LEXICAL TYPOLOGY

Peter Koch (Part I)

A. General introduction

B. Lexical hierarchies

C. Lexical motivation

D. Syntagmatic axis

E. Outlook

1. The problem of the *tertium comparationis*

"Any typology requires a language-independent yard-stick against which the units under comparison can be measured [...]. This problem is particularly acute in semantic typology [...]" (Evans, in press: 508).

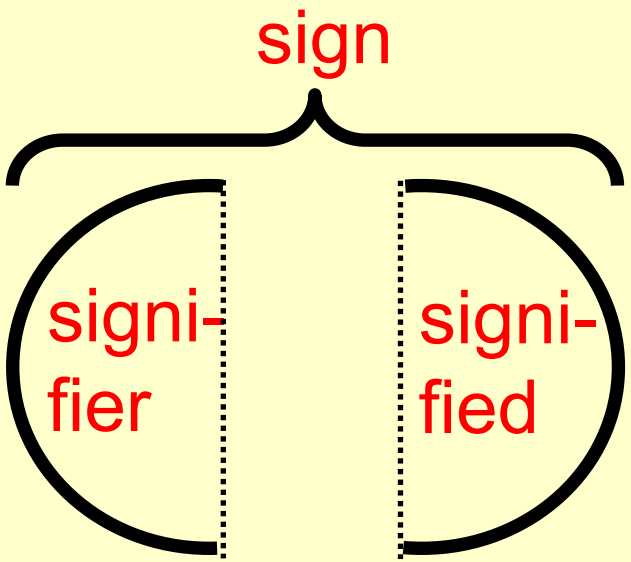
"From a theoretical point of view, the overriding issue for lexical typology concerns the *tertium comparationis*. What are the optimal concepts and categories to support the systematic investigation of lexicons and lexicological phenomena across the world's languages?" (Goddard, submitted).

1. The problem of the *tertium comparationis*

language comparison = comparison of linguistic **signs**

linguistic **signs** = (two?)-level entities

Semiotics in the Saussurean (1916) tradition:



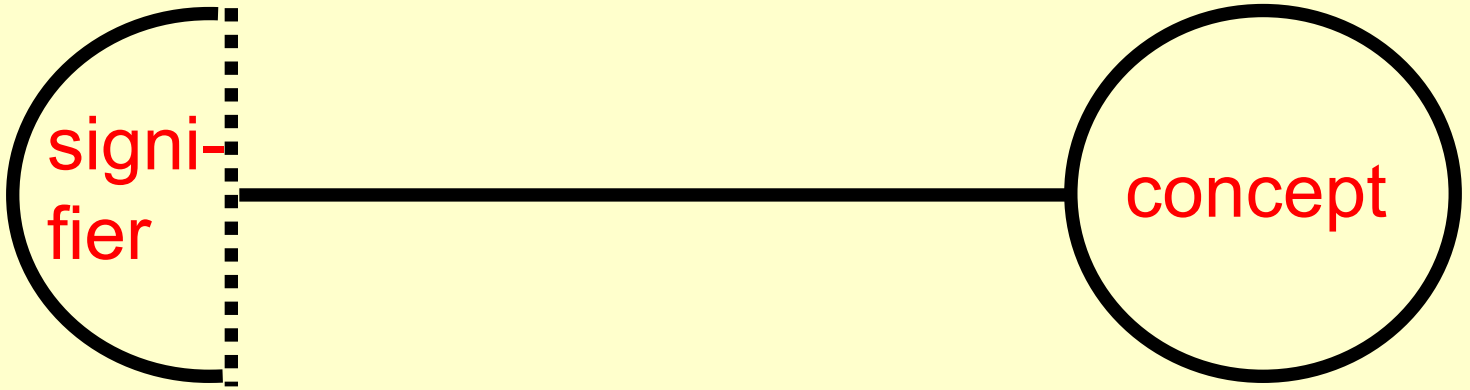
(expression)
form

linguistic
meaning

Fig. 1

Semiotics in the “cognitive semantics” tradition

(e.g. Haiman 1980; Taylor 1999):

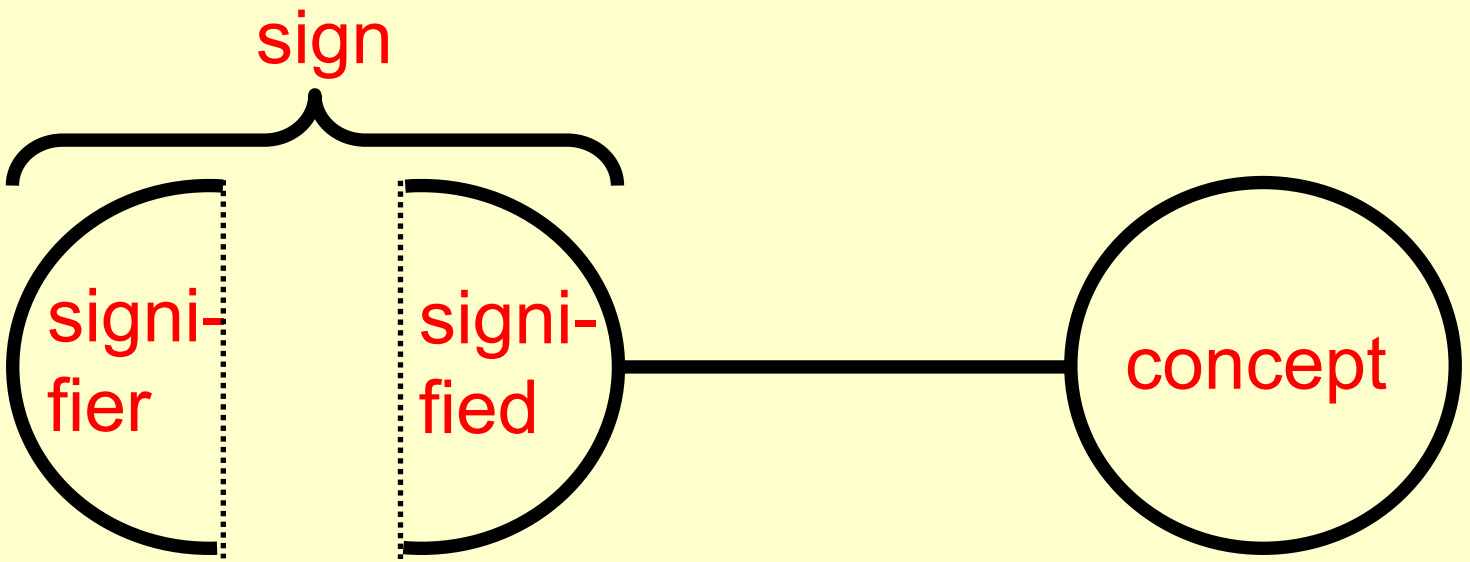


(expression)
form

encyclopedic
meaning

Fig. 2

A realistic semiotics (cf. Raible 1983, 5; Blank 1997: 98-102; Koch 1998; 2003):



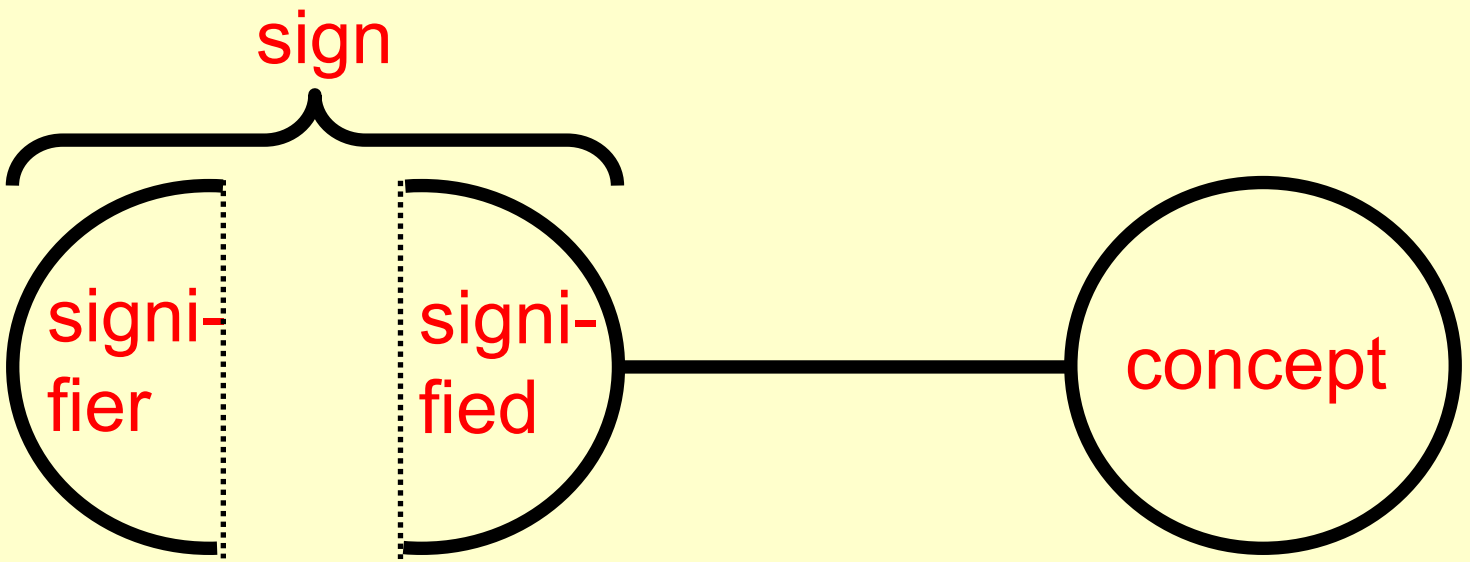
(expression) form

linguistic meaning

encyclopedic meaning

Fig. 3

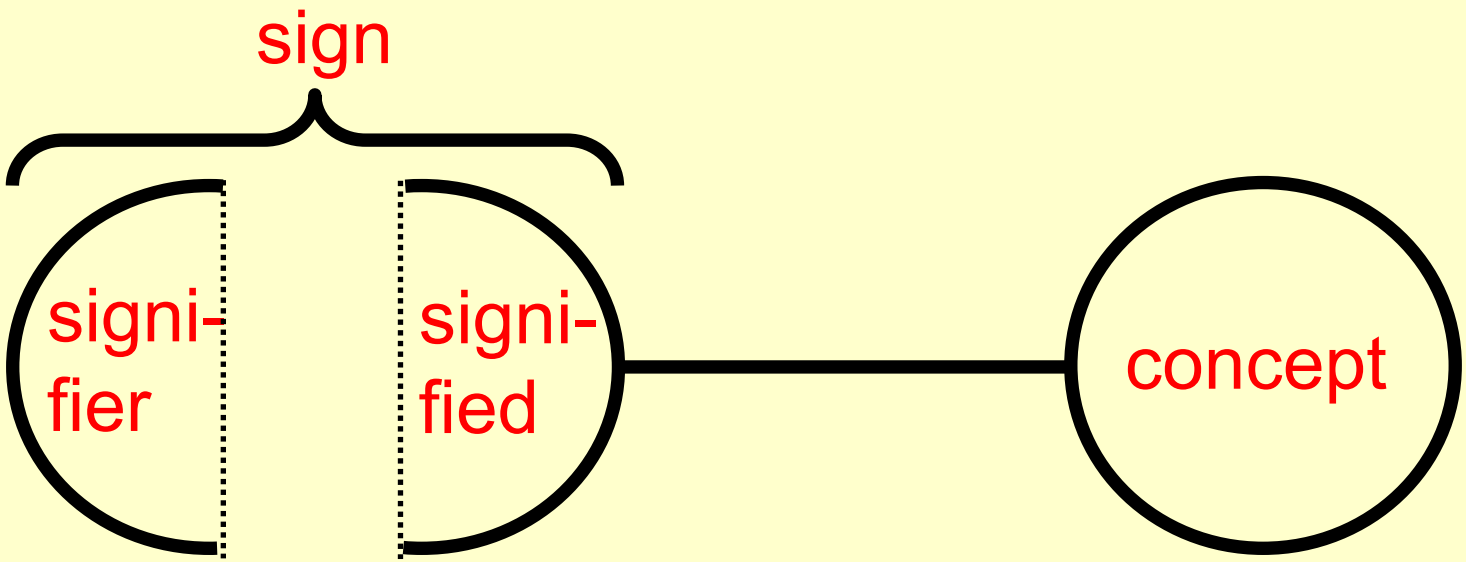
A realistic semiotics, exemplified:



