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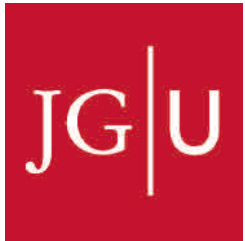
AALBORG UNIVERSITY

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Plenary Lectures

Presentations

How do languages copy morphology?
On structural restrictions on morphological borrowing

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Outline

1. Morphological borrowing
2. Two views of inflectional borrowing
3. When may an affix be considered borrowed? Isolability vs. productivity
4. Category deflection in affix borrowing
5. Resistance to foreign derivational prefixes
6. 'Impermeable' morphological structure
7. Multiply anchored recipient-language affixes
8. Final remarks and summary

Aims and topics

- Sketch some background in contact morphology
- Touch on a few partly interconnected, partly separate topics illustrating the kinds of issues that may be raised in contact morphology
- Question notion of 'productivity' as sole criterion for defining borrowed affixes
- Illustrate how borrowing may efface the inflectional character of affixes

- Comment on borrowed prefix resistance in certain suffixing and prefixing-suffixing languages
- Modify proposition that everything can be transferred:

    recipient-language structure may totally block transfer

- Point to need for fine-grained, in-depth contrastive analysis as a basis for investigating borrowing principles
- Bring some new linguistic material into the discussion

1.

Morphological borrowing

Morphological borrowing & contact morphology have quite recently attracted a good deal of attention in linguistic research

- Morphological borrowing:

  the copying of morphologically bound forms from a donor language (DL) into a recipient language (RL)

- Contact morphology:

  the study of morphological borrowing

Two major reasons for increased attention to phenomenon of morphological borrowing:

(a) importance of morphology to
    (i) linguistic typology generally and
    (ii) typological language classification

(b) key role of morphology
    (i) in establishing genealogical links between languages and
    (ii) for advancing genealogical language classification

(a) In typology:
the morphological behavior of languages constitutes the basis for grouping languages into morphological types
(e.g., the traditional classification into isolating, agglutinating, fusional & polysynthetic languages)

(b) In historical linguistics:
morphological correspondences constitute major evidence of
genealogical relatedness

But — in relation to historical linguistics —
if morphology, esp. inflectional morphology,
can be borrowed,

> the role of morphology in genealogical language classification
> will be correspondingly weakened

Hence, important to know
(a)   to what extent
          morphology can be borrowed
(b)   precisely which morphological elements
          are typically borrowed

How is morphology mediated?

Indirect morphological borrowing

vs.

Direct morphological borrowing

Indirect borrowing of affixes

(1) (a) Bilinguals borrow affix as part of
morphologically composite lexemes

   (b) Also, borrow simpler related
forms without the affix

(2)   RL monolinguals or bilinguals
extract affix in RL

(3)   Affix subsequently
attached to native RL stems
(the affix has become 'productive')

Direct borrowing of affixes

Bilinguals

(1)   isolate affix in DL already

(2)   carry it over to RL directly without depending on whole borrowed words (pairs of affixed and non-affixed forms)

Direct rather than indirect borrowing
may play a greater role
in largely bilingual speech-communities

Structural scope of morphological borrowing

- Pattern borrowing (in morphology)

  Selective borrowing of morpheme meaning/function only

- Morpheme borrowing

  Borrowing of both meaning/function and form

Contact-induced morphological change

- Loss
- Addition
- Replacement

Prevalence of replacement

"in morphology … replacement is more common than simple losses or additions"

(Gardani 2008, 22)

Overall factors affecting morphological borrowing

- Social (incl. sociolinguistic) conditions
- Cognitive (incl. psycholinguistic) conditions
- Structural conditions

The structural conditions carry some special interest in contact morphology insofar as morphological borrowing takes place in a strictly structural linguistic context

Structural borrowing scale

Lexical formatives (nouns > verbs) >

Derivation >

Inherent inflection >

Contextual inflection

Recent work on contact morphology: Sample references

2008   Francesco Gardani, *Borrowing of inflectional morphemes in language contact*. Frankfurt a/M.

2012   Lars Johanson & Martine Robbeets (eds.), *Copies versus cognates in bound morphology*. Leiden.

2012   Martine Vanhove, Thomas Stolz, Aina Urdze & Hitomi Otsuka (eds.) *Morphologies in contact*. Berlin.

2013   Frank Seifart, *AfBo: A world-wide survey of affix borrowing*. Leipzig. http://afbo.info

2015   Francesco Gardani, Peter Arkadiev & Nino Amiridze (eds.), *Borrowed morphology*. Berlin.

2.
Two views of inflectional borrowing

Two views of inflectional borrowing

I. No-Dispreference View

　　e.g., Sarah G. Thomason

("When is the diffusion of inflectional morphology not dispreferred?" 2015)

II. Dispreference View

　　e.g., Yaron Matras

("Why is the borrowing of inflectional morphology dispreferred?" 2015)

No-Dispreference View

"inflectional morphology is [not] transferred as frequently as other structural features and lexicon"

"[but] the diffusion of inflectional features is considerably more common than one might guess from the general language-contact literature"

(Thomason 2015, 27)

"there is no global dispreference for morphological diffusion"

"In certain types of contact situations, even inflectional morphology passes readily from one language to another"

(Thomason 2015, 27)

Across-the-board transferability hypothesis

"as far as the strictly linguistic possibilities go, any linguistic feature can be transferred from any language to any other language"

(Thomason & Kaufman 1988, 14)

"anything can be transferred, also between discrete systems"

(Gardani 2008, 18)

Dispreference View

"the borrowing of inflectional morphology is ... dispreferred"

"Straightforward cases of borrowed inflectional morphemes are hard to find ..."

"Borrowed inflectional morphemes are usually limited ... to borrowed vocabulary"

[They] "do not diffuse to inherited lexemes"

(Yaron Matras 2015, 48 first quote, 75)

Under the dispreference view:

- The borrowing of inflections is for the most part accidental

- It may come about in part because a given DL inflectional affix happens to resemble an inherited RL inflection

- Or it may involve a small subset of DL lexical items together with their full DL inflections

(cf. following figure)

Borrowing of DL forms + DL inflections

RL system

A subset of DL forms with DL inflections

Under the dispreference view:

- Inflectional borrowing is usually a by-product of other borrowing

- There is little functional or communicative reason to borrow inflectional morphemes

- Hence, inflectional morphemes are rarely borrowed

(i) Purpose of borrowing derivational morphology:

> "to replicate procedures of meaning derivation from the source language in the recipient language"

(ii) Purpose of borrowing inflectional morphology:

> "to re-draw social boundaries"

(Matras 2015, 76)

Inflectional morphology is said to serve
as a marker of language choice:

"The motivation to 'borrow' inflectional
morphology
is inherently linked to
re-negotiating language boundaries,
which in turn is part of
a process of re-negotiating
identity."   (Matras 2015, 76)

3.

When may an affix be considered borrowed?

Isolability vs. productivity

When is an affix borrowed?

Usual definition:

An affix is borrowed when it productively attaches to native RL stems

Example: *-able* in English

as in *lik(e)able, lov(e)able, kissable, huggable, doable, readable*

Problems:

- How many instances demonstrating productivity are needed?

    One? Two? Several?

- How well established do the instances have to be in the speech community?

    Used occasionally in special speaker groups?

    Generally used and generally accepted?

- Are there other considerations than productivity that might indicate affixhood?

Test case:
Is E-derived *-ing* a borrowed suffix in Swedish?

Swedish has incorporated E loanwords with *-ing*

Sw also possesses a corresponding suffix *-(n)ing*

The Swedish allomorph *-ing* appears after a stem

(a)   in *-n, -r*   *för-sen-ing, för-klar-ing*

                            (but *för-hal-ning*)

(b) in C + *l, n*, or *r* *för-ädl-ing, för-ändr-ing*

(c) + suffix *-er-*   *serv-er-ing*

The allomorph *-ning* appears elsewhere

Examples of word pairs in *-ing* and *-ning*

-ing	*-(n)ing*	*Verb*	
doping	dopning	dopa	'doping'
[dúːpiŋ]	[dùːpniŋ]		
jogging	joggning	jogga	'jogging'
[jɔ́gːiŋ]	[jɔ̀g·niŋ]		
mobbing	mobbning	mobba	'bullying'
[mɔ́bːiŋ]	[mɔ̀b·niŋ], [mɔ́bːniŋ]		
ranking	rankning	ranka	'ranking'
[ráŋ·kiŋ]	[ràŋ·kniŋ]		

-ing/-ning pairs:
Illustrative usage-frequencies

-ing	*-ning*
doping	dop**n**ing
3 127	5 699
mobbing	mobb**n**ing
2 842	10 452

(Korp, Gothenburg University, 122 out of 198 corpora chosen, 8/10/2015)

Type of case where E suffix *-ing* and Sw allomorph *-ing* overlap

E *-ing*   Sw *-ing*   *-ning*

?   ?

sampl**ing** 'sampling'

Indeterminate origin of suffix morph?

English-Swedish *-ing* overlap

Does the Sw word *sampling* contain:

(a) the English suffix *-ing*

    or

(b) the allomorph *-ing* of the inherited Sw suffix *-(n)ing*?

English-Swedish *-ing* overlap

Tone assignment test?

'Accent 1'   'Accent 2'

(i.e., non-tonal)   (i.e., tonal)

[sám·pliŋ]   [sàm·pliŋ]

Less adapted   More adapted

But caution: *mobbning* also sometimes
                        rendered as [mɔ́b·niŋ]

Morphemic analysis

mobb		'mob'
mobb	a	'bully' (vb.)
mobb	ar e	'bully' (noun)
mobb	ning	'bullying'
mobb	ing	'bullying'

Speakers, who use *mobbing*, still use *mobba, mobbare*

Hence, morph *-ing* fully identifiable and isolable

E *-ing* not productive in Swedish

The non-tonal morph *-ing* is not productive in the native Swedish lexicon.

Can the morph *-ing*

despite its lack of productivity

be regarded as a borrowed suffix in Swedish?

Cf. ending *-else* in Swedish

föd-else	föd	'birth'	'give birth to'
gräm-else	gräm	'mortification'	'mortify'
rör-else	rör	'movement'	'move'
skriv-else	skriv	'letter'	'write'
styr-else	styr	'board'	'steer'
var-else	var	'being'	'be'

etc.

-else in the history of Swedish

- Swedish ending *-else* — ultimate origin in Low German

- *-else* corresponds to inherited Sw endings *-sel*, *-sle* (*styrsel* 'firmness')

- Ending *-else* added to some Swedish stems: *födelse*, *styggelse*, etc.

- But the contact-induced *-else* not productive in Modern Swedish

- Is *-else* therefore no longer a suffix in Swedish?

Conclusion

- The widespread criterion

  that affixes are to be considered borrowed
  when natively productive

    does not fully correspond to
    native speaker perception and production

- For instance, Swedish speakers do treat and apparently perceive E *-ing* as a suffix (isolability)

- Yet, *-ing* is not productive
- In this respect, *-ing* is similar to the borrowed termination *-else*,

  also not productive,
  but still regarded as suffix
- Also, the sequence *-ing* should then count as a suffix among all the other borrowed affixes in Swedish

- More generally,

  need in contact linguistics for
  a more nuanced definition of term
  'borrowed',

    taking into account more factors than just
    productivity

- The correct identification of affixes

    a prerequisite for the investigation of
    structural constraints on morphological
    borrowing

4.

Category deflection in affix borrowing

- Most commonly a borrowed item retains the category, to which it belongs in the DL

  Lexical   remain   lexical

  Derivational remain   derivational

  Inflectional   remain   inflectional

- But sometimes items partly shift category

  (category deflection)

- The typical directions of this shift are of theoretical interest

Example where the DL category is essentially retained

Latin sing./plur. endings sometimes used for Latin nouns in Swedish

-us	**-i**		
stimul-us	stimul-i	'stimulus'	'stimuli'
-um	**-a**		
centr-um	centr-a	'center'	'centers'
-en	-in-**a**		
examen	examin-a	'degree'	'degrees'

DL category essentially retained in Sw

- These suffixes are limited to a small subset of borrowed Latin lexemes
- The suffixes have not become productive in the native vocabulary
- Most such forms seem nowadays to be on their way out of the language
- But these suffixes essentially retain their inflectional character

Inflection ➜ derivation

However, sometimes, what is primarily
a DL inflectional affix

is transformed into
an RL derivational affix in the RL

Example Swedish suffix *-is*

Origin: Latin nouns & adjectives with nom./gen. sing. in *-is*

fīnis   'end'

ignis   'fire'

nāvis   'ship'

turris   'tower'

gravis   'heavy'

rudis   'raw'

(e.g., Latin *rudis* > Sw. *rudis* 'totally ignorant')

Examples illustrating suffix *-is* in Swedish

	X-is				*Base*	
N	**alkis**	'boozer'	<	N	**alkoholist**	'alcoholic'
	bästis	'best pal'	<	NP	**bästa vän**	'best friend'
	kompis	'pal'	<	N	**kompanjon**	'partner'
	dagis	'daycare center'	<	N	**daghem**	'daycare center'
	godis	'candy'	<	N	**godsaker**	'candy'
	snabbis	'quickie'	<	NP	**snabb** ?**grej**	'quick thing'
A	**dekis**	'on skid row'	<	A	**dekadent**	'decadent'
	poppis	'trendy'	<	A	**populär**	'popular'
	sotis	'jealous'	<	N	**sot**	'soot'
I	**grattis!**	'congrats'	<	?V	**gratulerar**	'I congratulate'

Special case of *-is* suffix: *smajlis, bebis*

smajl-is   'smiley, emoticon'

smajl-is-en   'the smiley'

smajl-is-ar   'smileys

smajl-is-ar-n-a   'the smileys'

Presumably, influence also from the English plural ending *-(e)s*, i.e., an inflectional ending

Conclusion

- "inflectional morphology is more likely to be borrowed if it is re-interpreted as derivational"   (Matras 2015, 61)

- Inflection-to-derivation deflection constitutes an indication that inflection is lower on the borrowing scale than derivation

5.

Resistance to foreign derivational prefixes

Suffixing preference:

languages tend to prefer suffixes over prefixes

- Contrastive prediction:

  languages lacking prefixes should resist the borrowing of prefixes

- Slight puzzle:

  even languages with inherited prefixes may exhibit a reluctance

  to make borrowed prefixes productive

For illustration:

examples from Turkish, Basque, Samoan (and Māori)

    that involve or correspond to

    the derivational Greek/English prefix *anti-*

Affixation profiles of lgs. selected

	Prefixes		Suffixes	
Lg.	Deriv.	Infl.	Deriv.	Infl.
Turkish	—	—	+	+
Basque*	—	+	+	+
Samoan**	+	—	+	+

* Old infl. prefixes in Bq. + deriv. *e- in non-finite verb forms

** Relic & non-relic derivational prefixes in Samoan

Element *anti*- in Turkish

antipatik	'antipathetic'
antidemokratik	'antidemocratic'
antibiyotik	'antibiotic'
antisosyal	'antisocial'

etc.

Barely any tendency to generalize *anti*- to native words

Derivational prefixes in Basque:
Pattern borrowing (old phenomenon)

ez-   *eznormal*   'abnormal' (*ez* 'no(t)')

        ezgarai   'inconvenient time'
                       (*garai* 'time')

berr-   *berresan*   'repeat' (*esan* 'say')

        berrasi   'resume' (*hasi* 'begin')
                       (cf. *bihur* 'twisted')

Some imported derivational prefixes in Basque
(limited productivity)

des-   *desegin* 'undo' (*egin* 'do')

erre-   *erreberritu* 'renovate' (*berri* 'new')

kontra- *kontraeraso* 'counterattack'
           (*eraso* 'attack')

super-   *supergizon* 'superman' (*gizon* 'man')

Sequence *anti-* in Basque loans

antibiotiko	'antibiotic'
antiinperialismo	'anti-imperialism'
antikatoliko	'anti-Catholic' (adj.)
antikristau	'anti-Christian' (adj.)
antipapa	'antipope'
antisemitismo	'antisemitism'
antiseptiko	'antiseptic' (adj.) (*septiko* 'septic')
antizikloi	'anticyclone' (*zikloi* 'cyclone')
etc.	

New internal Bq. coinages with *anti-*
(essentially learned formations)

antigorputz   'antibody'

                 gorputz 'body'

anti-izoztaile   'anti-freeze' (n.)

                 izoztu 'freeze', *-tzaile* '-er'

antisorgailu   'contraceptive'

                 (also *antikonzeptibo*)

                 sortu 'conceive', *-gailu* '-er'

                 (*gailu* 'instrument, device')

A Basque word-forming dilemma

- "Basque has no word-forming prefixes of its own"

- "A major problem [is] finding Basque equivalents of the common European prefixes like *pre-*, *contra-*, *trans-*, *syn-*, *anti-*, *co-*, *super-*, *inter-* and *sub-*."

- "it is far from obvious how these useful morphs should be rendered in Basque"

(Trask 1997, 266)

Non-relic prefixes in Samoan
(Mosel & Hovdhaugen 1992, 173)

(ʻ)**ā-**	future	(**mā-**)	de-ergative
ana-	past	**ta-**	plurality of patients
au-	lacking something	**ta-**	verbal derivation
au-	continuous or repeated activity	(**tā-**)	verbal derivation
faʼa-	causative	**taʼi-**	distributive
feʼ	plurality of events	**tau-**	typically related to
ma-	able to	**toʼa-**	human
ma-	de-ergative		

Samoan *fa'a-* (extremely productive)
(Examples from Milner, *Samoan dictionary*, 1966)

fa'amoe	'lull'	moe	'sleep'
fa'aalofa	'regret'	alofa	'love'
fa'alua	'twice'	lua	'two'
fa'afāfine	'gay male'	fāfine	'woman'
fa'afanua	'map'	fanua	'land'
fa'a-Sāmoa	'Samoan language or custom'		

and so on

Samoan *ʼaneti-* < E < Gr *anti-*
(Examples from Cain 1986, 14, Schütz 2007, 144)

ʼanetikerisano   < anti-Christian

ʼanetikeriso   < Antichrist

ʼanetimāmona   < anti-Mormon

ʼanetipope   **<** antipope

At least up to recently, seemingly little or no productivity in the native lexicon

Cf. Samoan prefix *fa'alē*- 'un-' (lit. 'like not')

Reason for lack of productivity of *'aneti*- cannot be the length of the prefix in itself.

Witness (*lē* particle 'not', 'do ... not'):

fa'alēlelei 'unsatisfactory' lelei '(be) good'

fa'alēmīgao 'unscrupulous' mīgao '(be) respectful'

fa'alētonu 'uncertain' tonu '(be) exact'

etc.

Alternatives to *anti-* in Polynesian lgs.

Samoan

vai manu'a	'antiseptic' (*vai* 'water'; *manu'a* 'wound')
vaimū	'antiseptic' (*mū* 'burn; inflamed')

Tongan

faito'o tāmate	'antiseptic' (faito'o 'medicine'; tāmate'i 'to kill')

Māori

hau takawaho   'anticyclone'

(*hau* 'air'; *taka* 'lose balance';

waho 'the outside')

kupu tauaro   'antithesis; antonym'

(*kupu*   'word; statement'

tauaro 'opposite')

patu mōrūruru   'antiperspirant'

(*patu*   'beating; weapon'

mōrūruru   'odor (of sweat)')

Productivity of formations with *anti-*

Language	*Productivity*	*Possible reason*
Turkish	None	Lack of prefixes in general
Basque	Weak	Lack of derivational prefixes
Samoan	None(?)	Puzzle: (a) Dispreference for phonotactically 'awkward transliterations'? (b) Word formation patterns?

6.

'Impermeable' morphological structure

Detachable 'yes' — attachable 'no'?

- Across-the-board transferability hypothesis:

  "any linguistic feature can be transferred from a n y   l a n g u a g e   t o   a n y   o t h e r language" (Thomason & Kaufman 1988)

  "anything can be transferred" (Gardani 2008)

- But this appears to view the matter primarily from the perspective of the donor language

- Actually, the structure of the recipient language may effectively block adoption

Structural obstruction to borrowing

- Observing normal morpheme and word templates in the RL, it may be mechanically impossible to insert a given DL morpheme into RL phonotactic structure

- Replacing a given RL affix by means of a DL affix may substantially complicate or alternatively erase essential morphological distinctions in the RL

  Case in point: expression of the notion 'plural' in Basque

Basque plural inflections: cases

Case/pseudo-case	Ordinary plural	Proximate plural
absolutive	lekua**k**	lekuo**k**
ergative	leku**e**k	leku**o**k
genitive	leku**e**n	leku**o**n
dative	leku**e**i	leku**o**i
benefactive	leku**e**ntzat	leku**o**ntzat
comitative	leku**e**kin	leku**o**kin
instrumental	leku**e**z	leku**o**z
locative	leku**e**tan	leku**o**tan
ablative	leku**e**tatik	leku**o**tatik
allative	leku**e**tara	leku**o**tara
directional	leku**e**tarantz	leku**o**tarantz
terminative	leku**e**taraino	leku**o**taraino
relational	leku**e**tako	leku**o**tako

Effects of hypothetical -*s* substitution (1)

If in one paradigm only:

> Total structural clash with pattern of the other paradigm

If in both paradigms:

> Effacement of distinction between the paradigms

Effects of hypothetical *-s* substitution (2)

In either case:

(a) Substantial change of canonical phonotactic forms

CVCVVC > CVCVCC, etc.

(b) Occasionally, creation of illegal consonant clusters

*-sntz-, *-sz

Effects of hypothetical *-s* substitution (3)

- Essentially total structural obstruction to borrowing plural *-s* to express plurality throughout the paradigm

- Remains the theoretical option of inserting *-s* merely in the absolutive case instead of *-k*

- This is likely to require a conversion of *-s* into *-ts*, since Basque tends not to use *-s* in word-final position

Conclusion

- Without radical historical change in Basque (including the abolition of the Bq. case system), it is totally unlikely that Spanish *-s* could wholesale replace the Bq. system of expressing plurality

- Consequently, not everything can be adopted by an RL

- RL structure may constitute an impenetrable blockage to transfer

7.

Multiply anchored recipient-language affixes

Unanchored vs. well-anchored affixes

- Across-the-board transferability hypothesis does not sufficiently take into account the broader morphotactic context of RL features

- Well-anchored affixes and semantically governed affix order patterns may render transfer highly improbable or even rule it out

  Cf. 1st & 2nd person markers in Basque synthetic verbs

Early Basque 1st & 2nd person verb affixes

	Pers.	Pron.	Inflectional verbal morphology		
			Prefix	*Suffix*	
Sing.	*1st*	ni	n-	-da-, -t	
	2nd	hi	h-	-a-, -k	*(masc.)*
				-na-, -n	*(fem.)*
Pl.	*1st*	gu	g-	-gu(-)	
	2nd	zu	z-	-zu(-)	

Early Basque affix system

- Internally tightly knit
  - Exception: 1st & 2nd sing. *suffixes*
- Externally entrenched
  - Considerable agreements between pronoun system and verb affix system
- Systematic, context-dependent -(C)V-/-C alternations in 1st & 2nd singular suffixes
- Strict adherence to morphotactic pattern #absolutive + … + dative + ergative#
- *Position* of person marker with respect to stem uniformly decides on a absolutive, dative, or ergative reading

Modern Spanish

	tomar *'take'*	*comer* *'have dinner'*	*subir* *'get up'*
1stSg	tomo	como	subo
2ndSg	tomas	comes	subes
1stPl	tomamos	comemos	subimos
2ndPl	tomáis	coméis	subís

Conclusion

- Basque and Spanish systems based on entirely different principles

- Spanish endings — if inserted into the Bq. paradigm —would severely disfigure the Basque verb forms

- No transfer into the Basque verb system is actually attested

- Apparently, complete structural blockage to such transfer

8.

Final remarks and summary

Methodology

Facets of structural linguistic analysis of morphological borrowing:

(1) Descriptive analyses, separately, of
     (a) DL morphological structures
     (b) corresponding RL structures

(2) Contrastive analysis of DL and RL structures

(3) Analysis of actually attested cases of morphological borrowing

Degree of precision in the analysis

Ideally, a fine-grained analysis at all levels of description:

(1) descriptively,
(2) contrastively,
(3) of contact data

Example:

Heinold, Simone. 2009. Derivational morphology under the influence of language contact in French and German. *Journal of Language Contact* 2, 68–84

Hierarchical scale of properties favorable to morphological transfer

Categorial clarity >

Semantic saturation >

Sharp boundary >

One function >

Formal reinforcement >

Gap filling

(Gardani 2008, 92)

Major conditions favoring transfer

Semantic invariance/ saturation

Meaning /function

Inter-level transparency:

Sharp segmentation: Form | **Form** | Form

Formal invariance

Summary of main points discussed

- Productivity as the sole criterion in defining borrowed affixes is questionable (E *-ing* in Sw)

  > Consider also other structural processes (e.g., affix deletion yielding a stem for new derivations; *dop-ing > dop- > dop-a*) and speaker reactions (psycholinguistics)

- The correct identification of affixes is absolutely crucial to contact morphology

- A detailed typology of affix types needed

- Direction of categorial deflection can be taken as a criterion to support the ranking of *derivation* as higher than *inflection* on borrowing scale

  (e.g., Latin inflectional *-is* > Sw derivational *-is*)

- Borrowed-prefix resistance is strongly tied to lack of (productive) RL prefixes (Turkish, Basque; contrastive prediction).

  But prefix resistance also shows up in prefixing-suffixing languages (Samoan, Māori),

  conceivably due to presence of alternative, native word-formation processes and purism

- Paradigm-internal and phonotactic properties of a projected RL may effectively block intrusion of contact-language affixes

    (Basque plural marking system)

- Cross-paradigmatic RL dependencies may similarly block affix transfer

    (Basque system of person markers in verbs; additionally, related to personal pronoun system)

Re: No-dispreference view

Inflectional borrowing between discrete systems does not seem to be overwhelmingly common

The expansion of the morphological contact-data base has until now not resulted in

- an overwhelmingly greater proportion of cases of inflectional borrowing between discrete systems as opposed to other borrowing

- an overturn of the ranking that inflectional borrowing traditionally occupies on the borrowing scale

Re: Dispreference view

- Alleged purpose of borrowed inflectional morphology: "to re-draw social boundaries" (Matras 2015, 76)

- Uncertain inference

- On a closer look, it emerges that purely structural matters may lead to resistance to adopt foreign morphology

  (Cf. Basque examples)

Across-the-board transferability hypothesis

"any linguistic feature can be transferred from any language to any other language" (Thomason & Kaufman 1988)

"anything can be transferred" (Gardani 2008)

- The across-the-board transferability hypothesis does not hold up.
- It leaves out the role of the potential RL.
- The structure of the RL may effectively block the intrusion of DL elements.

Thank you for your attention!

Mange tak!

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The discovery of Danish phonology and prosodic morphology:
from third university caretaker Jens P. Høysgaard (1743) to the 20th century

26th Scandinavian Conference of Linguistics
August 19-21, 2015, University of Aalborg

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Priorities of this talk (overview) HO

Before Høysgaard (1743ff): not very much

  Jacob Madsen Aarhus (1538-1586): his 1586-book

  GkS 789: large (phonetic etc.) ms from 1727 [Henriksen 1976]

Giant of the 18th century: Jens P. Høysgaard (1698-1773)

  Vowel analysis, Stød, and Prosodic system

Three 19th century Greats: Rask, Verner, Jespersen

  Focus on their contribution to Danish phonology

After ca. 1900: Functional and structural phonologies

  Prague school, Glossematics, and thereafter

GENERAL FOCUS ON WORD PROSODY (STØD!)

Discovery of Danish phonology/pros.morph.

1) <u>Høysgaard: the great linguist of the Enlightenment</u>

– **the vowel system and *the discovery of stød (Aandelav)***

2) Giants of the 19th century: Rask, Verner, Jespersen

– **Rasmus Rask: phonology and morphology, typology and comparative linguistics**

– **Karl Verner: the master of *accents* and *tones***

– **Otto Jespersen: great phonetician and prosodist (etc.)**

3) The 20th century: structural analyses of phonology

– **André Martinet (and Trubetzkoy): Prague phonology applied**

– **Louis Hjelmslev (and Uldall): Foundation of Glossematics**

– **Around Eli Fischer-Jørgensen (Rischel, Basbøll, Grønnum)**

1) Jens Pedersen Høysgaard (1698-1773)

- Introduction

- The Patriot's entry 1743

- The marvellous discovery: Høysgaard and the stød

- Høysgaard's grammars and other works

- Høysgaard's view on the usefulness of the [his] linguistic
   descriptions

Stød: a syllable rhyme prosody

Stød is, according to **the brilliant 18th century scholar Jens P. Høysgaard**, pronounced with a "push" like *et meget lidet hik*, i.e. '(like) a very little hiccup' (it is a laryngeal syllable rhyme prosody, no relation to tonal patterns).

The absence or presence of this 'little hiccup'-like phenomenon can be the only difference distinguishing words having otherwise identical pronunciations, e.g.

Basbøll 2003, 2005, 2008, 2014; Grønnum & Basbøll 2007, 2012

Stød: a syllable rhyme prosody

- *ven, vend!* 'friend', 'turn!' [vɛn, vɛnʔ]

- *musen, musen* 'the muse', 'the mouse' [mu·sən, mu·ʔsən]

- *vandet, vandet* 'watery', 'the water' [vanəð, vanʔəð]

- LATIN (in Danish, of course):

- *inʔsula, insularum, amanʔt* (´ʔ´stands for stød)

Why is Danish stød important?

According to **Louis Hjelmslev** every language has a
particularly difficult descriptive problem around which the
whole linguistic analysis must center…and for Danish, this is
the **stød.** (Louis Hjelmslev 1948/1951 (1899 – 1965))

Rasmus Rask (1787 – 1832)

Vilhelm Thomsen (1842 – 1927)

Karl Verner (1846 – 1896)

Otto Jespersen (1860 – 1943)

Holger Pedersen (1867 – 1953)

Eli Fischer-Jørgensen (1911 – 2010)

First literary evidence of stød?

Der till medh: så wærdas de icke heller att talla som annat folck, utan **tryckia ordhen fram lika som the willia hosta, och synas endeles medh flitt forwendhe ordhen i strupan, for æn de komma fram**

Also this: nor do they stoop ('worthy themselves') to speak like other people, but **press the words forward as if they will cough, and appear partly to deliberately turn the words around in the throat, before they come forward** (i.e. out of the mouth)

First literary evidence of stød?

sammaledes wanskapa the munnen, då the talla, wridhan och wrengan, så att the draga then offwra leppen till then wenstra sidon och den nedra till then högra sidon, menandes dett wara sig

en besynnerlighe prydning och wellståndh.

(Söderberg (1908) "Det Hemming Gadh tillskrifna talet mot danskarna" in *Historiska Studier tillägnade Professor Harald Hjärne på hans sextioårsdag den 2 maj 1908 af lärjungar, pp.* 645-74 [boldfacing mine].

partly they misshape the mouth when they speak, twist it and sneer it, so that they pull the upper lip to the left side and the lower to the right side, thinking this to be a particular ornament and well-standing. [My translation]

Jens P. Høysgaard (1698-1773)

Born in Aarhus, caretaker at the University 1737-59

Then sacristan etc. at Trinity (University) Church

1743b: Concordia res parvæ crescunt, eller Anden Prøve af Dansk Orthographie, Som viser skrevne *Accenters* Nytte, og *Vocalernes* rætte Brug […Danish orthography, showing the use of written *Accents* and the rightful use of the *Vowels*]

1747: Accentuered og Raisonnered/ Grammatica

1752: Methodisk Forsög til en dansk Syntax (500 pages)

Høysgaard 1743b on the Vowels

Second Attempt/Specimen of Danish *Orthographie*

1) Høysgaard in 1743b introduces a **new vowel symbol, an "open ø"**, as in *før* (tilforn 'before') vs. *før* (frisk 'stout'). This is a **just discovered phoneme** (Gerner (GG3:121, from 1678-9) alludes to 2 pronunciations of ø, but not clearly)

2) Høysgaard prefers **å (**for the low back rounded vowel phoneme in modern terms), or a more IPA-like symbol, in order not to write *aa*

3) Høysgaard sees as the very first that e.g. the vowel in *list* is the same as in *et* and similarly for *bukke* og *knopper* etc. **This is a new and correct phoneme analysis**

*Most important feature in 1743b: the written accents and **stød***

Høysgaard's *new* vowel system HO

Høysgaard's vowels (HB's lines) HO

Høysgaard 1743b on "Tones"

"If another can investigate and find that no other known
language has as many Tones as Danish, then he would
immediately be convinced that written Tones in Danish are
needed more than in any other language. In German, there
are hardly more than two [long and short V/HB]. The Greeks
did write their Tones even though they had only three.
Whereas in Danish there are four which we cannot, because
there are so many, indicate by letters as the Germans
do" (1743b: 223).

