Approaches to grammaticalization

1. Introduction

1.1. First definitions

The term “grammaticalization” goes back to Meillet (1912). He was not the first who described the phenomenon but he was the one who coined the term. He talks about a process of innovation, the passage from autonomous words to grammatical agents. ...

While analogy may renew [linguistic] forms in their detail but leaves the existent system as a whole unaffected, the “grammaticalization” of certain words creates new forms, introduces categories for which there was no previous linguistic expression, transforms the system as a whole. (Meillet 1912/1921:133; the translation¹ and the bold print is mine; W.B.)

The classical definition of Kuryłowicz (1965):

Grammaticalization consists in the increase of the range of a morpheme advancing from a lexical to a grammatical or from a less grammatical to a more grammatical status, e.g. from a derivative formant to an inflectional one. (Kuryłowicz 1965 [1975: 52])

1.2. Example: From verb to conjunction: Jabêm (Austronesian, Papua New Guinea)

(Dempwolff 1939, Zahn 1940, Bisang 1986)

The verb -be/-mbe 'think, intend, want' in Jabêm underwent several steps of grammaticalization. Like all the verbs in Jabêm, it obligatorily occurs with a prefix combining person and TAM (realis [R] vs. imaginativus [I], terminology from Dempwolff 1939). In example (1), the verb -be/-mbe takes the prefix of the realis. In (2), the verb is in the imaginativus:

(1) Jabêm: Zahn 1940: 80, Bisang 1986: 158
    aê ga-be ja-sôm.
    1s 1sR-want 1sI-say
    ‘I want to say.’

¹ The French original runs as follows: “... le passage de mots autonomes au rôle d’agents grammaticaux a été beaucoup moins étudié durant les quarante dernières années. ... Tandis que l’analogie peut renouveler le détail des formes, mais laisse le plus souvent intact le plan d’ensemble du système existant, la “grammaticalisation” de certains mots crée des formes neuves, introduit des catégories qui n’avaient pas d’expression linguistique, transforme l’ensemble du système.”
(2) Jabêm: Dempwolff 1939: 90, Bisang 1986: 158
lau-ò se-be sè-nam kôm atom.
people-FEM 3pR-want 3sI-make field/soil NEG
'The women don't want to make the field.'

The form *ge-be* [3sR-want] 'I want' is grammaticalized into a conjunction as follows:

1. If this form occurs in the second position of a sequence of three verbs in which the first verb is in the *realis* and the second in the *imaginativus*, the semantic relation of purpose can be inferred between V₁ and V₃. If the three verbs are marked for the same subject, *-bel-mbe* can be analyzed as an independent verb (3a) or as some kind of subordinator (3b):

(3) Jabêm (Dempwolff 1939:90, Bisang 1986:158):
lau-ò se-jong kagadê se-be se-no geng.
people-FEM 3pR-collect wood 3sR-want 3sI-cook thing/something
a. 'The women are collecting wood, they want to cook something.'
b. 'The women are collecting wood for cooking something.'

2. If V₁ and V₃ have different subjects, the verb *-bel-mbe* always occurs in the 3sR, i.e. in the form of *gebe*. In such a constellation, V₃ can either take the *realis* or the *imaginativus*. The use of the former implies purpose (4), the use of the latter implies cause (5):

(4) Jabêm (Dempwolff 1939:90, Bisang 1986:159):
ô-lic gebe okêm é-Ngung aôm atom.
2sI-see CONJ plant_with_thorns 3sI-prick 2s NEG
'Be careful not to be pricked by the thorny plant.'

(5) Jabêm (Zahn 1940:310, Bisang 1986:159):
Napalê tonaj ké-taŋ gebe tama-ô ké-kêŋ bôc
boy that 3sR-cry CONJ father-POSS:3s 3sR-give pig
gê-déŋ eŋ atom.
3sR-go_to 3s NEG
'The boy cried because his father didn't give him the pig.'

