They are reading the newspaper
Weak nouns, weak verbs, and stereotypicality

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Weak nouns, weak verbs, and stereotypicality

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(based on collaboration with Maartje Schulpen and Joost Zwarts)

Utrecht Institute of Linguistics OTS
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- Introduction to weak definites (Carlson & Sussman, 2005)
- A kind-reference analysis of weak definites (Aguilar and Zwarts, 2010; Aguilar-Guevara, in progress)
- Weak nouns, weak verbs and stereotypicality (Aguilar-Guevara, in progress)
- Conclusion
**Weak Definites**

allow ‘sloppy’ readings in VP-ellipsis constructions

weak definite

1. Lola went to the hospital and Alice did too
   
   (different hospitals are possible)

regular definite

2. Lola went to the restaurant and Alice did too

   (different restaurants are not possible)
Weak definites display lexical restrictions

Not every noun can occur in a weak definite:

3  a. Lola checked the calendar and Alice did too.  
   b. Lola checked #the book and Alice did too.

Not every verb can govern a weak definite:

4  a. Lola checked the calendar and Alice did too.  
   b. Lola read #the calendar and Alice did too.
• Introduction to weak definites
• A kind-reference analysis of weak definites
• Weak nouns, weak verbs and stereotypicality
• Conclusion
A KIND-REFERENCE ANALYSIS

weak definites refer to atomic kinds

Example

a. \([\text{[the]}] = \lambda P \, \forall x. P(x)\)

b. \([\text{[calendar]}] = \lambda x_k \, Calendar(x_k)\)

c. \([\text{[the calendar]}] = \forall x_k \, Calendar(x_k) = C\)
A KIND-REFERENCE ANALYSIS

the kinds are associated with *stereotypical usages*

SUs are well-established notions about the purpose of use of objects.

Examples:

The calendar kind $\text{C}$ is associated with the SU ‘to schedule and learn about events planned over a period of time’.

The hospital kind $\text{H}$ is associated with the SU ‘to get medical services’.
A KIND-REFERENCE ANALYSIS

weak definites combine with individual-level predicates by means of a lexical rule

**Kind Lifting Rule:** If V is a transitive verb (or verb-preposition combination) with the meaning $\lambda x_i \lambda e [V(e) \land Arg(e) = x_i]$, then V also has the meaning $\lambda x_k \lambda e [V(e) \land R(Arg(e), x_k) \land U(e, x_k)]$.

Example

8  If $[[\text{to check}]] = \lambda x_i \lambda e [\text{Check}(e) \land Th(e) = x_i$
Then $[[\text{to check}]] = \lambda x_k \lambda e [\text{Check}(e) \land R(Th(e), x_k) \land U(e, x_k)]$
A KIND-REFERENCE ANALYSIS

the lexical rule is subject to a condition

Condition of applicability of the KLR: A verb or verb-preposition combination $V$ with the meaning $\lambda x_i \lambda e[V(e) \land \text{Arg}(e) = x_i]$ can also get the meaning $\lambda x_k \lambda e[V(e) \land R(\text{Arg}(e), x_k) \land U(e, x_k)]$ and then combine with a DP referring to an atomic kind $K$ iff $\lambda eV(e) \cap \lambda eU(e, K) \neq \emptyset$. 
A KIND-REFERENCE ANALYSIS

the logical form of weak definite sentences

Examples

9. Lola checked the calendar.
   \[\exists e [\text{Check}(e) \land \text{Ag}(e)=\text{lola} \land R(\text{Th}(e), \text{C}) \land U(e, \text{C})]\]

10. Lula went to the hospital.
    \[\exists e [\text{Go-to}(e) \land \text{Ag}(e)=\text{lula} \land R(\text{Loc}(e), \text{H}) \land U(e, \text{H})]\]
A KIND-REFERENCE ANALYSIS
accounting for the lexical restrictions

Not every noun can occur in a weak definite:

3  a. Lola checked the calendar and Alice did too.
   b. Lola checked #the book and Alice did too.

Not every verb can govern a weak definite:

4  a. Lola checked the calendar and Alice did too.
   b. Lola read #the calendar and Alice did too.
A KIND-REFERENCE ANALYSIS

accounting for the lexical restrictions

13  Lola checked the calendar.

∃ e[Check(e) & Ag(e)=lola & R(Th(e), C) & U(e, C)]
A KIND-REFERENCE ANALYSIS

accounting for the lexical restrictions

to check the calendar
A KIND-REFERENCE ANALYSIS

accounting for the lexical restrictions

to check the calendar
to read #the calendar
A KIND-REFERENCE ANALYSIS

accounting for the lexical restrictions

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<table>
<thead>
<tr>
<th>Check(e)</th>
<th>U(e, C)</th>
<th>Read(e)</th>
<th>U(e, C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>to check the calendar</td>
<td>to read #the calendar</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Read(e)</th>
<th>U(e, B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>to read #the book</td>
<td></td>
</tr>
</tbody>
</table>
A KIND-REFERENCE ANALYSIS

accounting for the lexical restrictions

to check the calendar  

check(e)  