Then Høysgaard enumerates the four *Accents* [i.e. ±stød, ±long
V/HB] which he proposes to indicate in writing [Høysgaard's
terminology is changing, but the logic is clear]

Jens P. Høysgaard (1698-1773)

1747: Accentuered og Raisonnered/ Grammatica, /Som viser/ Det Danske Sprog/ i sin naturlige Skikkelse,/ saa velsom/ dets/ Rime=konst og Vers=regler;/ Samled/ med Patriotens Tvende/ Orthographiske Prøver,/ og/ Udgiven/ De Fremmede til Villie, som allerede veed no=/get af Sproget, og i sær for de Unges/ skyld, som opdrages enten til Bogen/ eller Pennen.

1747: Accentuated and Reasoned/ Grammatica, /That shows/ The Danish Language/ in its natural Shape,/ as well as/ its/ Rhyme=art and Verse=rules;/ Collected/ with the Patriot's Two / Orthographic Attempts,/ and/ Published/ For the Foreigners, who already know some=/thing of the Language, and in particular for the Young/ who are educated either to the Book,/ or to the Pen.

Høysgaard 1747 on *Aandelav*

p. 273: "Og dette Aàndelav kálder jeg det Stødende og St*ød=t*onede, fordì det udføres næsten med samme st^ød, som et meget lidet hìk plèjer at gjøre, sàasom i følgende ôrd:

n´ød (tvungen) Skínd (húd) Brúd (f`æstem´ø) trínd (rónd) Lód (dêl, vègt) skín (giv I^ys) R´øder (af rôd) en Spúrv eller Spúre; løber (jeg rénder) br´yder &c."

p. 273: "And this Aàndelav I call the Pushing and Push-toned, because it is executed nearly with the same Push as a very little hiccup usually is, as in the following words: n´ød (tvungen) Skínd (húd) Brúd (f`æstem´ø) trínd (rónd) Lód (dêl, vègt) skín (giv I^ys) R´øder (of rôd) en Spúrv eller Spúre; løber (jeg rénder) br´yder &c."

Stød phonologically: Høysgaard

Three central aspects of stød phonologically (my terms):

1) **Stødbasis, segmentally**: to have stød, a syllable must have **long sonority in the syllable rime**; Høysgaard did not see this clearly (because he classifies the consonants according to their names whereby *s, f* are grouped with the sonorants).

2) **Stødbasis, prosodically**: to have stød, a syllable must have have **primary or secondary stress**; Høysgaard saw this clearly and states it as part of his total prosodic system.

3) a stød-syllable **with V:** can be considered **bimoraic**; Høysgaard 1747: ´ + ` = ^, i.e. a long V with stød has two phases, first a short stød-V and then a short V without stød

[in agreement with Trubetzkoy 1935, cf. Fischer-Jørgensen 1987]

Høysgaard's Prosody (1769: 5) HO

Aandelav: **Standsende = Stopping, like á, Dobbelt = Double, like â [stød]**	**In some Danish words (especially in Copenhagen)**
Aandelav: Kort-jævn = Short-equal, like à, Lang-jævn = Long-equal, like a"	In all languages, but not in all words
Tidslængde = Time-length: absolute, as the vowel's own time ...	Korttoned = Short-toned, like á and à [short vowel]
(ctd) ... [vowel quantity]	Langtoned = Long-toned, like â and a" [long vowel]
Tidslængde = Time-length: respective, between syllables ...	med Ophold, héder Lange, like á, à, â, a" [stressed]
(ctd) ... [stress]	uden Ophold, héder Korte, like ä in Ägènt [unstressed]

Stød morphologically: Høysgaard

Høysgaard gives a wealth of observations on stød in morphological alternations, both inflection and word formation, integrated in the whole of *Accentuered og Raisonnered Grammatica* (1747). No real stød-synthesis, but many cross-references. Just two random examples:

stød change in noun PL: §99: Stôl 'chair', Lánd 'country'; PL Sto'le, Lànde (this illustrates all four *Aandelav*);

§136: "2den *Obs*: Den 2den og 3die Grâd fáas ved at lægge **re** og **st** til *Pluralem* i den 1ste Grâd, saas: ...**d'ovne** af **doven** gîr **d'ovnere, d'ovnest. Undtag"** ...[2d *Obs*: COMP and SUP are formed by adding **re** and **st** to PL of the POS...Except (1)...] modern analysis, precise exceptions!

Jens P. Høysgaard (1698-1773)

1) Høysgaard was the first to identify stød phonetically

2) Høysgaard was the first to identify the phonological function of stød as contrastive (minimal pairs *en masse*)

3) Høysgaard distinguished between stress, tone and stød

4) Høysgaard was the first to identify and document the grammatical functions of stød

5) Høysgaard's prosodic works contain throughout the (long) text accent indications on many words

6) Høysgaard's four syllable types (+- vowel length, +- stød) are still being used in Danish philology and dialectology

[from Basbøll, 2014, in special issue on ICHoLS XII, *L&LB,* St Petersburg]

4) Høysgaard's linguistic principles

1747 §94 Det Latînske og andre flere spròg haver baade efter bem`ærkelsen og forándringen sex *Casus*...men i Dansken hâr man kun i det højeste **tu Endelser** at foràndre *Nomina*, og **tre** til at foràndre visse *Pronomina* med...dog i henséende til bem`ærkelsen i det ringeste **tre**

[Latin and several other languages have both semantically and formally six *Casus*...but in Danish there are at most **two Endings** to change *Nomina*, and **three** to change certain *Pronomina*...but semantically, at least **three**]

1747 §389 Det Danske sprog holder en mere naturlig orden end det Latinske og mange andre, og derpaa grundes en stôr dêl af dets tydelighed [The Danish language has a more natural order than Latin and many others, and a large part of its clearness is due to that].

Høysgaard continues to state that a Latin sentence with five words can have up to 120 (5!=5x4x3x2) different orders, but a Danish one normally only a couple of different orders (he uses the formula to state that a Latin 8-words-sentence might have up to 40,320 (=8!) orders).

4) Høysgaard's Great Syntax 1752

1752 §538 ...at denne Syntax hverken er fuldkommen e. fuldstændig. Verket heder kun et Forsøg...Men ihvorvel dette Arbeyd bliver altiid een eneste Mand, i sær af mine Lige, forvoxen ; mener jeg dog, at jeg haver skikket mig deri som en god Handtlanger...og har beviist, at vort Sprog kan lige saa vel bringes under Regle, som andres."

[This Syntax is neither perfect nor exhaustive. It is only called an Attempt...but even though this work will always be too big for a single man, in particular of my kind, I do believe that I have behaved as a good craftsman...and have proven that our Language can be brought under Rules just like other languages.]

Høysgaard 1752 (500 pp, §532-1926) "is with the wealth of stuff mastered by the author and integrated into his system the most admirable of Høysgaard's publications and doubtless one of the most important grammatical works of the whole 18th century" (Bertelsen 1926: 186)

Høysgaard as mathematician

Jens Høysgaards Tydelige Integral-Regning, forøget med et heelt Ark, hvor den anvendes paa andre Verkstykker end i det første, og meest paa at finde Tyngdens Middel-Punkt der, hvor man neppe ventede at finde den, m.v: udgiven i sær for at opklare Theorien til den ældre Integral-Regning, som i Praxi har sine Fordeele.

Published under JH's **full name** in 1767 [together with the illustrator Cramer]; [cf. S.C.Christensen *Matematikkens Udvikling i Danmark og Norge i 18. Aarh.* [disp.] (1895: 192)]

an earlier version (only by JH) **Algebraisk Qvadratur eller tydelig Integral-Regning** was published a decade earlier.

Høysgaard as Latinist (1771)

Nyt Forsøg til at fastsætte den Regelrette Brug af *CONJUNCTIONERNE QUOD* og *UT*, af *MODUS CONJUNCTIVUS* og af *INDICATIVI IMPERFECTUM & PERFECTUM* i Latinen. Anstillet og udgivet som en Opmuntring for andre, ikke til at opkoge Gammelt, men til at forbedre det, af J. H. Kiøbenhavn, 1771.

[New Attempt...published as an encouragement for others, not to rehash old stuff, but to ameliorate it, by J.H.] NB: Not anonymous!

til Kiøbs hos Klokker Høysgaard her i Landemerket [can be bought at Bell-Ringer Høysgaard here in [street-name]]. Høysgaard's last publication, well received.

JH on the Usefulness of linguistics

Jeg har forprøvet det med et barn paa sex aar, og befundet, at børn, som ere nogenledes øvede i at stave, kan paa en halv time lære at udsige hver stavelse ræt efter skrevne Toner [1743b: 228; also cf. p. 236 on both natives and foreigners)]

[I have tried with a child aged six and found that children who have some exercise of spelling, can learn in half an hour to pronounce syllables with their written tones [i.e. *Aandelav*]]

Cf. from the frontispiece of 1747: "For the Foreigners.../...and in particular for the Young/ who are educated either to the Book,/ or to the Pen"

Høysgaard is thus a fine representative of the *Enlightenment*

Conclusion about Jens Høysgaard

The value of Høysgaard's writings is immense:

– For **language history:** innumerable insightful, detailed and well documented observations about the **Danish language in the 18th century**, concerning pronunciation, segmental and prosodic phonology, morphology, syntax, semantics, pragmatics...

– For **the history of science:** ...integrated in a coherent system...

– For **linguistics:** ...which is "*accentuated*" and "*raisonné*"

So: Høysgaard is the great Danish linguist of the Enlightenment

Discovery of Danish phonology/pros.morph.

1) **Høysgaard: the great linguist of the Enlightenment**

– the vowel system and *the discovery of stød (Aandelav)*

2) **Giants of the 19th century: Rask, Verner, Jespersen**

   – **Rasmus Rask: phonology and morphology, typology and comparative linguistics**

   – **Karl Verner: the master of *accents* and *tones***

   – **Otto Jespersen: great phonetician and prosodist (etc.)**

3) **The 20th century: structural analyses of phonology**

– **André Martinet (and Trubetzkoy): Prague phonology applied**

– **Louis Hjelmslev (and Uldall): Foundation of Glossematics**

– **Around Eli Fischer-Jørgensen (Rischel, Basbøll, Grønnum)**

Høysgaard and Rasmus Rask

Rask 1826 (his longest work) often refers to "Höjsgård" with admiration, both concerning vowels (*ö* and *å*) and Tones/ Aandelav [as against Baden etc.]. Rask says (p. 50f):

"Disse Tonehold udgöre måskje det fineste og vanskeligste i vor Udtale ; sjælden beholdes de uforandrede i alle et Ords Böjninger og Forbindelser ; men sædvanlig ombyttes og forandres de på det mangfoldigste, ja flyttes og bortfalde stundom aldeles"

[These *Tonehold* are perhaps the finest and most difficult in our pronunciation; only rarely they are constant in all inflections and compositions of a word; but normally, they change in many ways and sometimes even disappear completely].

Rasmus Rask (1787-1832)

De Fynske Bønders Sprog (published by PAndersen 1938)

- stems from Rask's school years, never finished

- heavily influenced by Høysgaard, e.g. prosodic notation

- Rask is phonologist more than phonetician (PA) (e.g. diphthongs: distinguished according to mono- vs. biphonem.)

Retskrivningslære (1826): Rask's largest publication

"Rask heard with his Funish ears and saw with his Icelandic eyes" (Karl Verner); but cf. Rask vs JGrimm (who said 8 sounds in G. *Schrift*: S c h r i p h t !) (Rask's Law!)

Rask uses accents to distinguish between prosodies and vowel qualities (in many works, also on Danish (1830))

Karl Verner (1846-1896) HO

Letter Jan. 1874 to Vilhelm Thomsen (Verner 1903: 205ff)**:**

Nature of "Tonelag": only one modification in Danish: "Tonestød" [±stød] (nothing on *kat*)

Historical origin (new!): A. Orig. (oldn.) polysyl.s: no stød

   B1. Light monosyl.s: no stød

   B2. Heavy monosyl.s: stød (*pínsl > pi:'nsel* etc.)

   [using Høysgaard's accents for 18th cent. Danish]

Relation to Scand.: comparison to Norw. (Aasen) (p. 209)

Detailed on developments since Høysgaard (Verner insists on natural speech data, preferably by his own listening)

Cf. Rev. [1880] of Axel Kock 1878 [Sw. Acc.] (1903: 84-104)

Otto Jespersen (1860-1943) and after

Fonetik 1897-99: original observations; prosody: sonority syllable, and stress analysis (rhythm, 'value stress')

Modersmålets fonetik (1906, 3d edn. 1934): textbook

New-Jespersenians: Brink, Lund, Heger, J. Normann J.

- (Basbøll's term, approved by Lund) (rm = rigsmål)

Dansk Rigsmål (Brink & Lund 1975), 1840-1955,

- based upon recorded sound, internationally important

- *definition of rm:* based upon (word)forms allover Denmark

- *problem (HB):* no two wordforms are identical, only abstractions; and prosodic cues to locality abstracted away

Regionalsprog: *rm-like* but with local traits

19thC Danish term. of "tones" HOb7

Bloch: Rask's teacher (of Greek) and a leading pedagogue

- except for terminology, very modern

Rask: not so sharp in counting 6 "Tonehold" (4 suffice)

Verner [not in the table]: term "tonestød"

- identifies glottal stop; sees parallels to baltic tones (also perceptually), sees connection between tonal configurations (gives musical notation) and glottal stop [(also) historically]

Sweet [greatest phonetician alive, according to Jespersen]

- terminology: glottal catch (x) or 'stödtone'

Jespersen: modern terminology

- insists on sharp distinction between stød and tone

Danish weakenings: obs > approx and $_oV > ə$

- Swedish *gata, koka:* two syllables with **clear** boundaries (**/CV.CV/**), also clear boundaries between the segments!

- Danish *gade, koge: where is the syllable boundary? How easy is it to count syllables?* (**/CVC.ə/**)
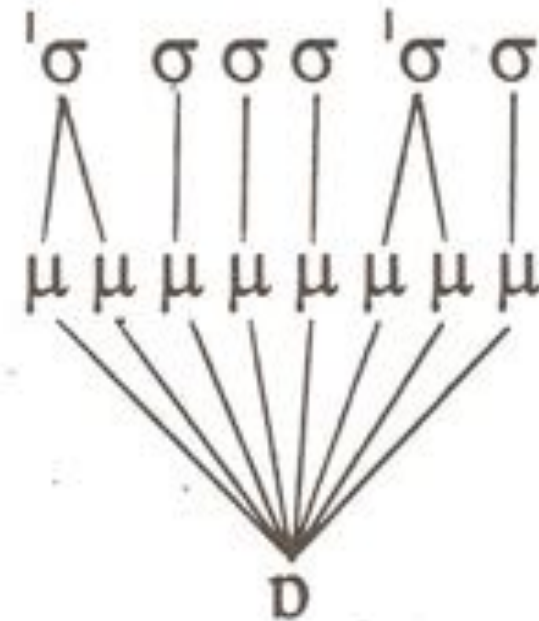
HOW MANY SEGMENTS IN DANISH? **badede [bæ(:)ð::]**

(cf. Rischel 'National Heritage' on Danish syllable structure)

[next slide!]

Gives rise to problems for phonological analyses of Danish: are "soft d g" (ð ɣ) separate phonemes or /d g/?

Is schwa a separate phoneme /ə/? what about a-schwa? (i) what is the relation between stress and segments?

*Koge o(ver), (L)uge u(denfor)**, (H)årdere at åre(lade)**;* Rischel 2003

Glossematics: Hjelmslev and Uldall

Louis Hjelmslev (1899-1965): 1936, 1951 (HO boks 9-12)

Hans Jørgen Uldall (1907-57): 'Phonematics', marginal prosodies T1 (stød), T2 (non-stød), T3 (h), T4 (non-h)

Danish dialectology: heavy influence from Glossematics

- Main works: PAndersen 1958 and Ejskjær 1970

- 'purest glossematics': BAndersen *Rønnemålet* (1959)

The classification of syllables below, based upon Høysgaard, is crucial for Danish structuralist dialectology (PAndersen '77):

	Stød	**Not stød**
■ **Long V**	**V:ʔ** *pæn*	**V:** *pæn(e)*
■ **Short V**	**VCʔ** *pen*	**VC** *ven (penn(e))*

Around Eli Fischer-Jørgensen

Eli Fischer-Jørgensen (1911-2010): Grand Old Lady

- Trends in Phonol. Theory 1975; Tryk i ældre dansk 2001
- Textbook (1960) and large studies on Danish prosody

Jørgen Rischel (1934-2007): Sound Structure in Language (OUP 2009); prosodic pioneer works from 1964; also studies on other Nordic languages, e.g. Norwegian word tones and Faroese diphthongisation

Hans Basbøll (b. 1943): The Phonology of Danish (OUP 2005) Sonority Syllable Model, Non-Stød Model

Nina Grønnum (b. 1945): Textbooks, DanPASS (electronic Danish speech corpus, annotated and analysed); intonation, phonetic analyses of stød, observations of stød changes

20thC Danish Phonol: vowels HOb9

Martinet: 10 vowel phonemes, triangular system, /a/ alone

- no */ö:/ (despite Høysgaard's minimal pairs); weak /i/ is a neutral vowel, like schwa (/i/ thus both neutral and full)

Hjelmslev: harsh reductions, many ad hoc (8 phonemes)

- ends up with a 2x2x2 system, relatively well motivated by 'the substance' [three dimensional system 'geometrically']

Rischel: problematizing pioneer account (10 phonemes)

- inspired by generative phonology, faithful to difficulties

Basbøll: distinction 12 phonemes >< 10 morphophonemes

Grønnum: only abstract phonemes (10) (morphologically conditioned, no level of 'pure sound structure')

20thC Danish Phonol: cons. HOb10

Martinet: 17 phonemes, archiphonemes B D G, / δ γ /

- neutralisation of plosives finally and before weak vowels

Hjelmslev: harsh reductions, many ad hoc (10 phonemes)

- ends up with a 2x5 system, far from well motivated by 'the substance' [two dimensional system 'geometrically']

Rischel: problematizing pioneer account (insp. by gen.ph.)

- mainly on relation obstr - approx, faithful to difficulties

Basbøll: distinction 17 phonemes >< 15 morphophonemes

- detailed phonotactics based upon HB's Sonority Syl. Model

Grønnum: only abstract phonemes (15) (morphologically conditioned; no level of 'pure sound structure')

20thC Danish Phonol: stød HOb11

Martinet: Stød occurs in the 2d mora (Trubetzkoy 1935)

- disappears 'en position faiblement accentuée'

AaHansen: the classical stød-account, well documented

- stød presupp. long son. and stress; monosyllables important

Hjelmslev: stød is a 'signal' and not part of 'inventory'

- for particular 'compounds' and "syllable structures", ad hoc

Basbøll: stød is unmarked in bimoraic ('heavy') syllables

- Non-Stød can be Lexical (*ven, spleen*) or due to Word-structure (*hus<u>e</u>*); vocabulary split (native-like or not)

Grønnum: no mora analysis, otherwise follows Basbøll

- important investigations of stød phonetically, and new støds

20thC Danish Phonol: stress HOb12

Martinet: 3 degrees (not quite clear), mentions 'rhythm'

Hjelmslev: 2 accents: ' ₒ ; 2d stress either in CPD or stød-σ

Rischel: binary opp. at diff. levels; morpheme stress

- compound stress without a cycle; discontinuous phrases
(*stykke <u>røget</u> laks*); 'unitary stress' is cue to syntax

EHansen & Lund: 3 degrees, detailed rules for stress red.

- both syntactic and idiomatic (according to word-class)

Basbøll: 3 degrees, detailed rules for word stress

- treatment of stress integrated with stød (word prosody)

Grønnum: 3 degrees, original treatment of rel. stress-tone

Epilogue: Stød and Scand. tones

1) Stød is a property of a syllable, word tones (accent 1 or 2 in Swedish and Norwegian) are a property of a word

2) Monosyllables can have stød or not, monosyllables always have accent 1 in Swedish/Norwegian

3) Never stød in syllables with short sonority rime (no such restrictions in Swedish/Norwegian)

4) Phonetically and phonologically, stød is the marked term, but accent 2 is the marked term in Swedish/Norwegian

Apart from 1-4, stød corresponds to accent 1

Lexically and morphologically, Non-Stød and accent 2 are marked

Epilogue: Stød and Scand. tones

Phonetically and phonologically, stød is radically different from word tones (accent 1 (2)), as has been known since Høysgaard and emphasized by Verner, and which agrees with the Danish tradition (including the Non-Stød Model).

BUT

In analyses within the p.t. dominant paradigm in international theoretical phonology, viz. Optimality Theory (in the tradition from generative>autosegmental/metrical phonology) **stød is analyzed by means of HL-tones ([H*L] in one syllable).**

Line of research from Paul Kiparsky, Itô & Mester, Tomas Riad, Morén, and others

Mange tak
for jeres opmærksomhed!

Thank you very much
for your attention!

Appendix to Hans Basbøll's plenary talk at SCL 26, Aalborg, August 19-21, 2015.

[Taken from HB's ms to chapter 2.5 'Fonetikker', in vol. 1 of *Dansk Sproghistorie 1-6*, eds. Ebba Hjorth et al., Det Danske Sprog- og Litteraturselskab (forthcoming). **NON-FINAL VERSION!**]

BOKS 7: TERMINOLOGI OM "TONER" I 1800-TALLET, BEGYNDER HER

Moderne term	*Stød (vs. ikke stød)*	*Vokalkvantitet: lange (vs. korte) vokaler*	*Stød+vokal-kvantitet (Høysgaards Aandelav) (antal)*	*Tryk*
Bloch 1817	med Tryk (vs. med Efterklang)	Qvantitet: lang (vs. kort) vokal	Accentuationer eller Tonefald (4)	[Tone(fald)]
Rask 1826	[Behandles under Tonehold: standsende el. langstødende, stødende]	[Behandles under Tonehold: [stødløse] skridende el. langjævne (vs. løbende eller kortjævne)]	Tonehold (6) [De to overflødige er: slæbende = langtrukne, rullende = nynnende]	Tonefald: Stavelser med og uden Tonehold (yderligere: Hovedtone vs. Bitone i fx *Trefod)*
Levin 1844	Tonelag: stødende (vs. flydende)	Tonehold: lange (Stavelser eller Selvlyd) (vs. korte) ['hvor Betoningen stræber bort fra Vocalen']		Tonefald (Accent) [betonede vs. tonløse] [også Hovedtone vs. Bitone]
Hommel 1868	Tonelag: stödende (vs. flydende)	Tonehold: lange (vs. korte) Stavelser		Tonefald: betonede (vs. ubetonede)
Sweet 1877	glottal catch (x) or 'stödtone' (vs. its absence)	[langvokaler noteres med to vokalsymboler]		stress
Jespersen 1897-1899	stød (vs. fravær af stød)	lang (vs. kort) vokal		tryk

BOKS 9: NOGLE FONOLOGISKE ANALYSER EFTER 1900 AF RIGSMÅLETS VOKALSYSTEM, BEGYNDER HER

	Kvalitativt forskellige vokalfonemer (trykstærkt) (antal)	*Vokalkvantitet*	*Stød og vokaler*	*Neutralvokaler, vokaler i tryksvag stilling*	*Bemærkninger*
Martinet 1937	Trekantsystem med /a/ alene i bunden som den mest åbne, 3 rækker med 3 i hver (10)	Kun 9 lange da der ikke er minimalpar med /ø:/ overfor /ö:/ [kritisabelt, jf. *køre* vs. *gøre*]	Stødvokal fortolkes som langvokal i en stødstavelse	'Voyelles en syllabes de très faible intensité: /ə/ et /i/' (dvs. /i/ kan både være fuld- og neutralvokal)	Der diskuteres neutralisationer, fx tolkes /ə/ som manifestation af de ikke-snævre vokaler
Hjelmslev 1951	(8) ʔœ tolkes som ø [ad hoc]; *u* både 'selekteret' (*hus*) og 'selekterende' (*djærv* '*diɛɾu*)	Langvokaler afledes ved manifestations-regler [mange ad hoc], eller noteres som dobbeltvokaler	Se boks 11 om stødet	ʔə tolkes som ɛ (under svagtryk)	De 8 vokaler opstilles i et tredimensionalt system der er relativt rimeligt (jf. boks 10) ud fra 'substansen'
Rischel 1969	10 fonemer, og diskussion af om ɑ og ɒ kan tolkes som fonemer	Diskuterer længde som prosodi eller (vokal)geminat	Stødvokaler som lange med 'proso-dien' stød	Diskuterer forskellige fortolkninger	Problemati-serende pioner-fremstilling
Basbøll 2005	12 vokal-fonemer (med /ɑ ɒ/); 10 morfo-fonemer	Vokallængde er prosodisk (specificeret leksikalsk)	Stødvokaler som lange med 'proso-dien' stød	2 neutralvokal-fonemer (/ɐ ə/), 1 neutral-morfofonem (|ə|)	To niveauer: (konkrete) fonemer og (abstrakte) morfofonemer
Grønnum 2007	10 fonemer [detaljerede komplekse manifestations-regler]	Vokallængde er prosodisk (specificeret leksikalsk)	Stødvokaler som lange med 'proso-dien' stød	1 neutralvokal-fonem (/ə/)	Ret abstrakt fonemanalyse, morfologisk begrundet

BOKS 10: NOGLE FONOLOGISKE ANALYSER EFTER 1900 AF RIGSMÅLETS KONSONANTSYSTEM, BEGYNDER HER

	Forskellige konsonant-fonemer (antal)	*Konsonant-kombinatorik*	*Stød og konsonanter*	*Konsonanter i tryksvag stilling*	*Bemærkninger*
Martinet 1937	lukkelyde: 6 + 3 arkifonemer; 6 spiranter, 2 likvider, 3 nasaler	Detaljerede tavler med skelnen mellem arkifonemer og (andre) fonemer	Stødkonsonanter tolkes som konsonanter i stødstavelse [sprængansats ('0') 'korrelerer' med /h/]	Neutralisation – dvs. af lukkelyde kun BDG – før 'voyelle neutre' (jf. boks 9)	Analysen med arkifonemer BDG (foruden /ptkbdg/) betyder /ð ɣ/ som fonemer
Hjelmslev 1951	*bdfghlmnrs* (10); ?*p t k* tolkes som *bh, hb* osv. [ad hoc]; ?*ɣ ð* som *g d* stavelsesfinalt	Ingen systematisk oversigt (men kombinatorik udnyttes i tolkningerne [noget ad hoc])	Se boks 11 om stødet	Da de to accenter ' og ₒ overalt angives, kan stavelses-grænserne bruges [noget ad hoc]	De 10 konsonanter opstilles i et todimensionalt system der er temmelig ad hoc (jf. boks 9) ud fra 'substansen'
Rischel 1970a	[Ikke primært om fonemer, men om relationen mellem klusiler, frikativer og halvvokaler]	Der er et stort ordnet materiale relevant for konsonant-kombinatorik		Der er et stort materiale om tryksvag stilling ud fra 'strong vs. weak position'	Pionerfrem-stilling med generative regler; meget diskuterende
Basbøll 2005	17 fonemer (med /ð ŋ/), 15 morfofonemer	Meget detaljeret analyse ud fra Basbølls Sonority Syllable Model (SSM)	Stødkonsonanter tolkes som konsonanter i stødstavelse	Konsonant-kombinatorik i tryksvag stilling gennemgås detaljeret ud fra SSM	To niveauer: (konkrete) fonemer og (abstrakte) morfofonemer
Grønnum 2007	15 fonemer (uden ð ŋ), detaljerede manifestations-regler	Behandles bl.a. i skemaer	Stødkonsonanter tolkes som konsonanter i stødstavelse	Gennemgås ret detaljeret	Ret abstrakt fonemanalyse, morfologisk begrundet

BOKS 11: NOGLE FONOLOGISKE ANALYSER EFTER 1900 AF RIGSMÅLETS STØDSYSTEM, BEGYNDER HER

	Stød segmentalt	*Stød prosodisk*	*Stød leksikalsk*	*Stød morfologisk*	*Bemærkninger*
Martinet 1937	Efter langvokal, eller efter kortvokal + sonor konsonant	I stavelsens 2. mora; stød forsvinder 'en position faiblement accentuée'	Behandles kun antydningsvist	Behandles kun antydningsvist	Psykologiske argumenter; stødtab i sammensætnings 1. led bruges som argument for fonologisk kvantitet
AaHansen 1943	Stød forud-sætter lang sonoritet,	(fts.) og et vist tryk. Karak-teristisk for enstavelsesord	Særdeles detaljeret gennemgang	Særdeles detaljeret gennemgang	Meget vigtig fremstilling, selvstændig og veldokumenteret (også vedr. 'nystød')
Hjelmslev 1951	[Stød er 'signal' for sammen-sætninger og bestemte stavelses-strukturer,	(fts.) udgår af inventaret. Betingelserne er tildels arbitrære og problematiske]	Der formuleres ingen generelle leksikalske regler	Ingen særlig morfologisk analyse af stød-alternationer	Foreløbig og skitseagtig, men meget indflydelsesrig
Basbøll 2005	Stød i stavelser med langvokal, eller med kortvokal + sonor konsonant	Stød i 2. mora; tryksvage stavelser er monomoriske	Leksikalsk ikke-stød (ifølge opdeling af ordforrådet: hjemligt vs. ikke-hjemligt)	Ikke-stød afhængigt af endelsers integration i ordstrukturen	Samlet 'Ikke-stød model' (stød umarkeret i tunge stavelser i hjemligt [inkl. lån fra græsk, latin og tysk] ordforråd)
Grønnum 2007	Stød i stavelser med langvokal, eller med kortvokal + sonor konsonant	Ikke mora-analyse; men i øvrigt svarende til ovenstående	Ret detaljeret	Stor gennemgang (især byggende på Basbøll), gode skemaer	Omhyggeligt dokumenteret lærebogsfremstilling

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BOKS 12: NOGLE FONOLOGISKE ANALYSER EFTER 1900 AF RIGSMÅLETS TRYKSYSTEM, BEGYNDER HER

	Tryk fonologisk (trykgrader)	*Tryk i morfemet*	*Tryk i ordet*	*Tryk i ytringen*	*Bemærkninger*
Martinet 1937	I praksis 3 grader, men lille udnyttelse pga. rytme	2 fonologiske trykgrader i morfemet [uskarpt]	Diskuterer sammensætninger som *Eftermiddag, Sygeforfald* (rytme)	Behandles ikke	[Pga. 'très faible intensité' (se boks 9) må der være 3]
Hjelmslev 1951	2 accenter: ' er 'intensiv' ₀ er 'extensiv'	Behandles ikke separat	Bitryk: variant af ' i (2. led af) sammensætninger, og af ₀ under dominans af stød	Behandles ikke separat	Om forholdet mellem tryk og stød, jf. boks 11
Rischel 1970b, 1972, 1983	Binær modsætning (2) på forskellige niveauer	Detaljerede regler afhængigt af bl.a. fonologisk struktur	Påviser at sammensætningstryk kan beskrives uden 'cycle' (modsat Chomsky-skolen)	'Frasedannelse' (også diskontinuert: *et stykke røget laks*)	'Enhedstryk' kan give nøgle til syntaksen
EHansen & Lund 1983	3 trykgrader (+ overtryk)	Behandles ikke	Behandles ikke	Detaljerede (ordklasse-opdelte) regler for ords tryktab	'Syntaktiske' og 'idiomatiske' tryktabsregler formuleres
Basbøll 2005	3 trykgrader (+ emfase), bitryk noteres	Regler især byggende på Rischel	Detaljerede eksplicitte regler for ordtryk, især vægt på morfologiske alternationer og suffiks-typer	Regler for ytringstryk der søger at kombinere et frase- og ord-synspunkt	Tryk behandles integreret sammen med stød (ordprosodi)
Grønnum 2007	3 trykgrader (+ emfase), bitryk normalt ikke med	Regler især byggende på Rischel	Relativt kortfattet men dækkende	Kortfattet behandling	Original vigtig samlet behandling af tryk og intonation

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From Operational Research to Linguistics and Logic
Martin H. Prior

In this paper I wish to track my progression from Operational Research to language and logic, the core of which was computing. My first degree was in econometrics, or economics and statistics: a social science degree in the 'sixties which became progressively more numerate, and which led me to Operational Research, a problem-solving discipline which in practice draws researchers from many disciplines. I shall start this paper with my experiences in OR, in the steel industry in South Wales.