3. Finally, *gebe* is also used in the context of direct (6) and indirect (7) speech:

(6) Jabêm (Zahn 1940:312; Bisang 1986:160):
Bucgêdô ké-sôm gebe Gwadêc sebeŋ ô-môŋŋ. 
Bucgedo 3sR-say CONJ Gwadec sebeŋ immediately 2sI-come
'Bucgedo said "Gwadec, come immediately."'

(7) Jabêm (Dempwolff 1939:91, Bisang 1986:160):
Bucgêdô ké-sôm gebe ẹ-nac ọpajalê-ô.
Bucgedo 3sR-say CONJ 3sI-hit boy-FEM
'Bucgedo said that he would hit the girls.'
2. Grammaticalization clines/pathways

Processes of grammaticalization typically proceed along a temporal sequence of different stages (= clines or pathways) as can be illustrated by the two examples in section 1:

(8) Grammaticalization cline of Jabêm gebe:
    Verb (‘he wants’) > CONJ (purpose) > CONJ (causality)
    > Quotative marker

The following cline is about grammatical form. It leads from discourse down to zero marking:

(9) Givón (1979: 209):
    Discourse > Syntax > Morphology > Morphophonemics > Zero

This cline can be seen from a combination of two processes of development: The first process is characterized by Givón’s (1971: 12) famous statement “Today’s morphology is yesterday’s syntax” (i.e. independent words evolve into dependent grammatical morphemes). The second process leads from discourse structure to morphosyntactic structure in the sense that discourse structure gets fossilized into syntactic and morphological structure (Givón 1979).

Another, more complex cline, describes the development from different lexical source concepts into tense-aspect-modality markers (Bybee et al. 1994):

(10) INFEREN CE FROM RESULTS → INDIRECT EVIDENCE
    INFERENTIAL 
    RESULTATIVE
    'be/have' 
    ,com e'
    ,finish'
    directionals
    deriva tional perfective
    ANTERIOR
    PERFECTIVE/SIMPLE PAST

Meanwhile, research in grammaticalization has claimed an impressive number of grammaticalization clines. They are listed in Heine & Kuteva’s (2002) World Lexicon of Grammaticalization.

From this perspective, processes of grammaticalization have the following characteristics (for a more extensive description, cf. Bybee et al. 1994: 9-22):

(i) Cyclicity: They are realised in stages, step-by-step.
(ii) Universality: The sequence of the individual stages follows universal clines.
(iii) Unidirectionality: The grammaticalization clines are not reversible.
(iv) Source determination: The clines start out from a source concept that determines their further development (e.g. body-part terms, verbs with the meaning of ‘come’, ‘go’, ‘be at’, ‘finish’, etc., cf. Heine & Kuteva 2002).
(v) Retention of earlier meaning: If a pathway develops from meaning A to B, there is an intermediate stage in which a linguistic item can have both meanings: A > {B/A} > B. Thus, nuances of the source concept or the source construction are retained at later stages.
(vi) As a consequence of (v), processes of grammaticalization are gradual and develop over a certain period of time with different nuances between A and B (Traugott & Trousdale 2010).

(vii) Coevolution of meaning and form: The change from a more concrete to a more abstract grammatical meaning is reflected in the form of the linguistic item involved.


The basic concept for measuring degrees of grammaticalization is the autonomy of the linguistic sign. Reduction of autonomy raises the degree of grammaticalization:

Language is an activity which consists in the creation of interpersonally available meanings, i.e. signs. This activity can be more free or more regulated; accordingly, the ways in which the signs are formed will either depend more on the actual decision of the language user or more on social conventions laid down in the grammar. ...