U(e, C)

to read #the calendar

Read(e)  

U(e, C)

to read #the book

Read(e)  

U(e, B)

to check #the book

Check(e)  

U(e, B)
In sum

- A verb + definite combination does not trigger weak definiteness if:
  - Either the set of events corresponding to the verb does not intersect with the stereotypical usages associated with the kind the definite refers to.
  - Or the kind is not at all associated with stereotypical usages.
A KIND-REFERENCE ANALYSIS

accounting for the lexical restrictions

Question

Can the lexical meaning of weak nouns and verbs actually substantiate this explanation?
OUTLINE

- Introduction to weak definites
- A kind-reference analysis of weak definites
- Weak nouns, weak verbs and stereotypicality
- Conclusion
### Weak Nouns

Weak nouns designate functional objects.

<table>
<thead>
<tr>
<th>Musical instruments</th>
<th>Home spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Romeo Penque also played the oboe on Roland Kirk’s 1975 album Return of the 5000 Lb.</td>
<td>I ran to the bathroom and made it just in time.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Communication devices</th>
<th>Machines</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHhhhhhhhh! I’m on the phone!</td>
<td>I ran on the treadmill today instead of just working out on the elliptical.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Means of transport</th>
<th>Professions</th>
</tr>
</thead>
<tbody>
<tr>
<td>It’s ok, we caught the train anyway.</td>
<td>Daddy, next time bring the plumber!</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Establishments</th>
<th>Recreation places</th>
</tr>
</thead>
<tbody>
<tr>
<td>Martha thinks that I have money in the bank.</td>
<td>I want to sleep on the beach before I die a boring death.</td>
</tr>
</tbody>
</table>
Weak Nouns

not every functional noun is a weak noun

Communication devices
23 Lu listened to #the tape recorder and Li did two.

Means of transport
24 Juan took #the taxi and Pedro did too.

Establishments
25 Martha is in #the hotel and Alice is too.

Home spaces
26 Sue spent two hours in #the corridor and Olga did too.

Machines
27 Bert ran on #the escalators and Ana did too.

Professions
28 Maartje called #the secretary and Berit did too.

Recreation places
29 Marco went to #the lake and Mora did too.
**Weak Nouns and Stereotypicality**

**Stereotypes**

- Stereotypes are conventional beliefs about concepts of individuals, events, situations, etc. which are part of the world a community has access to.

- They are constructed as from the regularity/frequency/habituality/homogeneity with which instances of the concepts occur.

**Example:**

Japanese tourists
Although stereotypes are very common, not every concept necessarily invokes one.

Example: Algerian tourists
WEAK NOUNS AND STEREOTYPICALITY

stereotypes

- Stereotypes are constantly changing just like the reality and idiosyncrasy of the community that adopts them is doing so.
- They can appear and disappear, but also they get enriched or impoverished.
- Not all the stereotypes are equally well-established within a community.
- Example:

  English tourists (in Amsterdam)
Weak Nouns and Stereotypicality

Usages

- Based on our experience in the world, we construct ideas about the usual way and circumstances in which functional objects are used.

Example: books
WEAK NOUNS AND STEREOTYPICALITY

stereotypical usages

For some functional objects, these ideas are sufficiently well established among the members of a community because the objects and circumstances of use are standard and part of the everyday life of the community.

Example: newspapers
WEAK NOUNS AND STEREOTYPICALITY

weak nouns designate objects with stereotypical usages
WEAK NOUNS AND STEREOTYPICALITY

the association with SUs is specified in the lexical entry of the nouns

Accordingly:

The lexical meaning of the noun *calendar* is associated with stereotypical functions.

The lexical meaning of the noun *book* is not.

Question:

How?
Weak nouns and stereotypicality

The association with SUs is specified in the lexical entry of the nouns.

Possibility

Pustejovsky (1991, 1995)’s generative lexicon

**Calendar**

\[
\text{ARGSTR} = \begin{bmatrix}
\text{ARG}_1 = x: physical\ object \\
\text{CONSTITUTIVE} = \cdots \\
\text{FORMAL} = \cdots \\
\text{TELIC} = give\ seasonal\ information. (e^T, w, x) \\
\text{AGENTIVE} = \cdots
\end{bmatrix}
\]

\[
\text{QUALIA} = \begin{bmatrix}
\end{bmatrix}
\]
Possibility

Pustejovsky (1991, 1995)’s generative lexicon

---

**Weak Nouns and Stereotypicality**

the association with SUs is specified in the lexical entry of the nouns

Calendar

\[
\text{ARGSTR} = \left[ \begin{array}{l}
\text{ARG}_1 = x: \text{physical object} \\
\text{CONSTITUTIVE} = \cdots \\
\text{FORMAL} = \cdots \\
\text{STEREOTYPICAL!} \text{TELIC} = \text{give seasonal information.}(e^T, w, x) \\
\text{AGENTIVE} = \cdots 
\end{array} \right]
\]
**Weak verbs**

