The *raadselen/#raadsels* 'riddles' behind Dutch co-plurals

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Dutch co-plurals

- Most Dutch nouns have **one plural form**, on either *-en* or *-s*:
    - *tomaten* / **tomaats* 'tomatoes'
    - *avocados* / **avocado'en* 'avocados'
- For some nouns **both forms** are attested:
    - *appelen* / *appels* 'apples'; *wortelen* / *wortels* 'carrots'
    - *dienaren* / *dienaars* 'servants'; *hazelaren* / *hazelaars* 'hazels'
    - *gemeenten* / *gemeentes* 'municipalities'; *vitaminen* / *vitamines* 'vitamins'
    - *bacteriën* / *bacteries* 'bacteria'; *provinciën* / *provincies* 'provinces'
    - *professoren* / *professors* 'professors'; *radiatoren* / *radiators* 'radiators'

For the term "co-plural", see:
Stolz, Thomas. 2023. 'On co-plurals: Cross-linguistic evidence of competing pluralization strategies in the domain of nouns.'
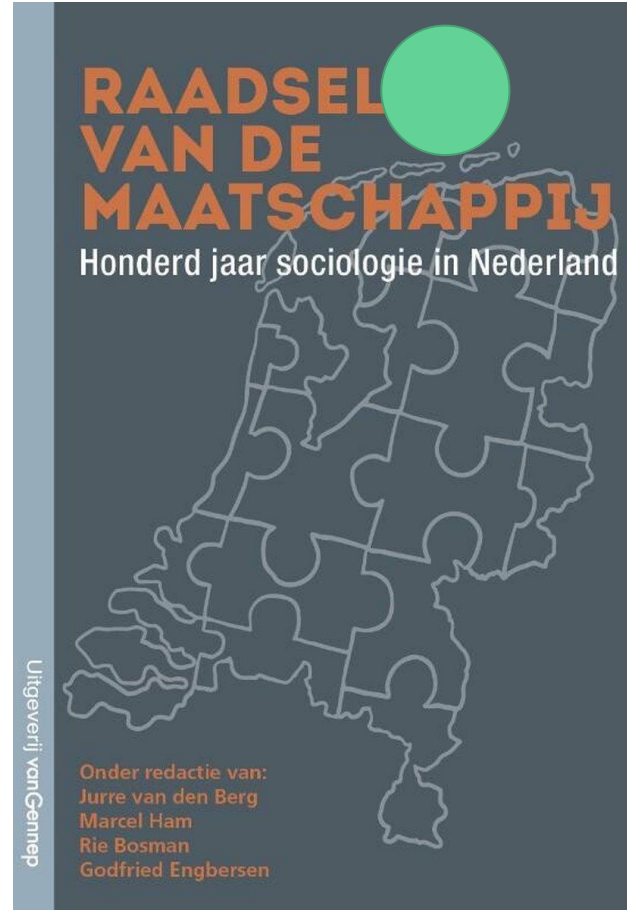   In Deborah Arbes (ed.), *Number categories*, 107–154. Berlin: De Gruyter. https://doi.org/10.1515/9783110986600-004
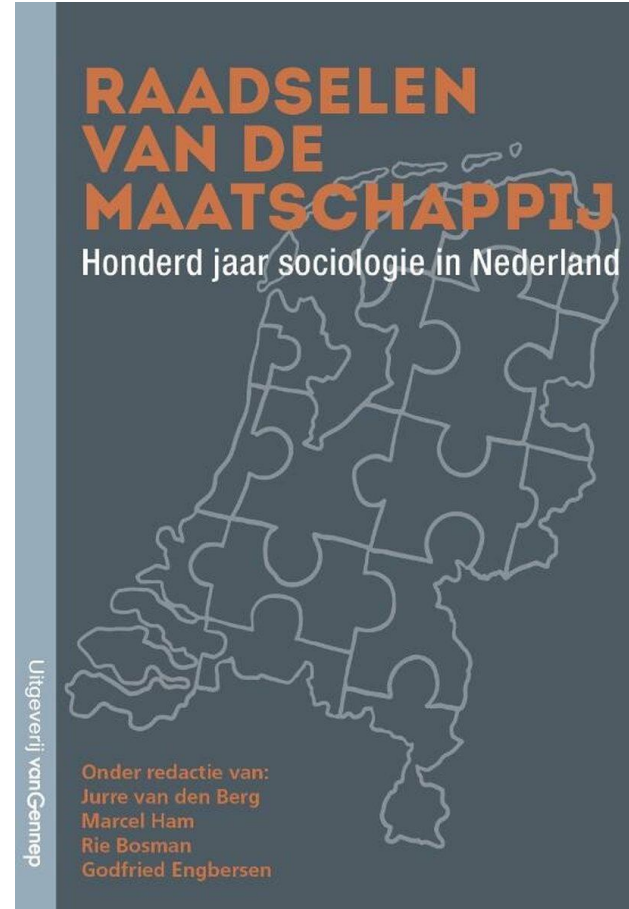
Dutch co-plurals