The concept of freedom concerns the relation between the language user and the signs he uses. If we abstract from the user, we get a structural analog to this concept, viz. the autonomy of the sign: the more freedom with which a sign is used, the more autonomous it is. Therefore the autonomy of a sign is converse to its grammaticality, and grammaticalization detracts from its autonomy. Consequently, if we want to measure the degree to which a sign is grammaticalized, we will determine its degree of autonomy. (Lehmann 1995: 121 - 122)

The autonomy of a sign consists of three parameters:

I. Weight: A linguistic sign needs a certain weight in order to be distinguished from other elements of its class, a weight which provides it with a certain prominence in the syntagm. Reduction of weight implies increase of grammaticalization.

II. Cohesion: The degree of grammaticalization of a linguistic sign depends on the rigour with which it can contract systematic relations with other signs. The more systematic this relation is the less a sign can be autonomous, i.e. the more it is grammaticalized.

III. Variability: A linguistic sign needs a certain degree of mobility in order to be autonomous. Thus, reduction of variability implies an increasing degree of grammaticalization.

Each of these three parameters have a paradigmatic and a syntagmatic aspect:

<table>
<thead>
<tr>
<th></th>
<th>Paradigmatic</th>
<th>Syntagmatic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>Integrity (Ia)</td>
<td>Structural scope (Ib)</td>
</tr>
<tr>
<td>Cohesion</td>
<td>Paradigmaticity (IIa)</td>
<td>Bondedness (IIb)</td>
</tr>
<tr>
<td>Variability</td>
<td>Paradigmatic variability (IIIa)</td>
<td>Syntagmatic variability (IIIb)</td>
</tr>
</tbody>
</table>

Table 1: Parameters for measuring autonomy (Lehmann 1995)
Ia. **Integrity (paradigmatic weight)**

A linguistic sign needs a certain substance - a certain integrity - in order to maintain its identity. The integrity of a sign is either **phonological** or **semantic**. Reduction of phonological integrity is presented under the term of “attrition”. At the semantic level, reduction of integrity means desemanticization. In the following example from Chinese, the preposition *bā* in its function of a causative marker and a marker of definite/specific direct objects in preverbal position (cf. example (11)) is based on a verb with the meaning of ‘hold, grasp, handle’ which occurs only in the meaning of ‘treat’ and in some idiomatic uses in Modern Standard Chinese (cf. example (12)):

(11) Tā bā chuānghu dāpò-le.  
3s COV window break-PERF  
‘S/He broke the window.’

(12) a. Nǐ bā tā zēnme-yàng?  
you treat he how  
‘How do you treat him?’

   b. bā-mén ‘keep the goal’

Ib. **Scope (syntagmatic weight)**

The syntagmatic weight or structural scope of a grammatical means is the structural size of the construction which it helps to form. The structural size of a construction will be regarded, in the absence of more precise criteria, as being determined by its **level of grammatical structure** (which, for many purposes, may be regarded as its constituent structure level). (Lehmann 1995: 143)

The scope of a sign is reduced with increasing grammaticalization. In the following example, the case suffix operates at the level of the NP in Turkish (13b) and at the level of the noun in Latin (13a). Thus, Latin case markers are more grammaticalized than Turkish case markers:

(13) a. Latin:  
   [terr]-ā  [nov]-ā  
   land-LOC.SG new-LOC.SG  
   ‘in the new land’

   b. Turkish:  
   [yeni yer]-de  
   new land-LOC  
   ‘in/at the new land’

IIa. **Paradigmaticity (paradigmatic cohesion)**

What is meant here by paradigmatic cohesion or paradigmaticity is the formal and semantic integration both of a paradigm as a whole and of a single subcategory into the paradigm of its generic category. This requires that the members of the paradigm be linked to each other by clear-cut paradigmatic relations, especially opposition and complementarity. (Lehmann 1995: 132 - 133)

Example:  Relational nouns and prepositions in English:

(14) Relational nouns:  
   front, back, top, bottom, interior, etc.

   Secondary local prepositions: beyond, before, beside, within, amidst, etc.

