                  ⟨et, t⟩

        Q                    DP
    ⟨e, ⟨et, t⟩⟩             ⟨e⟩

      tất-cả           D            NP
       'all'        ⟨et, e⟩        ⟨e, t⟩

                    các          sinh-viên
                    'the'        'students'
```

Problems of D-analysis

- Predicative and generic uses?
- The general optionality of *các/những* in quantification?
- Type-mismatch between *những* (of type ⟨et, ⟨et, t⟩⟩ or ⟨e, t⟩) and *tất-cả*.
- *Các năm sinh-viên intended: 'the five students'

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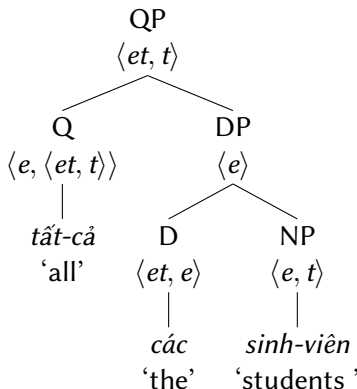
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Le & Schmitt (2016): các/những-phrases as head plurals

Summary: though both of them head a Quantity Phrase, *các* and *những* c-select ClPs and relative clauses (CPs) as their complement, respectively.

Problems of Le & Schmitt's account

(i.) **Compositionality problem**: It is not obvious how we can derive all the semantic mappings based on the relevant syntactic structures of *các/những* phrases.

(ii.) **Uniformity problem**: Given the c-selectional distinction, it is not transparent how to account for various common features between these two plural markers, e.g., the incompatibility with numerals, the requirement of classifier phrases (see the top-half of **Table 1**).

(iii.) **The optionality problem**: Given the head status of *các/những*, how do we account for their general optionality in many cases, e.g. *một-số/hầu-hết (các/những) sinh-viên* 'some/most students'?

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Section 4

My proposal

A semantics of plurality (Sauerland 2003, Martí 2020)

(26)   a.   *Nam read books.*
             ⤳ Nam read more than one book.   (exclusive plural)

      b.   *Nam didn't read books.*
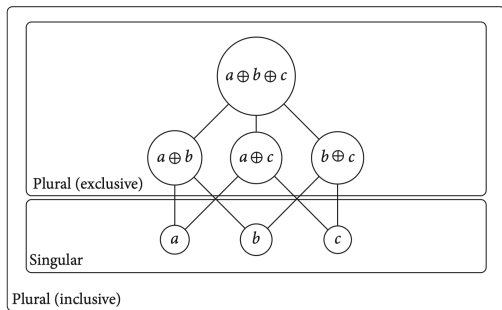   ⤳ Not a single book did Nam read.   (inclusive plural)

Figure 1: Singular vs. plural denotations (Champollion 2017:44)

Plurality in Vietnamese: inclusive or exclusive?

(27) ⟦*There are no **cats** on the mat*⟧   (Chierchia 2010:114)
      = False if there is one cat on the mat.
      → ⟦***cats***⟧ should be interpreted **inclusively**, i.e. denoting one or
      more than one cat in this downward-entailing (DE) context.

(28) a. *Trên tấm đệm chẳng có   con mèo nào.*
          on CLF mat NEG   have CLF cat which
          'There are not any cats on the mat.'
      b. ?*Trên tấm đệm chẳng có*   ⟮*những/các*⟯ *con mèo.*
          on CLF mat NEG   have PL   CLF cat
          Intended: 'There are no cats on the mat.'

(29) *Fido là   (một)/*những/*các con chó.*
      Fido COP one/PL   CLF dog
      'Fido is a dog.'   (upward-entailing (UE) context)

An evidence for inclusive plurality in Vietnamese

- DE contexts: negative, *if*-clause, wh-question , *no/few*-restrictor, etc.

(30) [Context: A asked about B's trip to Taipei yesterday with an expectation that B had visited at least two places there.]

    a.   *Hôm-qua trời đẹp,*   *cậu đã đi*   *được **những-đâu** thế?*
         yesterday sky beautiful 2sg pst visit duoc pl-where   prt
         'Yesterday was such a beautiful day, where did you visit?'

