Definite Meaning and Definite Marking

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Overview

1 introduction

2 Data

3 Previous Approaches

4 Definite Meaning

5 Definite Marking

6 Summary and further perspectives
Object languages

- Yiddish (Y)
- Esperanto (Eo)
- Papiamentu (P)
Oyfn pripetchik brent a fayerl,
On the hearth, a fire burns,
Un in shtub iz heys,
And in the house it is warm.
Un der rebe lernt kleyne kinderlekh,
And the rabbi is teaching little children,
Dem alef-beys.
The alphabet.

M.M. Warshawsky (18481907)
Introduction

- Look at definiteness marking in three environments (proper nouns, unique nouns, anaphoric definites)
- Problems for existing approaches
- Semantic map of definiteness (Am-David, 2014, 2016)
- Semantic analysis of the three contexts
- Syntactic analysis of the nominals and the articles
- Conclusion
Overview

1 introduction

2 Data

3 Previous Approaches

4 Definite Meaning

5 Definite Marking

6 Summary and further perspectives
Overview

1. introduction

2. Data

3. Previous Approaches

4. Definite Meaning

5. Definite Marking

6. Summary and further perspectives
Articles in Esperanto (Eo)

- (Distribution similar to Metropolitan English)
- Definite article: *la*
- (To be ignored: Contracted form with some prepositions ending in vowels: *de l*’ ‘to-the’, *pri l*’ ‘about-the’, . . .
  —mainly used in poetry, not in spoken Eo (Wennergen, 2016, p. 102))
- No indefinite article
- Main sources:
  - Textbasis: Tekstaro de Esperanto (http://www.tekstaro.com/); webpages in Eo.
Articles in Papiamentu

- Definite article: *e(l)*
- (To be ignored: Contracted form with *di* ‘of’: *dje* ‘of-the’)
- Indefinite article: *un*

Main sources:
- Textbasis: webpages in P.
Articles in Yiddish

- (Distribution similar to Standard German as in Schwarz (2009))
- Definite article: *der, die, dos*, …
- With prepositions:
  - Full form of the article: *in der shtub* ‘in the house’
  - Contracted form with some prepositions: *afn pripetshik* ‘on-the hearth’
  - Preposition with bare noun: *in shtub* ‘in (the) house’
- Indefinite article: *a(n)*
- Main sources:
  - Textbasis: Corpus of Modern Yiddish (web-corpora.net/YN'C)
Environments

- Proper names
- Uniques
- Anaphoric definites
Proper names: no article

- Primary use: referring to an individual bearing that name (von Heusinger, 2010)
- Eo: without article

(1) En 1873 li transloĝis al Varsovio kun la tuta familio in 1873 he moved to Warsaw with the entire family (tekstaro)

- P: without article

(2) I Korsou ta un isla chiki, and Curaçao is an island small ‘And Curaçao is a small island . . . ’ (www)

- Y: without article (Mark, 1978, p. 120):

(3) khaym kumt bald. Khaim comes soon ‘Chaim is coming soon.’
Proper names: Article when modified?

Y: article used when syntactically modified, (Mark, 1978, p. 120)):

(4)  a. (*\textit{der}) khaym kumt bald.
     the Khaim comes soon
     ‘Chaim is coming soon.’

b. *(\textit{der}) royter khaim kumt bald.
     the red Kaim comes soon
     ‘The red Chaim comes soon.’
Unique nominals

- Definition: There is exactly one referent in any utterance situation. The referent is an individual.
- Examples (see Lëbner (2011) (p. 284)): sun, pope, US president, weather, ...
- Eo: with article

(5) La suno subite sin montris el la nuboj, ... the sun suddenly itself showed from the clouds ‘Suddenly the sun showed itself out of the clouds ...’ (tekstaro)
Unique nominals: P and Y

- **P**: no article

  (6) (*E) **Solo** ta brila sin miserikòrdia.
  (the) sun PRES burn without mercy
  ‘The sun is burning without mercy’ (Kester & Schmitt, 2007, p. 113)

- **Y**: with article; if possible: in contracted form

  (7) az **der meylekh** hot gehert di zakh, . . .
  as the king has heard the affair . . .
  ‘as the king has heard about the affair, . . .’ (CMY)

  (8) iz **yuov gekumen tsum meylekh**, un hot gezogt: . . .
  has Yuov come to the king and has said: . . .
  ‘Yuov came to the king and said: . . .’ (CMY)
Uniques: Summary

- What is unique depends on the context
- ... and may vary from one language to the other.
- Trend: languages seem to prefer/require the weakest possible form of definite marking for uniques.
Anaphoric definites refer to a previously introduced referent.