Turning first to Operational Research, which according to Wikipedia at least, is a 'discipline that deals with the application of advanced analytical methods to help make better decisions'. The phrase we keep hearing is 'optimal decisions'. This will relate to an objective which might be military or might be civil. In civil applications we must choose between maximal production and most profitable or least costly production. It will choose relevant disciplines, whether mathematical, engineering or statistical. In the steel industry we considered optimal mixes or iron ore, admixtures of scrap in the steel-making process, and in this large steel plant, internal transport. These three examples involve increasing uncertainty and therefore lend themselves to an increasing extent for statistical analysis.

Indeed linguistics is rather similar to OR in welcoming a multi-disciplinary input, from modern languages, philosophy and increasingly mathematics and statistics.

In my department there in South Wales I was known for both my linguistic and my programming skills, and wondered whether this was the same aptitude. This prompted my intermittent reading of my father's *Formal Logic* (Prior, A.N. (1953)), I started playing around with some ideas the main ones being

(a)   concept intersection, the relationship between an intersectional adjective and its noun,
(b)   operator inversion, as with 'square' and 'square root' (square^{-1}).

My father once asked me whether 'picture of' could be considered an operator, and suggested its inverse could create a lion from a picture (see opposite). But I replied that I would have to invert time as well.

(1)

This idea stayed with me for some while, but as well as the idea of two-place predicates across time, another important idea came to me: what is the inverse of negation. This seemed to me to be the first question one should ask, but for mathematicians it seems to be a blind spot, perhaps because they relate inversion closely with reverse two-place predicates. But in fact,

$$NON^{-1}p$$

means 'that which some p are not', i.e. 'not the only p'. I am introducing this now, since it will pervade much of I am talking about in this paper.

But coming back to my modelling, I started experimenting with the idea that all binary operators could be reduced to concept intersection, and we can see this in the diagram below, where the nodes represent concept intersection:

(2)

In this diagram we capture "Jack loves Jill." The finite verb forms are based on underlying verbal nouns, which we directly capture in an adaptation of Davidson's event analysis: with the introduction of inversion to pick out whatever clause subject we wish, we no longer need for syntactic transformations at any level, although I believe that Chomskyan transformations provide a useful model for language acquisition. The black node represents concept intersection and the -1 index represents operator inversion, as with 'square root'.

Now this was around 1975 or so, and I was two years off starting Linguistics at University College London. I was very vague about linguistics, though I didn't agree with Chomsky, and I didn't get as far as Predicate Calculus in my father's *Formal Logic* (Prior 1953). Thus I was able to produce structures such as

(3)   E(Ap, Lq)   there is(E) an activity of loving q, (which-is) (done) by p (Ap)

(4a)   Pq   either some p are q, or there are neither p nor q (in effect Pq ≡ Qp)

or, to expand…

(4b)   Pq ≡ E(p, q) ∨ E(0p, 0q)   where 0p means 'no p'

Note that we can write both in Predicate Calculus, which I had never heard of:

(5)   *(∃w)(Agent(p, w) ∧ Loving-of(w, q))*

(6)   *(∃x)(Px ∧ Qx) ∨ (∀x)(~Px ∧ ~ Qx)*

But in each we go against standard conventions, firstly that some event like 'loving' is treated as a 'thing', so can we in fact quantify it? Donald Davidson says yes we can. But I did so independently, without any awareness that philosophers felt a need for a philosophical justification for quantifying over events.

Likewise, when I devised the relationship of concept intersection, which I called semantic apposition, I had no idea that there was a field called Description Logic, which used this relationship.

And for items (4) and (6), if we have a proposition Pq, standardly we have a one-place predicate P, and q as a unique argument. This again challenges the standard Predicate Calculus, saying that a predicate on a non-unique argument must have some meaning. And thus we may note within (3), that both p and q may be indefinite expressions.

So we have three challenges:

(7)
(a)   the use of abstract entities,
(b)   the use of non-unique arguments, and
(c)   inverse operators which don't relate to reverse predicates.

In fact we can extend this variety of Description Logic, and use the following principles:

(8)
(a) The inverse of 'there exists' (E) is 'such that' (E^{-1})
(b) The inverse of concept intersection is co-reference
(c) We have the equivalence, known as the 'duality principle'…

$$QXp \equiv PX^{-1}q$$

(d) Concept intersection of truth-values leads to a four-valued logic.

Turning briefly to my PhD Thesis (Prior, M.H. (1985)), this was devoted to the properties of concept intersection, with particular reference to how far we can capture adjectives with this. Now it is generally accepted that some languages are right-branching, for example VSO languages and most SVO languages, and others are left-branching, such as SOV languages. However non-rigid SOV languages may place heavy expressions to the right.

However the statistics show a degrees of irregularity, and in particular adjuncts such as adjectives did not fit in so regularly with this pattern.

What I found eventually was that in language, operators either consistently followed or preceded their operands, as shown below with 'on-line': 'on' precedes 'line', and in English, operators will precede operands. But we do not follow Montague Grammar in treating adjectives as operators, but use concept intersection, especially when the adjectives follow the noun, as in 'members present' as opposed to 'present members'. This is captured below by the node represented by a small circle:

(9)

… and across languages, a preceding adjunct of the form operator-operand is least favoured.

(10)   "Abstractive Semantics"

Level	Nature of level	Change
A	Semantic relationships within phrases	
AB		Categorial Grammar (adapted)
B	**Description logic**	
BC		Definition of elements
C	Natural language Predicate Calculus (Partial binding Calculus)	
CD		Evaluation of PBC
D	Logical form in PC	

Adapted Categorial Grammar

Discussed in Prior, M.H. (2009) and illustrated in (9) above…

(11)

(1a) $[+aX\ X] \rightarrow X$
(1b) $[X\ +aX] \rightarrow X$

(2a) $[X{:}aY\ Y{:}Z]\quad \rightarrow [X{:}Z]$
(2b) $[X{:}Y\ aY{:}Z]\quad \rightarrow [X{:}Z]$
(2c) $[X{:}Y\ Y{:}Z]\quad \rightarrow [X{:}Z]$
(2d) $[X{:}Y]\qquad\quad \rightarrow [X{:}K]$

(2e) * $[X{:}aY\ aY{:}Z]\ \rightarrow [X{:}Z]$
(2f) $[(X{:}Z)/(C{:}D)\ (C{:}D)]\ \rightarrow [X{:}Z]$

Natural Language Predicate Calculus (PBC)

Turning to Stage C above, I shall give a very brief outline of this Natural Language Predicate Calculus, which I have always called the Partial Binding Calculus, which uses Σ and Π operators, rather than the usual $\exists$ and $\forall$. To illustrate the new operators, I shall illustrate a number of identities:

(12a)

	Simple form		Evaluation	Gloss
1	$\Sigma aPa \wedge \Sigma aQa$	=	$\Sigma a(Pa \wedge Qa)$	Some things are p, and some of them are q.
2	$\Sigma aPa \wedge \Pi aQa$	=	$\Sigma aPa \wedge \Pi a(Pa \supset Qa)$	Some things are p, and all of them are q.
3	$\Sigma aPa \supset \Pi aQa$	=	$\Pi a(Pa \supset Qa)$	If some things are p, then all of them are q.

Now here the equivalence depends on carrying over the same binding variable, something we don't meaningfully do in standard PC, and to show further that things go differently:

(12b)

	Simple form		Evaluation	Gloss
4	$\Sigma a(Da \vee Ca) \wedge \Pi aBa$	=	$\Sigma a(Da \vee Ca)$ $\wedge \Pi a((Da \vee Ca) \supset Ba)$	Some people are either drunk(D) or disorderly(C), and they get barred(B).
5	$(\Sigma aDa \vee \Sigma aCa) \wedge \Pi aBa$	=	$(\Sigma aDa \wedge \Pi a(Da \supset Ba))$ $\vee (\Sigma aCa \wedge \Pi a(Ca \supset Ba))$	Either some people are drunk(D) or some people are disorderly(C), and (whichever it is) they get barred(B).

Now identity 3 is in fact the 'donkey sentence' considered by both Peter Geach(1962) and Hans Kamp (Kamp & Reyle (1993)). My own analysis is covered in Prior, M.H. (2003).

Prior versus Reichenbach

13) a. I have seen it today
        I had fixed it the day before (he saw it).
        Our new committee members went on an induction course before taking up their positions.

```
            E        S,R
        --------+-------------+----------
        I have seen it today

            E   R  S
        --------+----+---+----------------------------
        I had fixed it the day before he saw it

          E,R                S
        -------+------------------+-------------------------------------
        Our new committee members went on an induction course before taking up their positions
```

   b.   In other situations we may have an indefinite time reference

```
            E        S,R
        --------+------------+--------
        I have drunk the coffee
```

From Reichenbach's Reference Time to Time Reference in Tense Logic

14) a.   Some committee members **have visited** Finland (=10a)
    b.   It has been or is the case, that some committee members are in a state of having visited Finland.

        Now I have deliberately spelt out 14b in this 'user unfriendly' manner, since the subject NP may refer to something which is either present-tense or at an indefinite point in the past, but the point of reference of the VP has to be at a point of time prior to that of the NP.

        We may actually capture this in predicate calculus as follows:

    c.   *P* (∃x) (Zx ∧ PVx)*

        where *Zx* means *is a committee member*,
              Vx means *visit Finland*
              P*x means *x ∨ Px*

15)   What happens for the Simple Past? Take the following two examples:

    a.   Some committee members visited Finland.
    b.   Some committee members visited Finland in the 'sixties.

        In the first example, we are talking about committee members at the time of the visit. In the second example, we must infer from the context whether this means present committee members or members at the time of the specified visit.

I shall capture this by the following formula:

$$P^* \, (\exists x) \, (P^{dt}{*}Zx \wedge P^{\delta u}{*}V_{\delta u}x)$$

where $P^{dt}{*}q$ means x was true at a specified point of time (*dt*) in the past or present

$P^{\delta t}{*}q$ as for $P^{\delta t}{*}q$ but means *x* is/was true at a point of time during the period δt in the past, which may extend into the present

δu must in the above context begin at *dt* unless the content of *V* specifies otherwise, and in either case *must be past time*. (See note 5 above.)

and $V_{\delta u}$ as for *V* but the particular event concerned must start at or after the start of δu.

Now here we have a similar situation to that of the Present Perfect, in that a tense operator appears twice, but it is only the time reference on the VP predicate that has to be past tense. What we must note is that the external tense operator seems to relate to the subject NP, while the internal tense operator determines the time reference of the verb and furthermore advances the 'narrative time reference'. We are beginning to see the usefulness of a symbolism which parallels differential calculus.

Now what we see in the example of both the Perfect and the Simple Past examples is that there may be a relationship across time between the subject NP and the associated VP.

Expansion of Verbal Expression

16) a.   *x* visited Finland (*V*) at time *dt*.

b. $P^* \, (\exists x) \, (P^{dt}{*}Zx \wedge P^{\delta u}{*}V_{\delta u}x)$

c. $V_{\delta u}x = (\exists Q) \, (H_{\delta u}{*} \, (\exists A) \, [P^*Agent(x, A) \wedge Visiting(A, Q)] \wedge Compl \, Object \, (Q, \text{ Finland}))$

where $H_{\delta u}x = H(x \supset \delta u)$

$H_{\delta u}{*}x = H(x \supset \delta u) \wedge \boldsymbol{x}$

$Compl \, x = x \wedge G{\sim}x$

A is an **action** and *Q* is a **process**: n**ote in the above example that the quantifier for *A* falls within the scope of that for *Q*.**

17) a.   *x* was visiting Finland (*W*) at time *dt*.

b. $P^{dt} \, (\exists x) \, (Zx \wedge Wx)$

c.   Where we know that the visit was eventually completed:

$Wx = (\exists A) \, (Agent(x, A) \wedge F^* \, (\exists Q) \, [Visiting(A, Q) \wedge Compl \, Object \, (Q, \text{ Finland})])$

where we may probably drop *Compl* and, if we do not know whether the visit was completed, we replace *F** by *Prog*. Again *A* is an action and *Q* is a process:
n**ow note that in this example, the quantifier for *A* falls** outside **the scope of that for *Q*.**

17) a. *x* was blowing bubbles(BB)

    b. *BBx = (∃A) (Agent(x, A) ∧*

                         (∃Q) (Blowing(A, Q) ∧ Prog (∃y) [Bubbles(y) ∧ Object (Q, y)]*)*

18) a. **Defining Processes**

To say something more about action and process: I have suggested that the key meaning of a transitive verb, and I believe many intransitive verbs, lies in the relationship between action and process. How can we define this concept of process? I suggest we term it the *change or continuation in state* of something, normally the object of a transitive verb, but sometimes too the subject of an intransitive verb.

The separation of action and process also permits us to identify actions which have more than one process. Thus if somebody kills all the inhabitants of a village by putting poison in the will, to give the Anscombe example (Anscombe (1959)), there is a single action but two processes - that of the poison going into the well and that of the villagers dying. This provides a straightforward answer to the difficulty put forward that two activities very different in nature constitute a single action.

    b. **Note on the Definition of Actions**

Even though I have, along with Davidson and Bennett, treated actions as quantifiable entities, such an approach has not gained universal acceptance. How does one define a particular event or state for a given predicate? An example of recent discussion of this issue may be found in Kamp & Reyle (1993), which does indeed recognise the difficulties of using events within the field of Formal Logic, but nevertheless justifies their use in the 'Discourse Representation Structures' used in their work to capture natural language.

In this paper I have raised the additional question of whether 'processes' can be treated as quantifiable entities, but so far I have treated the concept of an action as given, and indeed I do not believe it can or need be defined in terms of an associated predicate. One possible definition, as an initial hypothesis, would be the change or continuation in the state of the instrument, where for example the 'instrument' might be implements, parts of the body, the senses, etc.

    c. **Note on activities**

As opposed to the passive voice, we may turn the agent into the subject of an intransitive verb, e.g. swatting at a fly. This is grammaticalised in some languages as the **anti-passive**, mainly to be found in the Caucasus, Australia and in Basque.

Here we might identify a concept of **activity**. How might we define this concept? I suggest we term it the *change or continuation in state* of the agent, as opposed to the action, which relates to the instrument.

We now capture agency by:

Agent(x, A) = Object(AA, x) ∧ Activity(AA, A)   with appropriate quantification of AA

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Towards Symbolic Occurrence Logic

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TIME

The standard view on the problem:

"All agree that space and time differ in their dimensionality, and all agree, even in a relativistic context, that the temporality of the world is not a spatial dimension."

– The Shorter Routledge Encyclopaedia of Philosophy . 2005

The Main Objective:

What has been called 'time' is conceptualisable by an alternative kind of Logic.

"The notion of succession produces that of time, which is nothing but a continuous succession of moments."

– Soave . 1804

"The notion of succession produces that of time, which is nothing but a continuous succession of moments."

– Soave . 1804

☛ 'Time' is an effect of something, and not vice versa.

is a RELATION

"Time is no entity in an ontological sense but a 'pure perceptual form [produced by] the senses."

– Kant . 1781

☛ 'Time' is an effect of something, and not vice versa.

is a RELATION

Definition (Flow of Time)

- A (discrete) flow of time (**T** , **<**) is a pair consisting of
  a **non-empty set T** of time points, and
  a **binary relation <** on **T** x **T**, called the immediate successor relation.
  ☛ It is <u>irreflexive</u>, <u>antisymmetric</u> and <u>transitive</u>.

Definition (Flow of Time)

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T

$T \times T$

T

Definition (Flow of Time)

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  a **non-empty set T** of time points, and
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T

T

Assume we had no time measurement devices, how could we know (logically) that time has passed ?

Definition (Flow of Time)

- A (discrete) flow of time (T , $<$) is a pair consisting of
a **non-empty set T** of time points, and
a **binary relation $<$** on T x T, called the immediate successor relation.
☞ It is <u>irreflexive</u>, <u>antisymmetric</u> and <u>transitive</u>.

Then,
Accept a few stipulations …

What is in logic and epistemology often called 'states of affairs' (including 'events') of the real world (whatever these things are) could be called LOCAL UNIVERSES (*LUs*).

LUs are made of ENTITIES and PROPERTIES.

At least *LUs* must be assumed to be represented in the minds of human beings.

We know that

- If *LU₁* and *LU₂* are SIMILAR (incorporate the same Entities and Properties) to each other then we will not be able to tell the difference, not even a 'time' difference.

- If *LU₁* and LU₂ *are* DISSIMILAR (having different Entities and Properties) we will still not be able to tell the 'time difference' (for instance as 'before' and 'after') unless we think that the occurrence of entities and/or properties in at least one of them indicates STRUCTURAL RELATIONS (e.g. causal relations, whatever that is) between the two *LUs*.

Background of Our Thought

1. The logical relationships between the occurrences of entities and/or properties is expressible by what Hans Götzsche calls an Occurrence Logic (Occ Log).

2. For the moment *i …*

   We could confine ourselves to clarifying the relation between tense logic and traditional symbolic logic.

Background of Our Thought

3. Considering LU_i and LU_j , We must be able to …

    a. Analyse the relationships between tense logic and symbolic logic for and only for the moment i.

    b. Analyse the relationships between tense logic and symbolic logic for and only for the moment j.

    c. Analyse the relationships between (a) and (b).

The Tense Logic Approach

- The logical language of tense logic contains, in addition to the usual <u>truth-functional operators</u>, four <u>fundamental modal operators</u> with intended meanings as follows:

1. P (Past) operates **'it has at some time been the case that . . . '**.

2. F (Future) operates **'it will at some time be the case that . . . '**.

3. H (Has always been) is a dual of P in the sense that it's equivalent to not - P - not. It operates **'it has always been the case that . . . '**.

4. G (always Going to be) is a dual of F in the sense that it's equivalent to not - F - not. It operates **'it will always going to be the case that . . . '**.

Occurrence Logic

Occ Log

- **Basic Idea:** Our approach is independent from truth-values and truth-functions.

✳ According to one of the predicaments of theories of time is the fact that …

> We cannot determine the truth-value of propositions about the future .

And

> The truth-value of propositions about the past may be rather intricate and unorganised .

- **Basic Idea:** Our approach is independent from truth-values and truth-functions.

✷ According to one of the predicaments of theories of time is the fact that …

We cannot determine the truth-value of propositions about the future .

And

The truth-value of propositions about the past may be rather intricate and unorganised .

- Basic Idea: Our approach is independent from truth-values and truth-functions.

We focus on the idea of developing formal Occurrence Logic, the capability of which is to describe the occurrence of things and their interrelations.

We are independent from truth-values and employ occurrence-values in our approach .

FORMALISM

Argument in Occ Log

To say that an argument in Occ Log is valid is to say that "**if the premises all follow from the occurrences, then the conclusion would 'necessarily' also follow from the occurrences**".

Premise 1. Occurrence (Concerned with an occurrence)

Premise 2. Occurrence (Concerned with an occurrence)

⋮

Premise n. Occurrence (Concerned with an occurrence)

_____

Conclusion. Occurrence (Concerned with an occurrence)

- In our formal system the occurrence of entities is described by, e.g., the formula

$$z \mathbin{°\!\!>} y \; : \; (y \text{ occ icc } z \text{ occ}) \equiv$$
$$(y \text{ occurs in case and only in case } z \text{ occurs})$$

- This expression has been labelled <u>Strong Implication</u> .

- z and y are not propositions, but occurrences (of entities, ie. events).

   - which either present (occur, take place) or are absent in certain functions in formal system.

   So the formula does not by itself express any kind of truth-dependent semantics.

Formulae in Occ Log

- The statement *A* is a formulae iff it meets these two requirements:

  a. *A* is not truth-functional.
  b. *A* describes 'an occurrence of an event' or describes 'an ordering of a number of events'.

- If *A* and *B* are formulas in Occ Log, then so are:

$$\neg A \ , \ A \wedge B \ , \ A \vee B \ , \ A \circ\!\!> B \ , \ B \circ\!\!> A \ , \ A \circ\!\!> B \circ\!\!> A$$

Fundamental Rules

$\neg\,(\,q \mathbin{^\circ\!\!>} p\,) \;\equiv\; p \mathbin{^\circ\!\!>} q$

$p \mathbin{^\circ\!\!>} q \;\equiv\; \neg\,p \mathbin{^\circ\!\!>} \neg\,q$

$p \mathbin{^\circ\!\!>} q$ is not valid in case and only in case q takes place and p doesn't take place.

$p \mathbin{^\circ\!\!>} q \mathbin{^\circ\!\!>} p$ is meaningful in case and only in case p and q take place together; otherwise $p \mathbin{^\circ\!\!>} q \mathbin{^\circ\!\!>} p$ is not meaningful.

Fundamental Axioms in Occ Log

N : *Now, Currently*

Axiom 1. (Past) : $\quad$ ***x** °> **N***

Axiom 2. (Future) : $\quad$ ***N** °> **x***

Axiom 3. (Has always been) : $\quad$ ***x** °°> **N***

Axiom 4. (Always Going to be) : $\quad$ ***N**°°> **x***

Fundamental Axioms in Occ Log

Axiom 5. What will always be, will be :

$$N \,°°{>}\, x \;\;\Rightarrow\;\; N \,°{>}\, x$$

Axiom 6. Whatever will always follow from what always will be, always will be :

$$[\,N \,°{>}\, (\,x \,°{>}\, y\,) \,°°{>}\, (\,x \,°{>}\, y\,)\,] \;\;\Rightarrow\;\; x \,°°{>}\, y$$

Axiom 7. If it will be the case that x, it will be - in between - that it will be the case that *x* :

$$N \,°{>}\, x \;\;\Rightarrow\;\; N \,°{>}\, °{>}\, x$$

Axiom 8. If it will never be that *x* then it will be that it will never be that *x* :

$$\neg\,(\,N^{\circ}\!>x\,)\;\;\Rightarrow\;\;[\;N^{\,\circ}\!>\neg(\,N^{\,\circ}\!>x\,)\;]$$

Axiom 9. What is, has always been going to be :

$$x\;\;\Rightarrow\;\;[\,x^{\,\circ\circ}\!>N^{\,\circ}\!>x\;\equiv\;x^{\,\circ\circ}\!>x\,]$$

Fundamental Axioms in Occ Log

Axiom 10. What is, will always have been :

$$N \; °°> x \; °> N$$

Axiom 11. Whatever has always followed from what always has been, always has been :

$$[\, (\, x \, °> y \,) \; °°> \; (\, x \, °> y \,) \; °> N \,] \;\; \Rightarrow \;\; x \; °°> y$$

Occ Log vs. Tense Logic

Thank You For Your Attention

www.cfl.hum.aau.dk

Interpreting Poems/Literal Forms: An Operator-Driven Semantic Transformation Perspective

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PREFACE

● Such a transformation is supposed to have been based on a **variety of operators** each being responsible for transforming a number of **propositions** into a **new semantic entity.**

● The Central point in all these issues is a sort of **transformation** with regard to a numbers of **propositions** that finally yield a **new semantic structure** standing for a **new mental mode.**

● Interpreting a text is a crucial cognitive ability which manifests well in a wide range of issues such as "generation of new ideas" as well as "creation of new pieces" (either scientific pieces or artistic pieces) and besides that "emergence of new feelings/ sentiments".

● The new mental mode can be a **new idea** or a **new feeling** in some way.
Based upon the Context, The **New Mental Mode,** as the outcome of interpretation, can be either Stable or Unstable. **Stability** goes back to the **Status of Justification** supporting the **Transformation Process.**

● **Obviously, based upon the complexity of a Subject**, result of interpretation may **become more complicated, making an " idea" tend to a " feeling"** as the outcome.

● Operators should be such that can **cover a wide spectrum of transformations** which are essential to **cognitive activities.**

PRESUPPOSITIONS

● What we are concerned about at the first place is to set a **Framework for justifying such a Transformation**, with no particular emphasis on **Whether or Not Result of Transformation is stable.**

● Our major presupposition is that ,
.. When certain patterns with **certain Semantic Structures** (Images, Literal Forms), which follow **certain Relational Structures among its constituents** (again with their own Semantic Structures), are exposed to a perceiver, expectation exists that **he/she may end up with a New Semantic Structure(at – one – glance Dif.) in his/ her Mind whose Content can be Anticipatable under certain circumstances.**

● The thing important at the first place is **to show that Such a Transformation is Existential (It Occurs).**

OPERATORS FOR SEMANTIC TRANSFORMATION

● **Mind** in response with different **Semantic Structures**, may converge into **new Semantic Stucture(s)** related to them in some way. These **Semantic Structures** can be **stored in STM** and subsequently be used in **human inference processing.**

● Operator responsible **for extracting common features**, out of some semantic entities as inputs.

Ex : Biology,Physics, Genetics , Chemistry
  → **cognizing the surrounding environment**

● Operator responsible **for characterizing a class**, out of some semantic entities as inputs.

Ex: Green, Red , Blue, Brown
  → **color (as a Natural Quality)**

● Operator resposible for **characterizing the scenario(s)** including a set of semantic entitie

Ex: Contemplating over points, trying to answer questions

→ **Spirit of research**

● Operator responsible for **extracting possible relations** between some semantic entities as inputs

Ex1: Love , Hatred
→ **Contrast,Difference,Conflict,...**

Ex2: Opening a book, Getting engaged with reading it, Going from one page to another
→ **Priority in order in reading**

● Operator responsible **for characterising an entity** through linking some semantic entities **(as objects)** as inputs

Ex1: Car, Handle
→ **Car's Handle**

Ex2: Flower, Leaf
→ **گلبرگ**

MENTAL MODELS

MENTAL MODELS

● Operator with schematic structure responsible for characterising the message behind a fact (or ensemble of some propositions)

Ex: "Insistence on something strange"
which means that
(i)   **"Doubt exists with regard to the common type of that thing"** /
(ii) "**There is lack of hope with regard to the common type of that thing"/**
(iii) **"One is tired of the common type of that thing(that is in relation with that thing".**

Types of Resultant

Feature

Association

Class

Relation

Scenario

Resultant

SOME SCENARIOS

● (a child's smile) ^ (sunshine)

innocence   hope gaiety   hope   gaiety

 (smile is bound with sunshine)

(1) **(smile of hope)**
(2) **(smile of gaiety)**
(3**) (smile of sunshine)**
(4) **(sunshine brings hope)**
(5) **(sunshine brings gaiety)**
(6) **(sunshine brings smile)**

THE SUN SHINES ON US BY DAY

● (<u>Dry flower</u> within a <u>book of poem</u>) (written on the page
some <u>poems with regard</u>
to man in search for meaning)

odor meaning   something genui

(1) (<u>odor</u> of <u>meaning</u>)
(2) (<u>odor</u> of <u>poem</u>)
(3) (<u>odor</u> of <u>search for meaning</u>)
(4) (<u>flower</u> of <u>meaning</u>)
(5) (<u>poem</u> is just like a <u>flower</u>)

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On Poem Interpretation

● **Literal Forms** , and /or **Descriptive Structures** such as **Mystical Poems** , have the ability to involve the **Listener** in a sort of **Phenomenological Interaction** with itselves in a way that **particular Messages** get to **emerge** in his/her Mind.

● This is probably due to the fact that, in a text with **expressive structure** , the poet just expresses a situation , with no particular attempt to preach the listener.
- That yields any factor which may be barrier to **a Natural Process** of **Interaction** between the **Listener** and **the Poem**.
- More over opportunity is provided for the **Listener** to get **engaged** with a kind of **experience** similar to the one belonging to the **Poet**, and **taste in reality** the content of their expressions through **Imagination**.
- This leads to **a Tacit Interaction** between the **Listener** and **the Poet** as the **Creator of the poem**.

AN EXAMPLE OF MYSTICAL POEM

● You bird, talk language of birds
I know to hear what you mean

ای مرغ بگو زبان مرغان   من دانم رمز توشنیدن

Insis. On

Something strange

Insis. On

Something strange

Operator of "extracting feature"

Insistence on the ability of hearing the birds

Insistence on the ability of hearing the birds

Operator of "changing modality"

I know to hear what you mean

Fusion Spaces

You bird, talk language of birds

SOME POSSIBLE SCHEMATIC STRUCTURES

" **Insistence on something strange** " **may mean:**

● Having doubt about its common type
● Lack of hope (disappointment) on its common type
● Being tired of the common type (that is in relation with human-being)

… However, depending on **the Context**, and the other **Bayts** coming beside this Bayt, other interpretations are conceivable as well.

SCHEMAS

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(From world to world we face so many images belonging to different visages)

…   A thing occurring in many contexts
that means
the thing is so numerous

(Which of these images in reality belongs to us)

کدامست زین نقش ها آن ما

…   Putting the possession of a thing under question
that means

individual related to it **(**either the one who possesses it, the one who is an object for it.
Or the one being informed of it**)**, is probably not fully aware of it
(holds a sort of uncertainty in grasping the nature of that thing**)**

CONCLUDING REMARKS

● **Semantic Transformation/Semantic Fusion** can be viewed as a ground for **Interpretation** which manifest well in issues like "idea generation", "creation of new pieces" as well as "emergence of new feeling".

● **Operators** ruling over such a proccess , are rooted in **Semantics**, **Psychology** and **Wisdomics** which are concerned with Propositions As Semantic Structures.

FUTURE PROSPECTS

As **Future Research Programs** one may mention:

/ How **Such Operators** can be stored
in a way to **Well Appear/ Participate** in the **process**
of **Transformation**

/ How Schematic structures may be derived using a
meta-domain theory and how they may influence
such a **Process of Transformation**

/ What could be role of "**context**" in deriving
"**schematic structures**"

On the influence of similarity on phonetic transfer during the acquisition of German words by Danish learners.

Results from an experimental study

Lars Behnke,
26th Conference on Scandinavian Linguistics,
University of Aalborg

Danish accent (= „negative transfer")
in German words

	L1 (Ger)	L2 (Danish accent)	Initial	Medial	Final
Fricatives	[z]	[s]	*Sessel* [zˈɛsl̩] 'armchair'	*Pinsel* [pˈɪnzl̩] ‚paintbrush'	---
	[χ]	[k] ([ç],[ʃ],∅)	---	Intervocalically: *Drache* [dʁˈaxə] ‚dragon', Before [t]: *Docht* [dɔxt] ‚wick'	*Loch* [lɔ χ] ‚hole'
Plosives	[pʰ], [tʰ], [kʰ]	[b̥], [d̥], [g̊]	---	*Klippe* [klˈɪpə] 'cliff', *Motte* [mˈɔtə] 'moth', *Spucke* [ʃpˈʊkə] 'spit'	---

Danish accent (= „negative transfer")
in cognates vs. non-cognates

- „Cognates":
  Lexical items with semantic and formal similarity

Cognate		Non-Cognate	
Ger. *Klippe* [klˈɪpə] 'cliff'	Dan: *klippe* [ˈklebə]	Ger. *Grippe* [gʁˈɪpə] 'flu'	Dan: *influenza* [enfluˈɛnsa]

- „Positive transfer" is an effective learning strategy when applied to cognates

Hypothesis I

- Hypothesis: „Cognate effect"

Cognate		Non-Cognate	
Ger. *Klippe* [klˈɪpə]	Dan: *klippe* [ˈklebə]	Ger. *Grippe* [gʁˈɪpə]	Dan: *influenza* [enfluˈɛnsa]
Ger. L2: [ˈklebə]		Ger. L2: [gʁˈɪpə]	

- Lexical transfer is prior to phonetic transfer in that it entails phonetic transfer within that word, which might itself be „negative"

Research on Cognates

- Tests involving cognates help to get insight into the structure of the bilingual lexicon

- Cognate facilitation effect (faster word recognition in bilinguals than in monolinguals) (Costa, Caramazza, Sebastian-Galles 2000)

- Focus on word production, not phonetic accuracy

- Focus on bilinguals, not foreign language learners

Research on Cognates

- English-Spanish bilinguals
- E.g. *teléfono (*Amengual 2012)*, taco* (Flege & Munro 1994)
- VOT in [t]
- English (monolingual)

- Spanish (monolingual)

- Spanish (bilingual)

Hypothesis II

[ʁ]   [ɹ]

French: *route*   English: *route*

French learners of English (and vice versa) tend to perceive a phonetic similarity between the two r-sounds, when they appear in cognates, although they are rather dissimilar on the purely phonetic side (Odlin 1989).