Fr. *viande*	‘meat’	all we know
(vs.	(as opposed	about MEAT
Fr. *chair*)	to ‘flesh’)	

Fig. 4

A realistic semiotics, exemplified:



Sp. *carne* ‘meat+flesh’ all we know about MEAT and FLESH

Fig. 5

Semiotic perspectives:

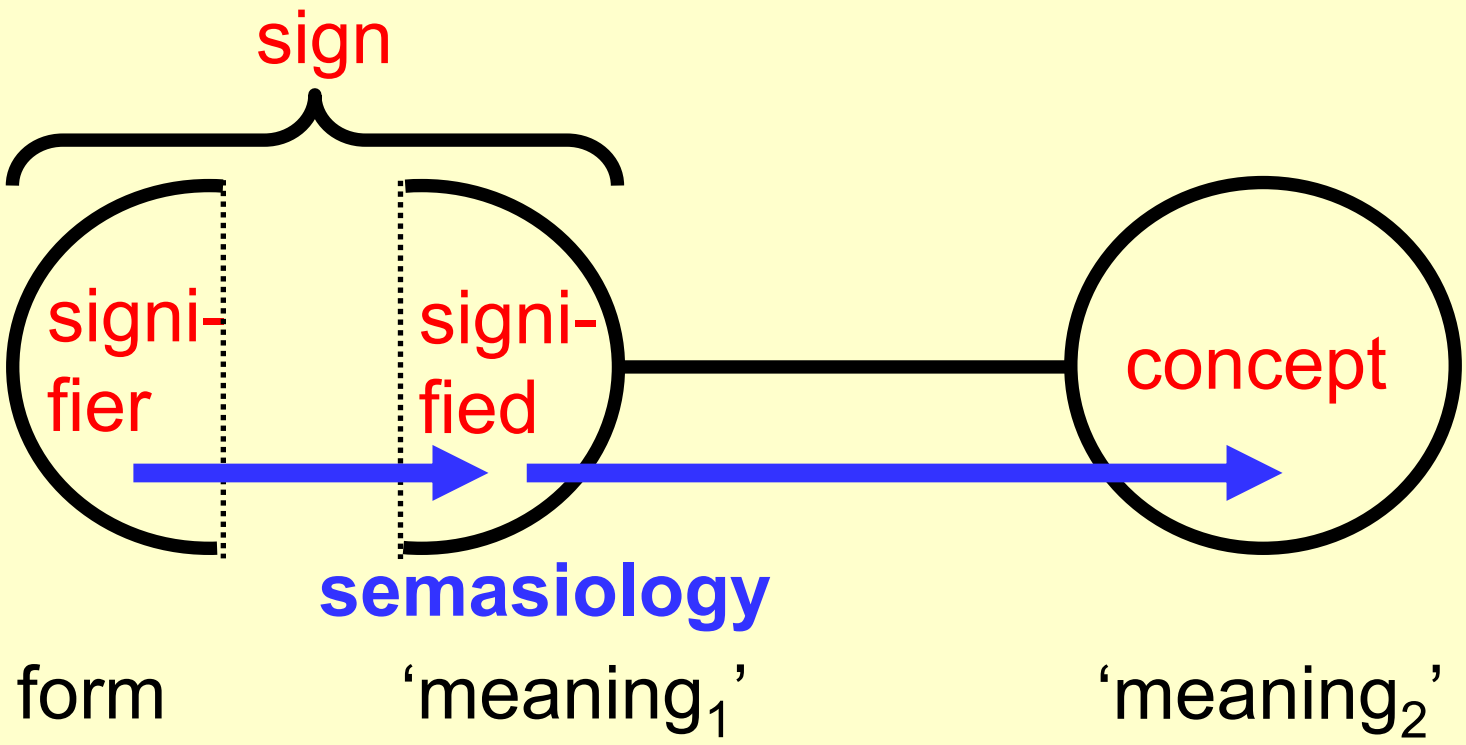


Fig. 6

Semiotic perspectives:

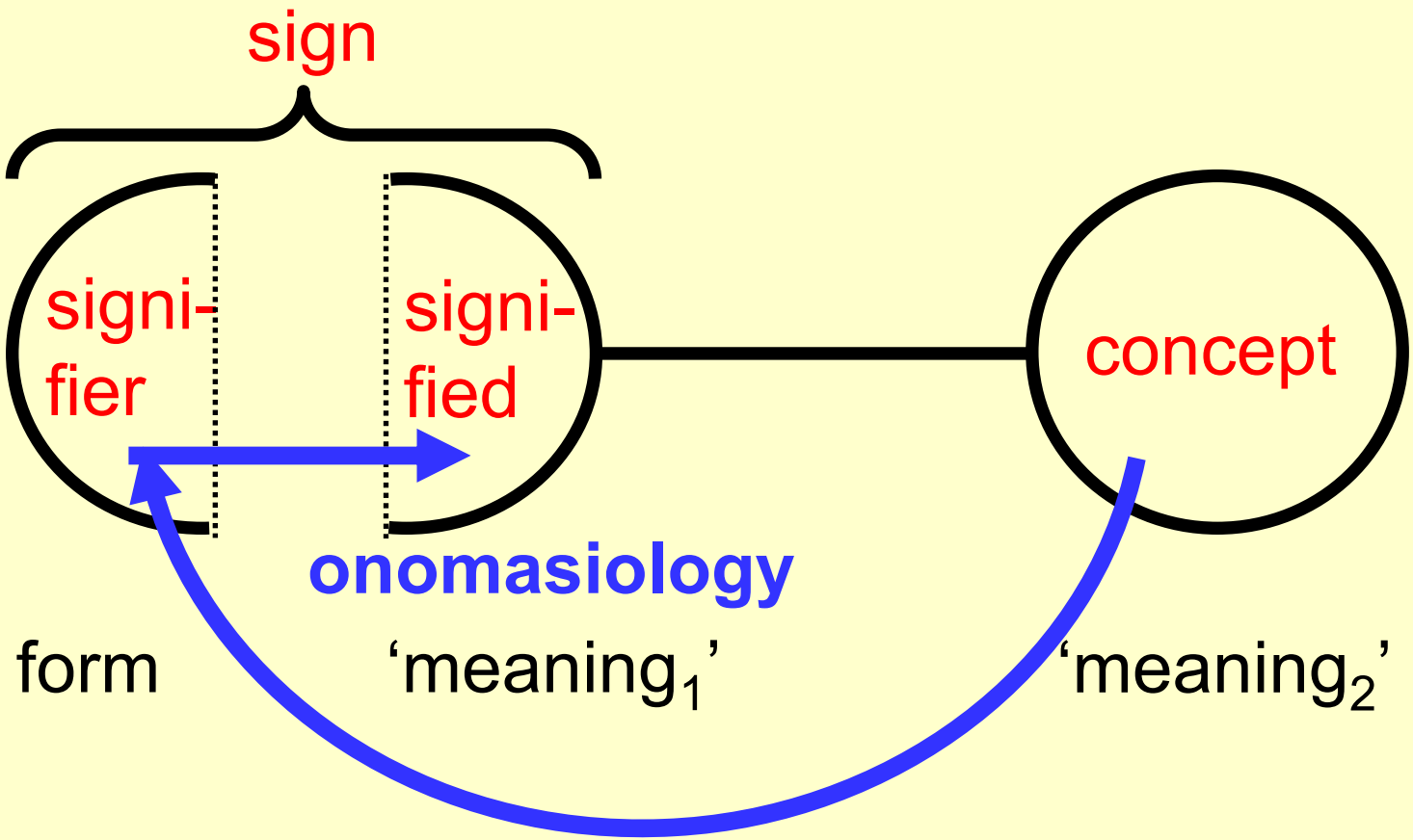
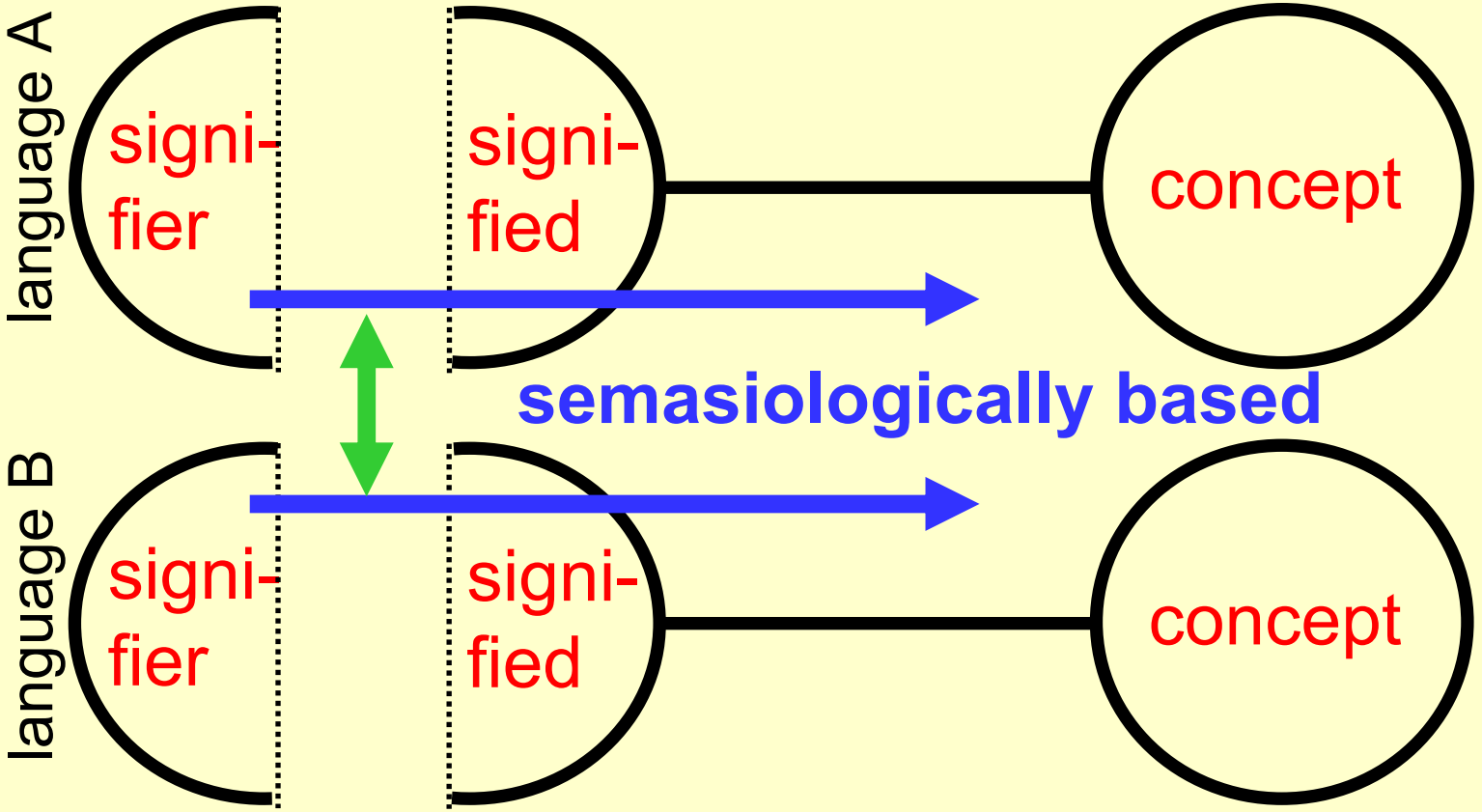


Fig. 7a

Typological comparison based on **signifying** units:



e.g.: Are there languages that have more polysemy than others?