In Eo, the article is used:

(9) Mi havas grandan domon. La domo havas du etaĝojn.
I have big house the house has two floors
‘I have a big house. The house has two floors.’ (Wennergen, 2016, p. 80)
Anaphoric definites in P

The definite article is used in P:

(10) Mi a kumpra un bolo.
I PAST buy a cake

*(E) bolo a wòrdu kome den 10 minüt.
the cake PART been eat in 10 minutes

‘I bought a cake. The cake was eaten in 10 minutes.’ (Kester & Schmitt, 2007, p. 119)
Anaphoric definites in Y

The definite article is used in Y.

(11) hot im gefunen a man, ...; un der man hot im gefregt, has him found a man and the man has him asked azoy tsu zogn: ...
sot to say
‘A man found him and the man asked him to say . . .’ (CMY)

Also with a preposition:

(12) un a man iz gegangen ... un der nomen fun a man is gone and the name of the man dem man iz gewen elimelekh ... is been Elimelekh
‘And a man went from .... And the name of the man was Elimelekh . . .’ (CMY)
## Data summary

<table>
<thead>
<tr>
<th>Language</th>
<th>proper name</th>
<th>unique nominal</th>
<th>anaphoric definite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Esperanto</td>
<td>–</td>
<td>la</td>
<td>la</td>
</tr>
<tr>
<td>Papiamentu</td>
<td>–</td>
<td>–</td>
<td>e</td>
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<tr>
<td>Yiddish</td>
<td>–</td>
<td>der</td>
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<td></td>
<td></td>
<td>P-n</td>
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</tr>
</tbody>
</table>
Overview

1. Introduction

2. Data

3. Previous Approaches

4. Definite Meaning

5. Definite Marking

6. Summary and further perspectives
Overview

- Basic ingredients of the analyses
- Rough sketches of problematic aspects
Basic ingredients

- \( \nu \)-operator: \( \nu x : \phi \)

\[
(13) \quad [\nu x : \phi]
\]

a. is only defined if there is exactly one individual \( a \) such that \( [[\phi]]_{g[x \mapsto a]} = 1 \)

b. when defined, then \( [\nu x : \phi] \) is that \( a \).

- Situations taken to be partial worlds (Kratzer, 1989; Elbourne, 2002; Schwarz, 2009)
- Presupposition: Need to be satisfied for a formula to be interpretable, as in (13-a).
  Can be accommodated locally, i.e., end up in the scope of some operator.
- Conventional implicature (CI, Potts (2005)): has a truth value independent of that of the rest of the sentence; cannot be accommodated in the scope of an operator (except for speech operators)
Problem with $\iota$

- $\iota$ is commonly used in the semantics of definites.
- $\iota$ treats existence and uniqueness both as presuppositions.
- Need to separate existence and uniqueness (Horn & Abbot, 2013; Coppock & Beaver, 2015):

(14) Cancelling existence:
He is not the ambassador to Spain, because Spain doesn’t have an ambassador here.

(15) Uniqueness cannot be cancelled:
   a. #He’s not the ambassador to Spain—there are two.
   b. #There are two ambassadors to Spain; therefore, he is not the ambassador to Spain.

