1. Basic ingredients of CM

1.1. Word-based morphology: morphological schemas express generalizations over sets of existing words, and are recipes for forming new words.

\((1)\) buy buyer

\((2)\) [\(x\)]_v\_er\_N_ \(‘\text{one who } V\_s’\)

Tripartite parallel architecture (Jackendoff, 2002). Words are signs. Pairings of forms and meanings (\(\approx\) Sign-based morphology, (Inkelas and Zoll, 2005; Orgun, 1999))

Figure 1. The schema for deverbal –er

\[\begin{align*}
\omega_i & \leftrightarrow \ N_i & \leftrightarrow & [\text{one who } \text{PRED}_j]_i \\
| & \mid & \\backslash \\
[ \_][\text{\_ar}]_k & \rightarrow \ V_j \text{Aff}_k
\end{align*}\]
“Pieces of syntactic structure can be listed in the lexicon with associated meanings, just as individual words are; these are the MEANINGFUL CONSTRUCTIONS of the language.”

“Construction grammar makes no principled distinction between words and rules: a lexical entry is more word-like to the extent that it is fully specified, and more rule-like to the extent that it contains variables [...]”

“Lexical entries are arranged in an inheritance hierarchy.” (Jackendoff, 2008), p. 15.

Compounding schema for English:

(3) \[
[a]_k \ [b]_n \ [c]_j \leftrightarrow [\text{SEM}_i \text{ with relation } R \text{ to } \text{SEM}_k]
\]

1.2. Hierarchical lexicon with subpatterns and default inheritance (Booij, 2005)

(4) \textit{Noun:}

- \textit{example}
  - ber-e ‘bear’
  - bere-sterk ‘very strong’, bere-aardig ‘very kind’
  - bloed ‘blood’
  - bloed-serieus ‘very serious’, bloed-link ‘very risky’
  - dood ‘death’
  - dood-eng ‘very scary’, dood-gewoon ‘very ordinary’
  - kei ‘boulder’
  - kei-goed ‘very good’, kei-gaaf ‘very nice’
  - pis ‘piss’
  - pis-nijdig ‘very angry’, pis-woedend ‘very angry’
  - poep ‘shit’
  - poep-heet ‘very hot’, poep-lekker ‘very pleasant’
  - ret-e ‘ass’
  - ret-e-leuk ‘very nice’, ret-e-spannend ‘very exciting’
  - reuz-e ‘giant’
  - reuze-leuk ‘very nice’, reuze-tof ‘very good’

\[[\text{bere}]_N \ [x]_{\lambda} \]_A ‘very A’

Reduplication in Afrikaans (Botha, 1988)

(5) \textit{example}

- Die kinder drink bottels-bottels limonade
  - The children drink bottles-bottles lemonade
  - ‘The children drink bottles and bottles of lemonade’
  - Bakke-bakke veldblomme versier die tafels
  - Bowl-bowls veldblomme versier die tafels
  - ‘The tables are decorated with wild flowers by the bowlful’
The two subconstituents are co-indexed which indicates their identity. The phonological make up of the two constituents is also identical but there are los of cases in which reduplication triggers additional phonological operations (Inkelas and Zoll, 2005).

1.3. Schema unification: co-occurrence of word formation patterns

(6) \[
\text{verb} \quad \text{deverbal adjective} \quad \text{on-adjective}
\]
\[
\begin{align*}
\text{bedwing ‘suppress’} & \quad \text{bedwing-baar ‘suppressable’} & \quad \text{on-bedwing-baar ‘unsuppressable’} \\
\text{bestel ‘deliver’} & \quad \text{bestel-baar ‘deliverable’} & \quad \text{on-bestel-baar ‘undeliverable’} \\
\text{blus ‘extinguish’} & \quad \text{blus-baar ‘extinguishable’} & \quad \text{on-blus-baar ‘unextinguishable’}
\end{align*}
\]

(7) \[
[\text{on-A}]_A + [\text{V-baar}]_A \equiv [\text{on}[[\text{V-baar}]_A]_A
\]