Fig. 9

Typological comparison based on **signifying** units:

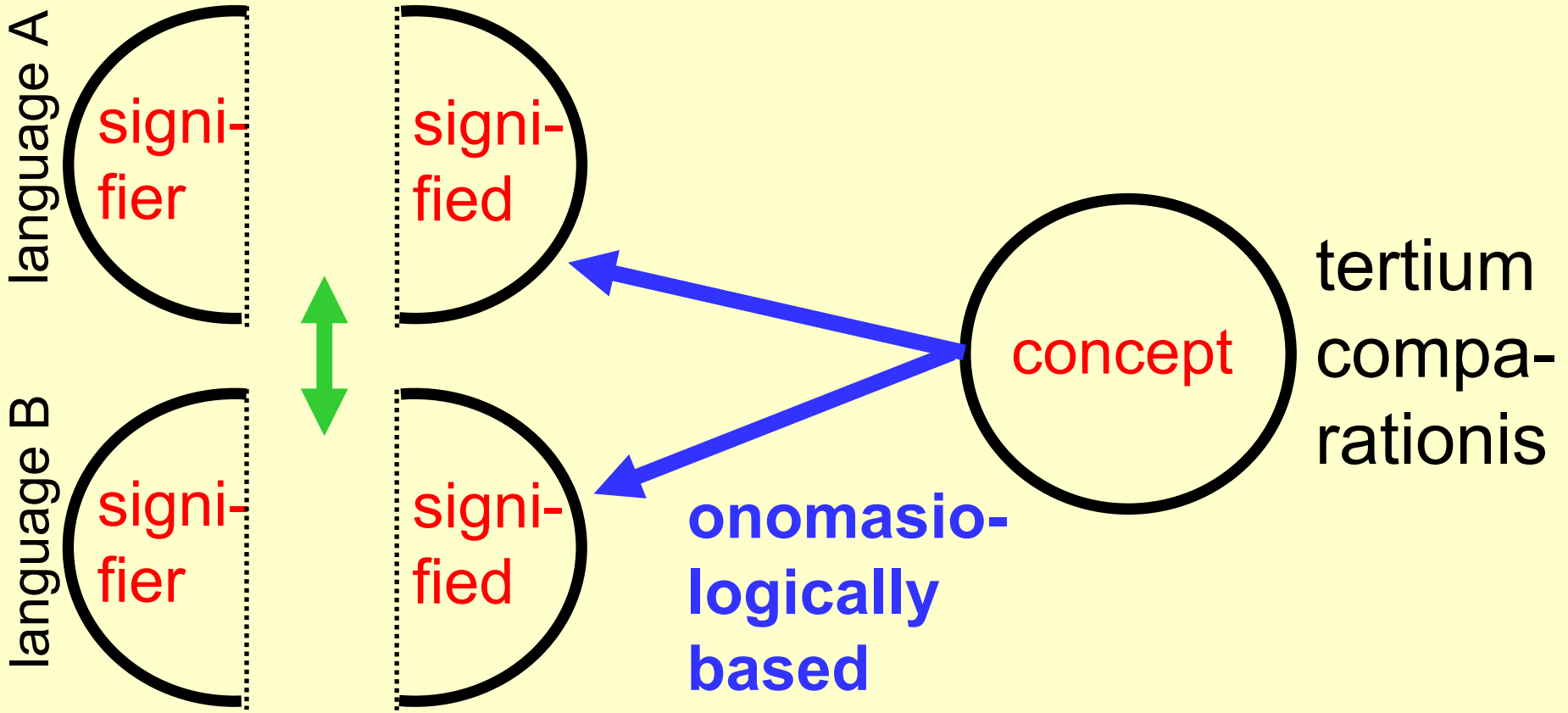


Fig. 11

The new discussion on linguistic ‘relativity’:

- Lucy 1992
- Niemeier 2000; Pütz 2000
- Gentner/Goldin-Meadow 2003

cf. also:
- Luque Durán 2001: 15-53, 489-541
- Koptjevskaja-Tamm 2008: 13-26
- Evans, in press: 508-511

"For morphosyntactic comparison to be possible, we must hold the meaning constant – at least this must be universal. [...] The question of semantic universals is the most difficult to answer [...]. Translation is generally possible, even if not always straightforward. Notice that for the purpose of typological comparison we do not need identity of strictly linguistic meanings. All we need is some level of meaning at which meanings must be commensurable. [...] as long as there is translatability of simple concepts, comparison should be possible" (Haspelmath 2007: 127f.).

"[...] posing some abstract, 'universal' level of semantic representation leaves open the question what kind of meaning-based categories these 'simple concepts' belong to. Are they psychologically real or are they theoretical constructs? Are they linguistic or non-linguistic semantic categories? [...] how can we be sure that the translational equivalent in some other language involves the same, rather abstract meaning" (Rijkhoff 2009: 101).

Conceptual inventories for onomasiological research:

denomination	**reference**	**number of concepts**	**purpose**
Begriffssystem	Hallig/Wartburg 1963	over **8,000**	dialectological investigation
Dictionnaire onomasiologique des langues romanes	Vernay 1991-96 (DOLR)	uncompleted with nearly **3,000**	onomasiological systematics
Dictionary of Selected Synonyms in the Principal Indo-European Languages	Buck 1949	nearly **1,500**	etymology of Indo-European

➔ basis of the *Intercontinental Dictionary Series* (IDS), edited by EVA Leipzig (Key/ Comrie) [http://lingweb.eva.mpg.de/ids/]: **1,310** concepts; 214 languages; → typological research

Conceptual inventories for onomasiological research:

denomination	**reference**	**number of concepts**	**purpose**
Wörterbuch der vergleichenden Bezeichnungslehre	Schröpfer 1979-94	uncompleted with nearly **1,100**	recurrent diachronic semantic patterns
Swadesh list(s)	Swadesh 1955; 1960	2 versions: about **200** and **100**	lexicostatistics, glottochronology
Natural Semantic Metalanguage (NSM)	Wierzbicka 1996; Goddard, submitted	**63**	claim for universality

NSM primes (Goddard, submitted: Table 1):

I, YOU, SOMEONE, SOMETHING~THING, PEOPLE, BODY	**substantives**
KIND, PART	**relational substantives**
THIS, THE SAME, OTHER~ELSE	**determiners**
ONE, TWO, SOME, ALL, MUCH~MANY	**quantifiers**
GOOD, BAD	**evaluators**
BIG, SMALL	**descriptors**
KNOW, THINK, WANT, FEEL, SEE, HEAR	**mental predicates**
SAY, WORDS, TRUE	**speech**
DO, HAPPEN, MOVE, TOUCH	**actions, events, movement, contact**
BE (SOMEWHERE), THERE IS, HAVE, BE (SOMEONE/SOMETHING)	**location, existence, possession, specification**
LIVE, DIE	**life and death**
WHEN~TIME, NOW, BEFORE, AFTER, A LONG TIME, A SHORT TIME, FOR SOME TIME, MOMENT	**time**
WHERE~PLACE, HERE, ABOVE, BELOW, FAR, NEAR, SIDE, INSIDE	**space**
NOT, MAYBE, CAN, BECAUSE, IF	**logical concepts**
VERY, MORE	**intensifier, augmentor**
LIKE~WAY	**similarity**

inventory	**number of concepts**	**claim for universality?**
Begriffssystem Hallig/Wartburg	~8,000	no
DOLR Vernay	~3,000	no
Buck/IDS	1,300-1,500	no
Schröpfer	1,100	only with respect to the patterns
Swadesh list	~200/100	yes, but problematic
NSM	63	YES!

"[...] semantic molecules are complex meanings which are decomposable into combinations of semantic primes but which function as units in the structure of other, more complex concepts" (Goddard, submitted: section 2.):

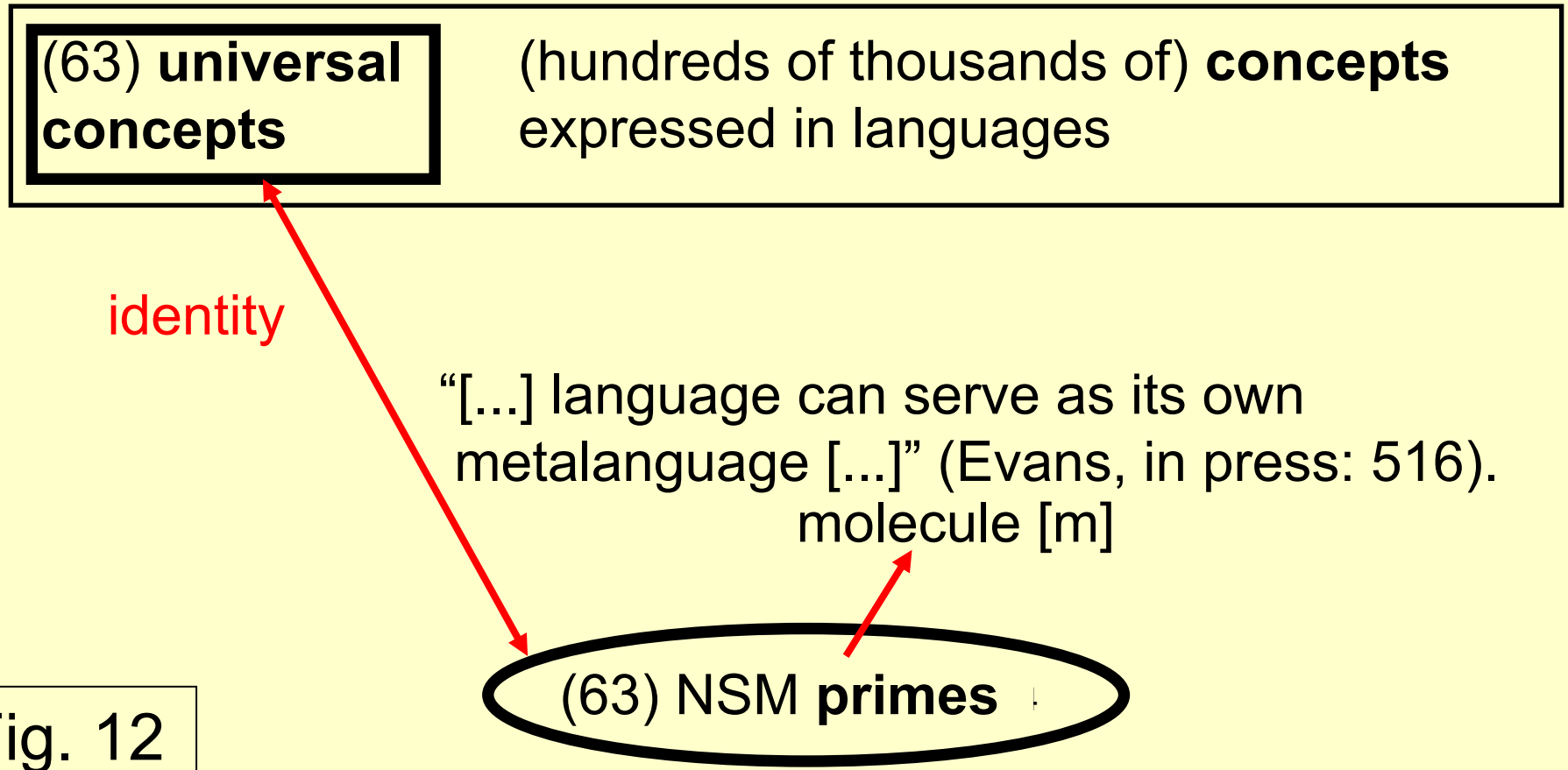


Fig. 12

"[…] semantic molecules must be meanings of lexical units in the language" (Goddard, submitted: section 2.).

"[…] many complex concepts have multiple "nestings" of molecule within molecule" (ibid.).