   Primary local prepositions: in, on, at, from, to
**Homogeneity:**
The integration of the paradigm has, furthermore, more intrinsic and less easily quantifiable aspects. It also comprises the formal and functional homogeneity of the paradigm, i.e. a certain amount of similarity between its members and of regularity in their differences. (Lehmann 1982: 134)

**Paradigmatication:**
The process of paradigmatic integration or **paradigmatication** leads to a levelling out of the differences with which the members were equipped originally. Genetic differences among prepositions of different origins, which account for their different behavior as long as they are weakly grammaticalized, are adjusted when they develop into primary prepositions. This can be seen, e.g., in German während = Engl. *during*, which no longer behave as participles. (Lehmann 1995: 135)

<table>
<thead>
<tr>
<th>Case/number paradigm (singular)</th>
<th>Person/number paradigm of the verb: Russian / Latin</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOM  cestр-а</td>
<td>1.SG люблю  am-o</td>
</tr>
<tr>
<td>ACC  cestр-у</td>
<td>2.SG любишь  am-a-s</td>
</tr>
<tr>
<td>GEN  cestр-ы</td>
<td>3.SG любит  am-a-t</td>
</tr>
<tr>
<td>DAT  cestр-е</td>
<td>1.PL любьм  am-a-mus</td>
</tr>
<tr>
<td>PREP cestр-е</td>
<td>2.PL любите  am-a-tis</td>
</tr>
<tr>
<td>INSTR cestр-ой</td>
<td>3.PL любят  am-a-nt</td>
</tr>
</tbody>
</table>

**Reduced paradigms:**
At the right end of a grammaticalization scale, paradigms are not formed, but reduced. The most grammaticalized categories of a language system usually consist of a two-member paradigm, i.e. a binary opposition. Typical examples are number (singular/ plural), gender (masculine/feminine), noun class (animate/inanimate, or human/non-human), tense (nonpast/past, real/future), mood (indicative/subjunctive), etc. (Lehmann 1995: 136)

**The end of paradigmaticity is fossilization:**
At the right end of the grammaticalization scale, paradigms are not formed, but reduced. The most grammaticalized categories of a language system usually consist of a two-member paradigm, i.e. a binary opposition. Typical examples are number (singular/ plural), gender (masculine/feminine), noun class (animate/inanimate, or human/non-human), tense (nonpast/past, real/future), mood (indicative/subjunctive), etc. All of these can be privative oppositions, i.e. the opposition may consist of only in the presence of a sign vs. its absence. This constitutes the highest degree of paradigmaticity. One more step of grammaticalization, and the paradigm ceases to exist. Its further fate may be called fossilization ... (Lehmann 1995: 136)

**Ilb. Bondedness (syntagmatic cohesion)**
This parameter refers to the intimacy with which a linguistic sign is connected with another sign. Increasing bondedness is called **coalescence**.

Bondedness is divided into several processes such as **cliticization**, **agglutination** (= **affixation** in Heine & Reh 1984), and **fusion**.
IIIa. Paradigmatic variability

Paradigmatic variability is the freedom with which the language user chooses a sign. The principle alternatives to choosing some sign are either choosing another member of the same paradigm or choosing no member of that paradigm, i.e. leaving the whole generic category unspecified. (Lehmann 1995: 137 - 138)

Paradigmatic variability ultimately leads to obligatoriness:

By this [i.e. transparadigmatic variability; W.B.] we mean the freedom of the language user with regard to the paradigm as a whole. The paradigm represents a certain category, and its members, the subcategories (or values) of that category. There may then be a certain freedom in either specifying the category by using one of its subcategories, or leaving the whole category unspecified. To the extent that the latter option becomes constrained and finally impossible, the category becomes obligatory. We shall therefore use the term ‘obligatoriness’ as a - more handy - converse equivalent of ‘transparadigmatic variability’. (Lehmann 1995: 139)

Obligatory use of the singular/plural distinction in English vs. Turkish:

(15) Turkish vs. English:
   a. ev 'house' ev-le r 'house-s'
   b. üç ev 'three house-s'

IIIb. Syntagmatic variability

Syntagmatic variability measures to what extent a linguistic element can be moved. The mobility of a linguistic sign is reduced with increasing grammaticalization.