    b.   *Tớ đi được Cố Cung*   *và Đạm Thủy.*
         1sg go duoc Palace Museum and Tamsui
         'I visited the National Palace Museum and Tamsui.'   (expected)

    c.   *Tớ đi được Cố Cung.*
         1sg go duoc Palace Musem
         'I visited the National Palace Museum.'   (unexpected)

Ontological assumptions

(31) Denotations of Vietnamese **chó** 'dogs' (number-neutral), **con chó** *'a/the dog'* (singular) and **những con chó** *'dogs'* (semantically inclusive plural)[4]

    a.   Singular: $[\![$**con chó**$]\!]$ = { a, b, c }

    b.   (Inclusive) Plural (semantically):
$[\![$**những con chó**$]\!]$ = $[\![$**chó**$]\!]$ = { a, b, c, a$\oplus$b, a$\oplus$c, b$\oplus$c, a$\oplus$b$\oplus$c }

    c.   (Exclusive) Plural (pragmatically):
$[\![$**những con chó**$]\!]$ $\rightsquigarrow$ { a$\oplus$b, a$\oplus$c, b$\oplus$c, a$\oplus$b$\oplus$c }

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[4]To my knowledge, all the previous authors except Phan (2023), updated in Phan & Chierchia (2026), adopt the exclusive view for *các/những*-plurals.

PMs *các* and *những* as inclusive PL operators-modifiers

Two types of plural markers in Vietnamese

(i) Nominal plural markers (PM$_{nom}$): *những, các, mấy*

(ii) Pronominal plural markers (PM$_{pro}$): *các[a], mấy, chúng, bọn, tụi, lũ*, etc.

[a]See Appendix 1 for more details.

(32) The inclusive PL operator (Chierchia 2010:114)
      $[\![PL]\!] := \lambda P$: P is an atomic predicate. λx. $\exists Q$ $[Q \subseteq P \wedge x = \oplus Q]$

Proposal: The modifier analysis

các and *những* semantically are instantiations of the inclusive PL operator
in the sense of Chierchia (2010,2013) and syntactically function as
modifying plurals in the sense of Wiltschko (2008).

PMs *các* and *những* as inclusive PL operators-modifiers

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Proposal: The modifier analysis

các and *những* semantically are instantiations of the inclusive PL operator in the sense of Chierchia (2010,2013) and syntactically function as modifying plurals in the sense of Wiltschko (2008).

(33)   The LF of [*tất-cả* [[*những/các* [*cây* [*bút*]]] *này*]] 'all these pens'
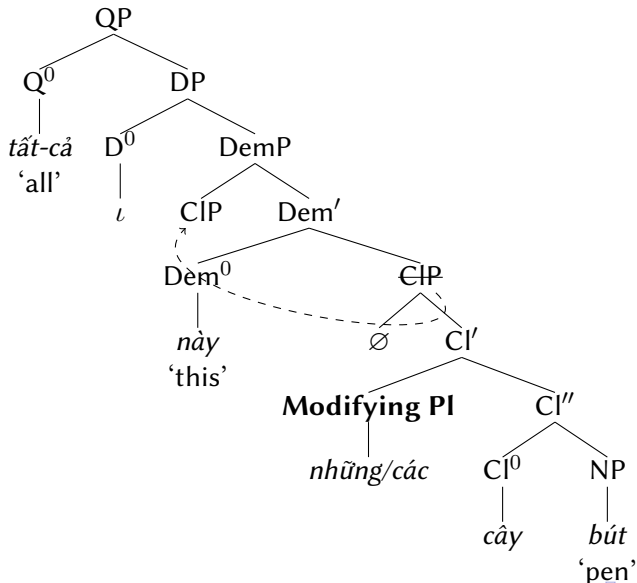
Proposal: Lexical entries for *các* and *những*

(34) a. $[\![\,\textbf{các}\,]\!]^{\,g} = \lambda P_{<e,t>} :$ P is an atomic property $\wedge\ \forall x[P(x) \rightarrow g(x)]$. $\lambda x_e.\ [\exists Q\ [Q \subseteq P \wedge x{=}\oplus Q]]$

     b. $[\![\,\textbf{những}\,]\!] = \lambda P_{<e,t>} :$ P is an atomic property $\wedge\ \exists P'$ such that P $\subset P'.\ \lambda x_e.\ [\exists Q\ [Q \subseteq P \wedge x{=}\oplus Q]]$

Proposal: Differences between *các* and *những*

những is encoded with atomicity and domain widening (i.e. partivity) presuppositions, whereas *các* is encoded with a contextually determined assignment function instead of the domain widening presupposition, though sharing the atomicity s-selection with *những*.