(8) \[
\text{noun} \quad \text{verb}
\]
\[
\begin{align*}
\text{caffeine} & \quad \text{decaffeinate} \\
\text{moral} & \quad \text{demoralize} \\
\text{mythology} & \quad \text{demythologize} \\
\text{nuclear} & \quad \text{denuclearize} \\
\text{Stalin} & \quad \text{destalinize}
\end{align*}
\]

(9) \[
[de \ [\text{x}]_N \text{ ate}]_V \quad [de \ [\text{x}]_N \text{ ize}]_V \quad [de \ [\text{x}]_A \text{ ize}]_V
\]

1.4. Schemas can also be used for multi-word lexical units.

French N à N

(10) \[
\begin{align*}
\text{moulin à poivre ‘pepper mill’} \\
\text{verre à vin ‘wine glas’} \\
\text{bois à feu ‘firewood’}
\end{align*}
\]
fruit à confiture ‘jam fruit’
moteur à essence ‘petrol engine’

Particle verbs in Germanic languages are separable, yet lexical units

2. Non-compositional properties of complex words
2.1. Exocentric compounds

(11)  
French
chauffe-eau ‘water heater’
coupe-ongles ‘nail clipper’
garde-barrière ‘gate keeper’
grill-pain ‘toaster’

Italian
lava-piatti ‘dish washer’
mangia-patate ‘potato eater’
porta-lettere ‘postman’
rompi scatole ‘brain breaker, puzzle’

Spanish
lanza-cohetes ‘rocket launcher’
come-curas ‘lit. eat priests, anti-clerical’
mata-sanes ‘lit. kill healthy people, quack doctor’
limpia-botas ‘lit. clean boots, boot black’

(12)  

Spanish exocentric adjectives
(13)  
pell-i-rojo
hair-LINKING VOWEL- red
‘red-haired’
cabiz-bajo
head-low
‘with low head, crest-fallen’
Dutch: gender of nouns derived from verbs by conversion:

(15) \[ x \] \text{verb stem} \quad \text{noun with common gender} \\
     bouw ‘to build’   bouw ‘building’ \\
     loop ‘to walk’    loop ‘walk’ \\
     trap ‘to kick’    trap ‘kick’ \\
     val ‘to fall’     val ‘fall’ \\
     was ‘to wash’     was ‘wash’ \\
     zet ‘to put’      zet ‘move’ \\

(16) \[ x \] \text{[N[-neuter].i \leftrightarrow [ACTION].i]} \\

Verbs with prefixes like be-, ge-, ont- and ver- do allow for conversion, but in this case the converted noun has neuter gender:

(17) \[ x \] \text{verb} \quad \text{derived neuter noun} \\
     ge-bruik ‘to use’   gebruik ‘use’ \\
     ge-loof ‘to believe’   geloof ‘belief’ \\
     ver-bruik ‘to consume’   verbruik ‘consumption’ \\
     ver-zuim ‘to omit’   verzuim ‘omission’ \\
     ver-lang ‘to desire’   verlangen ‘desire’ \\
     be-derf ‘to spoil’   bederf ‘decay’ \\
     be-gin ‘to begin’   begin ‘beginning’ \\
     be-heer ‘to manage’   beheer ‘management’ \\
     ont-bijt ‘to breakfast’   ontbijt ‘breakfast’ \\
     ont-werp ‘to design’   ontwerp ‘design’ \\
     ont-zet ‘to relieve’   ontzet ‘relief’ \\

(18) \[ x \] \text{[N[-neuter].i \leftrightarrow [ACTION].i]} \quad \text{(Prefix = be-, ge-, ont-, ver-)}
3. Mismatches between form and meaning: the role of paradigmatic relations

(19)  alpin-ism  alpin-ist
     altru-ism  altru-ist
     aut-ism    aut-ist
     bapt-ism   bapt-ist
     commun-ism commun-ist
     pacif-ism  pacif-ist