(16) Latin:
    Epistulam scriptam habeo
    Letter:ACC:FEM written:FEM 1.SG.have
    ‘I have written a/the letter.’

    Habeo epistulam scriptam.
    Habeo scriptam epistulam. etc.

(17) Spanish:
    He escrito una carta.
    AUX:1.SG written a letter
    ‘I have written a letter.’

    *He una carta escrito. ...

4. Pragmatic inference and grammaticalization

Pragmatic inference is a driving force of grammaticalization. It is of particular importance at the beginning of grammaticalization processes. Hopper & Traugott (2003) distinguish two types of inferences\(^2\) which trigger two different mechanisms:

(17) Pragmatic inference
    —→ Mechanism
    • Metaphoric inference (metaphor) Analogy
    • Metonymic inference (metonymy) Reanalysis

\(^2\)Metaphors are frequently understood as semantic in nature. Hopper & Traugott (2003: 84) adopt Levinson’s (1983) view that metaphors are not based on truth conditions but rather on communicative use.
4.1. Metaphoric inference

Metaphors are generally defined in terms of “understanding and experiencing one kind of thing in terms of another” (Hopper & Traugott 2003: 84, the bold print is mine; W.B.). Typically, metaphorical inferencing proceeds across conceptual boundaries as in (31) from Thai, in which a linguistic item that belongs to the domain of body-parts is associated with other domains:

(18) Heine et al. (1991):

\[
\text{PERSON} > \text{OBJECT} > \text{ACTIVITY} > \text{SPACE} > \text{TIME} > \text{QUALITY}
\]

The following examples illustrate the transition from the domain of PERSON (body part) to the domains of OBJECT (19), SPACE (20) and TIME (21):

(19) OBJECT: The noun nâa ‘face’ denoting a body part:

\[khāw lāa nhāa.\]

he wash face

‘He is washing his face.’

(20) SPACE: nâa as a locative preposition meaning:

\[(khāa)nāa bāan\]

side-face house

‘in front of the house’ / ‘the front-side of the house’

(21) TIME: nâa as an expression of time:


The mapping of metaphorical inference follows principles of analogy in the sense of rule extension. There is a category A that is associated with X (A:X). If analogy establishes similarities of A with B, B will also be associated with X (A:X = B:X).

Thus, category OBJECT is associated with nâa ‘face, front’. If analogy establishes similarities between the category OBJECT and the category SPACE, category SPACE will also be associated with nâa ‘face, front’ and get the spatial interpretation of ‘in front of’.

4.2. Metonymic inference

While metaphor depends on semantic transfer through a similarity of sense perceptions, metonymy depends on transfer through (morpho)syntactic contiguity. It “points to (“indexes”) relations in contexts that include interdependent (morpho)syntactic constituents” (Hopper & Traugott 2003: 88).

Metonymic inference motivates reanalysis, i.e., the assignment of a new morphosyntactic analysis to a given linguistic structure. Very often, reanalysis can be defined in terms of constituency change or rebracketing. The development from OBJECT to SPACE in (19) and (20) is not only due to analogy (§ 4.1) but also to reanalysis. The noun nâa ‘front, face’ is reanalysed as a preposition.

