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The change of behavioral and coding properties in constructional grammaticalization

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The Behavior-before-Coding Principle

When a grammatical construction grammaticalizes, as a rule the behavioral properties change before the coding properties of the construction.

1. The acquisition of subjecthood (COLE et al. 1980)

Cole et al. 1980:719: “behavioral subject properties are acquired historically prior to subject coding properties”

behavioral and coding properties of subjects according to KEENAN (1976):

behavioral

- triggers reflexivization
- undergoes/triggers equi-deletion
- undergoes subject raising
- (initial position)

coding

- shows nominative case-marking
- controls verb agreement

(dative) experiencer arguments in Germanic:

Gothic (exp. has neither coding nor behavioral properties)

- (1) *inup-pis usdaudjam ... waila Ø galeikan imma*
 because.of-this we.strive [well Ø_{NOM} please him]
 ‘Because of this we strive to please him well.’

Icelandic (exp. has only behavioral properties)

- (2) a. *Honum líkar þeir bílar.*
 him.DAT like.3PL those cars.NOM
 ‘Those cars please him./He likes those cars.’
 b. *Ég tel honum líka þeir bílar.*
 I believe him.DAT like.INF those cars.NOM
 ‘I believe him to like those cars.’

English (exp. has both behavioral and coding properties)

- (3) a. *I believe him to like those cars.* b. *He likes those cars.*
 (*Him like those cars.)

	behavioral	coding
Gothic	old	old
Icelandic	new	old
English	new	new

2. Behavioral and coding properties: generalizing the concepts

coding properties of constructions =
properties that are reflected in (inflectional) morphological distinctions,
e.g. case, agreement morphology

behavioral properties of constructions =
syntactic properties without morphological reflexes

3. Two simple examples

3.1. From 'have'-construction to periphrastic perfect

Latin *habeo librum scriptum* > French *j'ai écrit le livre*

- behavioral property: word order (directly after 'have'/directly after 'write')
- coding property: object agreement/lack of object agreement

- (i) Old French: (a) 'have' + Object + Participle.AGR
(ii) (b) 'have' + Participle.AGR + Object
(iii) Modern French 'have' + Participle + Object

- (4) (i) *Li reis Marsilies ad la culur muee.* (Rol. 441)
'King Marsilie has changed his color.'
(ii) *Li emperere ad prise sa herberge.* (Rol. 2488)
'The emperor has taken his camp.'
(iii) *J'ai écrit un livre.* 'I have written a book.'

	<i>behavioral</i>	<i>coding</i>
Latin, OFrench (a)	old	old
OFrench (b)	new	old
Modern French	new	new

3.2. From adjective + *mente* 'mind' to adjectival adverb

Latin *mente placida* 'with a placid mind' > Italian *placidamente*

- behavioral properties: fixed word order, not elliptable
- coding property: feminine form of the adjective

- (i) Spanish *clara y evidente-mente* 'clearly and evidently'
(ii) Italian **chiara e evidentemente*
(iii) French: incipient loss of feminine form in *évidemment*, etc.
(**évidemment*)

	<i>behavioral</i>	<i>coding</i>
Latin, Spanish	old	old
Italian	new	old
French (incipient)	new	new

4. The acquisition of verbhood: From verb-noun to verb in periphrastic constructions

Welsh verb-noun periphrases: Is the verb-noun a “verb” (BORSLEY 1993) or a “noun” (WILLIS 1988)?

- (5) *Mae Rhiannon yn canu 'r anthem.*
is Rhiannon in singing the anthem
'Rhiannon is singing the anthem.'

• **Coding properties:** verb-noun patterns like a noun:

notional object is coded like a possessor:

- (6) a. *Ceisiodd Emrys ei weld.*
tried Emrys 3SG.M seeing
'Emrys tried to see him.'
- b. *Gwelodd Emrys ei wraig.*
saw Emrys 3SG.M wife
'Emrys saw his wife.'

verb-noun can be preceded by different prepositions:

- (7) a. *Mae hi wedi mynd adref.*
is she after going home
'She has gone home.'
- b. *Roedd ef ar fynd.*
was he on go
'He was about to go.'

verb-noun undergoes the same mutation processes, e.g. after prepositions:

- (8) a. *ar fynd* (< mynd)
on going 'about to go'
- b. *ar fynydd* (< mynydd)
on mountain 'on a mountain'

• **Behavioral properties:** verb-noun patterns like a verb:

cooccurs with adverb, not with adjective:

- (9) *Mae Rhiannon yn canu yn hyfryd.* (*yn canu hyfryd)
is Rhiannon in singing ADV pleasant
'Rhiannon is singing pleasantly.'

different coreference possibilities:

- (10) a. *Mae ef yn ei daro.*
is he in 3SG.M hitting
'He_i is hitting him_{j/i}.'
- b. *Mae ef yn ei dy.*
is he in 3SG.M house
'He_i is in his_{i/j} house.'

verb-nouns cannot be topicalized like NPs:

(11)a. Mae Gwyn yn darllen llyfr Emrys.
 is Gwyn in reading book Emrys
 ‘Gwyn is reading Emrys’s book.’

b. Llyfr Emrys y mae Gwyn yn ei ddarllen.
 book Emrys PRT is Gwynin 3SG.M reading
 ‘Emrys’s book Gwyn is reading.’