Hypothesis II

$$[z] = [s]$$
$$[\chi] = [k]$$
$$[p^h] = [b̥]$$
$$[t^h] = [d̥]$$
$$[k^h] = [g̥]$$

→ The degree of similarity between corresponding sounds in two languages play a role for the accuracy with which the sounds are realized as L2-sounds in cognates.

→ A sufficient degree of dissimilarity might overrule a cognate effect (Flege 1995)

Hypothesis II

Flege's Speech Learning Model (1995):

- Correlation between the degree of similarity of L1- and L2-sounds and the accuracy with which these sounds can be acquired
- Sound correspondences are perceived at the allophonic level
- Dissimilar L2-sounds (i.e. with „no" corresponding L1-sound) are easier to produce accurately than similar sounds
- New sound categories are more easliy established for dissimilar L2-sounds
- Similar sounds in the L2 lead to „merged" sound categories
- No reference to lexical level

Experiment - Informants

Group A

- *n* = 14
- Learners of German as a Foreign Language
- Copenhagen Area
- German as L3
- Age: Ø 15,1
- 9th class of Folkeskole
- Low proficiency
  - no use of German outside the class roomcontact
  - no contact with Germans
  - no German media

Group B

- *n* =11
- Learners of German as a Foreign Language
- Copenhagen Area
- German as L3
- Age: Ø 39,5
- B1/B2 course at Studieskole
- Higher proficiency
  - B1/B2
  - use of German at work or with friends
  - occasional use of German media

Experiment – Procedure

- Disguised as „Word learning test"

- Pre-Test to find unfamiliar words:

På Capri er der en berømt blå grotte.
Auf Capri gibt es eine berühmte blaue
_____ (grotte).

- 36 unfamiliar words were selected for part 2

Experiment – Procedure

Recording of utterances and selection of sounds

Sessel – Höcker – Steppe - Schach

1. *Elefanter trækker over den afrikanske steppe.*
   Elefanten ziehen durch die _____ Afrikas.

2. *En dromedar har en pukkel.*
   Ein Dromedar hat einen _____.

3. *Bedstemor sad ofte i lænestolen.*
   Oma saß oft im _____.

4. *Karpow er verdensmester i skak.*
   Karpow ist Weltmeister im _____.

Experiment - Analysis

- Assessment of „accent" on the basis of acoustic and articulatory parameters

- Analysis with PRAAT

- Parameters:
  - Realizations of [z]: Duration, Center of Gravity
  - Realizations of [χ]: Manner of articulation, Center of Gravity
  - Realizations of [pʰ], [tʰ], [kʰ]: VOT, Manner of articulation

- Gradual notion of negative transfer: significant more values that are more Danish-like, e.g. if the average L2-realization of [z] is significantly longer (and therefore more like in Danish) [s]

Experiment – Initial [z]

	German (L2)	Danish (L1)
Cognates	*Sorte* [ˈzɔʁtə] ‚sort'	*sorte* [ˈsɔːⁱd]
	Säbel [zˈɛːbl̩] ‚saber'	*sabel* [ˈsaːˈbəl]
Non-Cognates	*Sessel* [zˈɛsl̩] 'armchair'	*lænestol* [ˈlæˈnəˌsdoˈl]
	Sarg [zaʁk] 'coffin'	*kiste* [ˈkiːsdə]
	Saite [zˈaɛ̯tə] 'string'	*streng* [ˈsdræŋˈ]

Results: Duration of L2-Realizations of initial [z]

L1-realization of *Säbel*

L2-realization of *Säbel*

Duration of L2-Realizations of initial [z]

General results for [z]

- Group B showed more accurate L2-values for duration for non-cognates both in medial and initial position
- Group A made no siginificant difference between cognates and non-cognates in neither position and neither for duration nor for CoG
- Group B showed more L2-like Center-of-Gravity-values for [z] for cognates in medial position only

→ Indication of cognate effect for [z]?

Interpretation of cognate effect for [z]

High proficiency level:

- With growing level of proficiency L1-words get more involved in the learning process

- Learning becomes more „systematic"

- Non-cognates are acquired segmentally, cognates are acquired „holistically"

- This leads to negative transfer on the phonetic side of cognates, while non-cognates are acquired without activation of L1

Low proficiency level:

- No activation of lexical L1-representations, all new words are equally new

Results for [χ], [pʰ], [tʰ], [kʰ]

No cognate effect could be observed for neither of the acoustic or articulatory parameters used.

There was considerable variation in the L2-realizations.

Why?

1. There is nothing like a cognate effect (the data for [z] should be explained in different terms)

2. The words selected differed in other respects (e.g. cognate *Kachel* [kˈaxl̩] ‚tile' vs. non-cognate *Stachel* [ʃtˈaxl̩] ‚sting')

3. The differences between the sounds are the result of different degrees of similarity

Theoretical implications

- If we assume that [z] and [s] are more similar than [χ] and [k], then the different behavior of the sounds with regard to cognates might be the result of their differing degrees in perceived similarity. (But on what basis are s-z more similar than χ -k?)

- If the L2-sounds that show no cognate effect are too dissimilar from their corresponding L1-sounds, why are they not all produced correctly, but rather show a high degree of variation?

- If there is a cognate effect of this kind then Flege's Speech Learning Model, which predicts different learning outcomes according to similarity of sounds, should be supplemented by a lexical factor, because the same L2-sounds can be acquired with more or less success, depending on whether they are part of cognates or non-cognates

Thank you for your attention!

The relative order of pronominal clitics in Squliq Atayal: "Citation etiquette beyond Thunderdome" revisited

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This talk looks at two issues:

First, it demonstrates the cross-linguistic significance of Squliq Atayal (part of the Atayalic subgroup, all spoken in northern Taiwan) within a typology of how clitic pronouns are ordered relative to each other. Whereas most languages use morphosemantic properties (such as person, semantic roles, or grammatical relations) to determine this ordering, Squliq Atayal—along with a number of languages in the central and western Philippines and Modern Hebrew—uses a phonological property:

If both pronouns are speech-act participants, the primary ordering criterion is the number of syllables, with monosyllabic clitics being initial (Liao 2004, 2005).

The second issue, reflected in my talk's subtitle, has to do with the way that such data have been reported in the literature. This talk reviews the findings of several authors (namely: Holmer 1993; Huang 1989, 1993; Liao 2004, 2005; Rau 1992) and shows how failure to include data from prior publications casts doubt on their own proposals. Had these authors simply looked up the dozen-or-so pronouns in the published dictionary (Egerod 1980[/1999]), which contains sentential examples for each headword, then much more evidence would have been available. The current situation, combining the various studies' findings, then summarizes this talk.

The pronoun inventory in Squliq Atayal

PERSON/ NUMBER	CASE			
	ABS *clitic*	ERG *clitic*	CORE *free*	LOC *free*
1SG	sakuʔ ~ kuʔ	makuʔ ~ mu	kuziŋ ~ kun	knan
EXCL1PL	sami	mjan	sami	sminan
INCL1PL	taʔ	taʔ	itaʔ	itan
2SG	suʔ	suʔ	isuʔ	sunan
2PL	simu	mamu	simu	smunan
3SG	Ø	njaʔ	hijaʔ	hijan
3PL		nhaʔ	hgaʔ	hgan

[based mainly on Liao (2004:327, 2005:49); transcription (to IPA) and case labels changed here and below]

The pronoun inventory in Squliq Atayal

PERSON/ NUMBER	CASE			
	ABS *clitic*	ERG *clitic*	CORE *free*	LOC *free*
1SG	sakuʔ ~ kuʔ	makuʔ ~ mu	kuziŋ ~ kun	knan
EXCL1PL	sami	mjan	sami	sminan
INCL1PL	taʔ	taʔ	itaʔ	itan
2SG	suʔ	suʔ	isuʔ	sunan
2PL	simu	mamu	simu	smunan
3SG	Ø	njaʔ	hijaʔ	hijan
3PL		nhaʔ	hgaʔ	hgan

Red shows syncretisms between ABS clitic and core free.
Yellow shows syncretisms between the clitic paradigms.
(Both of these are shown only on this slide).

The pronoun inventory in Squliq Atayal

PERSON/ NUMBER	CASE			
	ABS *clitic*	ERG *clitic*	CORE *free*	LOC *free*
1SG	**sakuʔ ~ kuʔ**	makuʔ ~ mu	kuziŋ ~ kun	knan
EXCL1PL	**sami**	mjan	sami	sminan
INCL1PL	**taʔ**	taʔ	itaʔ	itan
2SG	**suʔ**	suʔ	isuʔ	sunan
2PL	**simu**	mamu	simu	smunan
3SG	Ø	njaʔ	hijaʔ	hijan
3PL		nhaʔ	hgaʔ	hgan

Bold = absolutive case/Undergoer.

Underlining = ergative case/Actor.

The pronoun inventory in Squliq Atayal

PERSON/ NUMBER	CASE			
	ABS *clitic*	ERG *clitic*	CORE *free*	LOC *free*
1SG	***sakuʔ*** ~ **kuʔ**	*makuʔ* ~ mu	*kuziŋ* ~ kun	knan
EXCL1PL	***sami***	mjan	*sami*	*sminan*
INCL1PL	**taʔ**	taʔ	*itaʔ*	*itan*
2SG	**suʔ**	suʔ	*isuʔ*	*sunan*
2PL	***simu***	*mamu*	*simu*	*smunan*
3SG	Ø	njaʔ	*hijaʔ*	*hijan*
3PL		nhaʔ	*hgaʔ*	hgan

Italics = any disyllabic pronouns. (Combinations of italics with either bold or underlining are possible.)

1. A very brief typology of cluster-internal pronominal ordering

- Based on grammatical person (i.e., 1st > 2nd > 3rd):
  - Various Manobo languages, southern Philippines
  - Plngawan Ts'uli' Atayal
- Semantic-role based (Actor first):
  - Tausug and Mamanwa, southern Philippines
  - Kavalan, eastern Taiwan
- Based on grammatical relations (subject-first order):
  - Mantauran Rukai, southern Taiwan
  - Seediq, also Atayalic

2. Internal ordering of two clitic pronouns

There is a sharp historiographic distinction between (i) data where a linguist points out explicitly the relative order of two pronouns and (ii) data that are listed with clausemate clitic pronouns where pronominal ordering is not discussed as such. Before dealing with those two types of data, I show how various work-around strategies are employed (for example, with a single portmanteau pronoun) in Squliq Atayal.

2.1 Work-arounds, without an overt cluster

What sets Arthur Holmer's 1993 Lund working paper apart from the other publications on Squliq Atayal is his observation that the most common solution when there are two pronominal arguments in a transitive clause is for the ABS Undergoer to be overt and for the ERG Actor to be inaudible (1993:86): "there appear to be restrictions […]. 1st and 2nd person pronouns scarcely ever co-occur in preverbal position, relations between the two being expressed by special pronouns such as *misuʔ*, or by simple [absolutive] pronouns such as *sakuʔ*." Numerous authors also observe that ABS.1SG /*sakuʔ*/ by itself can be used in place of an overt cluster with ERG.2SG /suʔ/.

Ways to avoid an overt pronoun cluster

Abs \ Erg		+me −you −pl	+me −you +pl	+me +you +pl	−me +you −pl	−me +you +pl	−me −you −pl	−me −you +pl
		mu ~ *maku?*	mjan	ta?	su?	*mamu*	nja?	nha?
+me, −you −pl	**ku? ~ *saku?***				*saku?*	*saku?* **???**		
+me, −you +pl	***sami***				*sami*	*sami* **???**		
+me, +you +pl	**ta?**							
−me, +you −pl	**su?**	*misu?*						
−me, +you +pl	***simu***	*simu*	*simu*					
−me, −you ±pl	**Ø**	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Slide 11

2.2 Pronominal sequences overtly discussed

The works that discuss relevant new data regarding the relative order of two bound personal pronouns are—in chronological order—Huang (1989), Rau (1992), Liao (2004, 2005), and Li (2010).

Two other studies, Holmer (1993) and Huang (1993), are deriviative and not discussed further.

"Take any mutually relevant set of works on a specific problem. Construct a matrix with the works listed, down and across, in chronological order of appearance. For each cell […], enter a *yes* if the work at that row cites the work at that column on the problem or topic in question. Enter a *no* for each case of no citation. Discard the upper right quadrant of the square (since a work cannot be cited before its appearance). Also discard all self-citation cells - the diagonal […]." (**Pullum** 1988:579/1991:148; my *yes*, *no* replace his *plus*, *minus* [respectively])

Who cites whom?
Publications about Squliq Atayal that
explicitly discuss cluster-internal ordering

	Huang 1989	Rau 1992	Holmer 1993	Huang 1993	Liao 2004	Liao 2005	Li 2010
Huang 1989	—						
Rau 1992	yes	—					
Holmer 1993	*no*	*no*	—	*no*			
Huang 1993	yes	yes	*no*	—			
Liao 2004	yes	yes	*no*	yes	—		
Liao 2005	yes	yes	*no*	yes	yes	—	
Li 2010	yes	yes	*no*	*no*	yes	yes	—

The seven aforementioned works agree on one key point. ***Local*** (also known as speech-act-participant) pronouns precede ***Remote*** (a.k.a. third-person) pronouns. This is true of Atayalic overall as far as I know.

Pronoun clusters discussed in Li (2010)

Abs \ Erg	+me −you −pl	+me −you +pl	+me +you +pl	−me +you −pl	−me +you +pl	−me −you −pl	−me −you +pl
	mu ~ _maku?_	mjan	ta?	su?	_mamu ~ momu_	nja?	nha?
ku? ~ (+me −you −pl)					ku? _momu_	ku? nja?	ku? nha?
saku? (+me −you −pl)				su? _saku?_		saku? nja?	_saku?_ nha?
sami (+me −you +pl)						_sami_ nja?	_sami_ nha?
ta? (+me +you +pl)						ta? nja?	ta? nha?
su? (−me +you −pl)						su? nja?	su? nha?
simu (−me +you +pl)						_simu_ nja?	_simu_ nha?

Clusters discussed in Liao (2004, 2005)

Abs \ Erg	+me −you −pl mu ~ *maku?*	+me −you +pl mjan	+me +you +pl ta?	−me +you −pl su?	−me +you +pl *mamu ~ momu*	−me −you −pl nja?	−me −you +pl nha?
+me −you −pl ku? ~					**ku?** *momu*	**ku?** nja?	
+me −you −pl *saku?*				su? *saku?*		*saku?* nja?	
+me −you +pl *sami*							
+me +you +pl ta?						**ta?** nja?	
−me +you −pl su?						**su?** nja?	
−me +you +pl *simu*							

Slide 17

Pronoun clusters discussed in Rau (1992)

Abs \ Erg	+me −you −pl		+me −you +pl	+me +you +pl	−me +you −pl	−me +you +pl	−me −you −pl	−me −you +pl
	mu ~ *maku?*		mjan	ta?	su?	*mamu ~ momu*	nja?	nha?
ku? ~ (+me −you −pl)						**ku?** *momu*	**ku?** nja?	**ku?** nha?
saku? (+me −you −pl)							*saku?* nja?	
sami (+me −you +pl)								
ta? (+me +you +pl)							**ta?** nja?	
su? (−me +you −pl)							**su?** nja?	
simu (−me +you +pl)							*simu* nja?	*simu* nha?

Clusters discussed in Huang (1989)

Abs \ Erg	+me −you −pl mu ~ *makuʔ*	*makuʔ*	+me −you +pl mjan	+me +you +pl taʔ	−me +you −pl suʔ	−me +you +pl *mamu ~ momu*	−me −you −pl njaʔ	−me −you +pl nhaʔ
+me −you −pl kuʔ ~ *sakuʔ*					suʔ *sakuʔ*		*sakuʔ* njaʔ	
+me −you +pl *sami*								
+me +you +pl taʔ								
−me +you −pl suʔ							suʔ njaʔ	
−me +you +pl *simu*								

Slide 19

2.3 Data heretofore published but not discussed in terms of pronominal ordering

There remain six cells of the table not yet discussed using overt clusters:

	Actor (ERG case)	Undergoer (ABS case)
a.	1SG /*makuʔ*/ ~ /muʔ/	2SG /**suʔ**/
b.	1SG /*makuʔ*/ ~ /muʔ/	2PL /**simu**/
c.	EXCL1PL /mjan/	2SG/**suʔ**/
d.	EXCL1PL /mjan/	2PL /**simu**/
e.	2SG /suʔ/	EXCL1PL /**sami**/
f.	2PL /*mamu*/ ~ /*momu*/	EXCL1PL /**sami**/

Published pronoun clusters in Egerod (1980)

Abs \ Erg	+me −you −pl mu ~ / makuʔ	+me −you +pl mjan	+me +you +pl taʔ	−me +you −pl suʔ	−me +you +pl mamu ~ momu	−me −you −pl njaʔ	−me −you +pl nhaʔ
+me −you −pl kuʔ ~					kuʔ *mamu*	kuʔ njaʔ	
+me −you −pl *sakuʔ*						*sakuʔ* njaʔ	*sakuʔ* nhaʔ
+me −you +pl *sami*				suʔ *sami*		*sami* njaʔ	
+me +you +pl taʔ						taʔ njaʔ	
−me +you −pl suʔ		mjan suʔ				suʔ njaʔ	suʔ nhaʔ
−me +you +pl *simu*						*simu* njaʔ	

Slide 21

Published clusters *as of* Huang (1989)

Abs \ Erg	+me −you −pl mu ~ *maku?*	+me −you +pl mjan	+me +you +pl ta?	−me +you −pl su?	−me +you +pl *mamu ~ momu*	−me −you −pl nja?	−me −you +pl nha?
+me −you −pl **ku? ~**				(blue)	**ku?** *mamu*	**ku?** nja?	
+me −you −pl *saku?*				su? *saku?*	(green)	*saku?* nja?	*saku?* nha?
+me −you +pl *sami*				su? *sami*	(green)	*sami* nja?	
+me +you +pl **ta?**						**ta?** nja?	
−me +you −pl **su?**	(blue) (yellow)	mjan **su?**				**su?** nja?	**su?** nha?
−me +you +pl *simu*	(yellow) (green) (yellow)					*simu* nja?	

Slide 22

Published clusters *as of* Rau (1992)

Abs \ Erg	+me −you −pl mu ~ *makuʔ*	+me −you +pl mjan	+me +you +pl taʔ	−me +you −pl suʔ	−me +you +pl *mamu ~ momu*	−me −you −pl njaʔ	−me −you +pl nhaʔ
kuʔ ~ (+me −you −pl)				(blue)	**kuʔ** *mamu*	**kuʔ** njaʔ	**kuʔ** nhaʔ
sakuʔ				suʔ *sakuʔ*	(green)	*sakuʔ* njaʔ	*sakuʔ* nhaʔ
sami (+me −you +pl)				suʔ *sami*	(green)	*sami* njaʔ	*sami* nhaʔ
taʔ (+me +you +pl)						**taʔ** njaʔ	**taʔ** nhaʔ
suʔ (−me +you −pl)	(blue)	(yellow)	mjan **suʔ**			**suʔ** njaʔ	**suʔ** nhaʔ
simu (−me +you +pl)	(yellow)	(green)	(yellow)			*simu* njaʔ	*simu* nhaʔ

Slide 23

Published clusters *as of* Huang (1993)

Abs \ Erg	+me −you −pl mu ~ *maku?*	+me −you +pl mjan	+me +you +pl ta?	−me +you −pl su?	−me +you +pl *mamu ~ momu*	−me −you −pl nja?	−me −you +pl nha?
ku? ~ (+me −you −pl)					**ku?** *mamu*	**ku?** nja?	**ku?** nha?
saku?				su? *saku?*		**saku?** nja?	*saku?* nha?
sami (+me −you +pl)				su? *sami*		*sami* nja?	*sami* nha?
ta? (+me +you +pl)						**ta?** nja?	**ta?** nha?
su? (−me +you −pl)		mjan **su?**				**su?** nja?	**su?** nha?
simu (−me +you +pl)						*simu* nja?	*simu* nha?

Published clusters *as of* Liao (2004, 2005)

Abs \ Erg	+me −you −pl (mu ~ *makuʔ*)	+me −you +pl (mjan)	+me +you +pl (taʔ)	−me +you −pl (suʔ)	−me +you +pl (*mamu ~ momu*)	−me −you −pl (njaʔ)	−me −you +pl (nhaʔ)
kuʔ ~ (+me −you −pl)					**kuʔ** *mamu*	**kuʔ** njaʔ	**kuʔ** nhaʔ
sakuʔ				suʔ *saku ʔ*		***sakuʔ*** njaʔ	***sakuʔ*** nhaʔ
sami (+me −you +pl)				suʔ ***sami***		***sami*** njaʔ	***sami*** nhaʔ
taʔ (+me +you +pl)						**taʔ** njaʔ	**taʔ** nhaʔ
suʔ (−me +you −pl)		mjan **suʔ**				**suʔ** njaʔ	**suʔ** nhaʔ
simu (−me +you +pl)						***simu*** njaʔ	***simu*** nhaʔ

Slide 25

3. Further issues: cluster-external ordering

Abs \ Erg		+me, –you, –pl: mu ~ *maku?*	+me, –you, +pl: mjan	+me, +you, +pl: ta?	–me, +you, –pl: su?	–me, +you, +pl: *mamu ~ momu*	–me, –you, –pl: nja?	–me, –you, +pl: nha?
+me –you –pl	**ku?** ~					X_V / X_XV	V_ / X_V / X_XV	V_ / X_V / X_XV
	saku?				V_ / X_V	V_	V_ / X_V	V_ / X_V
+me –you +pl	*sami*				X_XV		V_ / X_V / X_XV	X_V
+me +you +pl	**ta?**						V_ / X_V	V_ / X_V / X_XV
–me +you –pl	**su?**		X_V				V_ / X_V	V_ / X_V
–me +you +pl	*simu*						V_ / X_V	V_ / X_V

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Amnesty International (AI) and Philanthropic Fundraising (PF) Appeals: A Comparative Move Analysis

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AI and PF Appeals: A Comparative Move Analysis

Introduction:

- Move analysis is an aspect of genre analysis
- Genres comprise patterns of information organization and linguistic expressions designed to achieve particular communicative purposes
- Move analysis identifies the communicative purposes of the genre and of the constituent moves and steps that enact the purpose of the whole
- Well-understood approach to study of genres
- Basis for comparison of genres
- Basis for contextual study of linguistic elements and their functions

AI and PF Appeals: A Comparative Move Analysis

Focus of the study: AI appeal letters

What are these?

Letters written by AI staffers, emailed to, and (revised) and forwarded by, AI volunteers to government officials on behalf of "Prisoners of Conscience" and related causes (http://www.amnestyusa.org/our-work/issues/prisoners-and-people-at-risk/prisoners-of-conscience)

Database/corpus of AI letters study:

30 letters; 9674 words; avg. 322.5 words

PF letters: Direct mail fund-raising letters from non-profit organizations; 242 letters (Biber, Connor, & Upton 2007: 54-6) **(BCU)**

AI and PF Appeals: A Comparative Move Analysis

Example AI letter:

Message Recipients: Yuri Yakovlevich Chaika - Prosecutor General

Subject: Free Nadezhda Tolokonnikova and Maria Alekhina

Dear Prosecutor General,

I am writing to express my deep concern about Nadezhda Tolokonnikova and Maria Alekhina, who were sentenced to two years in a penal colony for their participation in a February 2012 protest action by the feminist punk-rock group Pussy Riot at the Christ the Savior Cathedral in Moscow. These two women, both mothers in their twenties, were detained solely for their peaceful expression of their beliefs. They are Prisoners of Conscience.

I call on you to ensure that Maria Alekhina and Nadezhda Tolokonnikova are immediately and unconditionally released. While they remain incarcerated, the two women must not be ill-treated by prison staff or inmates, and they must be allowed regular contact with their families and legal teams.

In closing, I welcome the news of Ekaterina Samutsevich's freedom, but remain concerned about the conditional status of the release. The three Pussy Riot members should not have been prosecuted in the first place. I call on you and all authorities to respect and uphold the right to freedom of expression in the Russian Federation, and to remedy the unjust treatment of these young women immediately.

I thank you for your attention.

Yours sincerely,

AI and PF Appeals: A Comparative Move Analysis

Why study AI appeal letters?

- No one has done it before, so, adds to our knowledge of genres
- Their extreme exigence, e.g., impending execution
- Their relation to functionally similar genres, e.g., PF letters, protest placards (cf. *Free Nadezhda Tolokonnikova and Maria Alekhina*)
- Their management of ideological commitments and conflicts
- Their management of the power differential between senders and addressees
- Their management of stance and engagement
- Opportunity to examine the motivations underlying the characteristic linguistic choices of the genre by relating the language to the moves and steps—previous analysts content to make lists and quantify frequencies of expressions, leaving relations implicit
- Opportunity to study re-entextualization/re-contextualization processes by examining their relations with contextually relevant genres, texts, e.g., embedding emails, AI webpage documents, newsreports, etc.

AI and PF Appeals: A Comparative Move Analysis

How the two genres are similar:

- Both are eleemosynary appeals and thus imply that the writers do not have the power to force compliance by the addressees, so they have to be persuasive
- Both are letters: PF "direct mail letters" (BCU p. 44); AI email letters
- Both can be viewed as containing problem/solution texts
- Both attempt to persuade their addressees that a situation is a problem
- The writers/senders of the letters want something the addressee has or can do to (help) solve that problem
- The writers attempt to persuade their addressees to do something to (help) bring about the change
- The writers have good reasons for their requests
- Addressees of both have the power to deny or accede to writers' requests
- Both require skillful management of relations between writers and addressees
- The writers' requests compete with other demands on the addressee's time and resources, etc.
- Both are instruments in the sending organizations' fundraising efforts, PF directly, AI indirectly

AI and PF Appeals: A Comparative Move Analysis

How the two genres differ:

PF letters:

- Address broad range of chronic social problems (health/human services, environment,   community development, education, arts/culture), typically not individual   violations of human rights
- Mass, hard-copy mailings
- Each addressee receives one letter
- Addressees are "ordinary" people
- From a single sender
- Designed to persuade individual potential donors by single appeal
- Appeal mainly to pathos: "Dear Mr. D., It is impossible to be unmoved by . . ." (IRC appeal) "to…wrench one's heart" (BCU p. 43)
- Come with various inserts: photos of pathetic but photogenic people or animals, gifts (why?)
- Addressees not implicated in the problem situation
- Very carefully written, probably by experts in the crafting of such letters
- Signed by the CEO or other high-ranking officer of the sending organization
- On variously colored, good-quality paper
- Successful if some fraction of addressees donate money or time
- Related to sales letters and job applications (BCU p. 44), business letters (Pike 1992:   249)

AI and PF Appeals: A Comparative Move Analysis

How the two genres differ:

AI appeals:

- Address violations of human rights, typically of individuals, sometimes classes of individuals: "We campaign for a world where human rights are enjoyed by all." (AI webpage https://www.amnesty.org/en/)
- Often addressed to multiple individuals
- Addressees are powerful government officials
- Addressees may be implicated in the problem situation
- Addressees are sent multiple black and white email letters, no inserts/gifts (why not?)
- From multiple senders (often many thousands of senders)
- Designed to persuade by demonstrating widespread concern or condemnation about an   acute situation, i.e., by numbers
- Based on ideology of universal human rights and humanitarian law, i.e., on logos
- Successful if the addressees act as directed in the letters
- Writing not highly polished
- Related to protest placards:
  Compare: Placard [FREE PUSSY RIOT]
  Subject: Free Nadezhda Tolokonnikova and Maria Alekhina

AI and PF Appeals: A Comparative Move Analysis

What's involved in a move analysis?
BCU Approach: top-down corpus-based analyses of discourse organization (Upton and Cohen 2013. Table 1)

Required step in the analysis	Realization in this approach
1. Communicative/functional categories	Develop the analytical framework: determine set of possible functional types of discourse units, that is, the major communicative functions that discourse units can serve in the corpus
2. Segmentation	Segment each text into discourse units (applying the analytic framework from Step 1)
3. Classification	Identify the functional type of each discourse unit in each text of the corpus (applying the analytic framework from Step 1)
4. Linguistic analysis of each unit	Analyze the lexical/grammatical characteristics of each discourse unit in each text of the corpus
5. Linguistic description of discourse	Describe the typical linguistic characteristics of each functional categories category, based on analysis of all discourse units of a particular functional type in the corpus
6. Text structure	Analyze complete text as sequences of discourse units shifting among the different functional types
7. Discourse organizational tendencies	Describe the general patterns of discourse organization across all texts in the corpus

AI and PF Appeals: A Comparative Move Analysis

Biber et al's analysis of PF letters—structural/moves:

Structural elements:

    A. Date line

    B. Address of sender

    C. Salutation

    D. Complimentary close ("Sincerely . . .")

    E. Signature of sender

    F. Signature footer (printed name and/or title of signer)

    G. Footnote information (other information the addressee should know, including reminder about a return envelope, and any carbon copies)

AI and PF Appeals: A Comparative Move Analysis

PF letters moves and steps (BCU p. 52):

M1 Get the reader's attention
>Step 1 Pleasantries
>Step 2 Quotation, story or shocking/unexpected statement

M2 Introduce the cause and/or establish the credentials of the organization sending the letter
>Step 1 Indicate general problem/need
>Step 2 Highlight specific problem/need
>Step 3 Highlight success of past organization efforts
>Step 4 Outline the mission of the organization

M3 Solicit a response
>Step 1 Solicit financial support
>>*Step 1A* State benefit of support to the need/problem
>>*Step 1B* Ask directly for pledge/donation
>>*Step 1C* Remind of past support to encourage future support
>Step 2 Solicit other response

M4 Offer incentives
>Step1 Offer of tangible incentive
>Step 2 Offer of intangible incentive

M5 Reference any inserts

M6 Express gratitude
>Step 1 Thanks for past financial or other support
>Step 2 Thanks for current and future financial or other support

M7 Conclude with pleasantries

AI and PF Appeals: A Comparative Move Analysis

AI appeals—structural elements:

A. Message recipients: list (e.g., **Message Recipients:** James Caldwell - Attorney General of Louisiana, Bobby Jindal - Governor of Louisiana, James M. LeBlanc - Secretary, Department of Public Safety, Jocelyn Samuels - Acting Assistant Attorney General)

B. Subject: line (e.g., **Subject:** Grant Albert Woodfox his freedom)

(cf. protest placards e.g.,

[TIME IS RUNNING OUT. STOP GLOBAL WARMING])

C. To: line (e.g., **To:** President Obama) or Salutation (cf. BCU structural element C) (e.g., Dear President Obama,)

D. Announcement of imminent closing (e.g., In closing,)

E. Complimentary close (e.g., Yours sincerely,)

AI and PF Appeals: A Comparative Move Analysis

Move analysis of AI appeals:
(Nora Gordon provided the required second opinion for the AI move analysis)

M1 Describe the exigent situation and the basis for its undesirability (Obligatory)
    Step 1 Announce the reason for the communication (express concern)
    Step 2 Describe the situation motivating the communication
    Step 3 Characterize the situation in M1S2 as undesirable
    Step 4 Identify the normative basis for M1S3
    Step 5 Express the exigency of the situation characterized in M1S3
Move 2 Direct addressee(s) to redress the situation characterized in M1S3 in accordance with norms identified in M1S4 (Obligatory)
    Step 1 Describe desired change(s) to situation characterized in M1S3
    Step 2 Direct addressee(s) to bring about situation described in M2S1
    Step 3 Identify normative basis for M2S2 (same as or closely related to M1S4)
    Step 4 Express exigency of bringing about the changes described in M2S1
Move 3 Make concession(s) to addressee(s) (Optional)
    Step 1 Make the concession(s)
    Step 2 Note limitation(s) on concession(s)
    Step 3 Rebut concessions, typically by reference to normative basis in M1S4/M2S3
    Step 4 Solicit action(s) on basis of rebuttal
    Step 5 Express the exigency of the situation characterized in M3S4

AI and PF Appeals: A Comparative Move Analysis

Move analysis of AI Appeals (cont'd.):

Move 4 State related concerns and solicit related actions (Optional)

> Step 1 Describe related situation (related to M1S2)
> Step 2 Characterize the situation in M4S1 as undesirable
> Step 3 Solicit specific actions in response to M4S2
> Step 4 Identify normative basis for M4S2 (same as/closely related to M1S4/M2S3)
> Step 5 Express the exigency of the situation characterized in M4S2

Move 5 (Re-)state situation(s) requiring redress and solicit redressive action(s) (Optional)
> Step 1 (Re-)state situation(s) of concern (typically related to M1S3)
> Step 2 (Re-)characterize the situation in M5S1 as undesirable
> Step 3 (Re-)state action(s) to redress situation(s) in M5S1
> Step 4 (Re-)state normative basis for action(s) solicited in M5S2 (same as/ closely   related to M1S4/M2S3)
> Step 5 (Re-)state exigency of situations characterized in M5S1

Move 6 Engage addressee(s) (Optional)
> Step 1Express gratitude
> Step 2 Express hope for response from addressee

AI and PF Appeals: A Comparative Move Analysis

Comments on AI moves and steps:

I have separated the problem and solution segments into M1 and M2 because M2S2 is often separately expressed (e.g., in subject line; on placards)

Even tho' M4 and M5 are similar to each other and to M1 and M2, they cannot be reduced to a single repeatable move or to repetitions of M1 and M2, because they differ in allowing topical development of M1 and M2, e.g., by expressing more general and/or more specific concerns and appeals

There is considerable similarity in the steps of different moves, e.g., Moves 1-5 include "Express exigency" step

AI and PF Appeals: A Comparative Move Analysis

Analysis:
Protest placard: M2S2 [FREE PUSSY RIOT] [STOP RACIST POLICE TERROR IN THE US]

AI letter:
STRL [Dear President Obama,]

M1S1[I support **M2S1**[closing the Guantanamo detention facility]] and **M2S2** [urge you to get the job done, **M2S4** [today]]

M5S4 [The US government is obligated under international law to respect, protect and fulfill human rights.] **M5S3**[Each Guantanamo detainee must either be charged and fairly tried in federal court, or be released to countries that will respect their human rights]

M5S2 [Instead of justice for the September 11 attacks, Guantanamo has give the world torture, indefinite detention and unfair trials.]
[[ALTERNATIVE ANALYSIS: **M3S3** [Instead of **M3S1**[justice for the September 11 attacks], Guantanamo has given the world torture, indefinite detention and unfair trials.]]]