(22) a. [[front]$_n$ of the house]$_{NP}$
   b. [[back of]$_p$ [the barn]$_{NP}$]$_{PP}$
4.3. The interaction of metaphoric and metonymic inference—an example

In §§ 4.1 and 42, we have seen how metaphoric and metonymic inference together trigger the development from OBJECT > SPACE by the mechanisms of analogy and reanalysis. Hopper & Traugott (2003) illustrate the cooperation of the two types of inferences/mechanisms by another example:

Example: *be going to* in English:

(23)  a.  *John is going to visit Bill.*
    b.  *John is going to like Bill.*

| Stage I:  | be going [to visit Bill] |
| PROG Vdir Purpose clause |
| Stage II: | [be going to] visit Bill |
| TENSE Vact |
| Stage III: | [be going to] like Bill |
| TENSE Vstate |
| Stage IV: | [gonna] like/visit Bill. |
| TENSE |

Three stages of development: At stage I, (23a) is analysed as an utterance consisting of two verbs, *go* and *visit*, in the sense of 'John is moving away with the purpose of visiting Bill'. At stage II, the utterance in (23a) is reanalysed on the syntagmatic level. It is now understood as consisting of only one verb, the verb *visit*, marked by a future marker *be going to*. This analysis is an instance of metonymy. At stage II, *be going to* can only cooccur with dynamic verbs. This is no longer the case at stage III, when we also find stative verbs such as *like* in (23b). The paradigmatic expansion from dynamic to stative verbs at stage III is an instance of metaphor.
5. On the theoretical status of grammaticalization—unidirectionality and the universal character of grammaticalization clines

Newmeyer (1998) presents the following deconstruction of grammaticalization:

We have examined the associated set of diachronic changes that fall under the rubric of ‘grammaticalization’ and have found that no new theoretical mechanisms, nor mechanisms unique to grammaticalization itself, are needed to explain them. Far from calling for a ‘new theoretical paradigm’, grammaticalization appears to be no more than a cover term for a conjunction of familiar developments from different spheres of language, none of which require or entail any of the others. (Newmeyer 1998: 295)

According to Newmeyer (1998), grammaticalization consists of three independent processes:

- morphosyntactic reanalysis
- semantic change
- phonetic reduction

He supports the idea that grammaticalization is always associated with reanalysis. Thus, there is no grammaticalization without reanalysis (pace Haspelmath 1998, cf. § 4.4). However, this does not imply that reanalysis has always to do with grammaticalization. There are instances of reanalysis which have nothing to do with grammaticalization.

In addition, none of the above three processes depend on each other nor is there any diachronic order in which they take place.

On unidirectionality and degrammaticalization: Newmeyer (1998) argues that unidirectionality is an epiphenomenon and that there are many examples against it:

(i) Grammaticalization clines are not the results of a coherent and independent phenomenon of grammaticalization. They are rather an epiphenomenon of principles. The cline in (9), repeated here as (24), is the result of the more general least-effort principle which leads speakers to shorten the linguistic expressions that are most commonly used (cf. Zipf 1935)³:

(24) Givón (1979: 209):
   discourse > syntax > morphology > morphophonemics > zero

(ii) Given the epiphenomenal character of grammaticalization clines, Newmeyer (1998: 263-278) claims that there are many counterexamples. Processes that revert the direction of grammaticalization clines are called “degrammaticalization”.

Comments on Newmeyer (1998):

- Researchers dealing with grammaticalization do not understand their object of analysis in terms of a phenomenon that needs a unique and independent explanation. They start out from the observation that lexical items can develop into grammatical markers (etc.) and they try to explain this.

---

³ On Zipf’s law: “High frequency is the cause of small magnitude … A longer word may be truncated if it enjoys a relatively high frequency [either] throughout the entire speech community [or] if its use is frequent within any special group” (Zipf 1935: 31-32, quoted from Newmeyer 1998: 255).
Grammaticalization does not seem to be a homogeneous phenomenon anyway. It rather seems to be subject to variation across geographic areas and/or language (sub)families, and this needs a lot more research (cf. handouts 3 and 4).

The number of processes of change that operate against grammaticalization clines is very small.