Capturing the convergences (1)

(35) a. *Fido và Pluto là **những/các** con chó (thông-minh).*
      Fido and Pluto COP PL   CLF dog smart
      'Fido and Pluto are (smart) dogs.'   (pragmatically exclusive)

   b. *Tôi không có (*__các__/*__những__ đứa) con.*
      1SG NEG have PL   CLF child
      'I don't have children.'
                      (violate Patel-Grosz & Grosz's (2017) *Minimize DP!*)

- Incompatible with numerals and *mọi*: presuppositional failures.
- 'Licensing by modification' phenomenon: partitivity requirement.
- Appearing in existential and generic environments: derive from
  applying ⟦*những/các P_{<e,t>}*⟧ to ∃ and GEN, K operators (Trinh 2011).
- Their general optionality: due to their status as modifying plurals (i.e.
  adjuncts).

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  b. *Tôi không có   (*__các__/*__những__ đứa) con.*
      1sg neg   have pl   clf child
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Capturing the convergences (2): the homogeneity effect

(36) **Các** *phương-tiện không được phép rẽ trái.*
CAC vehicle NEG allow turn left
'All the vehicles are not allowed to turn left.' (universal)
or 'The vehicles are not allowed to turn left.' (maximal)

(37) *Nam có ba sinh-viên nhưng tôi chưa gặp mặt **các/những***
Nam have three student but 1SG NEG meet face PL
sinh-viên đó.
student DEM
'Nam has three students but I haven't met those students in person.'
⇝ I haven't met any of Nam's students in person. (¬∃)

Homogeneity effects (Krifka 1996, Križ 2016, Križ & Spector 2021, a.o.)

Definite plurals cross-linguistically behave like ∀-QPs in UE environments and like ∃-QPs in DE ones.

Capturing the homogeneity effect

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⤳ I haven't met any of Nam's students in person.   (¬∃)

My proposal

(In)definite plurals involving *các-những* are results of applying the covert
iota and existential operators to adjectival *các/những*-phrases (type ⟨*e, t*⟩).

Section 5

Bottom lines

Bottom line

- This study shows that the quantifier-alike behaviors of *các-những* are due to the homogeneity effects involving plurals in definite contexts. In other words, the Q-analysis of these PMs should be abandoned in favor of D-analysis or something else.

- However, contrary to both Q-analysis and D-analysis, I argue that the peculiar distributions/interpretations of the PMs *các* and *những* can be captured in a finer-grained way if we take them as modifying PMs in the sense of Wilkschko (2008) that semantically function as the inclusive PL operator in the sense of Chierchia (2010,2013) with extra atomicity and partitivity presuppositions for *những*, and atomicity and a contextual restricting domain for *các*.

Appendix 1: pronominal PMs

Two types of plural markers in Vietnamese

(i) Nominal plural markers (PM$_{nom}$): *những, các, mấy*

(ii) Pronominal plural markers (PM$_{pro}$): *các, mấy, chúng, bọn, tụi, lũ*, etc.

(40) a. **Hypothesis**: $[\![các_{pro} + X]\!]$ = $[\![X\text{-}tati]\!]$ = 'X and other people associated with X' (X is a relational N)

b. **Analysis**: Following Tomioka's (2021) account of Japanese *-tati*
$[\![các_{pro}]\!]$ = $[\![\text{-}tati]\!]$ = $\lambda P_{<e,t>}. \ \lambda Y_e. \ \exists x[P(x) \wedge x \sqsubset Y \wedge P$ represents $Y]$

c. **Derivation**: $[\![các_{pro}]\!]([\![th\grave{a}y + \text{PRO}]\!])$
= $\lambda Y_e. \ \exists x[teacher\text{-}of\text{-}PRO\text{'}(x) \wedge x \sqsubset Y \wedge teacher\text{-}of\text{-}PRO\text{'}$ represents $Y]$

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$\llbracket$*các$_{pro}$*$\rrbracket$ = $\llbracket$*-tati*$\rrbracket$ = $\lambda P_{<e,t>}. \lambda Y_e. \exists x[P(x) \wedge x \sqsubset Y \wedge$ P represents Y]

c. **Derivation**: $\llbracket$*các$_{pro}$*$\rrbracket$($\llbracket$*thầy* + PRO$\rrbracket$)
= $\lambda Y_e. \exists$ x[*teacher-of-PRO*'(x) $\wedge$ x $\sqsubset$ Y $\wedge$ *teacher-of-PRO*' represents Y]

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