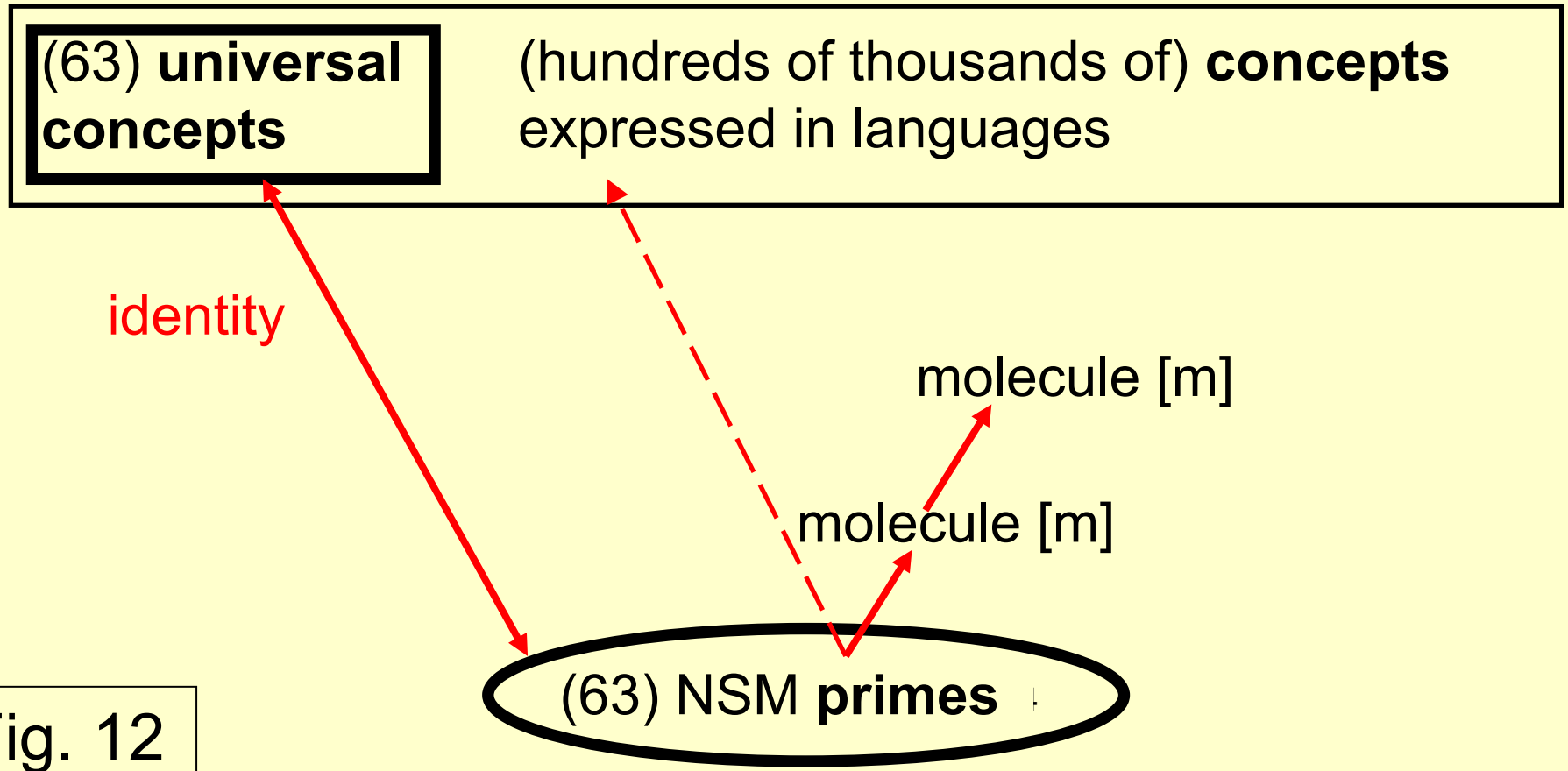


Fig. 12

"[…] a semantic template is a structured set of component types shared by words of a particular semantic class […]" (Goddard, submitted: section 3.)

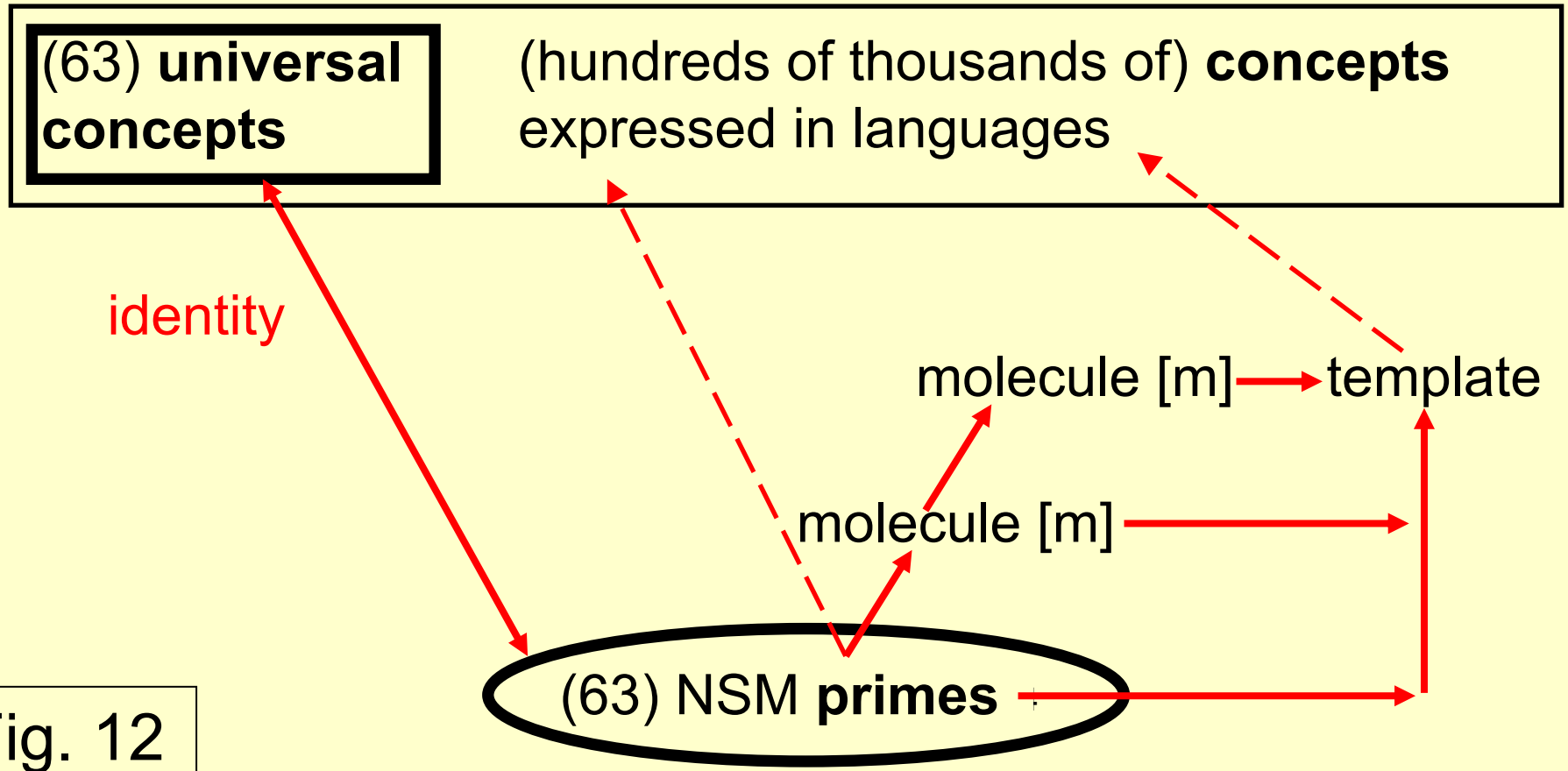


Fig. 12

(1/2/3) *Someone X was drink-/eat-/ñb-ing something Y:*
(English/Kamal)

a. s.o. X was doing s.th. to s.th. Y with the mouth [m] for some time
because of this, s.th. was happening to this s.th. at the same time

b. at many times s.o. does s.th. like this to s.th. when it is like this:
this s.th. is s.th. like / not like water [m] / Ø
this s.o. wants this s.th. to be inside their body

← **relational analysis**

c. when s.o. does s.th. like this to s.th. for some time the same thing happens many times
it happens like this:
this s.o. does s.th. to this s.th. with their mouth [m]
because of this, after this, part of this s.th. is for a very short time inside this s.o.'s mouth [m]
after this, this s.o. does s.th. else to it with their mouth [m]
because of this, after this, it is not inside this s.o.'s mouth [m] anymore, it is somewhere else inside this s.o.'s body for some time

d. if s.o. does s.th. like this to s.th. for some time, after some time, all parts of this s.th. can be inside this s.o.'s body