two classes of weak verbs

**Group I:** verbs directly alluding to functions

30  Lola *played* the oboe.

31  Lu *listened to* the radio.

32  Esteban *read* the newspaper.

33  Victor *opened* the window.
Weak verbs

two classes of weak verbs

Group I: verbs directly alluding to functions

30 Lola played the oboe.
31 Lu listened to the radio.
32 Esteban read the newspaper.
33 Victor opened the window.

Group II: verbs that at least are not incompatible with functions

34 Fidel left the hospital.
35 Luis took the train.
36 Zara slept on the beach.
37 Joan called the doctor.
Weak verbs are compatible with stereotypical usages.
+ **Outline**

- Introduction to weak definites
- A kind-reference analysis of weak definites
- Weak nouns, weak verbs and stereotypicality
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According to my kind-reference analysis of weak definites, a verb + definite combination triggers weak definiteness iff:

a. The kind the definite refers to is associated with stereotypical usages.

b. The set of events corresponding to the verb intersect with the set corresponding to stereotypical usages.

The meaning of weak nouns and verbs substantiate this explanation:

- That weak nouns (and only weak nouns) designate objects with stereotypical usages substantiates a.
- That weak verbs are compatible with stereotypical usages substantiates b.
OUTLINE

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- Appendix. EXPERIMENT TESTING THE STRENGTH OF TYPICAL PURPOSES:
  - Pretest 1
  - Pretest 2
  - Experiment
**Pretest 1**

design

**Weak definite nouns**

Typical reasons for someone to go here are ...?

- bank
- _____________________
- _____________________
- _____________________
- _____________________
- _____________________

**Regular definite nouns**

Typical reasons for someone to go here are ...?

- hotel
- _____________________
- _____________________
- _____________________
- _____________________
- _____________________
Typical reasons for someone to go here are ...?

**bank**

_____ to withdraw money

________________________
________________________
________________________
________________________
________________________

**hotel**

_____ to stay overnight

________________________
________________________
________________________
________________________
________________________
A typical reason for a mailman to go somewhere is...?

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
A typical reason for a mailman to go somewhere is...?

______________________________

to deliver mail

______________________________

______________________________

______________________________
weak definites seem to lose the weak reading when they are modified

weak definite

4  Lola went to the park and Alice did too

(different parks are possible)

modified weak definite

5  Lola went to #the old park and Alice did too

(different parks are not possible)
Read the sentence and imagine the scene it describes:

The tall mailman went to the hospital

Now describe the scene you imagined by answering the following question:

Why did he do that?

________________________________________

________________________________________

________________________________________

________________________________________

________________________________________
THE EXPERIMENT

design

weak definites
The tall mailman went to the hospital

regular definites
The tall mailman went to the restaurant

modified weak definites
The tall mailman went to the new hospital

modified regular definites
The tall mailman went to the new restaurant
Read the sentence and imagine the scene it describes:

The tall mailman went to the hospital

Now describe the scene you imagined by answering the following question:

Why did he do that?

________ to deliver a letter ________

agent reason

T

THE EXPERIMENT
design

The EXPERIMENT
design

The EXPERIMENT
design
Read the sentence and imagine the scene it describes:

The tall mailman went to the hospital

Now describe the scene you imagined by answering the following question:

Why did he do that?

to get some treatment
THE EXPERIMENT

predictions

- Greater preference for the location reason for weak definites than for regular definites

- A greater preference for the location reason for weak definites than for modified weak definites

- An interaction effect of type of definite and modification
THE EXPERIMENT

design

materials

- 48 test sentences (12 per condition)
- 12 filler sentences

subjects

- 62 native speakers of Dutch

design

- 2x2 within-subjects design: weak definites, regular definites, modified weak definites, modified regular definites
An lmer analysis revealed:

- a significant main effect for type of definite ($\beta=0.3497$, SE=.1088, $p$(MCMC)<.0001)

- no significant main effect of modification ($\beta=-.1188$, SE=.1003, $p$(MCMC)=.1896)

- no interaction effect between type of definite and modification ($\beta=-.0009$, SE=.1496, $p$(MCMC)=.9714)
That weak definite sentences triggered more location reason interpretations than regular definites suggest that purposes associated with weak definites are stronger than those associated with regular definites.

That this tendency remained in modified and unmodified definites suggests that the strength of the purposes does not depend on the weak definite configuration but rather on the nouns.
REFERENCES


Thank you

Contact: agostana@gmail.com

Drafts available here: https://sites.google.com/site/agostana/publications