M5S5 [It is well past time **M5S3**[to change course and close the detention facility.]]

AI and PF Appeals: A Comparative Move Analysis

Comparison of PF and AI Moves and Steps:

- Both genres identify a problem: PF M2S2 (Specific problem/need highlighted) and AI M1S3 (Characterize the situation as undesirable) (also M4 and M5)

- Both propose a solution: PF M3S1S1A (State benefit of support) and AI M2S1 (Describe desired changes to problematic situation)

- Both attempt to persuade addressees to act to solve the problem: PF M3S1S1B (Ask directly for pledge/donation) and AI M2S2 (Direct addressee to bring about solution)

But they differ in substantial ways:

- PF includes Ms that AI does not: M4 (Offer incentives), M5 (Reference inserts), M7 (Conclude with pleasantries)

- AI allows for the making and rebuttal of concessions (M3); PF does not

- Because of differences in the kinds of problems addressed, the nature of the solutions proposed, the   types of addressees, the power of the addressee *vis à vis* the writers, the problem and its proposed solution, the bases for the appeals (pathos vs. logos), the mode of delivery, etc.

- In the position of the two genres in the genre continuum to which they belong—PF letters are related to business letters whereas AI letters are related to protest placards.

AI and PF Appeals: A Comparative Move Analysis

Some PF/AI linguistic comparisons:

- BCU examine stance expressions in PF letters, categorizing and listing them primarily by grammatical and very general semantic characteristics, e.g., 2.2 Stance verb + *to*-clause: Verbs Expressing Probability (liklihood): *appear*, *happen*, *seem*, *tend* (Of BCU's 26, only 8 occur in AI letters)

- BCU define stance expressions as linguistic devices that express "personal feelings, attitudes, value judgments, or assessments" and provide a list of works that use different terms for stance (p. 62), the most revealing one being "evaluation" (Hunston 1994; Hunston and Thompson 2000).

- Evaluation is done in discourse (Hoey 1983; Du Bois 2007) against a set of norms or criteria (Hyland 2005; Johnstone 2009). BCU give no bases for the evaluations legitimating the PF stance expressions, just post hoc discussion of their linguistic findings.

- The AI letters allow us to identify the stance expressions and the norms upon which situations are evaluated. For example, *punish* and its relatives *punishment* and *punishable* occur five times in the corpus, along with synonyms such as *penalty*. In discourse *punishment* invokes a frame (Goffman 1974; Tannen 1993) in which someone violates a norm, an expectation, or most relevantly to AI letters, a law. It is what is meted out to individuals after they have been found guilty by a court of breaking some law.

- Frames may be framed and laws and legal procedures subject to higher laws, so we find in the AI letters stance/evaluation expressions that invoke these higher laws to evaluate legal proceedings and their outcomes. Certain legal actions may *violate* laws. (*Violate* and its related forms occur 20 times in the corpus.) For example, the punishment of flogging is characterized as a *flagrant violation of the prohibition on torture or other cruel, inhuman or degrading treatment under international law*, which both evaluates flogging as a *flagrant violation* and identifies the norm it violates.

AI and PF Appeals: A Comparative Move Analysis

Linguistic characteristics of AI letter moves and steps:

While BCU focus on stance expressions, I focus on the main linguistic elements that enact the moves and steps, though much of that language is evaluative

I began with general predictions about the language to expect in the moves/steps

For this presentation, because the steps in several moves are very similar, e.g., *Express exigency* occurs in Moves 1-5, so where these similarities exist, I amalgamate the linguistic analysis under the general rubric of "The language of X," e.g., "The language of exigency"

AI and PF Appeals: A Comparative Move Analysis

The language of "Engage addressee(s)" (M6):

S1 Express gratitude:

Expect expressive speech acts from THANK group (Wierzbicka 1987):

(I) thank you for your (time and) consideration/attention (to this (important) matter).

Thank you in advance for your attention. (Occurs once <u>at end</u> of letter 8!)

Only in 9/30 (30%) of AI letters (vs. 51% in PF)

Attention—deliberately vague between mental effort and "*The act of dealing with something or someone*" (AHD 5th ed.); reflecting writer/addressee power differential, politely does not presuppose that addressee(s) will enact the solicited redress (Brown and Levinson 1978: 149: *Don't presume/assume*). Cf. BCU's M6S2: "Thanks for <u>current</u> & <u>future</u> financial or other support"

S2 Express hope for response from addressee:

Expect speech acts of anticipation:

Only 3 AI letters include M6S2 and two of these are variants of same letter (cf. BCU M3S2 Solicit other response):

I look forward to hearing from you regarding the advancement and protection of LGBTI rights.

AI and PF Appeals: A Comparative Move Analysis

The language of exigency:

Expect language of extreme temporal exigency and dire consequence expressing the importance of the appeal and the urgency of the need to redress injustice:

Temporal: *immediately; without delay; quickly; it is well past time; more than a year has passed; today, nearly 41 years after*

Importance: *urgent*

Manner: *(release) unconditionally*

Consequence/result: *(a miscarriage of the death penalty) cannot be undone*

AI and PF Appeals: A Comparative Move Analysis

The language of directing redressive action:

Expect moderately forceful directive speech acts reflecting writer/ addressee power differential and writer's inability to force compliance; attempt to avoid being ignored because of impoliteness:

I/we urge you to (occurs 27 times in 19/30 letters)

I/we call on you to (occurs 17 times in 13/30)

ask; *claim*; *challenge*; *remind*; *request*; *said*; *showing*

BCU (p. 71) characterize these as "Verbs Expressing Speech Act" stance; of the 26 identified in PF letters only the 8 above occur in my AI corpus

Others: *must*; *it is essential that*
    Imperatives

Politely mitigated: *I respectfully call on you to*;
    Please + imperative

AI and PF Appeals: A Comparative Move Analysis

The language of norms:

Stances depend on criteria for evaluation; AI letters frequently explicitly identify the criteria/norms/ideologies—human rights—upon which their evaluations/stances are based.

Expect language (derived from) legal documents underlying logos basis for appeals:

international law; international humanitarian law; human rights; right to life; international standards; prohibition on torture and other cruel, inhuman or degrading punishment; peaceful expression of their beliefs; humane treatment; United Nations Declaration of Human Rights

Mostly common NPs reflecting appeal/protest rather than (strictly) legal discourse.

AI and PF Appeals: A Comparative Move Analysis

The language of norm violation:

Expect language denoting manner and degree of norm violation:

(flagrant) violation; miscarriage (of justice); unjust/unfair/flawed (trials); should not have been (prosecuted); persecuted; forced (confessions); "confession"; torture; ill-treatment; (trials that) fall short of (international standards); violate (minimum international standards); (death penalty) violates (the right to life); Prisoners of Conscience

Strongly negative evaluative expressions.

AI and PF Appeals: A Comparative Move Analysis

Discussion:

Remarks on move/step analysis:

- Method of analysis with no theoretical basis
- Iterative dialectic process between rhetorical and linguistic analyses, so no principled end to the analysis
- Useful heuristic
- Helpful basis for discourse-specific linguistic analysis and discovery/identification of discourse-specific usages

Next analyses of AI letters:

- Management of ideological conflict
- Management of power relations
- Stance and engagement
- Re-contextualization/re-entextualization

Beyond AI letters

- Comparison between AI and other human rights organizations' letters

AI and PF Appeals: A Comparative Move Analysis

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AI and PF Appeals: A Comparative Move Analysis

(I)Thank you for your attention (to this (important) matter)

Semantic transparency vs. formal economy in word-formation

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Act of naming

Triad of relations:
1. extra-linguistic reality (object to be named), 2. speech community (coiner)
3. word-formation component (WF rules)

Onomasiological structure

Mark — Base

Determining **Determined**

'a person who writes novels (professionally)'

Result – Action – Agent

The sequence determined by the **Onomasiological Structure Rules**

Morpheme-to-Seme-Assignment Principle (MSAP) based on the **matching operation:**

The individual constituents of the onomasiological structure are assigned morphemes whose semantic facet corresponds with the particular, cognitively founded, constituent of the onomasiological structure.

MSAP implies the

Creativity within productivity constraints:

The ability of a 'coiner' to choose from a number of options of MSAP implementation

Factors:

- Productive WF rules
- Fashion
- Sociolinguistic dactors
- Psycholinguistic factors

Onomasiological Type I
   Result – Action – Agent
   novel – write – er

Onomasiological Type II
   Result – Action – Agent
      0   – write – er

Onomasiological Type III
   Result – Action – Agent
    novel   0   ist

Ding Mark – Ded Mark – Base
      √   0   √
novelist
- a person who writes novels
- a person who reads a lot of novels
- a person who sells novels
- a person who steals novels
- a person who likes to talk about novels
- a person who publishes novels, etc.

Two basic naming strategies reflecting two general tendencies in any language:

1. **tendency towards economy of expression**

2. **tendency towards transparency (clarity) of expression.**

Experiment - introduction

- English, Slovak, Hungarian and Bulgarian speakers
- 40 speakers per each language
- university undergraduates in the field of English studies
- sampling - questionnaire
- non-native speakers – questionnaires

- English – reference sample

English

↓

one month

↓

mother tongue

Experiment – task types

- Type 1 – drawings

What name or title would you give this person?

Type 2 verbal descriptions with options

A person whose smiling face is used for billboard advertisements:

a. smiler   e. smile-person
b. smilist   f. smile
c. smilant   g. other:
d. smileman

Type 3 verbal descriptions without options

What would you call someone who does research about spider webs?

Experiment - questionnaire

- 3 task types – each 5 subtasks – 15 Agent names
- 2,400 potential English coinages (600 by each language group)
- 1,800 coinages in total for the other three languages
- expected: 4,200 potential words
- not replied 148 (3.52%)
- eliminated 740 (17.62%)
  - descriptive phrases
  - existed words in shifted meaning

- ~~braveheart~~
- ~~stuntman~~
  - carsurfer
  - roof-rider

Suppose that a woman has a clone made of herself. Then suppose that a man has a clone made of himself. Now suppose that the two clones marry each other and have a child. What would you call the child?

~~George Clooney~~

cloneling

Questions

- influence of one's mother tongue?
- naming strategies of native speakers vs non-native speakers?
- relation between the morphological (word-formation) type and the preferred onomasiological type?
- economy vs transparency?

Results

Onomasiological types in the English language

	OT1	OT2	OT3	OT4	OT5	total
Slovak	233	134	147	6	7	527
Bulgarian	247	106	119	10	6	488
Hungarian	263	94	174	12	14	567
English	262	86	117	29	10	504

Onomasiological types in the mother tongues of the non-English informan

	OT1	OT2	OT3	OT4	OT5	OT6	total
Slovak	133	92	132	10	9	1	377
Bulgarian	294	45	85	34	1	1	460
Hungarian	206	95	75	10	8	5	399

Are the naming strategies influenced by one's mother tongue?

- If YES – different results
- If NO (influence of English) – same results

	OT1	OT2	OT3	OT4	OT5	total
Slovak	233	134	147	6	7	527
Bulgarian	247	106	119	10	6	488
Hungarian	263	94	174	12	14	567
English	262	86	117	29	10	504

- the word-formation system of one's mother tongue does not overpower the word-formation system of the target language

Are the naming strategies of native speakers identical to or different from those of non-native speakers?

- English vs Slovak, Bulgarian, Hungarian

	OT1	OT2	OT3	OT4	OT5	total
Slovak	*44.21%*	*25.43%*	*27.89%*	*1.14%*	*1.33%*	*100.00*
Bulgarian	*50.61%*	*21.72%*	*24.39%*	*2.05%*	*1.23%*	*100.00*
Hungarian	*47.22%*	*16.88%*	*31.24%*	*2.15%*	*2.51%*	*100.00*
English	*51.98%*	*17.06%*	*23.21%*	*5.75%*	*1.98%*	*100.00*

Chi square = 51.24 df = 12 $p < .001$

- preference of semantic transparency to the economy of expression

Is there relationship between the morphological type of a language and the preferred onomasiological type?

Onomasiological Types in mother tongues of all 4 groups of respondents

	OT1	OT2	OT3	OT4	OT5	OT6	total
Slovak	*35.28%*	*24.40%*	*35.01%*	*2.65%*	*2.39%*	*0.27%*	*100.00*
Hungarian	*63.91%*	*9.78%*	*18.48%*	*7.39%*	*0.22%*	*0.22%*	*100.00*
Bulgarian	*51.63%*	*23.81%*	*18.80%*	*2.51%*	*2.01%*	*1.25%*	*100.00*
English	*51.98%*	*17.06%*	*23.21%*	*5.75%*	*1.98%*	*0.00%*	*100.00*

- Slovak vs Hungarian
- English vs Bulgarian
- YES

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                    ┌─────────────────────────┐
                    │   Complex-word theory    │
                    └─────────────────────────┘
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┌──────────────────────────┐ ╱    ╲ ┌──────────────────────────┐
│ Complex-word formation   │╱      ╲│      Complex-word         │
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                    │     Naming      │
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          │ Economy of expression vs. transparency of  │
          └────────────────────────────────────────────┘
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                    │   Onomasiological    │
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      │ Cognitively founded onomasiological                  │
      │ theory                                               │
      │ ----------------------------------------------------- │
      │ ---------                                             │
      │         Creativity within productivity               │
      │                   constraints                        │
      │    Morpheme-to-seme-assigment principle              │
      │       World knowledge, experiences,                  │
      └──────────────────────────────────────────────────────┘
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Argument Omission and the Role of Sentence Type

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Bergische Universität Wuppertal

Contents

Robert Külpmann & Vilma Symanczyk Joppe

1. Introduction

It is a well-established fact that the possibilities to omit a verb´s direct argument – in a non-elliptic context – are different from verb to verb.

(1)   [Context: Klara´s phone is ringing.]

Klara nimmt (den Hörer) ab.
'Klara picks up (the receiver).'

(2)   [Context: Udo hands Klara the shopping basket.]

*Sie nimmt *(den Korb).*
'She takes (the basket).'

Based on the examples in (1-2) the following valency patterns could be sketched:

(1') *abnehmen* 'ᴛᴏ ᴀɴsᴡᴇʀ ᴛʜᴇ ᴘʜᴏɴᴇ' :   */nom*   */(akk)*

                                                            AGENS   PATIENS
                                                                          (receiver)

(2') *nehmen* 'ᴛᴀᴋᴇ, ʜᴏʟᴅ':   */nom*   */akk*

                                                            AGENS   PATIENS

But taking a closer look at the example with obligatory complements ...

(2') *nehmen* '*TAKE, HOLD*':   */nom   /akk*
                                                                      AGENS   PATIENS

(2)   [Context: Udo hands Klara the shopping basket.]

Klara nimmt *(den Korb).

                                                    Klara takes *(the basket).

... and modifying it slightly, the obligatoriness of the argument changes:

(2') nehmen 'ENTGEGENNEHMEN, HALTEN': /nom   /akk

                                                    AGENS   PATIENS

[Context: Udo hands Klara the shopping basket.]

Klara nimmt *(den Korb).

                                                    Klara takes *(the basket).

Udo sagt: "Nimm mal (den Korb)!"
Udo says: "Take (the basket)!"

The imperative example is in conflict with the valency pattern above: the argument is optional.

Depending on whether one consults the assertive declarative sentence or the imperative as a reference, one might come to different conclusions with respect to the obligatoriness of the argument …

	nehmen 'TAKE, HOLD'	
Sentence type	*decl*	*imp*
Example	*Klara nimmt *(den Korb).*	*Nimm mal (den Korb)!*

… and the same holds for the infinitive.

	nehmen 'TAKE, HOLD'		
Sentence type	decl	imp	inf
Example	Klara nimmt *(den Korb)	Nimm mal (den Korb)!	Sofort ??(den Korb) nehmen!

2. Argument omission and sentence type

In the following, we will present a set of empirical studies, which shall shed a light on this different AO behaviour. We will examine the influence of the verb as well as the influence of the sentence type on AO.

2.1 The project

… is called
Argumentweglassung zwischen Valenz und Konstruktion
Argument Omission between Valency and Construction

… is funded by the German research foundation (DFG) (2013 – today) and run by Joachim Jacobs

… shall examine a central hypothesis:
The possibility to omit complements in a sentence S does not only depend on the verb which subcategorizes the complements, but also on the sentence type of S.

Central hypothesis, split up in two:

H1 **The possibility to omit complements, (also) depends on the verb which selects the complements.***

If H1 is true, there should be differences in AO behaviour for comparable verbs within the same sentence type (sortal specification of omitted arguments and contexts being equal or comparable).

=> **testing of different verbs within the same sentence type**

H2 **The possibility to omit complements, (also) depends on the sentence type in which they should be realized.****

If H2 is true, there should be differences in AO behaviour in different sentence types involving the same verb (sortal specification of omitted arguments and contexts being equal or comparable).

=> **testing of the same verb within different sentence types**

Important: **H1 and H2 do not exclude each other.**

* cf. e.g. Fillmore (1986), Zifonun (1997)
** cf. e.g. Jacobs (2014)

Methods

Introspection

… did not provide consistent results, even among the project members.

Corpus studies

… gave rise to practical problems: directive imperatives and infinitives were underrepresented in the large corpora; search queries were problematic because of formal syncretism and so on.

Acceptability rating studies / questionnaires

Design of questionnaires and test items

Interfering factors:

- different verb readings (with different possibilities of AO)
- different AO behaviour for definite and indefinite arguments
  (cf. Ruppenhofer/Michaelis 2010; Gillon 2012)
- different sortal specifications of the omitted argument (cf. Fillmore 198?)
- generic interpretations (cf. Blume 1993)
- contrast (cf. Blume 1993)
- accessibility of the referent of the argument from the context (cf. Cote 1996; Goldberg 2001)
- certain syntactic configurations (topic-drop, VP ellipses …)
- genre (cf. Massam / Roberge 1989)
- unacceptability of test sentences for reasons which had nothing to do with AO

Design of questionnaires and test items

- Test sentences are given in contexts

- The contexts suggest everyday oral communication

- Participants are asked to judge the acceptability of the test sentences in the given context

- Attention is paid to the following factors:

  - Definite AO

  - Eventive, not generic, interpretation of test sentences

  - identical verb readings

  - No contrast

  - omitted argument is mentioned in the context

  - (spoken) everyday communication

  - Ellipses, topic drop and similar constructions are avoided

- Minimal pairs of sentences with and without AO

Test items (example: *ausmachen* imperative)

Elise und Gerd brechen nachts auf einem einsamen Gehöft ein, dessen Besitzer verreist sind. Auf der Suche nach Wertgegenständen macht Gerd im Wohnzimmer das Licht an. „Bist du bescheuert?",

zischt Elise. „<u>Mach aus!</u> Jeden Lichtschein sieht man hier meilenweit!"

ja   nein

During the night, Elise and Gerd break into an isolated farmstead whose inhabitants are on vacation. Gerd, searching for valuables, switches on the light in the living room. "Are you crazy?", Elise hisses. "<u>Switch off!</u> Any gleam of light will be visible for miles!"

yes   no

Test conditions

- 21.06.2013 – today

- approx. 500 test items in 12 questionnaires

- participants: approx. 1,100 students of linguistics at the *Bergische Universität Wuppertal*

- approx. 10 % were not native speakers of German and/or didn´t complete the questionnaire within the time limit, therefore could not be entered into the statistics

- participants receive a 10-minute instruction

- 2 X 10 minutes for the questionnaire

- two answer options: *yes* (acceptable) and *no* (unacceptable)

- pseudo-anonymous / pseudo-randomized

- just one social criterion: native speaker of German

Overview of the results

	dir. infinitive	imperative	declarative
mean	*81 %*	*62.7 %*	*36.2 %*
range	*93.2*	*94.7*	*97.8*
standard deviation	*15.6*	*31.3*	*31.8*

Box Plot

2.2 Sentence type effects on AO

i. Definition of sentence type effects

ii. Manifestations of sentence type effects

iii. Evidence for sentence type effects in our AO data

Sentence type

In accordance with the standard view, we define a sentence type as a conventional pairing of a sentence form with an illocution.

Sentence types of German differ in
- the position of the finite verb,
- the verb mode and
- the presence of a *wh*-element.

Typical of sentence types in German:
- V2 assertive sentence
- V1 interrogative sentence
- V1 imperative sentence

Sentence type effects in AO

Under sentence type effects, we understand the influence of a sentence type on the (non-)realization of a verb's complements in the respective sentence.

Example:

Subjects of imperative sentences either do not have to be realized overtly (Wratil 2013) or cannot be realized overtly (Rosengren 1993, Platzack & Rosengren 1994).

Mach (du) doch die Tür auf!

('Open the door!')

Primary sentence type effects

We are dealing with a *primary sentence type effect* (PSTE) if

- a sentence type determines directly whether and which arguments can be omitted

- independently from the choice of the verb and

- independently from the possibility of AO in other sentence types

Examples for a probable PSTE

	dir. infinitive	imperative	declarative
abziehen K 'PEEL OFF'	*93.1 %*	*21.6 %*	*6.3 %*
auswechseln 'EXCHANGE'	*90.2 %*	*19%*	*20.3 %*
schenken 'GIVE AS A	*78.4 %*	*3.7 %*	*1.2 %*

Examples for a probable PSTE

Infinitive:

[…] Because her wipers have been making strange noises for some time, she asks the foreman […] He nods and tells his technician:
„Exchange ~~the wipers~~ immediately! […]
„Sofort ~~die Scheibenwischer~~ auswechseln! […]"

Imperative:

Kai´s car causes an infernal noise, because the fan belt is worn down. […]
André says to Kai: „Exchange ~~the fan belt~~, will you? […]"
„Wechsel endlich mal ~~den Keilriemen~~ aus. […]"

Declarative:

[…] Later in the evening, Petra remembers the broken bulb and asks her husband to replace it. He answers:
„I have already exchanged ~~the bulb~~."
„Ich habe ~~die Birne~~ vorhin schon ausgewechselt."

Secondary sentence type effects

We are dealing with a *secondary sentence type effect* (SSTE) if

- the verb has a large influence on AO in the respective sentence type and

- there is also a systematic relationship between the AO behaviour in the respective sentence type and the AO behaviour in at least one other sentence type.

Examples for a probable SSTE

	dir. infinitive	imperative	declarative
abholen 'TO COLLECT'	**78.2 %**	**42.1 %**	**1.8 %**
anmachen ,TO TURN ON'	**94.2 %**	**89.1 %**	**65.8 %**
einrühren 'TO STIR INTO'	**93.3 %**	**58.7 %**	**35.9 %**

Examples for a probable SSTE

Infinitive:

[…] Herbert answers the phone and is told that the medicine for his 80-year-old mother has arrived at the pharmacie. His mother overhears the call and says: „Please collect ~~my medicine~~ immediately! […]“
„Bitte sofort ~~meine Medikamente~~ abholen! […]“

Imperative:

[…] In the mailbox is a notice that a parcel was left with the neighbors. Elfriede tells her husband: „Collect ~~the parcel~~! […]“
„Hol mal ~~das Paket~~ ab! […]“

Declarative:

[…] A few months ago, Gerda and her boyfriend have split up. Her friend Helga asks, whether his treadmill is still in the basement of her house. Gerda answers: „Fortunately not!
Last Friday, he finally collected ~~the treadmill~~.“
„Am Freitag hat er ~~das Laufband~~ endlich abgeholt.“

Manifestations of STEs in the data

To argue for a PSTE in the data, we had to show that

(a1) the results in the respective sentence type were not influenced by the verb and

(a2) the results for this sentence type were independent from the results for other sentence types.

PSTE / a1: How to show results in a sentence type are not influenced by the verb?

1. We calculated the deviation from the mean (DM) of an individual result: the mean result of a verb was subtracted from the result of the verb in the respective sentence type.

2. We correlated the DMs for the respective sentence type with the results of this sentence type, e.g. the directive infinitive´s DMs with the directive infinitive´s results.

3. For a PSTE, there should be no significant correlation between the DMs and the results in the respective sentence type.

PSTE / a2: How to show results are independent from the results of other sentence types?

1. We correlated the results for each sentence type with the other sentence types.

2. For a PSTE, there should be no significant correlation between the sentence type in question and the other sentence types.

Manifestations of STEs in the data

To argue for a SSTE in the data, we had to show that

(b1)   the verb has an influence on an argument´s omissibilty and

(b2)   the results for this sentence type are related to the results of at least one other sentence type.

SSTE / b1: How to show that the verb has an influence on the distribution?

1. We correlated a sentence type´s acceptability results with its DM.

2. For a SSTE, there should be a significant correlation.

SSTE / b2: How to show a relation between the results of two or more sentence types?

1. We correlated the acceptability results of the respective sentence type with the results of the other sentence types.

2. There should be a significant correlation with at least one other sentence type.

Example *abziehen K* ('TO PEEL')

	dir. infinitive	imperative	declarative
acceptability	*93.1 %*	*39.4 %*	*6.3 %*
mean: 46.3 %	*93.1 – 46.3*	*39.4 – 46.3*	*6.3 – 46.3*
deviation from the mean	*46.8*	*-6.9*	*-40*

x-axis: deviation from the mean of the verb

y-axis: acceptability results for the verb in the different sentence types

Acceptability and DM: infinitive

- Consistently high acceptability values
- One-sided distribution of data points on the right side of the y-axis
- Deviation from mean: -17.1 to 56.6 (73.7)

Acceptability and DM: imperative

imperative — scatter plot of acceptability vs. deviation from mean acceptability

- Heterogeneous acceptability values from 3.7 % (*schenken*) to 98.2 % (*zeigen*)
- Distribution on both sides of the y-axis
- Deviations from mean: from -24.2 to 37.9 (62.1)

Acceptability and DM: declarative

- Acceptability values from 1.2 % (*schenken*) to 99 % (*aufschließen*)
- One-sided distribution of data points (left side of the y-axis)
- Deviation from mean: from -58.5 to 7.1 (65.6)

Acceptability and DM: all sentence types

The scatterplots for acceptability and DM already suggest that we have evidence for both PSTE and SSTE in our data on AO.

Acceptability and DM: all sentence types

The scatterplots for acceptability and DM already suggest that we have evidence for both PSTE and SSTE in our data on AO.

Acceptability and DM: all sentence types

The scatterplots for acceptability and DM already suggest that we have evidence for both PSTE and SSTE in our data on AO.

Correlation of acceptability values and DM

Rank correlation of acceptability and deviation from the mean (Spearman´s *Rho)*.

	dir. infinitive	imperative	declarative
r_s	.19	.75	.74
df	45	45	45
p	> .05	< .001	< .001
verb influence	no	yes	yes

Correlation of acceptability values

Rank correlation of acceptability values of the different sentence types (Spearman´s *Rho)*.

	INF - IMP	INF - DECL	IMP - DECL
r_s	.13	.23	.63
df	45	45	45
p	> .05	> .05	< .001
relation between sentence types	no	no	yes

Results

Directive infinitive:

a1: **Influence of the verb?** ✗

a2: **Relation to other sentence types?** ✗

=> The criteria for a PSTE are fulfilled.

Results

Imperative / declarative:

b1:   Influence of the verb?   ✓

b2:   Relation to other sentence types?   ✓

=> The criteria for an SSTE are fulfilled.

3. Summary & Outlook

i. Our central hypotheses (H1 + H2) that the verb as well as the sentence type can influence AO was confirmed by the data.

3. Summary & Outlook

ii. The sentence types in our study included directive infinitives, imperatives and declaratives. We could identify two types of sentence type effects on AO, namely:

- a PSTE for the infinitive: AO is determined by the sentence type.

- an SSTE for declarative and imperative: AO is mainly determined by the verb. While the results of both sentence types differ from each other, there is a significant moderate correlation.

3. Summary & Outlook

iii. How to model these findings in the grammar? We would suggest to analyze STEs in an approach based on a division of labour between valency and construction.

In such an approach, a PSTE indicates that the possibility for AO in the respective sentence type is independent from the verb and should be analyzed as a property of a construction.

An SSTE indicates that the possibility for AO is highly influenced by the verb and therefore should be analyzed in terms of valency.

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Frame-based Interpretation of Semantic Similarity/ Relevance Between Words/ Roots: A New Perspective in Etymology & Lexicon Formation

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Preface

- **Semantic Similarity** between two concepts has a lot of applications in **Semantic Information Processing** in general, and issues such as **Semantic Web**, **Text Mining**, **Text Summarization**, **Text Interpretation**, **Question Answering** and **Text Translation** as well.

- Here, **Similarity** between **two Concepts** (two lexicons, two phrases, two sentences or two texts in general), with the aim of substituting one concept by another and using one in the place of other, is of significance.

- **Semantic Similarity** makes its possible to make use of a similar concept, when the process of inference based on a certain concept, gets problematic.

- **Semantic Relevance** may in a similar manner be applied to **Semantic Information Processing** issues. Its peculiarity is to make a **Suitable Leaping** from one concept to another with the purpose of **helping the inference process**.

- **Ontology**, which is well used for r**epresenting Declarative (Background) Knowledge**, is a potential means in this regard.

2

Preface

- The main point in using **Ontology** for **assessing Semantic Relevance/ Similarity** is its inherent continuum which causes a systematic arrival from one conceptual entity to another. Obviously, the shortest path between two conceptual entities is worth being considered as a major criterion for assessment.

- **Frame**, which is for representing knowledge in a structured manner, can as well be used as a useful means for **assessing similarity/ relevance** between two concepts.

- **Miracle of Frame** is its ability in making appropriate connections between two **at-one-glance distinct** conceptual entities.

- The question is: << how through a right using of Frame, one may interpret the Semantic Relevance/ Similarity between two Semantic Structures, and justify the Semantic Identity of a semantic structure on the ground of the messages hidden in its constituents?>>

- For the first case, **roots of lexicons** (in Indo-European Languages), and for the second case, **lexicons as ensembles of molecular structures** have been considered.

3

Interpreting Semantic Similarity/ Relevance Between Roots of Lexicons

- Since the past, **Etymology** has been of major concern to studies in **Linguistics and Culturology** as well.

- Although classical studies in this respect have yielded remarkable results regarding structure and function of words roots, but the point that **whether or not these roots themselves may share common roots** is still in the offing.

- One should not forget that even **different roots** may hold **similar constituents with certain messages** whose study can be of high significance to Linguistic & Cultural studies.

4

- The main question is:

<< How **Frame** can be used effectively in **interpreting Semantic Similarity/ Relevance between the concepts of roots?**>>

- Suppose that a conceptual entity is benefited by "function" and "structure" as two key attributes.

- Provided that the values of these attributes themselves are propoundble in terms of new frames, we will then have a **network of mutually connected frames for each root**, which is in charge of justifying the **semantic relevance** between the **participating conceptual entities**.

- **Interpretation of similarity between the concepts of roots may** then be regarded as attaining the **possible crossing points of these networks.**

- Closer these crossing points to the concepts of the roots, the relevance between the roots is supposed to be more meaningful.