- Any approach that glues together existence and uniqueness is problematic. (Elbourne, 2002; Schwarz, 2009)
Scope of the analyses

- Focus on the nominal: Löbner (2011)
- Need both:
  - Both articles and nominals have inherent uniqueness requirements.
  - Partially idiosyncratic interaction (proper nouns vs. unique nominals)
- If interaction with preposition in focus, other cases neglected (Schwarz, 2009)
- Assumption of phonologically empty determiners for cross-linguistic parallels without discussion (Kester & Schmitt, 2007).
Overview

1. introduction

2. Data

3. Previous Approaches

4. Definite Meaning

5. Definite Marking

6. Summary and further perspectives
Definite meaning: Outline

- Based on Am-David (2016) and several conference presentations with Am-David (2nd European HPSG Workshop, Paris, 2014; Semantics and Philosophy in Europe Eighth Colloquium, Cambridge, 2015)

Components of the analysis:
- asserted content (AC): individual
- presupposition (Pres): existence
- conventional implicature (CI): uniqueness

Differences between the three environments:
- Proper names just like uniques, but with naming presupposition
- Unique nominals require uniqueness in all “typical” situations.
- Anaphoric definites require uniqueness in the current situation and coreference with accessible antecedent.
Typology of definiteness: Am-David (2016)

- Languages with several definite articles (at most: 3 in Ferring Frisian)
- Wider range of contexts
- Three inferences: for the $N$:
  - A (Maximality): There is exactly one maximal individual $a$ that satisfies $[[N]]$ in the current situation.
  - B (Common ground uniqueness): In every situation $s$ in the common ground, if there exists an object satisfying $[[N]]$ in $s$, then there is exactly one such object in $s$.
  - C (Anaphoricity): There is exactly one object satisfying $[[N]]$ in the current situation and this object is part of the current universe of discourse.

- Semantic map: $B \ldots A \& \neg (B \land C) \ldots C$

- We only look at $B$ and $C$ here!
Our languages in this map

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eo</td>
<td>la</td>
<td>ok</td>
</tr>
<tr>
<td>P</td>
<td>e</td>
<td>*</td>
</tr>
<tr>
<td>Y:</td>
<td>der</td>
<td>(ok)</td>
</tr>
<tr>
<td>P+n</td>
<td>ok</td>
<td>*</td>
</tr>
</tbody>
</table>
Arguments for CI status of A–C

CI vs. presuppositions:
- Am-David & Sailer (in prep.)
- Two criteria: (i) independ truth values, (ii) non-global accommodation
Independ truth values

- The truth value of an utterance can vary independently of that of a CI.
- The truth value of an utterance is only defined if its presupposition is true.

\[(16) \text{ Ši ėcesis fumi sed ųi ankoraũ drinkas. (Eo)}\]
\[\begin{array}{l}
\text{She abandoned smoke but she still drinks-alcohol} \\
\text{‘She stopped smoking but she is still drinking.’}
\end{array}\]

a. Presup: She smoked before. She drank before.

b. CI: Not smoking and drinking in contrast

\[(17) \text{Alex hat Ŝie gestern gesehen. (German)}\]
\[\begin{array}{l}
\text{Alex has you.FORMAL yesterday seen} \\
\text{‘Alex saw you yesterday.’}
\end{array}\]

a. Denotation of Ŝie: addressee

Cl of Ŝie: formal relation between speaker and addressee
Independent truth values for definites

- Denotation of the definite: an individual meeting its descriptive content.
- CI of the definite: uniqueness

(18) Hano aĉetis la libron. (Eo)
Hano bought the book
a. Denotation: Hano bought something that is a book.
b. CI: There is a unique book in the situation.
Local accommodation

- The truth of CI must hold at the overall utterance level.
- A presupposition can be accommodated in the scope of an operator (negation, conditional, interrogative)

\(\text{\(19\)} \) \(\text{\(\hat{\text{Si }} \text{ne } c\text{e}\text{sis }} \text{fumi} \quad \text{-} \quad \text{\(\hat{\text{Si }} \text{neniam fumis. \ (Eo) she not abandoned smoking she never smoked} \)\)\)\)\) 'She didn’t stop smoking — she never smoked.'