tertia comparationis = substantially based on the (very few) universal concepts

➔ 'substantialist' approach

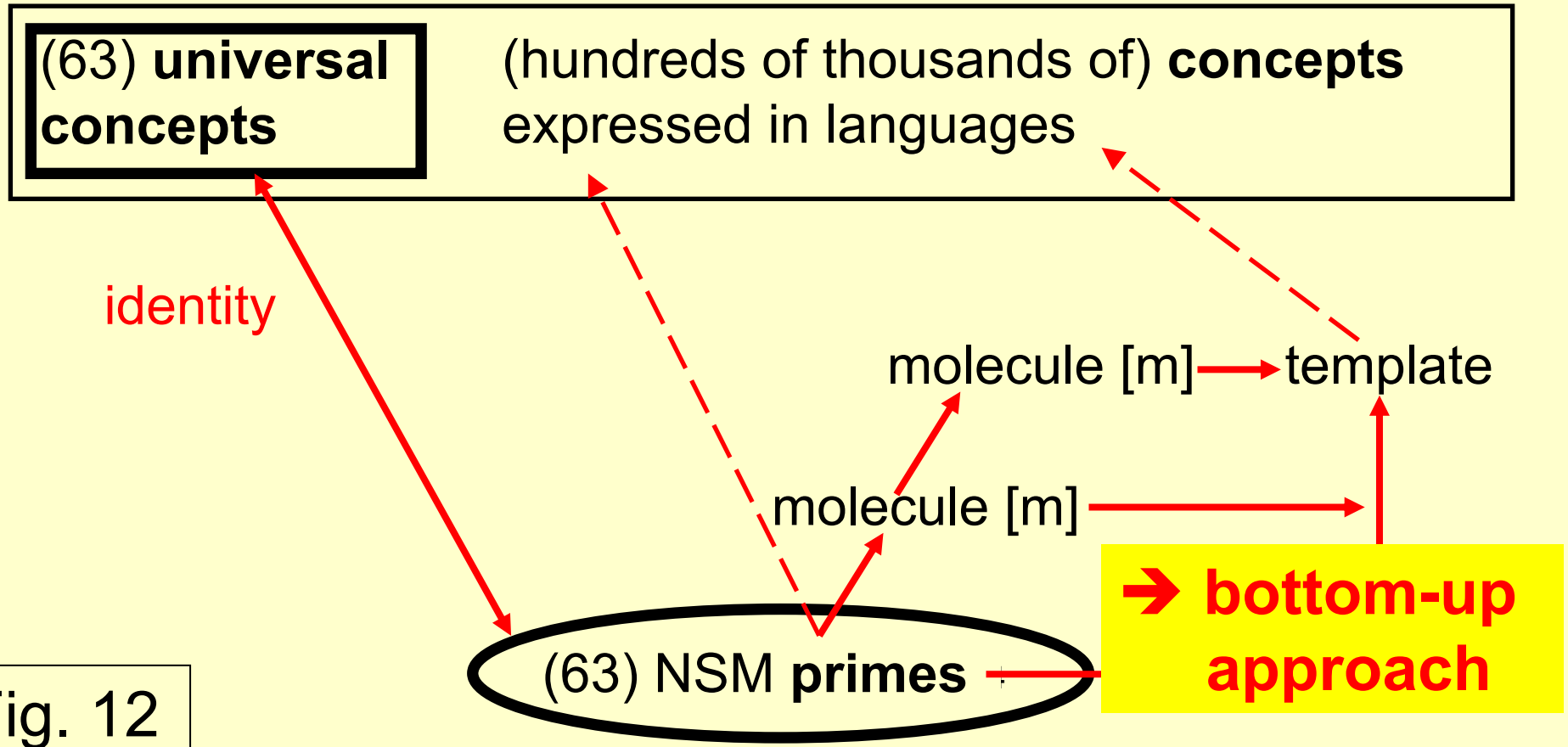


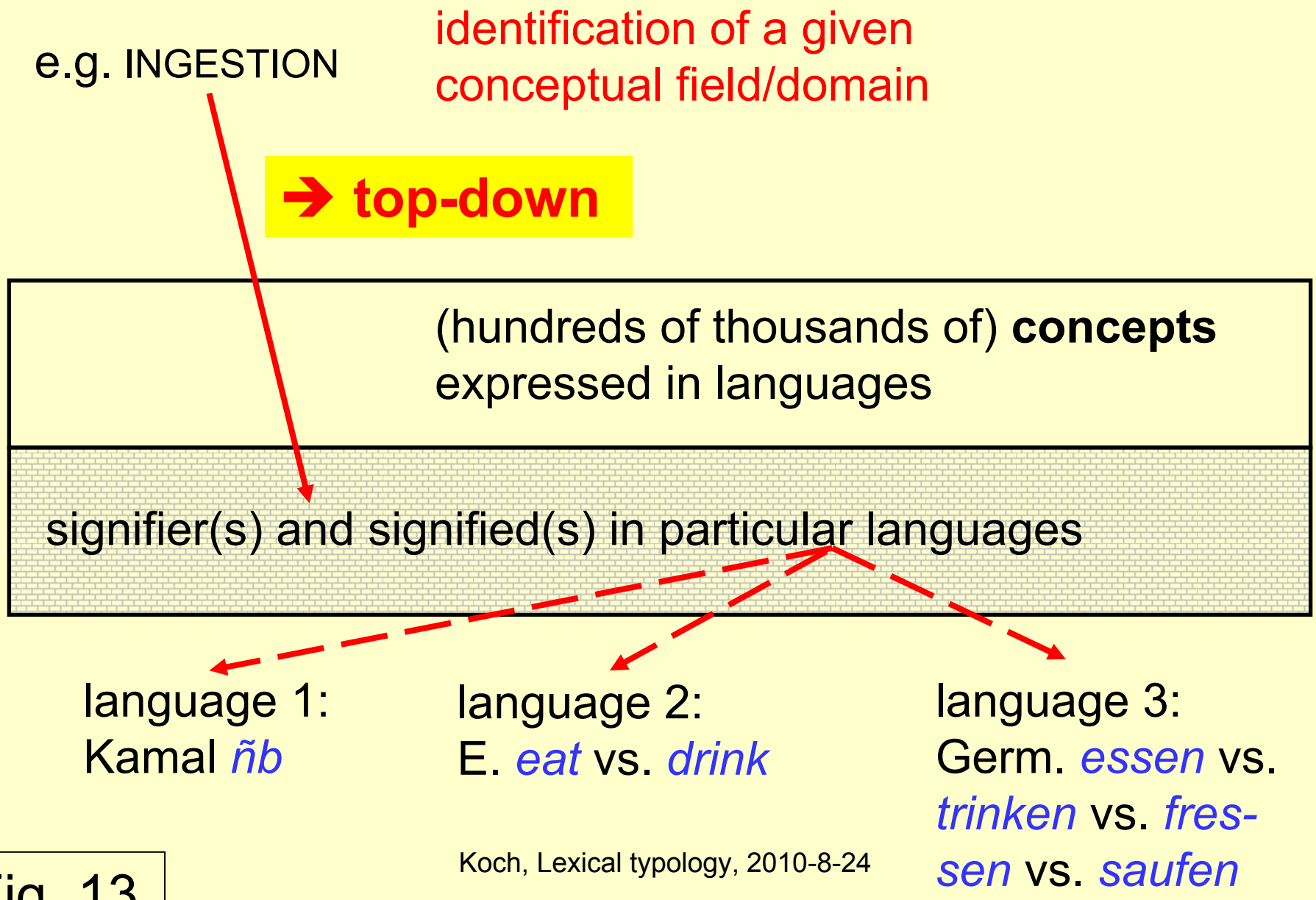
Fig. 12

‘substantialist’ approach

(63) **universal concepts**	(hundreds of thousands of) **concepts** expressed in languages

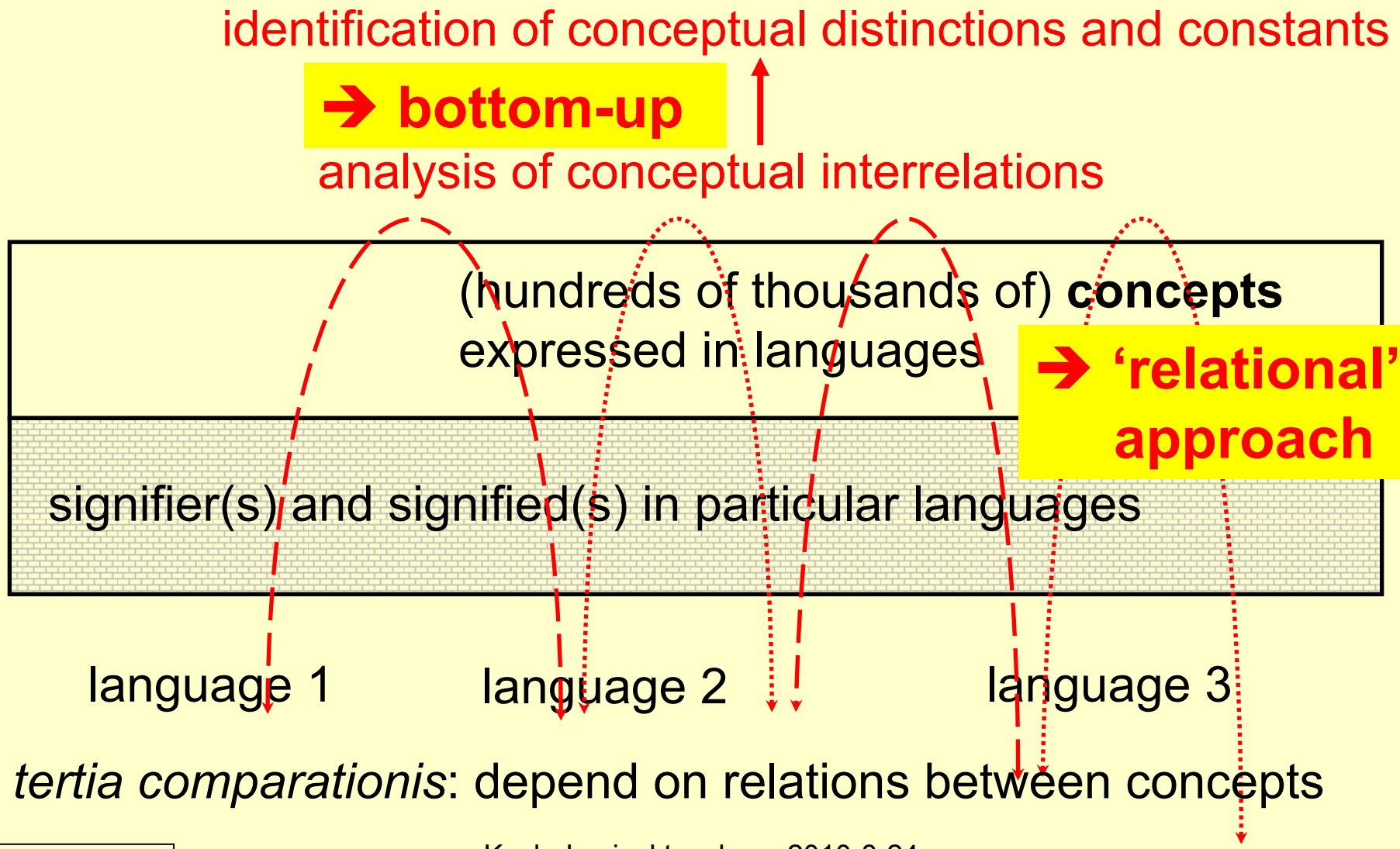
Is the “substance” correct?

WANT = prime? (cf. Koptjevskaja-Tamm 2008: 26; Evans, in press: 516)



Koch, Lexical typology, 2010-8-24

Fig. 13



tertia comparationis: depend on relations between concepts

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Fig. 13

Relational approach:

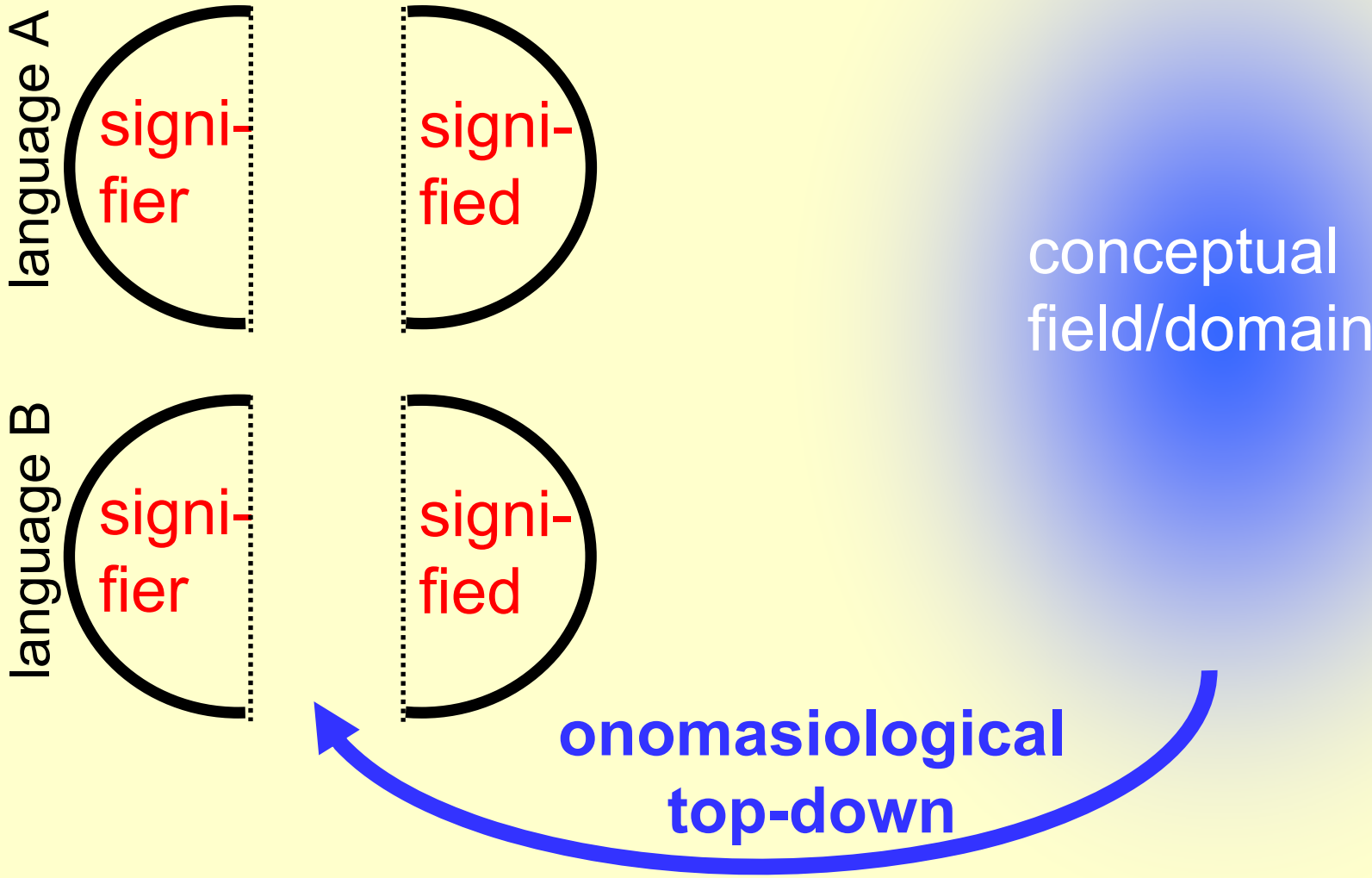

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Fig. 14a

Relational approach:

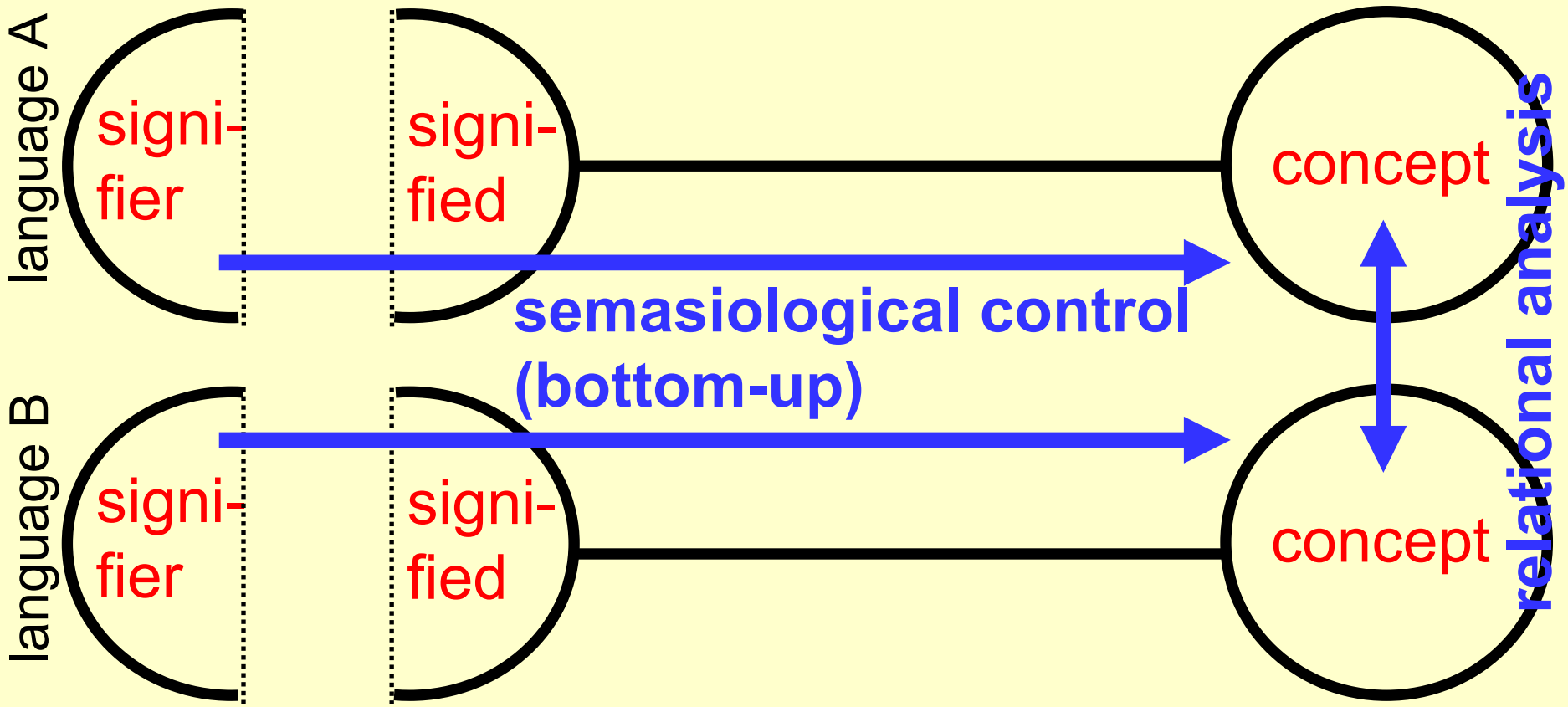


Fig. 14b

'substantialist' bottom-up approach

vs.

'relational' top-down-bottom-up approach

e.g. NSM

- strictly universalist (as for the *tertia*)

☞ Its application to particular languages ultimately **presupposes** a previous **relational** approach

- not necessarily universalist (as for the *tertia*), but open to universals

  Außereinzelsprachlichkeit (Heger 1990/91)

- not simply structural semantics !

2. Parameters of lexical typology

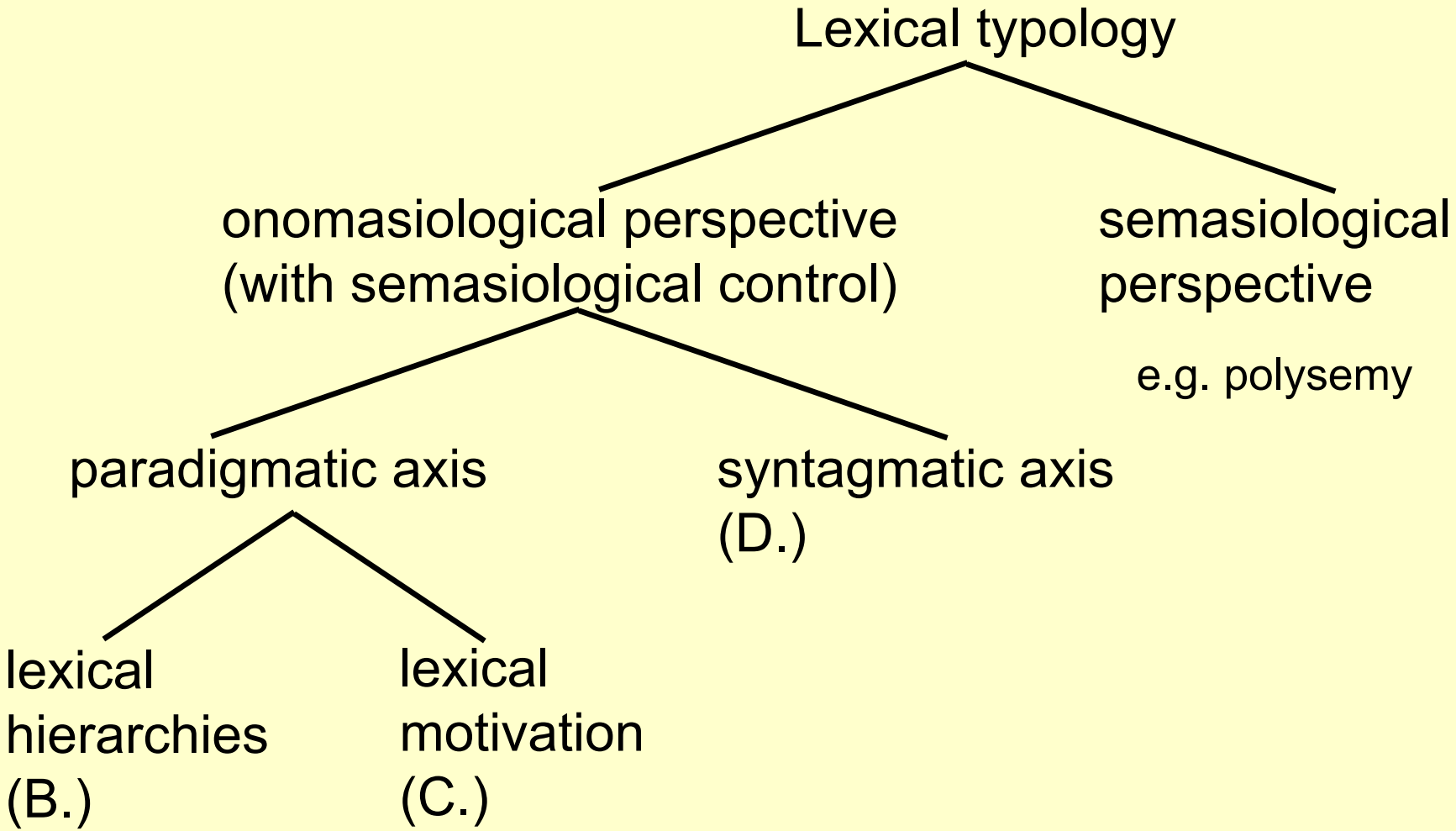


Fig. 15b

2. Parameters of lexical typology

"[…] the characteristic ways in which language […] packages semantic material into words" (Lehrer 1992: 249)

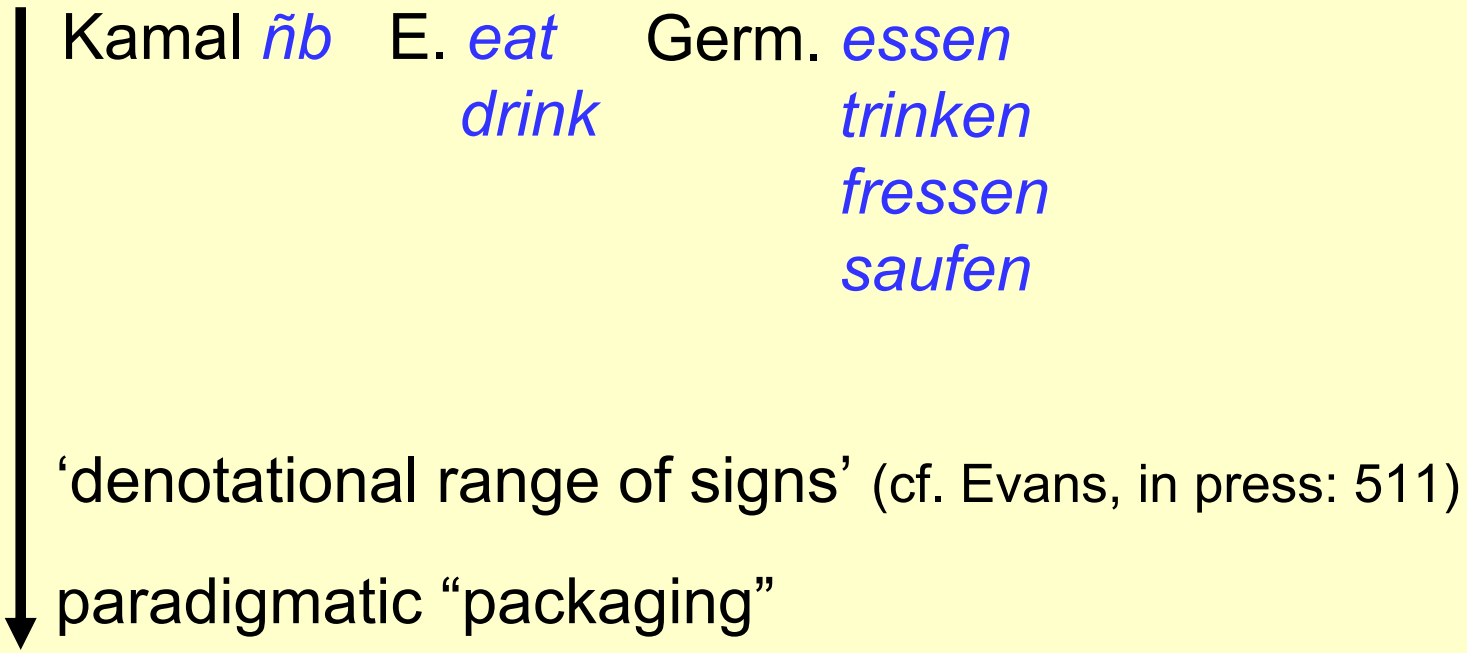
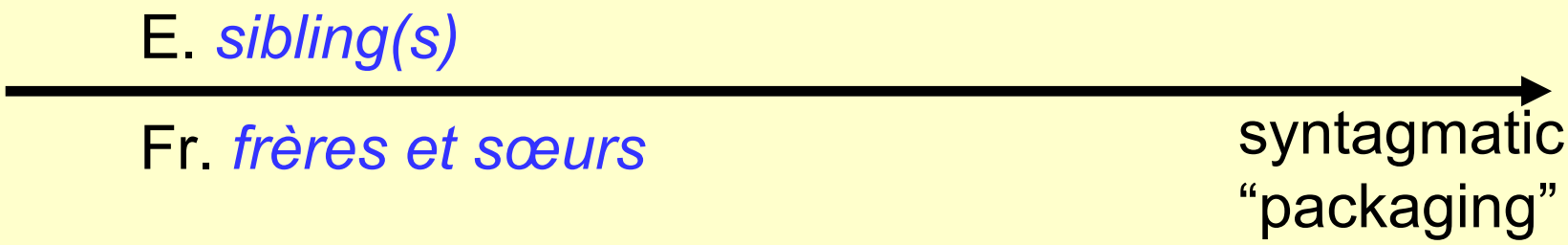


Fig. 16b

"[…] the characteristic ways in which language […] packages semantic material into words" (Lehrer 1992: 249)



= projection of conceptual material onto single vs. sequences of lexical items

3.1. Introduction: the Hjelmslev example

(cf. Hjelmslev 1957, 104f.)