Semantic Relevance of the Concepts of Roots

Labor — Life

| Meeting needs | Function |
| | |

| | |
| Meeting needs | Structure |

توجیه ربط معنایی میان مفاهیم مرتبط با ریشه‌های Labor و Life

"wog-" (Vigor) — "weg-" (Wake)

| Being benefited by energy | Function |
| | |

| | |
| Presence of energy | Structure |

توجیه ربط معنایی میان مفاهیم دو ریشه "wog-" و "weg-"

"wog-" (Vigor) — "wegh-" (Wagon)

| Being benefited by energy | Function |
| | |

| | |
| Source of energy | Structure |

توجیه ربط معنایی میان مفاهیم دو ریشه "wog-" و "wegh-"

6

Interpreting the Concept of A Lexicon based on Its Molecular Constituents

➢ A lexicon contains some **Molecular Phonetic Structures** each holding its **own peculiar message.**

➢ Having these messages fused, a **conceptual message at a higher level**, which in fact stands for the conceptual message of the entire lexicon, is supposed to come into existence.

➢ Provided that the messages of the molecular structures do exist, then the question is: << **How such a FUSION is performed?!**>>.

➢ To approach this, it can be shown that **interpreting the co-existance of these Molecular Constituents** can yield the final concept of the Lexicon.

Interpreting the Concept of A Lexicon based on Its Molecular Constituents

• Concept of a lexicon can simply be regarded as the **product of fusing the conceptual messages related to its molecular constituents.**

• To represent a lexicon's concept in terms of a frame, the **conceptual message of the second molecular constituent** in the Lexicon may be viewed as **an attribute**, and the **value of this attribute** can subsequently be regarded as the **ongoing message**.

How Frame Can Help Interpret Semantic Relevance between the Concepts of Two Lexicons

The main presupposition is that, if the **2ⁿᵈ molecular structure** in the two lexicons (as attributes), hold **a sort of relevance/ similarity with each other**, then the **final semantic relevance between the corresponding frames** will depend on **a sort of similarity between the values of the related attributes.**

Name of Constituent	PIE Root	Message
nd	*ned-*	*Knot, Net*
tr	*tere-, tra*	*Through, Trans*
rv	*Reiwos, reie-*	*Flow, Run*
ng	*-unga*	*Habitual action*
fl	*pleu-*	*Flow, Float*
pl	*pleu-*	*Flow, Float*
gr	*ghre-*	*Grow, Gray*
cr	*kerd-*	*Core, Heart*
cl	*gleu-, glei-, sol-*	*Clay, Whole*
gl	*gwele-, ghel-, gleit*	*Glue, Shine*
st	*sta-*	*Steady, Stand*

Some Molecular Constituents together with their Conceptual Messages

(Persian)

Trend
.. Nd (ned-/ knot): Tr (tere-, tra-/ through, trans)

➡️ Ravand
.. Nd (ned-/ knot): Rv (reiwos, reie-/ flow,run)

Fling
.. Ng (-ing, -unga/habitual action): Fl (pleu-/flow)

➡️ Plunge
.. Ng (-ing, -unga/habitual action): Pl (pleu-/ flow, float)

Ground
.. Nd (ned-/ knot): Gr (ghre--/ grow)

➡️ Gland
.. Nd (ned-/ knot): Gl (gwele-, ghel-/, gleit-/ shine, glue)

Cling
.. Ng (-ing, -unga/habitual action): Cl (gleu-, glei-/ clay, whole)

➡️ (Persian)

Kolang
.. Ng (-ing, -unga/habitual action): Kl (sol-/ whole)

Clust (er)
.. St (sta-/ steady): Cl (gleu-, glei-, sol-/ clay, whole)

➡️ Cryst (al)
.. St (sta-/ steady): Cr (kerd-/ heart)

Concluding Remarks & Future Prospects

❖   Using FRAME leads to providing a potential medium for INTERPRETING SEMANTIC RELEVANVE/SIMILARITY between two CONCEPTUAL ENTITIES.

❖ Selecting ATTRIBUTEs such as FUNCTION and STRUCTURE in this regard is of particular significance.

❖   FRAME-BASED approach to INTERPRETING SIMILARITY between CONCEPTUAL ENTITIES leads to a conducive medium for CHARACTERIZING THINKING STYLE in human communities with regard to the way CONCEPTs of LEXICONs are formed.

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Thanks for your Attention

COGNITIVE-ONTOLOGICAL APPROACH TO METAPHOR AND METAPHORICAL WORLDS

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SCL26
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1. Introduction

There are the classic work by J. Lakoff (1999), M. Johnson (1999), M. Turner (1996, 2002), J. Fauconnier (2002) and others. Rallying point for these ones is that metaphor is analyzed as **a given object.**

* At the linguistic (textual) level metaphor is an instrument of sense forming.
* At the mental-linguistic level metaphor is not only the mechanism but the result of the work of this mechanism. The basis for metaphorical transfer is **similarity**.

Other figures of speech (e.g., comparison) are often hybrid forms which are formed on the ground of metaphorical transferal.

Tools of cognitive linguistics can investigate the problem of genesis of metaphor, and to explore the preconditions of its formation.

Our theory - **cognitive-ontological approach** to the study of the formation of metaphor as a cognitive mechanism.

2. Cognitive-ontological approach to metaphor: the main features

MATERIAL

Cognitive study of the genesis of metaphor involves the research material in the form of:

mythological and folkloric texts,

literary works, (ancient literature),

theoretical papers containing the results of the analysis and the study of these texts [Freudenberg (1979), Veselovskij (1989)].

The special value of this material - it provides an analysis of the texts, which was created without previous literary tradition and patterns in contrast to the medieval or modern national literatures.

Considering the early man and his consciousness we mean:
  prehistoric period, Mesolithic period, Neolithic age, early-classed civilizations and ancient civilizations.

The development of complexity of mental structures has occurred in the conditions of the prehistoric or archaic consciousness, which is significantly different from the modern consciousness.

Main points:

1. The core of complex mental structures has occurred and formed in the conditions of **the prehistoric consciousness,** which is one of three ontological systems development.

2. Cognitive linguistics studies language at the junction of three ontological systems - **system of the human consciousness, system of the world, system of language**. We claim that the prehistoric consciousness developing was closely related to these systems, which were not initially separated.

3. Metaphor, along with many other cognitive mechanisms, was the result of the process of separation between ontological systems, and the relationship between them.

3. Ontological systems

Ontological system is a certain fragment (area, domain) of the real or abstract world, ordered collection of objects/concepts that are presented in a similar manner and have the uniformity of their interpretation.

We make difference between three ontological systems: **the ontology of the world, the ontology of human being, the ontology of language.**

Three ontological systems and pattern of their interaction:

THE MAIN FEATURES of PREHISTORIC CONSCIOUSNESS:

Initially the human being was conjoint with cosmos, nature and animals, and later - with flora.

Person was not immediately brought into focus of his own perception.

Prehistoric consciousness organized an imaginary world with the help of real-life forms.

4. Mythological image and mythological metaphor

Mythological image

Mythological image was the main mental unit of human knowledge.

Mythological image was the projection of human conceptualization of the real world. It's characteristics:

- It is concrete.

- It captures a special indiscrete perception of the world due to indivisibility ontological systems.

- It is a union of arbitrary objects of varying degrees of abstraction, where the main form of connection – identification.

- The cognizer is not separated from the cognizable.

- Phenomenon is not separated from its features.

Mythological metaphor

Mythological metaphor is narrowed and concretized mythological image. It demonstrates the direct coupling of two objects, one of which is necessarily concrete. Thus, death is metaphorically represented in the form of "fathers", "old"; life - "children", "young".

Mythological metaphor is fundamentally different from the traditional concept of metaphor - it has no function of "transferring".

Modern metaphor development is related to fo "transferring".

When the mythological image as the main form of perception of reality was destroyed, mythological metaphor transformed. It got the function of free comparison of two objects with respect to some common base. Thus, the mythological image as a cognitive category was replaced with other cognitive mechanism – metaphor.

Metaphor development began with the transferring of specific meanings in abstract ones and it completed as transformation of metaphor in figure of speech. Metaphor development was the result of:

- Separation between three ontological systems was inevitably accompanied by the establishment of relations between them. These relationships were organized on the principle of interaction between <u>reality and illusion (seeming)</u>.

- With the collapse of duality caused by the formation of concepts, duality phenomena falls into a genuine one and a copy, having only external features of the phenomenon, but not its essence. It was the beginning of forming the idea about authenticity and semblant (illusion). The relationships between authenticity and illusion became the basis of the relationships between the ontological systems of the world, human consciousness, and language.

Important fact for development of ontology of human consciousness: .

"Seeming" initially was the object of external human consciousness and then it has become a category of imagination. "Visibility" became not physical but mental phenomenon. Ontological system of human consciousness and ontological system of the world was in the same relationship as authenticity and semblant, reality and illusion.

Developing of consciousness is connected with the idea of **mimesis.**

Image concreteness becomes an allegory and gets abstract features ; insensibility to qualities and details transformed into selection of monolithic qualities, space perception develops to the moment of movement from cause to effect (stipulation replaces tautology). These are the conditions for **forming of metaphor** which is not yet a stylistic figure but already a cognitive mechanism of thinking.

Ancient and Modern Metaphor: difference

Modern consciousness is looking for logic, even the author's subjective logic.

Therefore, in modern metaphor the **third component** appeared - the basis for the transferring, which was absent in the primitive metaphor.

5. Metaphorical worlds

Metaphorical world is by definition metaindividual, it constitutes the heritage of a community as part of that community's langue, to the exclusion of its members' parole. It means that each metaphor is integrated in "a metaphorical field" (Weinrich 1976: 44).

To create and understand a metaphor the addresser and the addressee should share "the metaphorical field", the same socio-cultural values not only synchronically but also diachronically.

Another point of view: metaphor helps to switch levels of existence (or world levels). Whenever someone uses a metaphor he creates a metaphorical world underneath our actual world, and the relationship of that world to our world is a metaphorical one (Stockwell 2002).

Metaphor is not only a cognitive tool to create metaphorical worlds, but it is a mechanism of interaction between ontologies. Switching into another metaphorical world gives us possibility to operate objects from other ontology. Metaphorical world is the field of human consciousness ontological system where many individual minds are incorporated.

6. Conclusion

The cognitive-ontological approach considers metaphor as a way of thinking and explains the genesis of metaphor as mental phenomenon and cognitive mechanism of sense forming.

Approach to the study of formation of metaphor as cognitive mechanism focuses on three ontological systems (system of the human consciousness, system of the world, system of the language) and the relations between them, because every statement is a synthesis these ontological elements.

These ontological systems were not initially separated in prehistoric human's mind.

Modern metaphor developed from mythological metaphor and mythological image.

Forming of metaphor is closely related to mimesis, which made possible the imitation of reality in the imagination.

In cognitive-ontological aspect metaphor was one of the results of the process of partial division between three ontological systems and the way of interaction between them. As a result of the process of metaphor formation at mental and linguistic levels metaphorical worlds are appeared. They are the part of inter-ontological transpersonal interaction. Metaphorical worlds are the part of organized interaction between three ontological systems at transpersonal level.

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COMPOUND-INTERNAL SPACES IN GERMAN
A performance problem, a trend, or harbingers of language change?

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CONTENTS

PART I: HOW IT SHOULD BE

COMPOUND-INTERNAL SPACES AND ORTHOGRAPHY

SI IN GERMAN

- constant problem area

- excessively discussed during the German orthography reform of 1996 and its modifications

- writing rules were changed and changed back again

COMPOUNDING IN GERMAN

- **compound**: combination of two or more stems resulting in a new word.

- one of the most **productive** word formation processes in German
  ⇒ *Warentrennerding* 'product divider thing'

- resulting compounds can be very **long**
  ⇒ *Hochschulzugangsberechtigungsnachweis*

  'certificate of the right to enter a university'

SI in German Compounds

Are the stems of German compounds written together or separately?

"THE PRESCRIPTIVE VIEW I":
THE OFFICIAL RULES

„Die Getrennt- und Zusammenschreibung betrifft Einheiten, die im Text unmittelbar benachbart und aufeinander bezogen sind. Handelt es sich um die Bestandteile von Wortgruppen, so schreibt man sie getrennt. Handelt es sich um die Bestandteile von Zusammensetzungen, so schreibt man sie zusammen." (Amtliche Regelungen 2006: 32)

'[Space insertion] concerns **neighbouring text units which** are directly interrelated. If they are parts of **phrases**, they are written **separately**. If they are parts of **compounds**, they are written **together**.'

"The Prescriptive View II": The Standard Guide: Rechtschreib-DUDEN

Paragraphs on:

- particle verbs
- verbal compounds
- participles
- adjectival compounds
- univerbations
- geographical names
- compounds and derivations with numbers

Nothing on nominal compounds

"THE PRESCRIPTIVE VIEW III": META-PERSPECTIVE

Nerius (2006):

"Spelling books do usually not deal with nominal compounds, because apparently, **problems concerning [space insertion] do not exist with nominal compounds**. The reason is that the nominal area is the area of "genuine" compounds, in which only very few case could raise doubts about their [space insertion]."

"THE DESCRIPTIVE VIEW I":
SYSTEM

- Graphematic literature: orthographically orientated

- Maas (1992):

  spaces as "*syntaktische Sollbruchstelle*" ('syntactically predetermined breaking point')

- literature in the context of the orthography reform (e.g. Schaeder 1997; 1999a; 1999b; Gallmann/Sitta 1996), as well as Fuhrhop (2007):

  syntactically orientated; relying heavily on morphosyntactic tests such as permutation, comparation, expansion etc.

"The descriptive view I":
System

- Jacobs (2005):

  Subparts of expressions are realized separately, unless the expression is a morphological formation.

- Fuhrhop (2007):

  Products of word formation are written together; units which can be analyzed syntactically are written separately. (Both principles can apply simultaneously.)

CONCLUSION PART I

words	=	no spaces
compounds	=	words
compounds	**=**	**no spaces**

„Compounds must not contain spaces."

Conclusion Part I

Morpho-syntax   Interface   Written Language

MS-word
morphological process
no valency requirements
morphological patterns
extensibility

Graphemic word
Word boundaries must be occupied by punctuation marks or spaces, **no internal spaces**

Group of MS-words

Group of Graphemic words

Spaces on boundaries

PART II: HOW IT ACTUALLY IS

COMPOUND INTERNAL SPACES AND LANGUAGE USE

"THE DESCRIPTIVE VIEW II":
USAGE

Dürscheid (2000)
- 17 examples for compounds with internal spaces
- Possible explanations:
    - caused by a similar phenomenon: medial capitalization
    - influence of English
    - writers are disorientated because of the orthography reform
    - increasing productivity of nominal compounding

Dürscheid (2005)
- strategy for getting attention, used by advertising genres
- manifestation via an invisible-hand process

"THE DESCRIPTIVE VIEW II":
USAGE

Jacobs (2005):

- lists 22 examples

  <Freiland Putenbrust>, <Hamas Terrorist>, <Mikrofaser Jacke>, <Frauen Buchpaket>, <Biergarten Revolution>, <Gottes GmbH>, <Ingeborg Bachmann Preis>, <Commerzbank Berater>, <Reisepreis Sicherungsverein>, <Jaguar 24 Stunden Test>, <Totes Meer Salz>, <José Carreras Leukämie Stiftung>, <Bogner Modetage>, <Eishockey Li..., <Volkswagen Partner>, <Macintosh Performa Lösungen>, <Schüler Informationstage>, <Vitamin B12 Indikator>, <Wünsche werden wahr Training>, <Rücknahme Betrag>, <Baseball Schläger>, <Allergie Ratgeber> (Jacobs 2005: 6; 168)

- **orthography reform** is **not** responsible: noticed the trend in the eighties

- influence of **English**

- grammatical factors: **names**, **missing linking elements**, more than two autosemantic subparts

Corpus study

QUESTIONS

- Compound-internal spaces: Do they really occur?

- To which extent do they occur?

- 'Performance problem' / systematic occurence?

Data

- texts with low norm orientation
    - internet chats (*Dortmunder Chatkorpus*)
    - internet threads (own corpus)

- advertising texts
    - newspaper advertisements (own corpus)
    - brochures / leaflets (own corpus)

- N + N / XP + N

→ 14,622 COMPOUNDS

Threads (5574)
Chats (2041)
Advertisements (1519)
brochures / leaflets (5488)

Research parameters

- "morpheme boundary element" (Ø, space, hyphens, medial capitals)

- genre

- form and content
  - typographic aspects
  - structural factors
  (phrasal? linking elements? non-paradigmatic linking elements? ellipses? copulative compounds?)
  - subparts resisting integration

  (abbreviations, numbers, names, words from foreign languages / English, brand names, logos)

- idiolectal influences (unsystematically)

DISTRIBUTION OF MBE*

- Ø (70,54%)

- hyphen H (18,18 %)

- space S (11,12 %)

- medial capitals MC (0,16 %)

*at the main morpheme boundary

Ø
H
S
MC

LOCATION OF INTERNAL SPACES

- space at the main morpheme boundary: 97,66 %

- space at another morpheme boundary / hyphen at the MMB: 2,1 %

- space at another MB / Ø at the MMB: 0,24 %

R1: HIERARCHICAL USAGE OF SPACES AND HYPHENS AS INDICATORS OF STRUCTURE

- Assuming a three-part hierarchy H of structure indicators occupying the morpheme boundaries of compounds, in which a space is considered high, a hyphen is considered medium and the absence of both is considered low, the following rule holds for complex compounds: If any element from H occupies a morpheme boundary MB^n (n indicating the number of steps of derivation up to this point), "later" MBs^{n+x} must be occupied by elements ranking identical or higher in H.

MBE	place in hierarchy
space	*high*
hyphen	*medium*
Ø	*low*

EXAMPLES ILLUSTRATING R1

- Augenarztsprechstunde ('consulting hour of an eye specialist')
- Augenarzt-Sprechstunde
- Augen-Arzt-Sprechstunde
- Augenarzt Sprechstunde
- Augen Arzt Sprechstunde
- Augen-Arzt Sprechstunde
- *Augen-Arztsprechstunde
- *Augen-Arztsprech-Stunde
- *Augen Arztsprechstunde
- *Augen Arztsprech Stunde
- *Augen Arzt-Sprechstunde

  etc.

PHRASAL COMPONENTS

- $[XP + N]_N$ / $[[XP]_N + N]_N$

- Orthographic rules demand hyphenation

- Compounds with phrasal components: 633

- Examples:
  - *Dritte Welt Land* ('Third World country')
  - *"ausländer raus" fraktion* ('"foreigners out" faction')

PHRASAL COMPONENTS: RESULTS

(Ø: 4.74 %; H: 63.51 %; S: 31.6 %; MC: 0,16 %)

R 2

a) If a compound contains **phrasal elements**, they must be separated from the rest by a **hyphen or a space**.

b) **Hyphenation** represents the **unmarked strategy**.

ABBREVIATION COMPONENTS

- orthographic rules demand hyphenation
- compounds with abbreviation components: 1668
- Examples:
  - *CD Regal* ('CD shelves')
  - *DFB Elf* ('German Football Association eleven')

ABBREVIATION COMPONENTS

(Ø: 4.26 %; H: 67.93 %; S: 27.52 %; MC: 0,3 %)

R 3

a) If a compound has an **abbreviation** component, it must be separated from the rest of the compound by a **hyphen or a space**.

b) **Hyphenation** represents the **unmarked strategy**

NUMBER COMPONENTS

- orthographic rules demand hyphenation
- compounds with number components: 659
- Examples:

  - 400 g Packung ('400 g pack')
  - 50/50 Situationen ('fifty-fifty situations')

R 4

a) If a compound has a **number** component, it must be separated from the rest of the compound by a **hyphen or a space**.

b) **Hyphenation** represents the **unmarked strategy**.

Brand name components

- No explicit orthographic rules for brand names / for compounds with name components hyphenation is "allowed"

- compounds with brand name components: 984

- Examples:

  - *Alpina Raumfarbe* ('Alpina room paint')
  - *Weihenstephan Rahmjoghurt* ('Weihenstephan cream yoghurt')

Brand name components

(Ø: 1,93 %; H: 18.6 %; S: 79.17 %; MC: 0,3 %)

BRAND NAME COMPONENTS: THE INFLUENCE OF GENRE

	complete corpus	advertising texts	internet texts
Ø	19 / 1.93 %	4 / 0.48 %	15 / 9.55 %
H	183 / 18.6 %	97 / 11.73 %	86 / 54.78 %
S	779 / 79.17 %	725 / 87.67 %	54 / 34.39 %
MC	3 / 0.3 %	1 / 0.12 %	2 / 1.27 %

R 5

- If a compound has a **brand name** component, it must be separated from the rest of the compound by a **hyphen or a space**.

- **Hyphenation** represents the **unmarked strategy**.

- **In advertising texts, insertion of spaces represents the unmarked strategy.**

COMPOUNDS WITH BRAND NAME COMPONENTS:
A REMARK ON LOGOS

- In 117 out of 984 compounds with brand name components, the brand name is realized as a logo (which differs typographically from the rest of the compound).

- In 116 of them the logo part is separated by spaces, the other one has a medial capital.

- Logos might be the origin of R5.

TRENDS

There is a tendency to insert hyphens and spaces in

- **proper names** as components of compounds and
- **foreign word** components, especially for
- **English** components

Linking elements, especially non-paradigmatic LEs, seem to have a slight prohibitive influence.

Conclusion Part II

- Orthographic rules forbid German writers to split up compounds – but they do it nevertheless.

- Separated compounds occur to a degree (11,12 % in a corpus from informal internet and advertising texts) which makes it hard to believe they are a mere "performance problem".

- Separated compounds display systematic behaviour.
    - They function as indicators of structure.
    - Certain subparts (phrasal elements, abbreviations, numbers, brand names) force insertion of hyphens or spaces.
    - Their occurrence can be dependent on genre.
    - Medial capitals can hardly be responsible for this "trend".

Part III: How it might be in the future

IDIOLECTAL FACTORS

Who are those people who put spaces into German compounds?

DATA OF INDIVIDUAL WRITERS

Most compounds could not be assigned to individual writers. Exceptions are the following:

- VIP chats
- thread participants with many contributions

Two different sorts of writers could be identified.

TYPE A

Thread author *narciss*

Ø	H	S
Menschenrecht, Volksvertreter, Bierflaschen, Schneeballschlacht, Weltpolitik, Staatsbankrott, Mädchenhandel, Drogenbosse, Straßenkinder, Schuhimitate, Volksvertretern, Weltbild, Reisekosten, Medienwelt,		*EU Recht, US Bankenkrise, US Mord, US Kommerz*

Type B

Thread author *carlocoxx*

Ø	H	S
		chef sache, ochsenknecht brüder, gewallt

Type B

Thread author *carlocoxx*

warum regt ihr euch denn so auf??wenn die catterfeld klagen würde,dan würde sich hier keiner aufregen.guckt euch doch diese kinder von tokio hotel an die sind noch viel peinlicher rennen zur merkel und wollen das sie es zur chef sache macht filesharer zu packen.das ist doch viel peinlicher!und wenn der opa sein enkel am pc gelassen hat,der die lieder gesaugt hat??

Richtig so!!schade nur das die ochsenknecht brüder ihr fett nicht weck bekommen haben das arogante pack!und von wegen gewallt verherlichung von rap musik,die eltern sind zuständig für die erziehung und nicht die rapper!

T YPE B

Thread author *carlocoxx*

warum regt ihr euch denn so auf??wenn die catterfeld klagen
würde,dan würde sich hier keiner aufregen.guckt euch doch diese
kinder von tokio hotel an die sind noch viel peinlicher.rennen zur
merkel und wollen das sie es zur chef sache macht filesharer zu
packen.das ist doch viel peinlicher!und wenn der opa sein enkel
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Richtig so!!schade nur das die ochsenknecht brüder ihr fett nicht
weck bekommen haben das arogante pack!und von wegen
gewallt verherlichung von rap musik,die eltern sind zuständig für
die erziehung und nicht die rapper!

CONCLUSION PART III

i. There are indeed changes in the system of German space insertion. For the majority of writers, these changes are limited to word formations which contain numbers, abbreviations, brand names or foreign language subparts. In the future, there might be slight modifications of the rules of space insertion, probably in the form of additional rules (as for the case of all-foreign compounds like *business lunch* which can be interpreted as quotes)

CONCLUSION PART III

ii. A small group of writers tend to insert spaces in all kinds of compounds. The writing skills of this group are generally low. Their compound-internal SI might be due to a biased input largely consisting of texts with low norm orientation. It might be the case that a "written sociolect" is emerging (*Deppenleerzeichen, Deppenapostroph* etc.).

iii. Apparently Nerius´ opinion that "problems concerning [SI] do not exist with nominal compounds" is not correct. Spelling guides and school books should react with more explicit rules on SI in compounds.

CONCLUSION: REVISED MODEL OF SI

MORPHO-SYNTAX   INTERFACE   WRITTEN LANGUAGE

MS WORD
morphological process
no internal valency requirements
morphological patterns
extensibility

GRAPHEMIC WORD
Word boundaries must be occupied by punctuation marks or spaces, **no internal spaces**

GROUP OF MS WORDS

GROUP OF GRAPHEMIC WORDS
Spaces on word boundaries

MS WORD

GROUP OF GRAPHEMIC WORDS
Containing a brand name, logo, number etc.

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Germanic Verb Particle Variation

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Content

Abstract

This paper has two goals:

- a "global" one: to present an overview of the variation concerning verb particles across the Germanic languages (see e.g. Haiden 2005, McIntyre 2007 and many others), and
- a "local" one: to use some of this variation data to argue for Yiddish being an SOV-language like German and Dutch rather than an SVO-language like English and the Scandinavian languages.

I will start out by suggesting that prepositions and (separable) particles have the same structure:

(1)   a.

                PP   b.   PrtP

     Spec   P'   Spec   Prt'

            P°   DP   Prt°   DP

and that the difference is that prepositions assign case, whereas particles do not. Therefore the complement DP (e.g. *the book* in *throw out the book*) will not be assigned a case. This problem has two potential solutions:

- **EITHER** the particle is incorporated into the verb (i.e. into V*), in which case V* (maybe via the trace in Prt°) may now assign case to the "object" (result: *He threw <u>out</u> the book*),
- **OR** the DP may move to PrtP-spec, where it can be assigned case directly by V° (as in ECM-constructions) (result: *He threw <u>the book</u> out*).

and both of these two constructions are straightforwardly passivisable.

The picture can be extended to the Germanic SOV-languages, assuming that what differs between SVO and SOV is the ordering inside V' and inside V* (i.e. **syntactic** ordering, which concerns separable particles, e.g. *go under*), but crucially **NOT** inside V° (i.e. **morphological** ordering, which concerns non-separable particles, e.g. *undergo*). This captures why the variation concerning particles (Vikner 1987, Engels & Vikner 2013, 2014 and many others) found in the Mainland Scandinavian - which otherwise show relatively little variation - is not found in the Germanic OV-languages (German, Dutch, Frisian, Low German, ...) - which otherwise show quite a lot of variation.

I will also show that the view that Yiddish is an OV-language like German and Dutch, not a VO-language like English or Danish, is supported by facts concerning verb particles. I shall argue against Diesing's (1997:383) claim that particles may not form the basis of an argument for the underlying order of Yiddish being OV.

The point is that only if Yiddish is an OV-language like German and Dutch, not a VO-language like English or Danish, can we explain why Yiddish is like German and unlike Scandinavian in allowing even such particles to occur preverbally in non-V2 constructions that do not incorporate, as seen by their not moving along with the finite verb during V2.

1. Separable particles

1.1 The differences between prepositions and (separable) particles

One difference between prepositions (P°) and (separable) particles (Prt°) in English is that prepositions have to **precede** their DP-complement, whereas the particle may either **precede** or **follow** the object DP:

(2)   En.   a.   I accidentally stepped <u>on</u> the radio.   P°
          b.   * I accidentally stepped   the radio <u>on</u>.

(3)   En.   a.   I accidentally switched <u>on</u> the radio.   Prt°
          b.   I accidentally switched   the radio <u>on</u>.

Haegeman & Guéron (1999:250-254) mention the following other differences:

- Whereas [P°+DP] may undergo *wh*-**movement**, this is not possible for [Prt°+DP]:

(4)   En.   a.   <u>In</u> <u>which</u> <u>hotel</u> did the Beatles stay ___?   P°
          b.   * <u>In</u> <u>which</u> <u>door</u> did the Stones kick ___?   Prt°

- Whereas [P°+DP] may undergo **clefting**, this is not possible for [Prt°+DP]:

(5)   En.   a.   It was <u>in</u> <u>this</u> <u>hotel</u> that the Beatles stayed ___.   P°
          b.   * It was <u>in</u> <u>this</u> <u>door</u> that the Stones kicked ___.   Prt°

- Whereas [P°+DP] may be **coordinated** with another [P°+DP], [Prt°+DP] may not be coordinated with another [Prt°+DP]:

(6)   En.   a.   He looked   <u>up</u> <u>the</u> <u>chimney</u> and <u>down</u> <u>the</u> <u>stairwell</u>.   P°
          b.   * She switched <u>off</u> <u>the</u> <u>TV</u>   and <u>on</u>   <u>the</u> <u>light</u>.   Prt°

- Whereas [P°+DP] may be **modified**, e.g. by *right* or *straight*, this is not possible for [Prt°+DP]:

(7)   En.   a.   The Beatles stayed <u>right</u> <u>in</u> <u>this</u> <u>hotel</u>.   P°
          b.   * The Stones kicked <u>right</u> <u>in</u> <u>this</u> <u>door</u>.   Prt°

- Consider finally **ellipsis**, i.e. leaving out a constituent that has already occurred in the discourse. Elision of the verb itself is only possible in the preposition case, not in the particle case:

(8)   En.   a.   He looked up the chimney and she looked down the stairwell.   P°
          b.   He looked up the chimney and she _____ down the stairwell.

(9)   En.   a.   He switched off the TV and she switched on the light.   Prt°
          b.   * He switched off the TV and she _____ on the light.

- On the other hand, the sequence V°+Prt° may undergo elision, whereas this is not possible for the sequence V°+P°:

(10) En. a.   He looked up the chimney and she looked up   the stairwell.   P°
    b. * He looked up the chimney and she _____ the stairwell.

(11) En. a.   He switched off the TV and she switched off the light.   Prt°
    b.   He switched off the TV and she _____ the light.

1.2 Verbs and particles in the Germanic SVO-languages

The analysis of the examples with prepositions is uncontroversial, as in (12)a:

(12) a.   b.

The analysis of the particle examples, however, is not uncontroversial. Consider the "single verb hypothesis", as in (12)b above (where V* signals a "complex lexical unit", Haegeman & Guéron 1999:254, i.e. more than a V° but less than a V', cf. section 2.1 below and references there).

One reason why the particle and the verb do not just form a V° (i.e. the reason why the particle is not simply incorporated) is that the particle may move to CP-spec in e.g. both Swedish and Danish:

(13) a. Sw.   <u>Ut</u> kastade dom mej inte, bara ned   för trappan.   (Holmberg 1999: 17)
    b. Da.   <u>Ud</u> smed   de   mig ikke, kun ned   ad trappen.
            Out threw   they me not, just down of stairs-the

In (12)a, [P°+DP] make up a constituent, namely PP, which accounts for why [P°+DP] may undergo *wh*-movement, (4)a, clefting, (5)a, coordination, (6)a, and modification, (7)a. The verb may undergo gapping on its own, (8)b, as it is a constituent, but the verb and the preposition may not undergo gapping together, (10)b, as they do not form a constituent.

In (12)b, [Prt°+DP] do not make up a constituent, which accounts for why [Prt°+DP] may not undergo *wh*-movement, (4)b, clefting, (5)b, or coordination, (6)b. The impossibility of the modification in (7)b is caused by the impossibility of interrupting V*. The verb and the particle may undergo gapping together, (11)b, as they form a constituent.

> (As for why the verb may not undergo gapping on its own, (9)b, this is less clear, but maybe the verb on its own is too small to undergo gapping, and V* is the smallest constituent that may undergo gapping.)

There are at least two problems with the verb and the particle forming a complex verb (though see McIntyre 2013 for a defence of this analysis). One is that the inflectional endings are not attached to the right edge of this complex verb, but in the middle:

(14) En. a.   * He [switch-onned] the radio this morning.
           b.   He [switched   on] the radio this morning.

(15) En. a.   * He [switch-ons] the radio every morning.
           b.   He [switches on] the radio every morning.