\(\text{\(a. \quad \text{Pres: She smoked before.}\)}\)

\(\text{\(20\)} \) \#\(\text{\(\text{\(\hat{\text{Sie}} \) have not with the smoking stopped}\)\)\)

\(\text{\(\text{\(\hat{\text{we}} \) are indeed on informal terms}\)\)\)

\(\text{\(a. \quad \text{Ci of Sie: speaker and addressee are in a formal relation}\)\)\)
Formalization of definite meaning: Proper name

$s_0$: Current situation

(21) \textit{Franjo} (Eo)

a. Asserted content (AC): $x$
   (The name refers directly to an individual)

b. Presupposition (Pres): $\exists x (\text{franjo}(x, s_0))$
   There is a person that is called Franjo in the current situation)

c. Presupposition (Pres): $\text{franjo}(x, s_0)$
   (The referent $x$ is called Franjo in $s_0$)

d. conventional implicature (CI):
   \[ Gn \ s(\exists x (\text{franjo}(x, s)) \rightarrow \exists! x (\text{franjo}(x, s))) \]
   If there is a person called Franjo in the common ground, there is exactly one such person.
Formalization of definite meaning: Uniques

Instead of \( \iota \), use \( \iota \exists \):

(22) a. Expression: \( \iota \exists x : \phi \)

   b. Denotation: \( [\iota \exists x : \phi]^g = a \), such that \( [[\phi]]^g[x \mapsto a] = 1 \)
Formalization of definite meaning: Uniques

(23)  \textit{suno} ‘sun’ (Eo)

a. Asserted content (AC): \(\nu \exists x : \text{sun}(x, s_0)\)
   (The nominal refers to some object that satisfies its descriptive content in \(s_0\).)

b. Presupposition (Pres): \(\exists x(\text{sun}(x, s_0))\)
   There is a sun in the current situation

c. conventional implicature (CI):
   \(\text{Gn}\ s(\exists x(\text{sun}(x, s)) \rightarrow \exists! x(\text{sun}(x, s)))\)
   If there is a sun in the common ground, there is exactly one such thing.
(24) Anaphoric link: identity with an element from the current discourse:

a. \( x = y \) (identity)

b. \( d(\text{discourse})\text{-acc(essible)}(y, s_0) \) (\( y \) occurs in the current discourse)
(25) \textit{la studento} ‘the student’ (Eo)

a. Asserted content (AC): $\exists x : \text{student}(x, s_0)$
   (The nominal refers to some object that satisfies its descriptive content in $s_0$.)

b. Presupposition (Pres): $\exists x (\text{student}(x, s_0)$
   There is a student in the current situation)

c. conventional implicature (CI):
   $(\exists x (\text{stud}(x, s_0)) \rightarrow (\exists! x (\text{stud}(x, s_0) \land x = y \land \text{d-acc}(y, s_0)))$
   If there is a student in the current situation, there is a unique such student that is identical with some $y$ which accessible within the current discourse.
Summary: Definite meaning

- 3-dimensional representation of definite meaning.
- AC: some individual (satisfying the descriptive content if there is such)
- Pres: existence presupposition
- CI: uniqueness, though with respect to varying situational requirements
- Missing?
  - Representation of the three dimensions in HPSG
  - Marking (Names and uniques are both situationally unique, but only the latter require an article in Y and Eo.)
Framework

- HPSG
- Techniques of underspecified semantics Bos (1996); Copestake et al. (2000); Egg (1998, 2010); Pinkal (1996);...
- General idea: Words and phrases constrain the semantic representation of their utterance (specifying what must occur in the representation and where)
- Proposal for integration of multidimensional semantics:
  - Bonami & Godard (2007): CIs for evaluative adverbs
  - Hasegawa & Koenig (2011): Structured meaning for focus
  - Plan: Use a standard HPSG-mechanism of perlocation and retrieval for projective meaning
(26) every student:

\[
\begin{align*}
\text{PHON} & \langle \text{every, student} \rangle \\
\text{CAT} & \text{noun} \\
\text{SYNS LOC} & \text{DR } \times \\
\text{CONT} & \text{student} \\
\text{CONTEXT} & \text{SPEAKER } \ldots \\
\text{LRS} & \text{EXCONT } \forall x(\alpha \to \beta) \\
\text{PARTS} & \langle \forall x(\alpha \to \beta) \rangle
\end{align*}
\]

(27) External Content Principle:
In every utterance, every subexpression of the EXCONT value of the utterance is an element of its PARTS list, and every element of the utterance’s PARTS list is a subexpression of the EXCONT value. (Richter & Sailer, 2004)
LRS Encoding of presuppositions and CIs