Newmeyer’s (1998) polemic statement had the healthy effect of provoking more detailed analyses, which show that the situation is much less dramatic than it was claimed by Newmeyer (1998). More fine-grained definitions of degrammaticalization (Norde 2009) reveal that the number of counterexamples is rather small (Traugott & Dasher 2010). Even Newmeyer (2001) had to admit that unidirectionality “is not all that false”.

6. Grammaticalization and constructions

6.1. The role of constructions in grammaticalization

In more traditional approaches (Bybee et al. 1994, Hopper & Traugott 2003), constructions and the positions within them are crucial for the direction into which a given morpheme can be grammaticalized. Thus, the Chinese verb zài ‘be at, live’ as illustrated in (25) develops into a tense-aspect marker (progressive) if it occurs in the preverbal position of an argument construction (26). If it occurs in an adverbial position, it develops into a preposition/coverb (27):

(25) zài in the function of a verb:
   a. 他 在 图书馆。
      \( Tá \ zài \ túshūguān. \)
      s/he be.at library
      ‘S/he is in the library.’

   b. 他妈妈在的时候
      \( Tá \ māmā zài \ de \ shíhou \)
      s/he mother be.alive ATTR time/when
      ‘When her/his mother was [still] alive, ...’

(26) zài as a progressive marker (Li & Thompson 1981:221):
    他在穿皮鞋。
    \( Tá \ zài \ chuān \ píxié. \)
    s/he PROGR put.on leather.shoe
    ‘S/he is putting on his/her leather shoes.’

(27) zài in the function of a preposition/coverb:
    他在医院死了。
    \( Tá \ zài \ yīyuàn \ sǐ-le. \)
    s/he PREP:be.at hospital die-TAM
    ‘S/he died at the hospital.’

In this traditional approach, constructions are seen as coercion environments within which processes of grammaticalization (reanalysis, analogy) take place. They coerce lexical items or less grammatical items into more grammatical items.
6.2. Construction Grammar

What is a construction:

ALL LEVELS OF GRAMMATICAL ANALYSIS INVOLVE CONSTRUCTIONS: LEARNED PAIRINGS OF FORM WITH SEMANTIC OR DISCOURSE FUNCTION, including morphemes or words, idioms, partially lexically filled and fully general phrasal patterns. ... Any linguistic pattern is recognized as a construction as long as some aspect of its form or function is not strictly predictable from its component parts or from other constructions recognized to exist. In addition, patterns are stored as constructions even if they are fully predictable as long as they occur with sufficient frequency. (Goldberg 2006: 5)

If constructions have their own meaning, they can contribute additional information. Let’s look at the following example with the intransitive verb laugh:

(28) a. John laughed.
b. *John laughed the poor guy.
c. *John laughed out of the room.
d. John laughed the poor guy out of the room.

How should one explain (28d). Do we need a special lexical entry for laugh as a ditransitive verb? — Goldberg’s (1995, 2006) solution in terms of Construction Grammar looks as follows:

The intransitive verb laugh contributes its one participant role. The rest is contributed by a construction whose meaning is ‘X CAUSES Y to MOVE Z’. The argument of the intransitive verb is compatible with the cause-role of this construction. The other two roles are contributed by the construction which also contributes the overall meaning of (28d) ‘John causes the poor guy to move’.

(28d’)

<table>
<thead>
<tr>
<th>Sem</th>
<th>CAUSE-MOVE</th>
<th>&lt; cause</th>
<th>goal</th>
<th>theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>R:means</td>
<td>LAUGH</td>
<td>&lt; laugh</td>
<td>goal</td>
<td>theme</td>
</tr>
<tr>
<td>Syn</td>
<td>V</td>
<td>SUBJ</td>
<td>OBL</td>
<td>OBJ</td>
</tr>
</tbody>
</table>

For Construction Grammar, constructions are the fundamental units of linguistic knowledge. Individual constructions are related to each other in a complex network of constructions.