(20) $< [x{-}\text{ism}]_{ni} \leftrightarrow \text{SEM}_{i} > \leftrightarrow < [x{-}\text{ist}]_{nj} \leftrightarrow \text{[person involved in SEM]}_{j} >$

(21) alloc-eer ‘to allocate’ alloc-atie ‘allocation’
     communic-eer ‘communicate’ communic-atie ‘communication’
     reden-eer ‘to reason’ reden-atie ‘reasoning’
     stabilis-eer ‘to stabilize’ stabilis-atie ‘stabilization’

(22) $< [x{-}\text{eer}]_{vi} \leftrightarrow \text{[SEM]}_{i} > \leftrightarrow < [x{-}\text{atie}]_{nj} \leftrightarrow \text{[action of SEM]}_{j} >$

(23) toponym  inhabitative  toponymic adjective

Provençe  Provenç-aal  Provenç-aal-s
Amerika   Amerik-aan  Amerik-aan-s
Catalonië  Catal-aan  Catal-aan-s
Guatemala  Guatemala-eek  Guatemala-eek-s
Chili      Chil-een  Chil-een-s
Madrid     Madril-een  Madril-een-s
Portugal   Portug-ees  Portug-ees
Ambon      Ambon-ees  Ambon-ees
Rome       Rom-ein  Rom-ein-s
Palestina  Palest-ijn  Palest-ijn-s
Bretagne   Breton  Breton-s
Azië       Azi-aat  Azi-at-isch
Monaco     Moneg-ask  Moneg-ask-isch
Israel     Israel-iet  Israel-it-isch
Moskou     Moskov-iet  Moskov-it-isch
(24) \( < [x]_{N\text{i}} \leftrightarrow \text{[inhabitant of } j\text{]} > \leftrightarrow < [[x]_{N\text{i}}-\text{s}]_{A\text{k}} \leftrightarrow \text{[relating to } j\text{]}_k > \)

(25) inhabitative toponymic adjective female inhabitative

<table>
<thead>
<tr>
<th>Language</th>
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(26) \( < [[x]_{N\text{i}}-\text{s}]_{A\text{k}} \leftrightarrow \text{[relating to } j\text{]}_k > \leftrightarrow < [[[x]_{N\text{i}}-\text{s}]_{A\text{k}}]_{N\text{i}} \leftrightarrow \text{[female inhabitant of } j\text{]}_i > \)

where \( j \) is the index for the geographical entity involved also mentioned in schema (24).

4. Hierarchical lexicon and allomorph selection

4.1. Subpatterns of compounding can be expressed in a hierarchical lexicon. Japanese *suru*-compounding, formation of verbs from verbal nouns (constructional idiom) (Kageyama, 1982):

(27) a. yama-nobori-suru
    mountain-climbing-do
    ‘to do mountain climbing’

b. kenyuu-suru
    research-do
    ‘to do research’
4.2. Allomorph selection in Dutch: governed by morphological structure.

(28) \[[VN] [suru]\]_\text{V} \to \text{to perform the act denoted by VN}\]

(29) preposition: met [mɛt]
postposition and particle: mee [me:] first part of a compound: mede [meːdə]

(30) \[ [\text{mede}]_\text{ADV} \text{N}]_\text{N} \to \text{\text{N} shared with other persons’}
mede-beslissing ‘co-decision’
mede-bewoner ‘fellow occupant’
mede-broeder ‘fellow brother’
mede-lander ‘fellow countryman’
mede-weten ‘(shared) knowledge’

(31) mee-bidden ‘to join in praying’ [mee-V] ‘to join in V-ing’
mee-denken ‘to join in thinking’
mee-drinken ‘to join in drinking’
mee-eten ‘to join in eating’

(32) mede-bewoner / *mee-bewoner ‘co-occupant’
mede-geloovige / *mee-geloovige ‘fellow believer’
mede-klinker / *mee-klinker ‘consonant’

(33) a. eind-examen / *einde-examen ‘end-exam, final exam’
eind-gesprek / *einde-gesprek ‘end-interview, final interview’
eind-station / *einde-station ‘end-station, final station’
eind-spel / *einde-spel ‘end-game, final game’

b. aard-appel / *aarde-apppel ‘earth-apple, potato’
aard-atmosfeer / *aarde-atmosfeer ‘earth-atmosphere’
aard-schok / *aarde-schok ‘earth-quake’
aard-worm/ *aarde-worm ‘earth-worm’

(exception: aarde-werk ‘earthenware, pottery’, in which aarde has a specialized meaning).