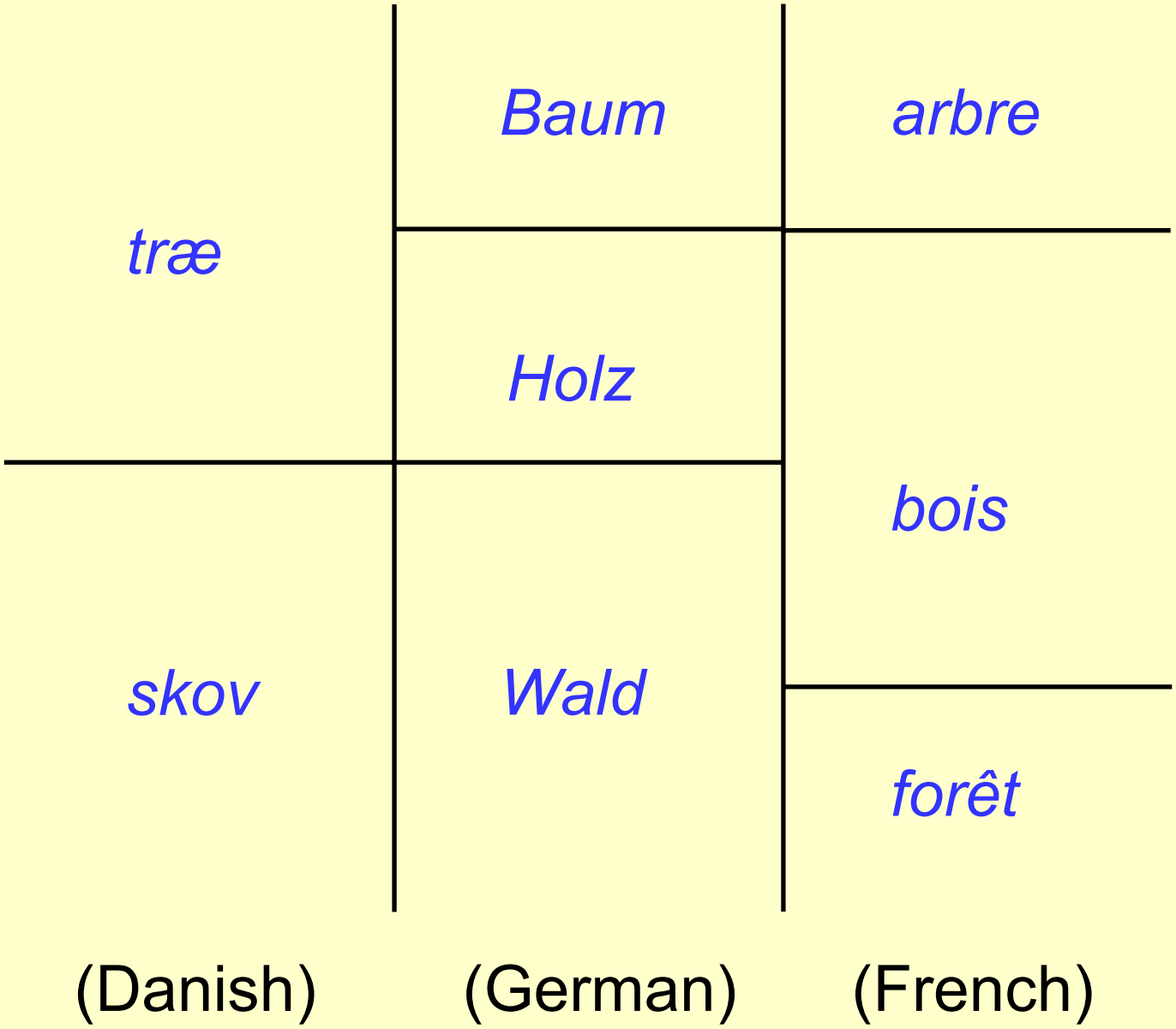


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Fig. 17b

3.1. Introduction: the Hjelmslev example

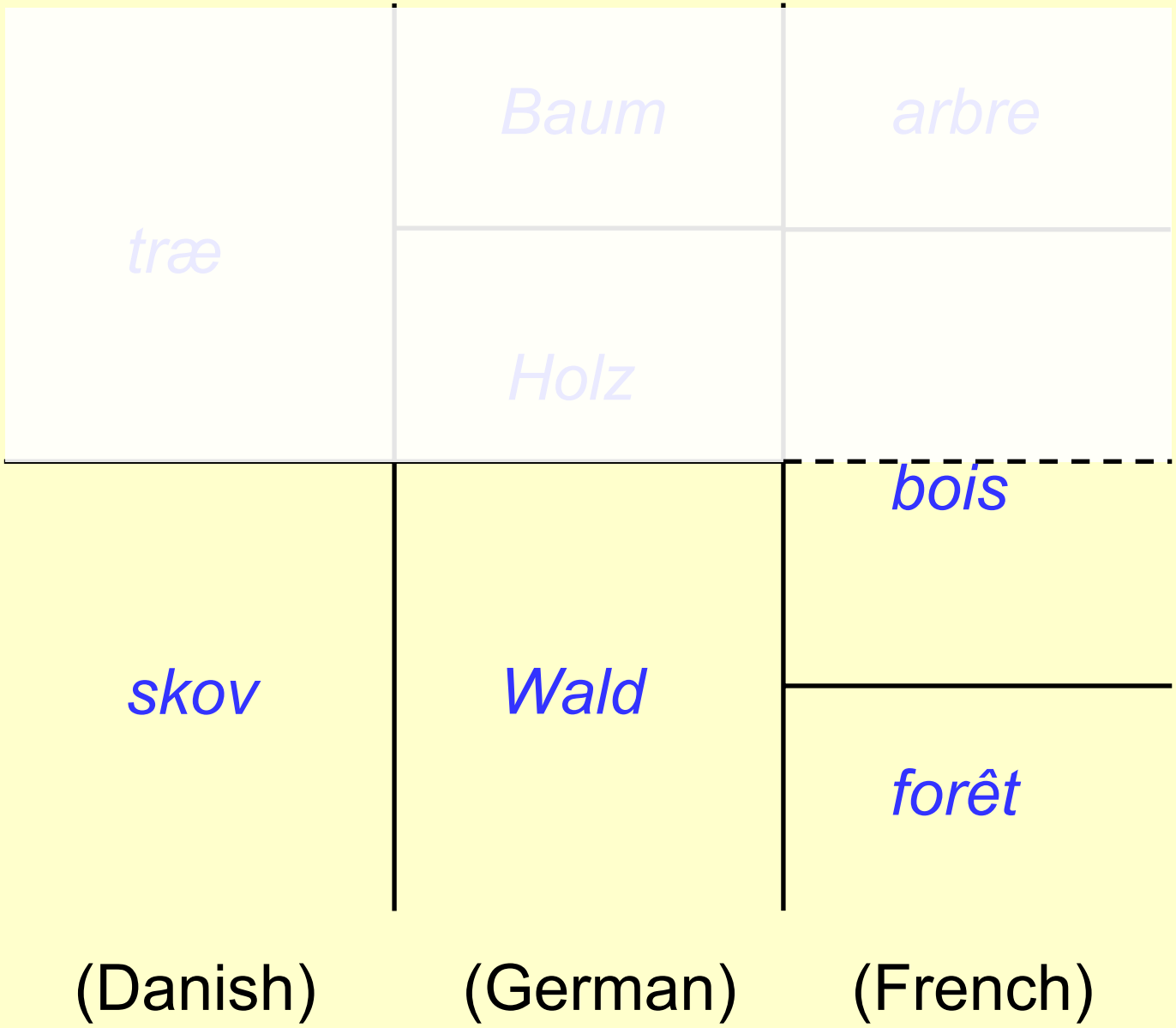

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Fig. 18

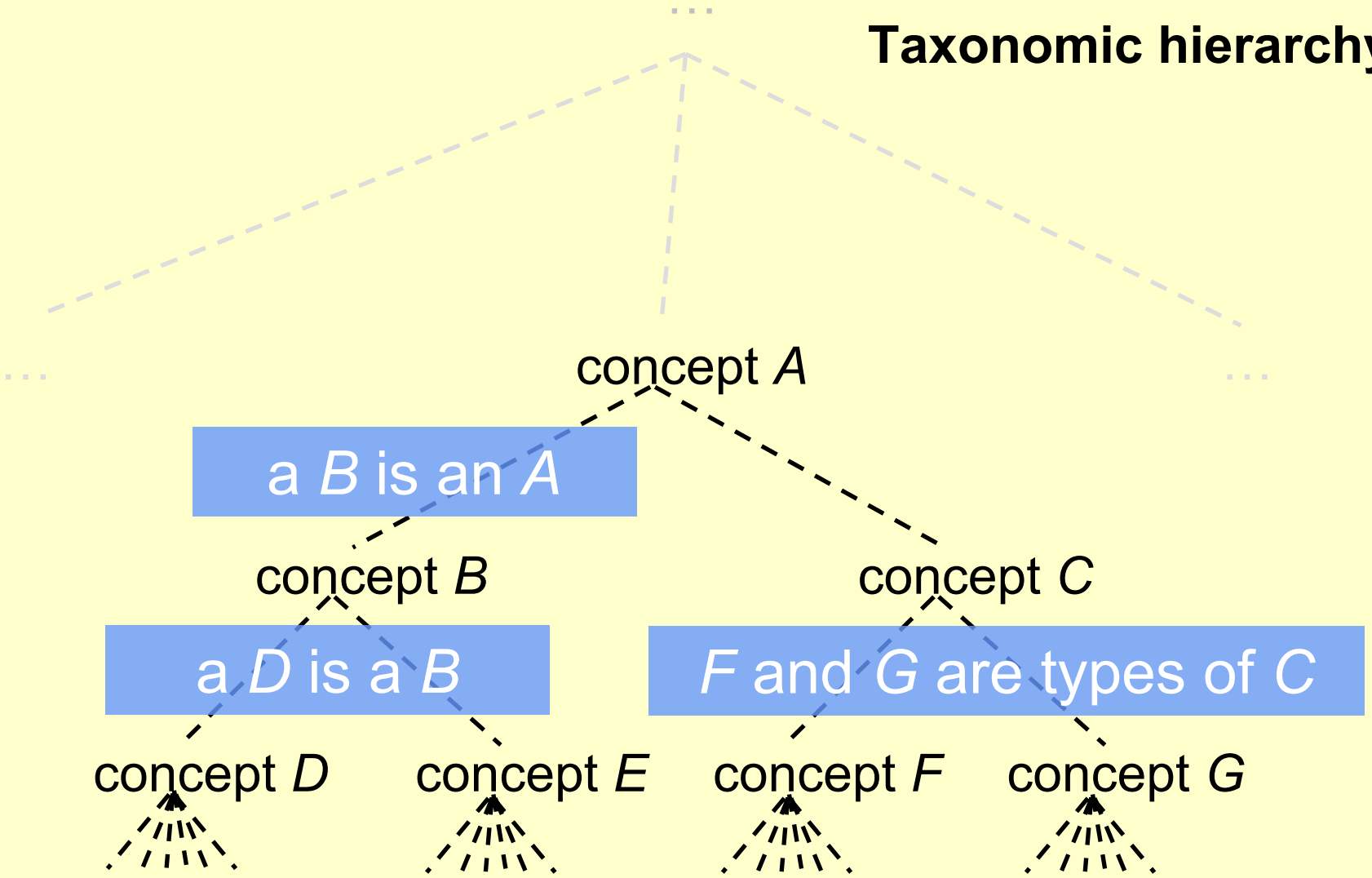

Taxonomic hierarchy
concept A
a B is an A
concept B
concept C
a D is a B
F and G are types of C
concept D
concept E
concept F
concept G