The other is that the complex element does not have the same category (etc.) as its daughter on the right, as is the case in other compounds: *dark-room* is a noun like *room* (its daughter on the right), not an adjective like *dark*, whereas *tax-free* is an adjective like *free* (its daughter on the right), not a noun like *tax*. *To switch on* however is not a particle like its right hand daughter *on*, but a verb, just like its daughter on the **left**, *switch*. In other words, it violates Williams' (1981:248) "Right Hand Head Rule".

Therefore Haegeman & Guéron (1999:257-258) suggest that particle constructions actually have a basic structure parallel to the examples with prepositions, as in (16)a:

(16)   a.

Consider now the consequences of the analysis in (16): (16)a is the basic structure, which will never make it to the surface, however - Prt° is unable to assign case, and therefore the DP would not be assigned a case (and for DPs, not being assigned case is disastrous).

There are two ways out of this problem:

• One is that the DP moves to the specifier position of PrtP, (16)b, where it may be assigned case directly from the verb, in a configuration very reminiscent of ECM (exceptional case marking). This option accounts for the possibility of the DP-Prt° order in e.g. (3)b above.

• The other is that the particle is incorporated into the verb, (16)c, in which case the verb can now assign case to the DP (maybe via the trace of the particle). This option accounts for the possibility of the DP-Prt° order in e.g. (3)a above.

The availability of both (16)b and (16)c is still compatible with the properties discussed above:

In neither (16)b nor (16)c is Prt° part of the V°, and therefore this analysis predicts e.g. *switch on* to attach its verbal inflection to *switch* rather than to *switch on*, (14) and (15), and it is also compatible with *switch on* not being a particle like *on*.

In neither (16)b nor (16)c is there a constituent [Prt°+DP], and this fact accounts for why [Prt°+DP] may not undergo *wh*-movement, (4)b, clefting, (5)b, or coordination, (6)b. The impossibility of the modification in (7)b is caused by the impossibility of interrupting V*. The verb and the particle may undergo gapping together, (11)b, as they form a constituent, V* in (13b).

> (As for why the verb may not undergo gapping on its own, (9)b, the situation has not changed, maybe the verb on its own is too small to undergo gapping, and maybe V* is the smallest constituent that may undergo gapping.

English and Norwegian allow both (16)b and (16)c, whereas Swedish only allows (16)b and Danish (and Faroese) only allow (16)c (see e.g. Vikner 1987):[1]

(17) En. a.   Peter threw   <u>out</u> <u>the carpet</u>.
      b.   Peter threw   <u>the carpet</u> <u>out</u>.
                                BOTH (16)b AND (16)c

(18) No. a.   Petter kastet   <u>bort</u> <u>teppet</u>.
      b.   Petter kastet   <u>teppet</u>   <u>bort</u>.

(19) Sw. a.   Peter kastade   <u>bort</u> <u>mattan</u>.
      b. * Peter kastade mattan   bort.   ONLY (16)c

(20) Da. a. * Peter smed   ud   tæppet.
      b.   Peter smed   <u>tæppet</u>   <u>ud</u>.   ONLY (16)b

As also shown in Vikner (1987, 2007), Engels & Vikner (2013, 2014), and many other places, the pattern in (18)-(20) is exactly the same as the pattern with verbs embedded under causative *let*:

(21) No. a.   Petter lot   <u>støvsuge</u>   <u>teppet</u>.
      b.   Petter lot <u>teppet</u>   <u>støvsuge</u>.   BOTH (16)b AND (16)c

(22) Sw. a.   Peter lät   <u>dammsuga</u> <u>mattan</u>.
      b. * Peter lät mattan   dammsuga.   ONLY (16)c

(i.e. (16)b,c WITH VP INSTEAD OF PrtP AND WITH V° INSTEAD OF Prt°)

(23) Da. a. * Peter lod   støvsuge   tæppet.
      b.   Peter lod <u>tæppet</u>   <u>støvsuge</u>.   ONLY (16)b
        Peter   let   carpet-the vacuum-clean carpet-the

As I take it that Danish/Norwegian/Swedish are SVO-languages, (23)b must involve movement of the DP. The parallels between (18)-(20) and (21)-(23) then lead me to also assume that (20)b involves movement of the DP rather than assume that (20)b to show that particles are head-final in Danish.

> (Head-final particles would also not allow assigning particles and prepositions the same structure.)

---

[1] Although English (and Norwegian) allow both (16)b and (16)c, this is only true for full DPs like *the radio* in (3)a,b above. If the DP is a pronoun, this is not so, only (16)c is possible:

(i)   En. a.*   While jumping, he accidentally switched   on <u>it</u>.   = (16)b
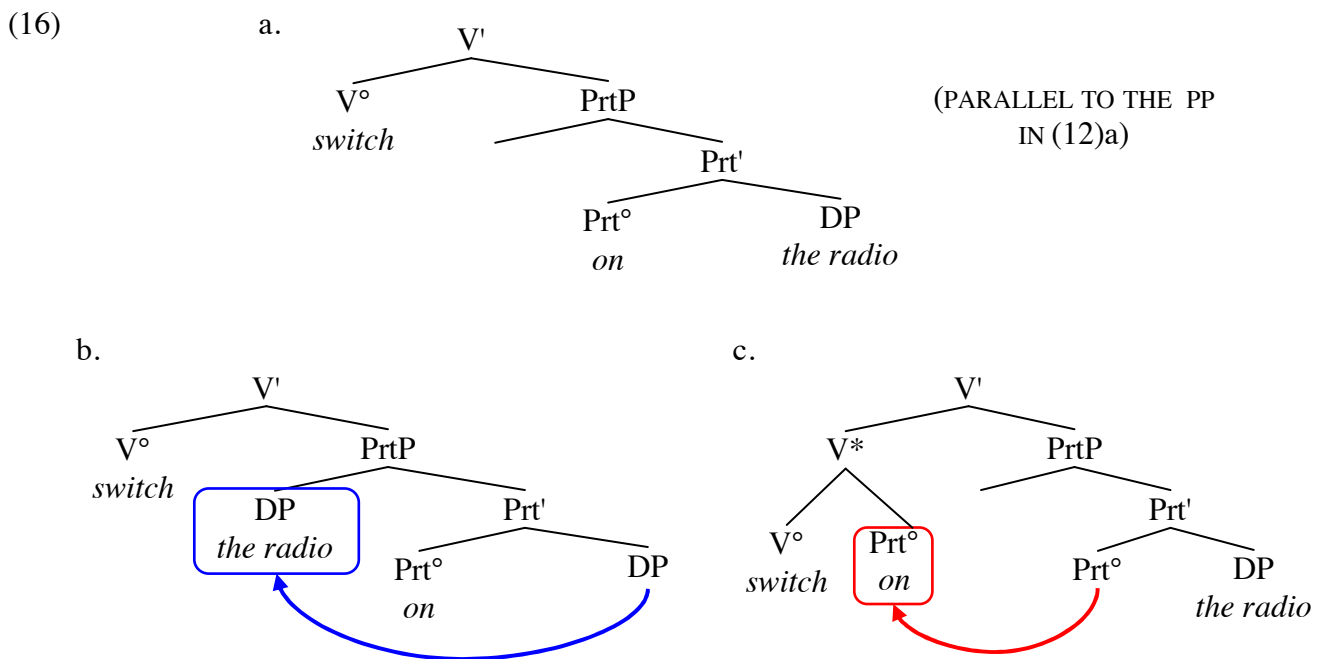   b.   While jumping, he accidentally switched <u>it</u> on.   = (16)c

1.3 Verbs and particles in the Germanic SOV-languages

Given the analysis of particle verbs in the SVO-languages in (16) above, the question now is to which extent this also applies to particle verbs in the SOV-languages. I would like to suggest that only those orders switch which are linked to V° and its complement (i.e. V°/V* follows PrtP rather than precede it), whereas all other orders remain the same:

(24) a. Ge. Peter wird das Radio anmachen.
     b. Du. Pieter zal de radio aanzetten.
     c. Af. Pieter sal die radio aanskakel.
             Peter will the radio on-switch

(25) a.

```
                        V'
              ┌─────────┴─────────┐
            PrtP                  V°
          ┌───┴────┐            machen
                 Prt'
              ┌───┴────┐
            Prt°        DP
             an      das Radio
```

   b.

```
                              V'
                    ┌─────────┴─────────┐
                  PrtP                  V°
           ┌───────┴───────┐         machen
         DP                Prt'
       das Radio        ┌───┴────┐
                      Prt°        DP
                       an
```

   c.

```
                            V'
                  ┌─────────┴──────────┐
                PrtP                   V*
          ┌──────┴──────┐         ┌────┴────┐
               Prt'               Prt°      V°
            ┌───┴────┐             an     machen
          Prt°        DP
                   das Radio
```

In other words, the ordering differences and similarities concerning particle incorporation between SVO-languages, (16), and SOV-languages, (25), are:

- The position of the **SEPARABLE** particle (which is at most a sister of V° and a daughter of V*) is to the left of the verb in the OV-languages, (25), Ge. *anmachen*, but to the right of the verb in the VO-languages, (16), En. *switch on*. This is a **syntactic** property, and thus depends on the syntactic licensing direction of verbs in the language in question (viz. the SOV/SVO-difference).
      This is just like the position of the complement XP (object DP or PP or PrtP), left or right of the verb, which is also a syntactic property, and which varies between across the Germanic SOV-languages and the Germanic SVO-languages.

- As will be discussed in more detail in section 2 below, the position of the **NON-SEPARABLE** particle (which is always both a sister of V° and a daughter of V°), is to the left of the verb both in the OV-languages, Ge. <u>verstehen</u>, and in the VO-languages, Da. <u>forstå</u>, En. <u>understand</u>. This is a **morphological** property, and thus does **not** co-vary with the syntactic licensing direction of verbs. This is just like the position of the verbal inflectional morphemes, which is also a morphological property, and which also does not vary across the Germanic SOV/SVO-languages.

As was the case with (16)b,c, (25)b,c are two different ways of getting case onto the complement DP of the (separable) particle. Cf. the English and Scandinavian variation as to DP-Prt° or Prt°-DP order, (17)-(20) above.

The question why there is no variation in the SOV-languages comparable to (17)-(20) may now be answered: Whether an SOV-language employs only (25)b, only (25)c, or both, does not make any difference, as both (25)b,c yield the same ordering predictions (as opposed to (16)b,c, which yield different predictions).

This is because (25)c is the same as in SVO, i.e. leftwards movement, whereas (25)b is different from SVO, rightwards movement (if V° is to the right of PrtP, then quasi-incorporation of Prt° into the V* is necessarily rightwards movement). In the SOV-languages, the two movements thus have the **"same"** result (i.e. as far as the sequence is concerned).

I would therefore like to suggest that (16)/(25) account for the differences between English/ Scandinavian on one hand and German on the other. In section 2 below, I will show that if Yiddish it assumed to be SOV, the account will also explain why Yiddish particle verbs behave so very differently from English/Scandinavian ones and so much like German ones.

(It might seem feasible to allow only (25)b, where there is no incorporation of the particle into V*, as an analysis of separable particles in the SOV-languages. However, we know from Swedish that this won't work, given that although Swedish only employs option (16)c with separable particles, these nevertheless remain separable, (13)a, (19)a.)

(It might seem that if the DP would adjoin to PrtP rather than move into PrtP-spec, movement of particles to CP-spec would receive a better analysis under (25)b, i.e. then PrtP could move to CP-spec. However, also in Swedish, particles may move to CP-spec, and Swedish only allows (16)c. For a possible analysis of particles in CP-spec, see the analysis of remnant VP-topicalisation in Engels & Vikner (2013, 2014), which predicts that if the particle has a DP-complement, the particle can only end up in CP-spec on its own if the DP-complement has undergone object shift, as does *mej*/*mig* in (13).)

(Another potential problem is that in some German cases, the particle might seem to be the case assigner, e.g. *Sie ist dem Bankräuber nachgefahren* 'She is the bank robber after-driven', i.e. she followed the bank robber by car. Here the DP has dative case, which is exactly what *nach* assigns when it is a preposition. Furthermore, the verb *fahren*, 'drive', can only have the perfect auxiliary *sein*, 'be', here, although it would normally have *haben*, 'have' when it assigns a case. See e.g. McIntyre 2007:359 for discussion and references.)

1.4 Passives with particles and prepositions

As the DP is assigned case from the verb in either version of the particle construction, it is not surprising that this construction may be passivised:

(26) En. a.   [The radio]$_1$ was accidentally   switched   t$_1$ on t$_1$.
         b.   [The radio]$_1$ was accidentally [switched on$_2$]   t$_2$ t$_1$.

It is more surprising that also the prepositional construction may be passivised ("pseudo-passive"):

(27) En.   Peter$_1$ will be laughed at t$_1$.

What is peculiar about the prepositional passive is that passivisation prevents not the verb *laugh* but the preposition *at* from assigning case, even though passivisation affects the morphology of the verb and not that of the preposition.

One possible analysis is to say that the reason why the passivisation of the verb *laugh* prevents the preposition *at* from assigning case is that the preposition in some sense 'forms part' of the verb:

(28)

If we assume that the preposition may also be incorporated into V*, just like the particle in (16)c, we can now account for the passivisation in (27)/(28). If the preposition is incorporated into the verb in a passive construction, the DP which is left without case, may find a case in the subject position, cf. (28).

If the preposition were to be incorporated into the verb in an active construction, the DP which would be left without case, would have nowhere to find a case, and so the construction would be impossible for independent reasons.

Furthermore, a cross-linguistic prediction is made here: Only one of the languages mentioned above (namely Danish) did not allow incorporation into the V* of the particle, and so we would expect that only Danish would not allow examples like (27) which involve a parallel kind of incorporation. This prediction would seem to hold (as noted in Herslund 1984, cf. Vikner 1995:246, note 14):

(29) En.   He was laughed at.

(30) No.   Han ble ledd   av.
             He   was laughed at   (Vinje 1987:140)

(31) Sw.   Skandalen   skrattades   åt.
             Scandal-the was-laughed at   (Platzack 1998:122)

(32) Da. a. ?? Han   blev grinet   af.
         b. ?? Skandalen   blev grinet   af.
             He/Scandal-the was laughed at

(33) Da. a.   Ham   blev der   grinet   af.
         b.   Skandalen   blev der   grinet   af.
             Him/Scandal-the was there laughed at

> (This would then further imply that in a prepositional passive with a particle, e.g. *She was looked up to*, this incorporation into V* takes place twice: first *up*, then *to*!)

In this section, section 1, the focus was mainly on separable particles. This is where the verb particle variation is, both between different types of SVO-languages and between SVO-languages and SOV-languages, and it was suggested that what differs between SVO and SOV is the ordering inside V' and inside V* (i.e. **syntactic** ordering, which concerns separable particles), but crucially **NOT** inside V° (i.e. **morphological** ordering, which concerns non-separable particles).

We are now ready to have a more detailed look at both separable and non-separable verb particles, in particular with a view to the status of Yiddish as an SVO-language or an SOV-language.

2. Separable vs. non-separable particles

All the Germanic languages, including English, have both separable and non-separable verb particles:

(34) En. a.   The patient <u>under</u>went   an operation.   NON-SEPARABLE

         b.   The ship   went <u>under</u> after colliding with an iceberg.   SEPARABLE

(35) En. a.   The lawyer   <u>off</u>set   his travel expenses against tax.   NON-SEPARABLE

         b.   The students   set <u>off</u> in search of the secretary's office.   SEPARABLE

> The terminology used in the literature may be confusing: Sometimes the distinction is made between separable and non-separable particles, sometimes between separable and non-separable prefixes, and sometimes between particles (which are taken to be separable) and prefixes (which are taken to be non-separable). I shall refer to separable and non-separable particles, and I shall also refer to particle verbs, by which I mean the complex verb which is formed by a verb and a particle, e.g. *undergo* in (34)a and *go under* in (34)b.

Below, I will try to show that the view that Yiddish is an OV-language like German and Dutch (as advocated also in Vikner 2001a,b, 2003, and by many others), not a VO-language like English or Danish, is supported by the facts concerning verb particles.

2.1 Different types of incorporation: V° and V*

In this subsection I set out what I take to be the basic difference between separable and non-separable particle verbs, namely that only the non-separable ones form a X°-constituent (i.e. a V°) in the syntax. Separable particle verbs do not form a V°, but a constituent of a higher projection level, which was labelled V* in (16)c/(25)c above.

As already hinted at above, I would like to suggest that separable particles are not incorporated into the verb **TO THE SAME EXTENT** that non-separable particles are. If we assume that a non-separable particle and its verb (<u>under</u>stand) constitute a V°, then a separable particle and its verb (*send off*) do not form a V°.

This does not mean that verb and separable particle may not somehow form a constituent, it only means that they may not together constitute a V°. I take it that the closest they may get to each other is to form a syntactic constituent which is not quite as small as V°, even if it may be smaller than V', cf. that they are taken to form almost a head but not quite by e.g. Booij (1990) where they constitute a V* (which is more than V° but less than V'). For further discussion, see e.g. Haegeman & Guéron (1999:254), Zeller (2001:58-69), Haiden (2005), and also Booij (2008:9, 2009:8) on "pseudo-incorporation"/"quasi-incorporation" where V* is analysed as [$_{V'}$ V N], i.e. a VP where the object does not project any XP. See also sections 1.2 and 1.3 above on whether a given language uses the option of incorporating separable particles into V*.

I will (continue to) use the notation V*, but I will take it only to indicate a constituent which is larger than a V°, i.e. I have nothing to say about whether V* is as big as V' or not (cf. Zeller's 2001:162 formulation Vn, n>0). (36) illustrates the analyses of the verbs used in the rest of the hand-out.

This follows Haiden (1997:105), Wurmbrand (1998:271), and many others, in taking **verb and separable particle to form a lexical unit but not necessarily also a syntactic X°-constituent**.

	MORPHOLOGY	SYNTAX	
(36)	**NON-SEPARABLE**	**SEPARABLE** (IN OV-LANGUAGES)	**SEPARABLE** (IN VO-LANGUAGES)

a.

V°	V*	V*
Prt° V°	Prt° V°	V° Prt°

b.
Yi. *farshteyn*
Ge. *verstehen*
Da. *forstå*
En. *understand*

c.

	Yi. *avekshikn*	Da. *sende afsted*
	Ge. *abschicken*	En. *send off*

Verb and separable particle would have this (i.e. lexical unity without syntactic unity) in common with many other combinations of a verb plus (part of) its complement, e.g. idiomatic expressions like English *to spill the beans* (i.e. 'to reveal a secret'), Danish *stille træskoene* (literally 'to put down the wooden shoes', i.e. 'to die'), German *jemandem einen Korb geben* (literally 'to give somebody a basket', i.e. 'to say no to an offer'), and Yiddish *hakn a tshaynik* (literally 'to beat a teapot', i.e. 'to talk nonsense'). Because such expressions have a noncompositional semantics, i.e. their meaning cannot be inferred from the meaning of their parts, the entire expression, e.g. *spill the beans*, has to be listed as a separate lexical entry. However, although they thus form one lexical unit, they do not form a syntactic one, as shown e.g. by Müller (2000): Syntactic operations, e.g. passivisation or V2, can affect part of such expressions while leaving other parts unaffected, so that the different parts of the lexical unit can end up rather far apart in the syntax:

(37) En.   The beans were finally spilled by John.

(38) Da.   I 1980 stillede   han desværre   træskoene.
In 1980 put-down he   unfortunately wooden-shoes-the
(= 'In 1980, he unfortunately died')

(39) Ge.   Warum gab sie ihm gestern   einen Korb?
Why   gave she him yesterday a   basket?
(= 'Why did she turn him down yesterday?')

(40) Yi.   Far vos hakt er shtendik   a tshaynik?
Why   beats he constantly a teapot?
(= 'Why does he always talk nonsense?')

This is clearly parallel to those verbs with separable particles that do not have a compositional semantics, e.g. German *aufhören*, Yiddish *oyfhern*, and Danish *høre op*, literally 'to up-hear' i.e. 'to stop'. The meaning of the particle verb cannot be computed from the meaning of its constituent parts, i.e. *hear* and *up*. Although *hear* and *up* have to be listed independently in the lexicon, the lexicon therefore also has to contain separate entries for *aufhören*, *oyfhern*, and *høre op*.

(Gold 1998:192-194 in fact argues that it follows from *oyfhern* forming a lexical unit that it must form a syntactic X°-constituent. I disagree with this conclusion, because of the data from idiomatic expressions cited above).

Ackema & Neeleman (2004:71) suggest for particle verbs that the separable particle (syntactic compounding) is the unmarked option, and that the non-separable particles (morphological compounding) are the ones that have to be marked in the lexicon.

2.2 Lexical differences between German, Yiddish, and Danish

Across the three languages **almost all possible combinatorial possibilities exist**, i.e. not only are there particle verbs which are separable in all three languages, (41), and others which are non-separable in all three languages, (48), but there are also particle verbs which are separable in one language and non-separable in the other two or vice versa, (42), (45)-(47). Only two combinations are not found, (43) and (44): There would seem to be no particle verbs which are separable in German and non-separable in Yiddish. The particle verbs which are non-separable in German and separable in Yiddish, (45) and (46), involve only five prepositions/particles (*durch/durkh* 'through', *hinter* 'behind', *über/iber* 'above', *um/arum* 'around', and *unter* 'below', see e.g. Olsen 1997:11 ff., Zifonun et al. 1997:2088 on their special properties).

The following table only includes one example of each particle in each of the groups, and it only contains particle verbs which are clearly semantically parallel across the three languages. "+" means separable particle/prefix, "-" means non-separable particle/prefix:[2]

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[2] Some, but not all, of the Danish particle verbs that I have classified here as separable also occur as non-separable particle verbs in very formal or technical usage but not in colloquial Danish (see e.g. Lundskær-Nielsen & Holmes:2011:134-135).

This tendency can also be observed in different examples where both the separable and non-separable variants are well-established forms. Consider German *auslaufen*, Yiddish *oysloyfn* 'run out, leak, expire'. In Danish this is separable in a more concrete sense, but non-separable in a more figurative or technical sense:

(i)   Da. a.   Vandet   løb   ud   på gulvet.
      b. * Vandet   udløb   på gulvet.
         Water-the (out)ran (out) on floor-the

(ii) Da. a. [??]Kontrakten   løb   ud   i 2013.
      b.   Kontrakten   udløb   i 2013.
         Contract-the (out)ran (out) in 2013

(41)   **German: +**   **Yiddish: +**   **Danish: +**

	German	Yiddish	Danish	
a.	<u>ab</u>brennen	<u>op</u>brenen	brænde <u>af</u>	*burn down*
b.	<u>ab</u>schicken	<u>avek</u>shikn	sende <u>afsted</u>	*send off*
c.	<u>auf</u>wachsen	<u>oyf</u>vaksn	vokse <u>op</u>	*grow up*
d.	<u>aus</u>halten	<u>oys</u>haltn	holde <u>ud</u>	*endure, stand*
e.	<u>ein</u>kaufen	<u>ayn</u>koyfn	købe <u>ind</u>	*buy, shop*
f.	<u>herein</u>kommen	<u>arayn</u>kumen	komme <u>ind</u>	*come in, enter*
g.	(<u>hin)aus</u>gehen	<u>aroys</u>geyn	gå <u>ud</u>	*go out*
h.	<u>nach</u>geben	<u>nokh</u>gebn	give <u>efter</u>	*give in, indulge*
i.	sich <u>um</u>sehen	<u>um</u>kukn zikh	se sig <u>om</u>	*look around*
j.	<u>zu</u>nageln	<u>tsu</u>noglen	sømme <u>til</u>	*nail shut*
k.	<u>zurück</u>ziehen	<u>tsurik</u>tsien	trække <u>tilbage</u>	*retract*
l.	<u>zusammen</u>stoßen	<u>tsunoyf</u>shtoysn	støde <u>sammen</u>	*clash, collide*

(42)   **German: +**   **Yiddish: +**   **Danish: -**

	German	Yiddish	Danish	
a.	<u>ab</u>weichen	<u>op</u>vaikhn	<u>af</u>vige	*deviate*
b.	<u>an</u>kommen	<u>on</u>kumen	<u>an</u>komme	*arrive*
c.	<u>auf</u>suchen	<u>oyf</u>zukhn	<u>op</u>søge	*look up (a person)*
d.	<u>bei</u>legen	<u>ba</u>leygn	<u>ved</u>lægge	*append (e.g. to a letter)*
e.	<u>durch</u>führen	<u>durkh</u>firn	<u>gennem</u>føre	*carry out*
f.	<u>ein</u>wenden	<u>ayn</u>vendn	<u>ind</u>vende	*object*
g.	<u>um</u>stoßen	<u>um</u>shtoysn	<u>om</u>støde	*reverse (e.g. a decision)*
h.	<u>zu</u>lassen	<u>tsu</u>lozn	<u>til</u>lade	*allow*

(43)   **German: +**   **Yiddish: -**   **Danish: +**

    ---

(44)   **German: +**   **Yiddish: -**   **Danish: -**

    ---

(45)   **German: -**   **Yiddish: +**   **Danish: +**

	German	Yiddish	Danish	
	<u>über</u>springen	<u>iber</u>hipn	springe <u>over</u>	*skip, pass over*

(46)   **German: -**   **Yiddish: +**   **Danish: -**

	German	Yiddish	Danish	
a.	<u>durch</u>löchern	<u>durkh</u>lekhern	<u>gennem</u>hulle	*make holes in*
b.	<u>um</u>ringen	<u>arum</u>ringen	<u>om</u>ringe	*surround, encircle*
c.	<u>über</u>reden	<u>iber</u>redn	<u>over</u>tale	*persuade*
d.	<u>unter</u>drücken	<u>unter</u>drikn	<u>under</u>trykke	*suppress*

(47)   **German: -**   **Yiddish: -**   **Danish: +**

	German	Yiddish	Danish	
	<u>zer</u>schlagen	<u>tse</u>shlogn	slå <u>itu</u>	*smash to pieces*

(48)   **German: -**   **Yiddish: -**   **Danish: -**

	German	Yiddish	Danish	
a.	<u>be</u>merken	<u>ba</u>merkn	<u>be</u>mærke	*notice*
b.	<u>ent</u>schuldigen	<u>ant</u>shuldikn	<u>und</u>skylde	*apologise*
c.	<u>er</u>kennen	<u>d</u>erkenen	<u>er</u>kende	*recognise*
d.	<u>ver</u>stehen	<u>far</u>shteyn	<u>for</u>stå	*understand*

2.3 Syntactic differences between German, Yiddish, and Danish

German, Yiddish and Danish are all V2, meaning that in declarative main clauses, the finite verb must be in the second position, irrespective of whether the first position is occupied by the subject, (49), or by some other constituent, (50):

(49) a. Ge. [Der Junge] <u>wird</u> auf dem Weg   eine Katze   sehen.   V2
      b. Yi. [Dos yingl] <u>vet</u> oyfn   veg zen   a   kats.   V2
      c. Da. [Drengen]   <u>vil</u>   se   en kat på vejen.   V2
         The   boy   will (on the way) (see) a   cat   (on way-the) (see)

(50) a. Ge. [Auf dem Weg] <u>wird</u> der Junge   eine Katze sehen.   V2
      b. Yi. [Oyfn   veg] <u>vet</u> dos yingl zen a   kats.   V2
      c. Da. [På vejen] <u>vil</u> drengen se   en kat.   V2
         On   the way   will the boy   (see) a   cat   (see)

If the finite verb is e.g. in the third position, the main clause is not well-formed:

(51) a. Ge. * [Auf dem Weg] [der Junge] <u>wird</u>   eine Katze sehen.   *V3
      b. Yi. * [Oyfn   veg] [dos yingl] <u>vet</u> zen a   kats.   *V3
      c. Da. * [På vejen]   [drengen] <u>vil</u> se   en kat.   *V3
         On   the way   the boy   will (see) a   cat   (see)
                                    ((49)b, (50)a,b, (51)a,b are from Santorini 1992:596-597, (1), (4))

As (50) shows, in main clauses, the finite verb moves out of the clause to a position in front of the subject position, whereas non-finite verbs do not undergo this movement, and this difference will be exploited below.

In Danish, the distinction between separable and non-separable particles can be seen both when the verb undergoes V2 and when it doesn't. In non-V2-contexts, the separable particle occurs after the verb, whereas the non-separable particle before the verb:

(52) a. Da.   Brevet   vil han   sende <u>afsted</u>.   SEP: **<u>RIGHT</u>** OF V
      b. Da. * Brevet   vil han <u>afsted</u>sende.
         Letter-the will he (off)send   (off)

(53) a. Da. * Brevet   vil han ikke   stå   <u>for</u>.
      b. Da.   Brevet   vil han ikke <u>for</u>stå.   NON-SEP: LEFT OF V
         Letter-the will he   not (under)stand (under)

In V2-contexts, the separable particle is left behind when the verb moves, whereas the non-separable particle moves as part of the verb (this is of course the defining property for separability:

(54) a. Da.   Brevet   sender han <u>afsted</u>.   SEP: STAYS BEHIND
      b. Da. * Brevet   <u>afsted</u>sender han.
         Letter-the (off)sends   he   (off)

(55) a. Da. * Brevet   står   han ikke <u>for</u>.
      b. Da.   Brevet   <u>for</u>står   han ikke.   NON-SEP: MOVES ALONG
         Letter-the (under)stands he   not   (under)

In German and Yiddish, on the other hand, the distinction between separable and non-separable particles can only be seen when the verb undergoes V2, but not when the verb does not undergo V2. In non-V2-contexts, both the separable particle and the non-separable particle occurs before the verb:

(56) a. Ge. * Den Brief wird er   schicken <u>ab</u>.
     b. Yi. ?? Dem briv   vet   er   shikn   <u>avek</u>.
     d. Ge.   Den Brief wird er   <u>ab</u>schicken.   SEP: **LEFT** OF V
     e. Yi.   Dem briv   vet   er <u>avek</u>shikn.   SEP: **LEFT** OF V
              The letter will he (off)send   (off)

(57) a. Ge. * Den Brief wird er nicht   stehen   <u>ver</u>.
     b. Yi. * Dem briv   vet   er nisht   shteyn   <u>far</u>.
     d. Ge.   Den Brief wird er nicht <u>ver</u>stehen.   NON-SEP: LEFT OF V
     e. Yi.   Dem briv   vet   er nisht <u>far</u>shteyn.   NON-SEP: LEFT OF V
              The letter will he not   (under)stand (under)

In V2-contexts, the separable particle is left behind when the verb moves, whereas the non-separable particle moves as part of the verb:

(58) a. Ge.   Den Brief   schickt er <u>ab</u>.   SEP: STAYS BEHIND
     b. Yi.   Dem briv   shikt   er <u>avek</u>.   SEP: STAYS BEHIND
     d. Ge. * Den Brief   <u>ab</u>schickt er.
     e. Yi. * Dem briv   <u>avek</u>shikt   er.
              The letter (off)sends   he (off)

                                                           ((58) is from den Besten et al. 1986:119, (20b))

(59) a. Ge. * Den Brief   steht   er nicht <u>ver</u>.
     b. Yi. * Dem briv   shteyt   er nisht <u>far</u>.
     d. Ge.   Den Brief <u>ver</u>steht   er nicht.   NON-SEP: MOVES ALONG
     e. Yi.   Dem briv <u>far</u>shteyt   er nisht.   NON-SEP: MOVES ALONG
              The letter (under)stands he not   (under)

This pattern is exactly as expected under the assumptions made in section 1.3 above, namely that

- the position of the **separable** particle is a **syntactic** property, and therefore depends on the syntactic licensing direction of verbs in the language in question (viz. the SOV/SVO-difference: It occurs after the verb in Danish, and before the verb in German).

- the position of the non-**separable** particle is a **morphological** property, and thus does **not** co-vary with the syntactic licensing direction of verbs (it occurs before the verb in both Danish and German).

The fact that Yiddish behaves like German and differently from Danish is expected if Yiddish is an SOV-language, but it is highly unexpected if Yiddish was SVO.

(If you would like to know how I can take Yiddish to be an SOV-language, when I have such clear Yiddish SVO-examples as (49)b, (50)b, see the appendix).

(For more parallels between German and Yiddish as far as verb particles are concerned, see Vikner 2001b: 38-47.)