- Encoding closer to Potts (2005) than Bonami & Godard (2007), but allowing for intermediate retrieval of CIs.
- List-valued attributes `PRESUP(POSITION)` and `CI`.
- Elements of `PRESUP` and `CI` also occur on the `PARTS` list.
- Percolation and retrieval for `PRESUP`:
  At clauses: All elements from the daughters’ `PRESUP` lists are on the mother’s `PRESUP` list unless they appear in the clause’s `EX-CONT` value. In the latter case they occur in the scope of some appropriate semantic operator.
- Percolation and retrieval for `CI`:
  At matrix utterances and clauses marking embedded utterances: All elements from the daughters’ `PRESUP` lists are on the mother’s `CI` list unless they appear in the clause’s `EX-CONT` value. In the latter case, they must occur in the immediate scope of some speech act operator.
Example: *Franjo*

Notation: $\alpha[\text{franjo}(x, s_0)]$: some underspecified expression that contains a given subexpression

(28) Semantic specification of a proper name:

\[
\begin{bmatrix}
\text{PHON } \langle \text{Franjo} \rangle \\
\vdots \\
\text{EX-CONT } x \\
\text{PARTS } \langle x, 1, 2, 3 \rangle \\
\text{PRESUP } \langle 1 \rangle (\ldots \land \exists x (\alpha[\text{franjo}(x, s_0)])) \rangle, \langle 2 \rangle (\ldots \land \alpha[\text{franjo}(x, s_0)]) \rangle \\
\text{CI } \langle 3 \rangle \text{Gn s } (\exists x (\alpha[\text{franjo}(x, s)] \rightarrow \exists! x (\alpha[\text{franjo}(x, s)])))
\end{bmatrix}
\]
Overview

1. Introduction
2. Data
3. Previous Approaches
4. Definite Meaning
5. Definite Marking
6. Summary and further perspectives
Definite marking

- Lexical entries of nouns and articles
- Yiddish: special attention to P+N combinations
Proper names

- Unique definite semantics as in (28)
- Optional determiner

(29) Sketch of the lexical entry of the name *Franjo*:

```
PHON ⟨Franjo⟩

SYNS LOC
  HEAD noun
  VAL
    SUBJ ⟨⟩
    SPR ⟨(DET)⟩
    COMPS ⟨⟩

LRS
  EX-CONT x
  PARTS ⟨x, 1, 2, 3⟩
  PRESUP ⟨1(… ∧ ∃x(α[franjo(x, s0)])), 2(… ∧ α[franjo(x, s0)])⟩
  CI ⟨3(… ∧ Gn s (∃x(α[franjo(x, s)]) → ∃!x(α[franjo(x, s)])))⟩
```
(30) Sketch of the lexical entry of the unique noun in Eo and Y, *suno/zun* ‘sun’:

\[
\begin{align*}
\text{PHON} & \langle \text{suno/zun} \rangle \\
\text{SYNS LOC} & \\
\text{VAL} & \begin{cases}
\text{HEAD} & \text{noun} \\
\text{SUBJ} & \langle \rangle \\
\text{SPR} & \langle \text{DET} \rangle \\
\text{COMPS} & \langle \rangle \\
\end{cases} \\
\text{EX-CONT} & [0] \exists x : \phi \\
\text{PARTS} & \langle 0, 1, 2 \rangle \\
\text{PRESUP} & \langle 1 \rangle (\ldots \land \exists x (\alpha[\text{sun}(x, s_0)])) \\
\text{CI} & \langle 2 \rangle (\ldots \land \text{Gn s} (\exists x (\alpha[\text{sun}(x, s)] \rightarrow \exists ! y (\alpha[\text{sun}(x, s)]))))
\end{align*}
\]
Definite article: Eo

- Semantics that is compatible with all types of nouns.
- Existence and uniqueness are only assumed for the current situation.