- *-en* is felt to be more **archaic**
  - Theissen (1970): no clear direction towards either *-s* or *-en*
  - Trommelen (2007): *-s* is the default, despite being less frequent
- The choice depends on **dialect**, but no easy generalizations (Theissen 1970):
  - *lengte* 'length': *-s* (67%) in the Netherlands vs. *-(e)n* (77%) in Belgium
  - *artikel* 'article': *-en* (100%) in the Netherlands vs. *-s* (60%) in Belgium
  - So each dialect lexically selects different forms, but a single dialect does not use one form more overall

Theissen, Siegfried. 1970. 'Dubbel meervoud -(e)n / -s'. *Handelingen – Koninklijke Zuid-Nederlandse Maatschappij voor Taal- en Letterkunde en Geschiedenis* 57:89–116. https://doi.org/10.21825/kzm.v57i0.17305

Trommelen, Mieke. 2007. 'Evidentie voor *-s* als "default"-meervoud in het Nederlands. *Leuvense Bijdragen – Leuven Contributions in Linguistics and Philology* 96:151–167. https://doi.org/10.2143/LB.96.0.2071286

A semantic distinction?

(1) *In deze lijst vind je de 15 leukste raadsel{s/*en}.*
      'In this list you find the 15 best riddles.'

(2) *Mathijs wil de raadsel{s/en} achter deze obsessieve liefde ontwarren.*
      'Mathijs wants to unravel the riddles/mysteries/mystery behind this obsessive love.'

- *Raadselen* are **related** to each other
- *Raadsels* are **unrelated** to each other (other than through the meaning of *raadsel*)

A semantic distinction?

(3) *Ik stam af van de Kelten. Wie zijn jouw voorvader{s/?en}?*
'I descend from the Celts. Who are your ancestors?'

(4) *Ik heb een stamboom van mijn voorvader{s/en} tot in de negende generatie.*
'I have a family tree of my ancestors to the ninth generation.'

- *Voorvaderen* are **structured** sequentially or in a family tree
- *Voorvaders* are **unrelated** (other than through the meaning of *voorvader*)
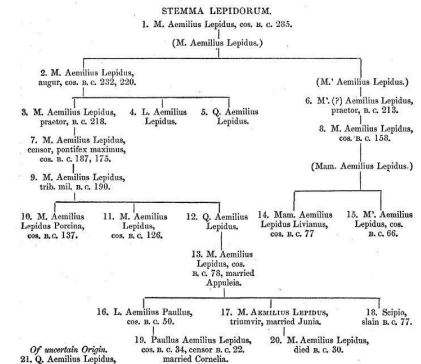
Reflections in lexicalized / fossilized plurals

- *stuk* 'piece':
  - *stuks* is a number of non-distinct, unrelated entities (*zelftesten, 5 stuks* 'self tests, 5 pieces')
  - *stukken* are related in a structured way (*stukken in een dossier* 'documents in a file')
- *kolonie* 'colony':
  - *koloniën* (of a country: structured through trade and organization)
  - *kolonies* (of insects: individual, unrelated groups)
- *water* 'water':
  - *wateren* for connected bodies of water (*internationale wateren* 'international waters')
  - *waters* for types of water as a substance (*reukwaters* 'scented waters' [types or bottles])
- *wapen* 'weapon':
  - default is *wapens*
  - *de wapenen opnemen* 'go to war' (different types of weapon, thoughtfully arranged)
- Words with the right pattern but only one plural:
  - *moordenaars/*-aren* 'murderers' and *molenaars/*-aren* 'millers' are typically unrelated, as opposed to *dienaars/-aren* 'servants'

-en: structured whole presupposition

- *-en* presupposes that the referent's elements are related through more than their lexical meaning
- *raadsel* 'riddle':
  - *raadsels* is true of any non-atomic set of *raadsel*
  - *raadselen* additionally presupposes that its elements **form one mystery**
- *voorvader* 'ancestor':
  - *voorvaders* is true of any non-atomic set of *voorvader*
  - *voorvaderen* additionally presupposes that its elements are **from the same family tree**

Possible formalization

"**Stratified reference** requires a predicate that holds of a certain entity or event ... to also hold of **its parts** along a certain **dimension** and down to a certain level of **granularity**" (Champollion 2015)

- SR over time yields the telic-atelic opposition:
  - *John **ran** for five minutes* (*run* holds of every subevent)
  - **John **ran to the store** for five minutes* (*run to the store* does not hold of every subevent)