Compare: chocolade-reep (chocola), lade-kastje (la) with long forms in compounds.

(34) \[[\text{eind}]_{\text{N}} [x]_{\text{N}}\] ‘final [x]’
\[[\text{aard}]_{\text{N}}[x]_{\text{N}}\] ‘[x] related to earth’

(35) stem allomorphy in Dutch verbs

- glijd /glij ‘to glide’
- rijd /rij ‘to ride / drive’
- snijd /snij ‘to cut’
- wijd / wij ‘to dedicate’

Long allomorph appears in derived words, and the short allomorph is used in compounds:

(36) \textit{compound} \hspace{1cm} \textit{derived word}

- glij-baan ‘slide-track, slide’
- glij-middel ‘slide-means, lubricant’
- rij-baan ‘ride-track, lane’
- rijd-er ‘rid-er’
- rij-bewijs ‘ride-license, driving license’
- rij-wiel ‘ride-wheel, bike’
- snij-biet ‘cut-beet, spinach beet’
- snijd-er ‘cutt-er’
- snij-gras ‘cut-grass, cutting grass’
- snijd-baar ‘slice-able’
- snij-vlak ‘cut-edge, cutting edge’
- snijd-sel ‘cutt-ing’
- wij-water ‘holy water’
- wijd-ing ‘consecration’

(37) \[[\text{glij}]_{\text{V}} [x]_{\text{N}}\]
\[[\text{rij}]_{\text{V}} [x]_{\text{N}}\]
\[[\text{snij}]_{\text{V}} [x]_{\text{N}}\]
\[[\text{wij}]_{\text{V}} [x]_{\text{N}}\]
eer-wraak ‘honour-revenge, revenge for the protection of family honour’
eer-betoon ‘honour-show, tribute’
ere-lid ‘honorary member’ /*eer-lid
ere-voorzitter ‘honorary chairman’ / *eer-voorzitter
ere-doctor ‘honorary doctor’/ *eer-doctor

[[ere]N[x]N]N ‘honorary x’

5. Inflection
5.1. Multiple exponence cf. (Gurevich, 2006)
The cells of a paradigm are morphological schemas that are paradigmatically related.
Latin mensae -mens-as $<[x –ae] ↔ N_{[+nom, +pl]} > ↔ <[x –as] ↔ N_{[+acc, +pl]} >$

5.2. Periphrasis = phrasal, multi word construction (Blevins, 2008; Booij, 2002; Börjars et al.,
1997; Sadler and Spencer, 2001).

Paradigm of 3rd pers. sg. forms of laudare ‘to praise’

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<tr>
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Deponentia have the same pattern: loquor / locutus est ‘speaks / has spoken’

3rd pers. sg. forms of the Dutch verb doden 'to kill'

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<tr>
<td>Past</td>
<td>had gedood</td>
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</table>
[[x]V0·Part [word]V0]v0 ↔ Pass [ PRED] (Pass = argument suppression)

Subtype of the raising construction: Syntactic compound, accessible for movement operations, no violation of lexical integrity.

Progressive construction (Booij, 2008)

(41) Jan is aan het fiets-en / *Jan is fietsend / De fietsende professor

John is at the cycle-INF /John is cycling / The cycling professor

'John is cycling'

Jan is de aardappels aan het schillen

John is the potatoes at the peel-INF

John is peeling the potatoes'

(42) [[aan]p [[het]Det [V-INF]N]]pp 'V-ing continuously'
References