(31) Sketch of the lexical entry of the Eo definite article *la*:

```
[PHON ⟨la⟩
  [HEAD def
    [SUBJ ⟨⟩
    [SPR ⟨⟩
    [COMPS ⟨⟩]]
  [SYNS LOC
    [VAL
      [EX-CONT [0]∃x : φ
      [PARTS ⟨0, 1, 2⟩
      [PRESUP ⟨1⟩(⋯ ∧ ∃xφ)]
      [CI ⟨2⟩(⋯ ∧ (∃xφ → ∃!xφ))]]]]]
```

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48 / 59
Definite article: P

- Semantics that is only compatible with anaphoric definites.
- Unique nouns can only combine with it if they are at the same time used anaphorically.

(32) Sketch of the lexical entry of the P definite article e:

\[
\begin{array}{c}
\text{PHON} \langle e \rangle \\
\text{SYNS LOC} \begin{cases}
\text{HEAD} \quad \text{det} \\
\text{SUBJ} \quad \langle \rangle \\
\text{SPR} \quad \langle \rangle \\
\text{COMPS} \quad \langle \rangle \\
\text{EX-CONT} \quad [0] \exists x : \phi \\
\text{PARTS} \quad [0, 1, 2] \\
\text{PRESUP} \quad [1] (\ldots \land \exists x \phi) \\
\text{CI} \quad [2] (\ldots \land (\exists x \phi \rightarrow (\exists ! x \phi \land x = y \land d\text{-acc}(y, s_0))))
\end{cases}
\end{array}
\]

(33) *E Maria ta yama bèk. *E solo ta kema. the Maria PRES call back the sun PRES burn
Semantics of the independent word definite article is compatible with all types of nouns.

Existence and uniqueness are only assumed for the current situation.

(34) Sketch of the lexical entry of the Eo definite article *der*:

```
PHON ⟨der⟩

SYNS LOC

VAL

HEAD det

SUBJ ⟨⟩

SPR ⟨⟩

COMPS ⟨⟩

EX-CONT \( \exists x : \phi \)

PARTS ⟨x, 1, 2⟩

PRESUP ⟨1|...∧∃x\(φ)⟩

CI ⟨2|...∧(∃x\(φ\)→∃!x\(φ\)))⟩
```
Syntax of P+D combinations

- P+D behaves externally like a PP, but internally like an article.
- P+D has the same 3-dimensional semantics as a unique nominal.
- Thus: only compatible with unique nominals and proper names!
Problem: While contracted, semantically restricted forms exist for singular nominals in some genders, this is not the case for all genders.

For those P and D that have P+D forms, we must require that there are P-counterparts that select for a full NP and that the NP complement does not have a unique-nominal CI.
Definite marking: Summary

- Syntactic selection accounts for difference between proper names and unique nominals.
- While unique nominals in P can, in principle, take a determiner, a definite article is excluded unless an anaphoric use is present.
- Single-word analysis of contracted prepositions in Y. Non-contracted forms of contractable prepositions with special CI.
Overview

1. Introduction

2. Data

3. Previous Approaches

4. Definite Meaning

5. Definite Marking

6. Summary and further perspectives
Summary

- Theory of definiteness applied to three languages.
- Interaction of syntax and semantics
- Multi-dimensional semantics is very natural in HPSG, given its perlocation-retrieval approach.
- Little previous work on Y, Eo, and P in HPSG:
  - Y: Müller & Ørsnes (2011)
  - Eo: Li (1995) (inflectional morphology); one exercise sheet for LKB course (http://www.delph-in.net/courses/09/cl/esperanto.pdf)
  - P: (none?)
Anaphoric definites require uniqueness within the universe of discourse.

Hawkins (1991): Uniform analysis of definites and demonstratives. Different p-set requirements, i.e., difference with respect to where uniqueness holds (in discourse, in visual perception, . . . )

Lücking et al. (2015): Space for uniqueness requirement can be determined through pointing gestures.
Because of inherent semantic definiteness, proper names and unique nominals do not need an article.

Anaphoric definites: The relevant presuppositional and CIs could come from the construction (word order etc.).
Some other open issues

- More contexts: bridging, generics, …
- Explicit link to accessibility theory for anaphoric definites
- Connection to indexicals (Maier, 2009)
- Secondary uses of proper names (von Heusinger, 2010)
- …
a sheynem dank!
Multan dankon!
Mashá danki!
References


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