6.3. Grammaticalization in terms of Construction Grammar

If the basic units of grammar are constructions which are part of a large network, this raises new questions on the nature of grammaticalization. I would like to briefly discuss the following two questions (inspired from Gisborne & Patten (2011):

(i) New constructions emerge and existing constructions change. What does grammaticalization mean in this context? Can these processes be called grammaticalization at all?
(ii) What is the relationship between changes affecting the larger construction and changes to its components?
To answer question (i), let’s start with the following well-known example of the way-construction:

(29) Israel (1996: 218):
   a. **Rasselas dug his way out of the Happy Valey.**
   b. **The wounded soldiers limped their way across the field.**

If one looks at the historical development of this construction as it can be derived from text corpora, one can see that the construction started out from two threads (from about 1650):

- **Manner-thread (29a):** *way* occurs in the direct-object position of verbs of motion. At the beginning, it occurred with highly frequent verbs like *go, ride, run, persue* (*he went his way*). From these general verbs of movement, its use expanded to manner of motion verbs (*sweep, creep, wheel*) until it ended up finally with verbs that do not express movement (*crash, sing*) by analogy.

- **The means-thread (29b):** *way* occurs in the direct-object position of verbs of path creation: This construction started with verbs like *pave or smooth* from the lexicon of road building. Later, the construction expanded to verbs implying the use of force (*cut, elbow, struggle*) until it generally expressed the idea of ‘indirect ways of reaching a goal’ (*fight one’s way*) up to ‘increasingly abstract schemas’ (*He whistled his way to the main front-door*) (Israel 1996). This expansion as again motivated by analogy.

In its modern use, the way-construction has reached a rather abstract stage in which it “provides a way to blend the conceptual content of an activity verb with the basic idea of motion along a path” (Israel 1996).

The development of the way-construction shows many parallels with grammaticalization. I list four of them:

- The development is directional, the construction moves toward increasing abstraction.
- The change takes place gradually.
- The expansion to an increasing number of verbs is based on analogy.
- There is reanalysis in the sense that verbs occurring with this construction acquire a new argument structure with the noun *way* in their object position.

The change from more concrete to more abstract meaning is reflected by two different types of constructions that represent two poles in a continuum between specificity and schematicity:

- **Specific/substantive constructions** are fully specified phonologically. Lexical items prototypically belong to this type. Thus, the lexical item *tree* is specified phonologically by *[tri:]*.
- Schematic constructions are defined in terms of more abstract categories as for instance in (26d’) by more abstract semantic (*cause, theme, ...*) and syntactic categories (SUBJ, OBJ, ...). Thus, schematic constructions are much more productive than specific constructions.
From this perspective, **grammaticalization** is characterized by the development from more specific to more schematic constructions. In other words, grammaticalization is directed towards **increasing schematicity**.

The two types of constructions include the distinction between **lexicalization and grammaticalization**. The pole of specific constructions stands for lexicalization, while the pole of schematic construction represents grammaticalization.

To answer question (ii), let’s look at Trousdale’s (2010) example of the development of modal verbs (*can, may, might, should, ought to, ...*). We will do so in three stages that represent three types of constructions. The process as a whole is called **constructionalization**:  

(i) From the perspective of the individual lexical item, each verb follows its own grammaticalization cline (lexical verb > modal verb).

(ii) But this is not the whole story because we can see that these individual instances converge into a group of verbs that take on similar morphosyntactic properties and express different categories of the same semantic domain (modality).

Stage (i) is characterized by the creation of **micro-constructions**.

At stage (ii), the individual constructions form a ‘**meso-construction**’.

(iii) As new micro-constructions arise, they ultimately lead to yet a higher order construction type which is called **macro-construction**.

The question is whether all processes of grammaticalization equally combine the development of individual markers with a simultaneous process of constructionalization. While this is what is believed by many specialists of grammaticalization, I will argue against a necessary correlation between individual processes of grammaticalization and the development of higher-level constructions (handout 3).
References