Champollion, Lucas. 2015. 'Stratified reference: The common core of distributivity, aspect, and measurement'. *Theoretical Linguistics* 41(3–4):109–149. https://doi.org/10.1515/tl-2015-0008

Possible formalization

"SR requires a predicate that holds of a certain entity or event … to also hold of its parts along a certain dimension and down to a certain level of granularity"

- SR over Agent yields the **collective-distributive opposition**:
  - *Alex and Noah smiled* ⇒ *Alex smiled*   (SR over Agent)
  - *Alex and Noah carried the piano upstairs* ⇏ *Alex carried the piano upstairs*   (no SR)
- Multiple **granularities**:
  - *The children were holding hands*   (SR down to pairs)
  - *The children came in teams*   (SR down to larger groups)
  - *The children were numerous*   (no SR)

Champollion, Lucas. 2015. 'Stratified reference: The common core of distributivity, aspect, and measurement'. *Theoretical Linguistics* 41(3–4):109–149. https://doi.org/10.1515/tl-2015-0008

Possible formalization

"SR requires a predicate that holds of a certain entity or event … to also hold of its parts along a certain dimension and down to a certain level of granularity"

- *-en* presupposes that elements form a **structured whole**
  - ⇒ there is a predicate that relates all elements together
  - ⇒ there is *no* SR, not down to any level of granularity   (cf. *be numerous*)

Expected corollaries

H1: **structured group nouns** prefer *-en*:

(5) *Met een serie aan maatregel{?s/en} wordt de consumptie van vlees steeds verder teruggedrongen.*

   'Meat consumption is being further reduced through a series of measures.'

But not in:

(6) *Deze regering heeft op allerlei gebieden nutteloze maatregel{s/en} ingevoerd.*

   'This government has introduced useless measures in several domains.'

Expected corollaries

H1: **structured group nouns** prefer *-en*:

(7) *In dit samenwerkingsverband van gemeente{?s/en} proberen we elkaar te helpen bij de aanpak van gedeelde problemen.*

'In this partnership of municipalities we try to help each other tackling common issues.'

But not in:

(8) *Verspreid over het land is er een aantal gemeente{s/en} waar deze problematiek speelt.*

'Throughout the country there is a number of municipalities where this problem arises.'

Expected corollaries

H2: **generic contexts** prefer *-s* (units are only connected by family resemblance):

(9)   *Wortel*{*s*/?*en*} *eten is goed voor je ogen.*
        'Eating carrots is good for your eyes.'

Expected corollaries

H3: **grinding contexts** prefer *-s* (no units to form a structured whole):

(10) *Kook de goudreinet tot moes. Doe de appel{s/?en} in een kom en voeg de kaneel toe.*

'Boil the goudreinet to a pulp. Put the apples in a bowl and add the cinnamon.'

But not in:

(11) *Schil 1 elstar per persoon en haal de kern eruit. Vul de appel{s/en} met kaneel en suiker.*

'Peel and core 1 elstra per person. Fill the apples with cinnamon and sugar.'

Expected corollaries

H4: *-en* is incompatible with **exceptions**:

(12) *De provincie{s/ën} eisen dat het Rijk aan de slag gaat met stikstof.*
'The provinces demand that the national government get started with nitrogen.'

each province individually? ⇒ *-s*
as a group? ⇒ *-s/-en*

(13) *De provincie{s/?ën}, met uitzondering van Utrecht, eisen dat ...*
'The provinces, Utrecht excepted, demand that ...'

Experiment

- Online questionnaire among Dutch & Belgian native speakers
- 23 questions for H1–H3 + 4 fillers
- 2023-11-1 – 2023-11-18
- 112 complete responses
  - 98 Dutch; 14 Belgian
  - Average age 44 (SD 15)
- Almost no measurable differences, possibly because …
  - Question construction separated forms from context
  - Contexts could have been better
  - H4 not yet tested

Kook de goudreinet tot moes. Doe de ___ in een kom en voeg de kaneel toe.

	Zeer ongebruikelijk	Ongebruikelijk	Enigszins ongebruikelijk	Enigszins gebruikelijk	Gebruikelijk	Zeer gebruikelijk
Appelen	○	○	○	○	○	○
Appels	○	○	○	○	○	○

Discussion

- Where *-en* and *-s* are both possible, geography and register play a role
- Additionally, *-en* is semantically marked: **structured whole presupposition**
- Like collective predicates, formalize with Stratified Reference (Champollion 2015)
- Tests:
  - Structured group nouns prefer *-en* (*stamboom*, *samenwerkingsverband*)
  - Grinding contexts prefer *-s*
  - Generic contexts prefer *-s*
  - *-en* incompatible with exceptions (*met uitzondering van*)
- Moving forward:
  - More tests?
  - Better ways to set up an experiment?
  - Other analyses?

Slides? → https://camilstaps.nl