3. Conclusion

In section 1, it was suggested that prepositions and (separable) particles have the same structure:

(60) a.
```
              PP
          /        \
      Spec          P'
                 /     \
               P°       DP
```
b.
```
              PrtP
          /        \
      Spec          Prt'
                  /     \
               Prt°      DP
```

the difference being that prepositions assign case, whereas particles do not. Therefore the complement DP (e.g. *the book* in *throw out the book*) will not be assigned a case. This problem has two potential solutions:

- **EITHER** the particle is incorporated into the verb (i.e. into V*), in which case V* (maybe via the trace in Prt°) may now assign case to the "object",
- **OR** the DP may move to PrtP-spec, where it can be assigned case directly by V° (as in ECM-constructions).

Both of these two constructions are straightforwardly passivisable.

The SVO-languages vary as to which strategy they allow, leading to variation in particle constructions across the SVO-languages (and similar variation in prepositional passives).

The same strategies were then shown to have non-distinct results for the SOV-languages, explaining why the SOV-languages do not have any variation in particle constructions similar to the one found among the SVO-languages.

Section 2 extended the discussion to the difference between separable and non-separable particles, and I argued that even when separable particles incorporate, they do not incorporate to the same extent as non-separable particles, in that only the latter incorporate into V°.

- The position of the **SEPARABLE** particle (which is at most a sister of V° and daughter of V*), to the left or right of the verb, is a **SYNTACTIC** property and depends on the syntactic licensing direction of verbs in the language in question (viz. the SOV/SVO-difference).

- The position of the **NON-SEPARABLE** particle (sister of V° and daughter of V°), left or right of the verb, is a **MORPHOLOGICAL** property, and thus does not co-vary with the syntactic licensing direction of verbs (i.e. no variation across the Germanic SOV/SVO-languages). This is just like the position of the verbal inflectional morphemes, which is also a morphological property, and which also does not vary across the Germanic SOV/SVO-languages.

These properties were discussed and tested with reference to whether the particle could be left behind when its verb moves (only possible with separable particles), special attention was paid to particles in Yiddish, comparing them to Danish and German, with the following conclusion:

If and only if Yiddish is an OV-language like German and Dutch, **not** a VO-language like English or Danish, can it be explained why Yiddish is like German and unlike Scandinavian in allowing even those particles to occur preverbally in non-V2 constructions that do **not** incorporate (as seen by their not moving along with the finite verb during V2).

Appendix: Extraposition in Yiddish

In Yiddish, both SVO or SOV are possible as surface orders:

(61) Yi. a.   Ikh hob   gezen <u>Moyshn</u>.
       b.   Ikh hob <u>Moyshn</u>   gezen.
           I   *have (Moyshe) seen*   *(Moyshe)*   (den Besten et al. 1986:125, (43))

If the basic order in Yiddish is VO, then the VO-order in e.g. (61)a would not require any object movement at all, and the OV-order in e.g. (61)b could be derived by means of scrambling:

(62) Yi. a.   Ikh hob   gezen <u>Moyshn</u>.   NO MOVEMENT, = (61)a
       b.   Ikh hob <u>Moyshn</u>   gezen _____.   SCRAMBLING, = (61)b
           I   *have (Moyshe) seen*   *(Moyshe)*

If, on the other hand, the basic order in Yiddish is OV, then the OV-order in e.g. (61)b would not require any object movement at all, and the VO-order in e.g. (61)a could be derived by means of extraposition:

(63) Yi. a.   Ikh hob _____ gezen <u>Moyshn</u>.   EXTRAPOSITION, = (61)a
       b.   Ikh hob <u>Moyshn</u>   gezen.   NO MOVEMENT, = (61)b
           I   *have (Moyshe) seen*   *(Moyshe)*

The problem is that it can be independently shown that Yiddish actually has both extraposition and scrambling, which again means that we have to look elsewhere (e.g. to the behaviour of verb particles) in order to find out what the base order in Yiddish really is.

Let me briefly review the evidence for extraposition, which is relevant in that this is how come I can claim that Yiddish is an SOV-language and still have Yiddish SVO-examples like (49)b, (50)b.

Santorini (1993:231, 243, n3) argues that irrespectively of whether Yiddish is OV or VO, examples like the following three all show that Yiddish has extraposition:

(64) Yi. a.   Geveyntlekh   hot   ongehoybn   esn <u>der</u> <u>balebos</u>.
           Normally   *has*   *begun*   *eat*   *the*   *host*
           (= 'Normally, the host would be the one who took the first bite')

       b.   Durkh   a kleyn shtetl hot gedarft durkhforn   <u>der</u> <u>keyser</u>.
           Through a small town   has must   *through-drive the emperor*
           (= 'The emperor had to drive through a small town)

       c.   Hot men derlangt oyfn   tish   <u>fish</u>.
           Has one   served   on-the table fish
           (= 'Fish was put on the table')   (Santorini 1993:231, (1a), (2a,b))

The point is that the subject would normally have occurred immediately after *hot* 'has' in both (64)a,b. As it is here in the sentence final position, it must have undergone extraposition (irrespective of whether Yiddish was OV or VO). As for (64)c, the object *fish* would normally have occurred immediately before *derlangt* 'put' if Yiddish was OV, and immediately after *derlangt* if Yiddish was

VO, so in either case it would have to have undergone extraposition, to get to its actual position, the sentence-final position.

Furthermore, as shown in Vikner (1995), Yiddish does not require extraposed constituents to be particularly heavy, (59b), as opposed to English and Scandinavian, exemplified by Icelandic in (67)a:

(65) a. Ic.   ... að það hefur <u>einhver</u> borðað   epli.
     b. Yi.   ... as es   hot   <u>emetser</u> gegesn an epl.
        ... that there has   someone eaten   an apple   （Vikner 1995:189, (43b,c))

(66) a. Ic.   ... að það hefur borðað þetta epli   <u>einhver</u> <u>strákur</u> <u>frá</u>   <u>Danmörku</u>.
        ... that there has   eaten   this   apple some   boy   from Denmark

     b. Yi.   ... az es   hot   gegesn an   epl   <u>a</u>   <u>yingl</u> <u>fun</u> <u>Danmark</u>.
        ... that there has   eaten   an   apple a   boy   from Denmark
                                            （Vikner 1995:200, (76), (77))

(67) a. Ic. * ... að það hefur borðað   epli   <u>einhver</u>.
     b. Yi.   ... az es   hot   gegesn an epl   <u>emetser</u>.
        ... that there has   eaten   an apple someone   （Vikner 1995:200, (75b,c))

(56) shows that both Icelandic and Yiddish allow transitive expletives, (65) and (66) show that both allow extraposition of a heavy subject in such a construction, and finally (67) shows that only Yiddish allows extraposition of a subject which is not heavy.

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Indefinite determiner doubling:
a comparative approach

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Contents

1. Introduction

Doubling phenomena where a single occurrence should suffice:
- Double definiteness (in some Scandinavian languages)
- Multiple negation
- Indefinite determiner doubling

We are interested in nominal expressions in which the indefinite article occurs more than once within the same DP, the so called 'indefinite determiner doubling' constructions. These are reported most extensively in varieties of German, such as Swiss German and Bavarian German, but they are found more generally across the Germanic languages:

- German (Weber 1948:203ff; Merkle 1975:89; Lindauer 1991; Leu, 2001:63; Plank 2003:366; Kallulli & Rothmayr 2008).
- Northern Swedish (Delsing 1993:142-145; Delsing 2003; Garbacz 2014)
- Northern Norwegian (Delsing 2003; Garbacz 2014)
- Danish (Wood & Vikner 2011; 2013)
- English (Wood 2002:109; 2013)

As a first approximation we can divide these into two types. (i) The northern Swedish type where more than two articles are permitted and (ii) types where no more than two articles occur, as in (2) and (3) with *such* and the etymologically related *so* and as in (4) with other degree words.

(1)   NSw.   <u>En</u> <u>stor</u> <u>en</u> <u>ful</u>   <u>en</u> kar
          a big a ugly a guy   (= 'a big, ugly guy')   (Northern Swedish, Delsing 1993:143)

(2)   En.   My rules are to cut down drinking, control my temper if I am drinking, not to drink in
          <u>a such a</u> large group and not to waste much money.   (BNC; Wood 2002:109)

(3)   Da.   Og jeg vil gerne også kunne lave <u>en</u> <u>så</u> <u>let</u>   <u>en</u> film som Frisøsens
          And I   will like to also could make a so light a film as   the-female-hairdresser's

          mand,   hvis jeg har lyst   til det.
          husband, if   I   have desire to that.   (KorpusDK, newspaper, 1991)

(4)   SGe.   <u>Ä</u> <u>ganz</u>   <u>ä</u> schönä   Baum
          a totally a beautiful tree   (= 'a totally beautiful tree ')
                                                                (Swiss German, Leu 2001:63)

- In this paper, we first survey and compare different data collection methods. We argue that the doubling data are too systematic and too frequent to be "performance errors".
- We then compare languages and show that German and English are the least restrictive as to which lexical items within a nominal allow doubling.
- We also take a hypothesis suggested for German as to when article doubling may occur and test it on our Danish and English data.
- Finally, we suggest a derivation of indefinite article doubling inside nominals with *sådan* and *such*, and inside nominals with *så* and *so*.

2. Data sources

Although not considered part of the standard languages, we suggest that indefinite determiner doubling data should be taken seriously since it may be found by a number of data collection methods:

elicitation; dialect grammars; dictionaries; corpora.

Internet searches can be useful but should not be taken in isolation. We agree with the decision Kalluli & Rothmayr (2008:107) make about French. They note that although a reviewer provided French examples, "Not having been able to find any literature on this construction in the non-standard varieties of French in which it occurs, nor to locate any informants that speak such a variety, we will however not consider these data in the present paper".

(5)   Fr.   C' est vrai que j' ai   une belle   une gueule.
          It is   true that I have a   beautiful a   face
                                        (silencejereve.hautetfort.com/archive/2005/08/index.html)

2.1 Elicitation

Syntactic data is more difficult to collect from spontaneous speech data than phonological data and elicitation is often a more efficient method. The disadvantage of elicitation is that people's conscious judgements are often affected by the standard.
Useful spontaneous and elicitation data on the Scandinavian languages is available from:

- Nordic Syntax Database (NSD) (judgments by 924 Nordic dialect speakers from 207 places)
- Nordic Dialect Corpus (NDS) (2,8 million words of spontaneous speech from Norwegian, Swedish, Danish, Faroese, Icelandic and Övdalian spoken language)

The constructions we are interested in that were tested in NSD are:

(6) Sw. Vi såg en svart en häst
     We saw a black a horse   (Garbacz 2014:43, (3))

(7) Sw. En så svart en häst har jeg aldrig set förr
     A so black a horse have I never seen before ,   (Garbacz 2014:43, (4))

Such examples are found in Northern Norway and Sweden. It is furthermore reported that the same Norwegian informants who reject the test sentence, (6) do actually produce sentences of that type. (Garbacz 2014:48). This shows that elicitation on its own is not a reliable method.

According to Kallulli & Rothmayr (2008:97), Bavarian speakers strongly prefer the doubling construction, whereas only some of the speakers of Standard German that they consulted optionally accept an extra article, as in (8) below, while other standard speakers find it ungrammatical:

(8) Ge. Ein so ein großer Bub
     a so a big boy (= 'such a big boy')   (Kallulli & Rothmayr 2008:97, (2b))

We suggest that the German speakers who found the expression unacceptable could have been biased by the fact that the word *Bub* is dialectal. It is important to know on what basis test sentences are rejected.

2.2 Corpora

The results from the Nordic Syntax Database (sentence judgments) and the Nordic Dialect Corpus (spontaneous speech) show the challenges in collecting data. When asked for sentence judgments, some informants may be influenced by the standard, but, although spontaneous speech is more reliable, the data can be sparse or non-existant.

Sentences (6) and (7) above have never been attested in Danish, and therefore they were not tested in Danish in the above projects. Consequently, it is somewhat surprising that we found examples in standard Danish in KorpusDK (56 million words; varied written texts):

      five examples of *en sådan en* (common gender version of 'a such a')
      two examples of *et sådan et* (neuter version of 'a such a')
      three examples of *en så ADJ en* (common gender version of 'a so ADJ a')
      two examples of *et så ADJ et* (neuter version of 'a so ADJ a')

(9) Da. Det modsatte er, at du er en sådan en smart fyr, der er meget ude om natten.
     The opposite is that you are a such a smart guy who is much out at night
                                                           (KorpusDK, novel, 1999)

(10) Da. Men et så stort et projekt i byens hjerte kræver selvsagt
     But a.neut *so big*.neut *a*.neut *project in town-the's heart demands of-course*

     en langt højere informationsgrad.
     a far higher information-degree.   (KorpusDK, newspaper, 2001)

These data were supplemented with internet data. Although some of the internet examples from Danish are colloquial as in (11), which is from a comments section on a newspaper website, it is evident from examples like (12), which is from a legal periodical, that not all of these examples are colloquial:

(11) Da. Nu er der jo   altid 2 parter i en sådan en sag   ...
     Now are there indeed always 2 parties in a such a case ...
                        (*http://newz.dk/cowi-skal-betale-en-halv-mio-i-bod*,02.04.2013)

(12) Da. Man kunne håbe på, at   Justitsministeriet   i det mindste kunne
     One could hope on that the-Ministry-of-Justice in the least   could

          komme til en sådan en konklusion, at   ...
          come   to a such a conclusion that ...
                                (from the legal periodical *Juristen*, June 30, 2010, p. 153)

Likewise, comprehensive searches in English corpora, which are somewhat larger, reveal the following occurrences (Misspeaking or typos have been filtered out):

corpus	no. of words	*a such a*		*a quite a*		*a rather a*		*a many a*		*a still a*	
		spoken	written	spoken	written	spoken	written	spoken	written	spoken	written
BNC	100 mill.	6	4	46	2	8	0	0	0	3	1
COCA	450 mill.	14	38	19	14	3	0	0	6	10	6
COHA (pre-1950)	400 mill.	-	6	-	2	-	0	-	8	-	0
COHA (post 1950)		-	11	-	4	-	0	0	-	-	0
SOAP	100 mill.	13	-	8	-	1	-	0	-	3	-
CANADA	50 mill.	1	1	5	1	0	0	0	0	0	3

There is an unexpectedly large number of written examples in American English compared with spoken examples. In British English the number of spoken examples is greater than written, which is the expected result.

As far as text types go, there is no discernable bias. Academic texts are represented as well as newspapers:

(13) En. During our interview, he ticks off what he believes the daily life of a such a worker would
         have been like.   (COCA, Academic Journal,*Archaeology*)

(14) En. He had a such a legendary police career that Hollywood modeled a hard-boiled TV
         character after him.   (COHA, News, Associated Press)

Most of the spoken examples are from the Public Broadcasting Service. In the example below the speaker is Sir Leon Brittan, educated at Trinity College Cambridge and former Member of the British Parliament:

(15) En. If you are able to break a logjam that's existed for two or three years and achieve
         agreement on a such a complex detail but important matter as a single market in securities,
         that says that we're still in business.   (COCA, ABC Business Report)

2.3 Dialect grammars

Indefinite determiner doubling was first reported in German dialect grammars, giving the initial impression that it is somewhat "exotic". Generally, it is found in southern and western dialects of German:

Austria: Carinthia   (Pohl 1989:62)
Czech Republic (Bohemia)   (Schiepek, 1989, cited in Kalluili & Rothmayr 2008:101)
Switzerland: (Weber 1948; Henn-Memmesheimer 1986)
Germany: Upper and Lower Bavaria, Upper Palatinate, Alemannic
                                            (Merkle 1976; Henn-Memmesheimer 1986)

(16) SGe.   Mer wöisched <u>en</u> <u>rächt</u> <u>en</u> gueten Apitit.
             We wish   a real a good appetite.   (Zürich German, Weber 1948:203)

(17) Ba.   <u>A</u> <u>so</u> <u>a</u> großa Bua
             a so a big   boy   (= 'such a big boy')
                                            (Bavarian, Kallulli & Rothmayr 2008:97, (2a))

Also found in Leicestershire English, only with *such*:

(18) En   Shay's got a sich a tong.
             She's got a such a tongue (= command of abusive language)   (Evans 1881)

Although earlier reports have focused on non-standard varieties, it is now becoming clear that the indefinite article doubling construction is less exotic than first reported.

2.4 Dictionaries

Although the OED dictionary entry for *such* does not contain any examples of doubling, dictionaries can still be a useful source. In an advanced text search in the OED, we found examples of '*a such a* N' and '*a quite a* N' in the definition text of the dictionary, (19) and under the entry for other words, (20) and (21):

(19) En.   produced or obtained by <u>a</u> <u>such</u> <u>a</u> process, and therefore unpredictable in detail.
                      (OED online, December 2012. Dictionary entry *random*, definition C.1.b)

(20) En.   There is <u>a</u> <u>quite</u> <u>a</u> telling mysticism in the wise men of the east, who are astrologising —
            studying the heavens—on their mountain, and first behold the wondrous star.
                              (OED online, December 2012. Dictionary entry *astrologize*,
                                            1883 L. Scott' *Renaissance of Art in Italy*)

Dictionaries sometimes quote from dialects and the one dialect example below (dictionary entry *gurry*) led us to search for descriptions of Leicestershire dialect.

(21) En.   I had <u>a</u> <u>such</u> <u>a</u> gurry on me as if I hadn't eaten nothink of a fortnit.
             My stomach was so upset, as if hadn't eaten anything for two weeks.
                                    (OED online, December 2012. Dictionary entry *gurry*,
                          1881 S. Evans *Evans's Leicestershire Words*. Cited in Wood 2002:109)

Likewise, this example from 1839 is cited in *Ordbog over det Danske sprog* (ODS), the Danish counterpart to the *Oxford English Dictionary* (OED) under the entry for 'Goliat':

(22) Da. Vel   er jeg kun en lille David mod   <u>en</u> <u>saadan</u> <u>en</u> Goliath, som I,
           Admittedly am I   only a little David against a such   a Goliath as   you,

           men jeg er rask, er jeg.
           but I   am fast, am I.   (Christian Winther: *Hesteprangeren*, first published 1839,
                                           here cited from *Samlede Digtninger*, vol 8, p. 53, published 1860)

The compilers of the dictionary were literate, well-educated individuals, yet did not notice the extra article.

As the data in this section show, cases of indefinite article doubling are found across different methods of data collection. We find that they are too frequent or too systematic to be false starts or performance errors.

3. What are the relevant cases of indefinite determiner doubling?

Recapitulating the data, we have:

(i) Varieties of the Northern Swedish and Northern Norwegian type, (1), (6) and (7). More than two articles are possible (i.e. not just doubling, but also tripling, etc.), each extra article accompanying an adjective. We suggest that this is a different phenomenon, which has a separate explanation.

(ii) Varieties that permit only doubling (no tripling)
    a. Standard Danish, where we have found doubling only with *so* and *such*:
    b. German and English, where doubling also occurs with other degree words.
        We have found examples of *a rather a (Adj) N*, *a quite a (Adj) N*, *a many a (Adj) N* and *a still a ((Adv), Adj) N*, as well as *an even a (Adj) N*. These have the German equivalents *ziemlich*, *ganz*, *manch*, and *noch* (ambiguous between *even* and *still*.

Rather:
(23) En. You realise that accountability is <u>a</u> <u>rather</u> <u>a</u> hot and fashionable word in education these
           days .   (BNC, radio, around 1990)

(24) En. So I believe it is <u>a</u> <u>rather</u> <u>a</u> waste of money.   (BNC, radio, around 1990)

(25) SGe. Es esch <u>en</u> <u>ziemlich</u> <u>en</u> fine   Tee.
            It is   a rather   a delicate tea.   (Kalluli & Rothmayr 2008:104, (24))

Quite:
(26) En. I note that there is <u>a</u> <u>quite</u> <u>a</u> demand for snake virus.
                                                  (OED online, December 2012. Dictionary entry *virus*,
                                                             1909 Bedford (Pa.) *Gazette*)
(27) SGe. Ich wünsche üch <u>en</u>   <u>ganz</u> <u>a</u> schöne abe.
            I wish   you a.MASC quite a nice   evening.   (Kalluli & Rothmayr 2008:127, (86c))

Many:
(28) En. "Done put away a many a friend and relative; ain't none upset me like this."
                                                                  (COCA, Fiction)

(29) SGe.   …ein manch <u>ein</u> Handball- <u>Fan</u> <u>aus</u>   der Region.
                a   many   a   handball fan from the region.   (Zürich German, Weber 1948:203)

Even:
(30) En.   it's <u>an even a</u> worse problem when the person is somebody you know, right?
                                                                (COCA, CBS_48Hours)

(31) Ba. a.   ein <u>noch</u>   wärmers Bier
                an even   warmer beer
        b.   <u>noch ein</u> wärmers Bier
                      even a   warmer beer
        c.   <u>ein noch ein</u> wärmers Bier
                an even a   warmer beer   (Plank 2003:366, (100), the gloss is ours)

Still:
(32) En.   It's <u>a still a</u> very difficult situation. There are many challenges we have to overcome.
                                        (COCA, PBS Newshour 2012; speaker: David Cameron)

(33) En.   The New York area is <u>a still a</u> hub, and I think it's as good a bet as any.
                                        (COCA, 1992, New York Times quoting direct speech)

(34) En.   ... but there is <u>a still a</u> long uphill battle to go for the cleanup and containment of this stuff.
                                                                (COCA, Fox Special Report 2010)

(35) Ge.   oder ob   man für wenig Geld   <u>ein noch ein</u> funktionierendes Altgerät   erwerben kann
                or   whether one for little   money a   still a   functioning   oldappliance acquire   can
                                        (www.helkueb.de/dienstleistung/restauration-und-reparatur)

4. When does indefinite article doubling occur?

(36)   **Hypothesis:**
        Article doubling occurs only with elements that do not have to be adjacent to an
        Adjective Phrase (AdjP).

This is suggested by Kalluli & Rothmayr (2008:98), in order to explain why certain degree words like
so 'so' and *ganz* 'quite' occur with doubling in German and Bavarian, whereas other quantifying
expressions like *sehr* 'very' and *irrsinnig* 'insanely' do not allow for determiner doubling.

Their point is that *so* and *ganz* can modify an AdjP even when they are separated from this AdjP by an
indefinite article, as shown by (37)b and (38)b. This then is what allows for doubling, as in (37)c and
(38)c:

(37) Ge. a.   ein so   großer Bub
        b.   so ein großer Bub
        c.   ein so ein großer Bub
                a so a   big   boy   (Kalluli & Rothmayr 2008:97-98, (4a), (7a), (2b))

(38) Ge. a.   ein ganz   blöder Fehler
        b.   ganz ein blöder Fehler
        c.   ein ganz ein blöder Fehler
                a quite a   stupid mistake   (Kalluli & Rothmayr 2008:97-98, (4b), (7b), (3b))

sehr and *irrsinnig*, on the other hand, can only modify an AdjP if they are adjacent to it, as shown by (39)a,b and (40)a,b. This then is what blocks determiner doubling, as in (39)c and (40)c:

(39) Ge. a.   ein sehr   großer Bub
      d. *   sehr ein großer Bub
      c. * ein sehr ein großer Bub
        a   very a big   boy   (Kalluli & Rothmayr 2008:98, (5a), (8a), (6a))

(40) Ge. a.   ein irrsinnig   blöder Fehler
      b. *   irrsinnig ein blöder Fehler
      c. * ein irrsinnig ein blöder Fehler
        a   insanely a   stupid mistake   (Kalluli & Rothmayr 2008:98, (5b), (8b), (6c))

However, according to this hypothesis, we would not expect doubling with those degree words that cannot be separated from the AdjP that they modify.

For English and Danish we expect doubling with English *such* and *sådan*, but not with *so* and *så*. This is because, unlike German *so*, English *so* and Danish *så* must be adjacent to the adjective they modify.

This is illustrated in more detail in the tables below, which set out the logical possibilities for word order and modification for English *so* and Danish *så*, followed by the logical possibilities for English *such* and Danish *sådån* (Wood & Vikner 2011:94).

(41)

	pre-article	post-article
	a: immediately preceding the whole DP/NP	**b:** modifying the whole DP/NP
	c: immediately preceding the AdjP	**d:** modifying the AdjP

(42) **English *so***

	pre-article	post-article
DP/NP	-	-
AdjP	**so**	**%so**

    a.   **so a hotel*
    b.   **a so hotel*
    c.   *so bad a hotel*
    d.   *?? a SO bad hotel*

(43) **Danish *så***

	pre-article	post-article
DP/NP	-	-
AdjP	**så**	**så**

    a.   **så et hotel*
    b.   **et så hotel*
    c.   *så dårligt et hotel*
    d.   *et så dårligt hotel*

(44) **English *such***

	pre-article	post-article
DP/NP	**such**	-
AdjP	-	-

    a.   *such a hotel*
    b.   **a such hotel*
    c.   **such bad a hotel*
    d.   **a such bad hotel*

(45) **Danish *sådan***

	pre-article	post-article
DP/NP	**sådan(t)**	**sådant**
AdjP	-	-

    a.   *sådan(t) et hotel*
    b.   *et sådant hotel*
    c.   **sådan(t) dårligt et hotel*
    d.   **et sådan(t) dårligt hotel*

Under the hypothesis in (36), we would not expect doubling in English and Danish with *so* and *så*.

In Danish we found three examples of *en så ADJ en N* and two of *et så ADJ et N*. In these examples, the article agrees with the noun in gender and the adjective shows agreement morphology with the neuter noun (e.g. *et så stort et N*).

(46) Da.   Men detektivarbejdet har været <u>en så stor en</u> succes, at   ...
          But detetive-work-the has been a so big a success that ...   (KorpusDK)

(47) Da.   Men <u>et</u>   <u>så stort</u>   <u>et</u>   projekt i byens   hjerte kræver selvsagt ...
          But a.NEUT so big.NEUT a.NEUT project in town-the's heart demands of-course ...

          ... en langt højere informationsgrad.
          ... a far higher information-degree   (KorpusDK)

(48) Da.   Det var første gang, at den kommunistiske ledelse   på så markant en plads   ...
          That was first time that the communist   leadership in so prominent a place   ...

          ... tillod   kritik   af <u>et</u>   <u>så kontroversielt</u>   <u>et</u>   projekt.
          ... permitted criticism of a.NEUT so controversial.NEUT a.NEUT project.   (KorpusDK)

The Danish data are thus counter-examples to the hypothesis in (36), as they show that doubling occurs even with degree words that do have to be adjacent to an AdjP (like Danish *så*).

Searches in the above mentioned English corpora failed to find any examples of *a so ADJ a*. We did find one example on the web:

(49) En.   However, in <u>a so long a</u> process, the genetic variability, knowledge and know-how
          determine the vital capacity for genetic improvement in the future.
                                                     (www.actahort.org/books)

We therefore suggest revising the hypothesis:

In order to get indefinite article doubling, there needs to be something to the left of an article (because then there can be another article left of that something.)

A frequently heard comment on our standard Danish and English data is that speakers must just have been confused. If it is possible for an element to occur both to the left of an article in one case and to the right of an article in another case, then speakers might get these two options mixed up.

This could perhaps be maintained for Danish where both e.g. *så dårligt et hotel* and *et så dårligt hotel* are possible, (43), but it will not work for English, where doubling is possible with *such*, (13)-(15), even though *such* only occurs left of the article, and not right of the article:
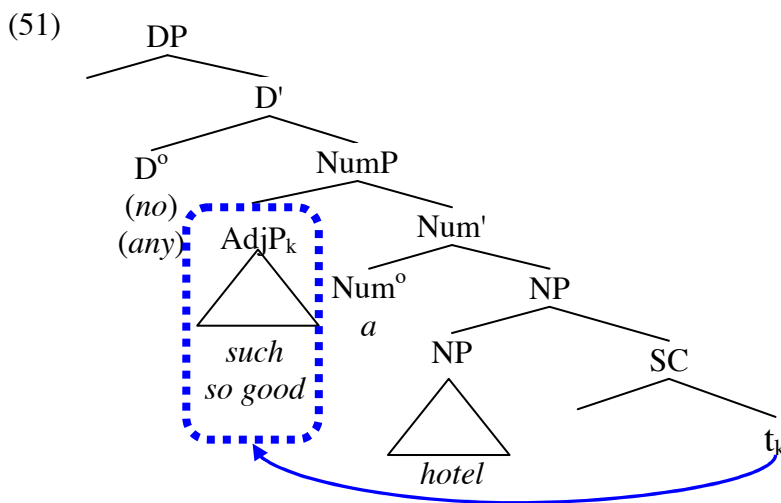
(50) En. a.   ... which are <u>such a</u>   <u>big part</u> of the present system.   (COCA)

b. * ... which are   <u>a</u> <u>such</u> <u>big</u> <u>part</u> of the present system.

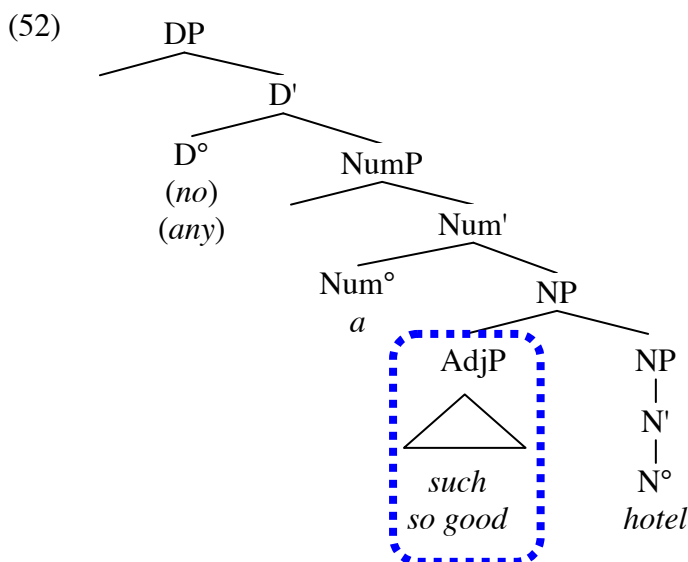(adapted from Wood & Vikner 2011:90, (4b))

In other words, when there is something "to the left of an indefinite article" (e.g. *such a legendary police career*), then this something (*such*) is still inside the DP, which means that it is still to the right of the D° itself, which again makes doubling possible (e.g. *a such a legendary police career*, (14)).

5. Structural analysis

Wood & Vikner (2011:104) derive pre-article *sådan* and *such* from a predicate raising construction as in (51). Post-article *sådan* is base-generated as in (52). The arguments are based on adjectival agreement morphology in Danish (and German). Post-article base-generated *sådan* always shows agreement with the (neuter) noun. Pre-article *sådan* on the other hand rarely shows agreement with the (neuter) noun.

(51)

(Wood & Vikner 2011:104, (68))

(52)

(Wood & Vikner 2011:104, (67))

The derivation in (51) allows for the inclusion of a double article. The prediction is that indefinite determiner doubling constructions derived from (51) are not likely to show agreement morphology. Although the data are sparse, this is actually borne out:

(53) Da.　Som tidligere ansvarshavende chefredaktør på ugebladet,　*Se og Hør,* ved　han ...
　°　*As　former　executive　editor　of magazine-the, Se og Hør, knows he　...*
　　...hvordan et　sådan　et　blad　skal　skrues sammen.
　　...how　a.NEUT such.COM a.NEUT magazine should be-put together　　(KorpusDK)

(54) Da.　Psykologen　benyttede lejligheden　til at undersøge hvad det egentlig er ...
　°　*Psychologist took　opportunity-the to to examin　what it　actually is　...*
　　...der får　folk　til at protestere imod　et　sådan　et　projekt.
　　...that makes people to to protest　against a.NEUT such.COM a.NEUT project　(KorpusDK)

This structure also allows constructions with *no such a* and *any such a* like the following:

(55) En.　... and there was no, <u>no such a</u> thing as bales in those days, duckie. <u>No such a</u> thing as
　　bales of straw, it was loose hay stacked.　　　　(oral history, BNC; Wood 2002:110)

(56) En.　Japanese kinship had <u>no such a</u> rule, except for a very top echelon of the samurai class.
　　　　　　　　　　　　　　　　　　　　　　(academic writing, COCA)

(57) En.　... on the basis of <u>any such a</u> proposal or application form ...　　(BNC; Wood 2002:110)

6. Conclusion

- We first surveyed and compared different data collection methods. We argued that the doubling data were too systematic and too frequent to be "performance errors".
- We then compared languages and showed that German and English were the least restrictive as to which lexical items within a nominal allow doubling.
- We also tested a hypothesis as to when article doubling may occur in German and tested it and revised it, based on our Danish and English data.
- Finally, we showed that the data were compatible with the analyses suggested in Wood & Vikner (2011:104)

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Corpus of Historical American English (COHA)　*http://corpus.byu.edu/coha*
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