(12)a. Mae Gwyn yn ceisio canu ‘r anthem.
 is Gwyn in trying singing the anthem
 ‘Gwyn is trying to sing the anthem.’

b. *Canu ‘r anthem y mae Gwyn yn ei geisio.
 singing the anthem PRT is Gwyn in 3SG.M trying
 ‘To sing the anthem Gwyn is trying.’

German verbal noun in *-ung*:

all behavioral and coding properties are nominal

(13) *Der Architekt ist bei der Veränderung der Pläne. (*die Pläne)*
 ‘The architect is (lit.) at the changing of the plans.’

English *-ing*-progressive:

all behavioral and coding properties are verbal

(14) *The architect is changing the plans. (*changing of the plans)*

	behavioral	coding
German <i>-ung</i>	old	old
Welsh	new	old
English <i>-ing</i>	new	new

5. From preposition to possessive verb

“HAVE-drift” (Stassen 1999+): the tendency for intransitive possessive constructions to become transitivized:

Maltese: preposition *għand* [and] ‘at, with’ becomes a verb – from 15a to 15b. (Comrie 1982)

(15) a. *Maria, għand-ha baqra.* [the only possibility in Cl. Arabic!]
 Maria at-3SG.F cow
 ‘Maria, there is a cow at her place.’

b. *Maria għand-ha baqra.*
 Maria have-3SG.SUBJ cow
 ‘Maria has a cow.’

• **behavioral properties:**

(a) word order obligatorily in front of *għand* -(cf. 16)

(b) possessor argument can control reflexivization (cf. 17)

(16) *G *ʕand* Maria baqra.
 at Maria cow
 ‘Maria has a cow.’

(17) Lisa *gʕandha* lilha nnifisha. (cf. Haspelmath & Caruana 1999)
 Lisa have.3SG.SUBJ to.her her.self
 ‘Lisa has herself.’

• **coding properties:**

- (a) negation is expressed by the circumfix *m(a)- ... -x*, as with verbs
- (b) otherwise, *gʕand-* inflects completely like the preposition!

Tunisian Arabic:

(Maik Gibson, LINGUIST List, Vol. 110-680)

incipient “normal verbal agreement” with preposed possessor:

present tense	<i>ʕand-i X</i>	‘I have X’
past tense	<i>kaan ʕand-i X</i>	‘I had X’ (agreement with “X”)
innovative:	<i>kunt ʕand-i X</i>	‘I had X’ (agreement with “I”)

	behavioral	coding
Arabic <i>ʕand</i>	old	old
Maltese	new	old
Tunisian	new	new (inc.)

6. The change from biclausal cleft to monoclausal focusing construction

English pseudo-cleft sentences:

• some **behavioral properties** point to a monoclausal analysis!
 (e.g. Meinunger 1998)

– Binding relations are not as in biclausal structures:

- (18) a. *What Pedro_i saw was a PICTURE of himself_i in the mirror.*
 b. *What Maria_i is is IMPORTANT to herself_i.*
 c. **What she_i claimed was that Maria_i is INNOCENT.*

– Tense of copula and tense of full verb must be identical:

(19) *What Maria read was (/ *is) a book about GIBBONS.*

Rendille (Cushitic) focusing marker *-é* (Heine & Reh 1984, Oomen 1978)

- (20) a. *inam-é y-imi*
 boy-FOC he-came
 ‘THE BOY came.’
- b. *inan-kí bur-é intan-é kajir-a*
 boy-REL big-COP here be-IMPF
 ‘The big boy is HERE.’

This was grammaticalized from a cleft construction:

... NP-é ... < NP copula (*ahi* > *é*) relative.clause

- most coding properties point to a normal monoclausal structure
- -é shows no verbal properties
- no relative clause marker
- (– however, negation is still expressed by *í-*, which is otherwise confined to relative clauses)

	<i>behavioral</i>	<i>coding</i>
?	old	old
English wh-cleft	new	old
Rendille -é	new	new

7. Further issues

7.1. Is the Behavior-before-Coding Principle new?

cf. Heine et al. 1991:213 “conceptual/semantic shift precedes morphosyntactic and phonological shift”

7.2. Are all these examples instances of grammaticalization?

cf. Haspelmath 1998 for dative experiencers > subjects
(note that they are all unidirectional and gradual!)

7.3. Why should coding properties change only after behavioral properties?

constructions involving morphology are generally tighter and hence less prone to change than looser constructions; a change in a tighter construction thus implies a change in a looser construction

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