Fig. 19

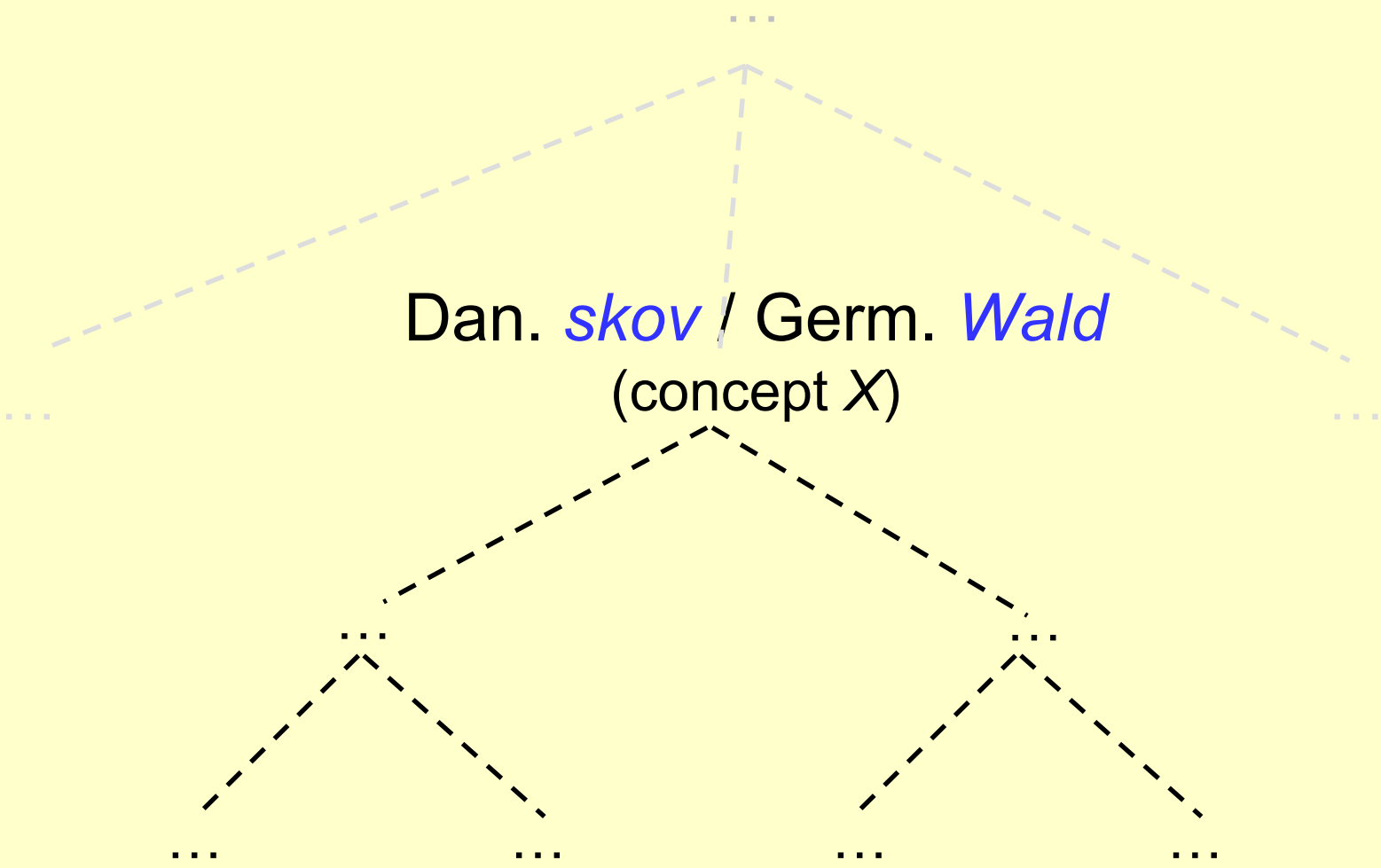


Fig. 20

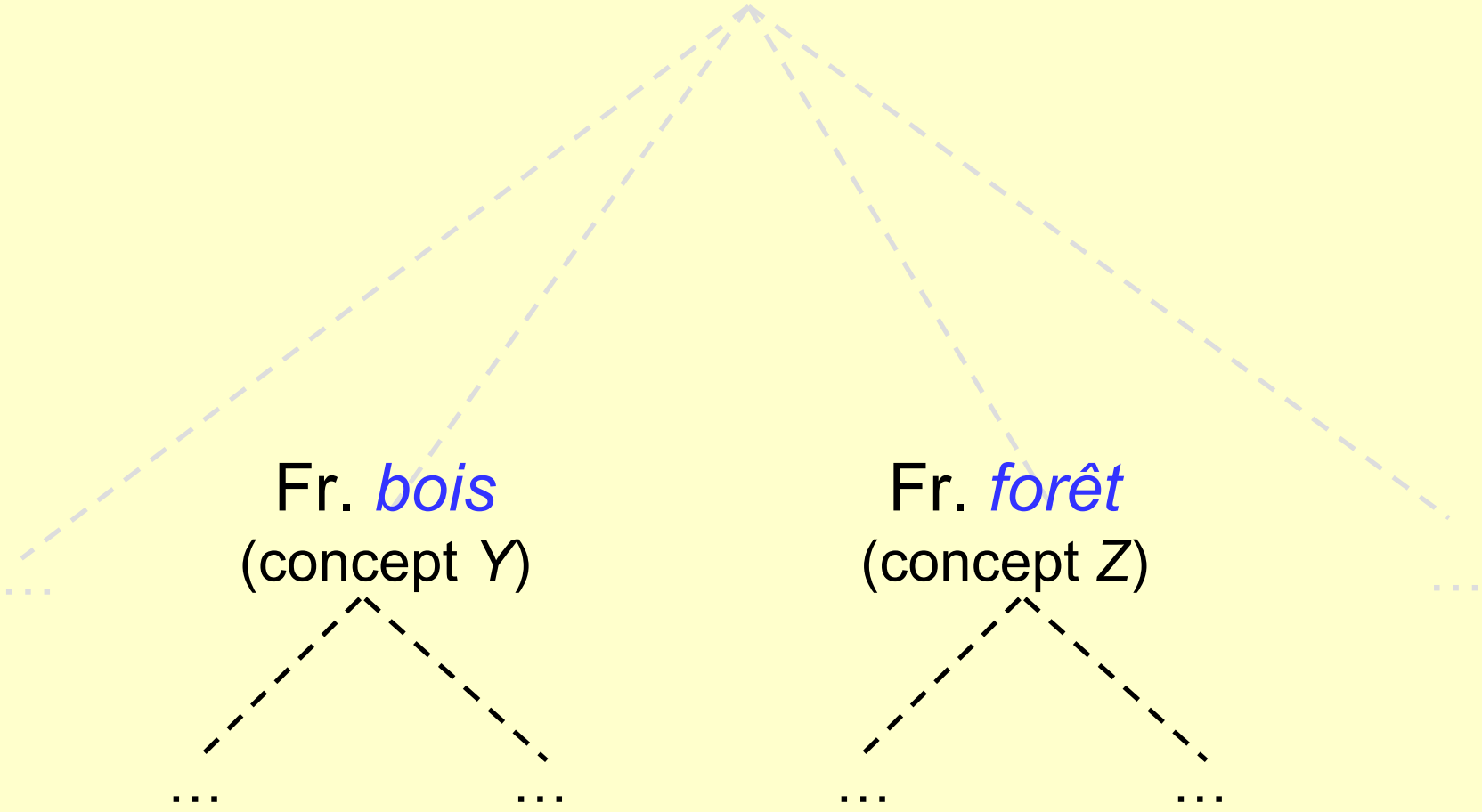
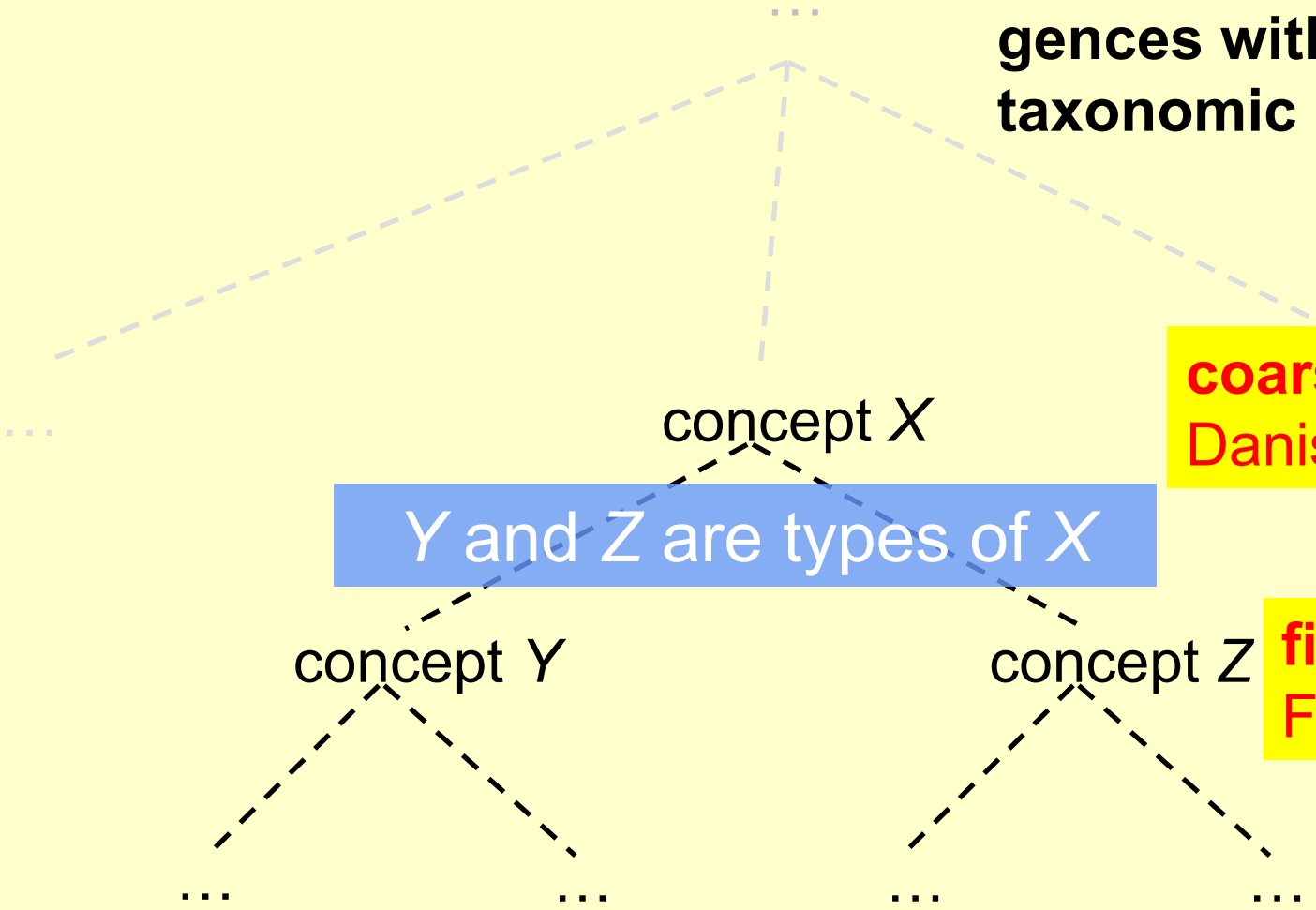


Fig. 21

Granularity divergences within a taxonomic hierarchy



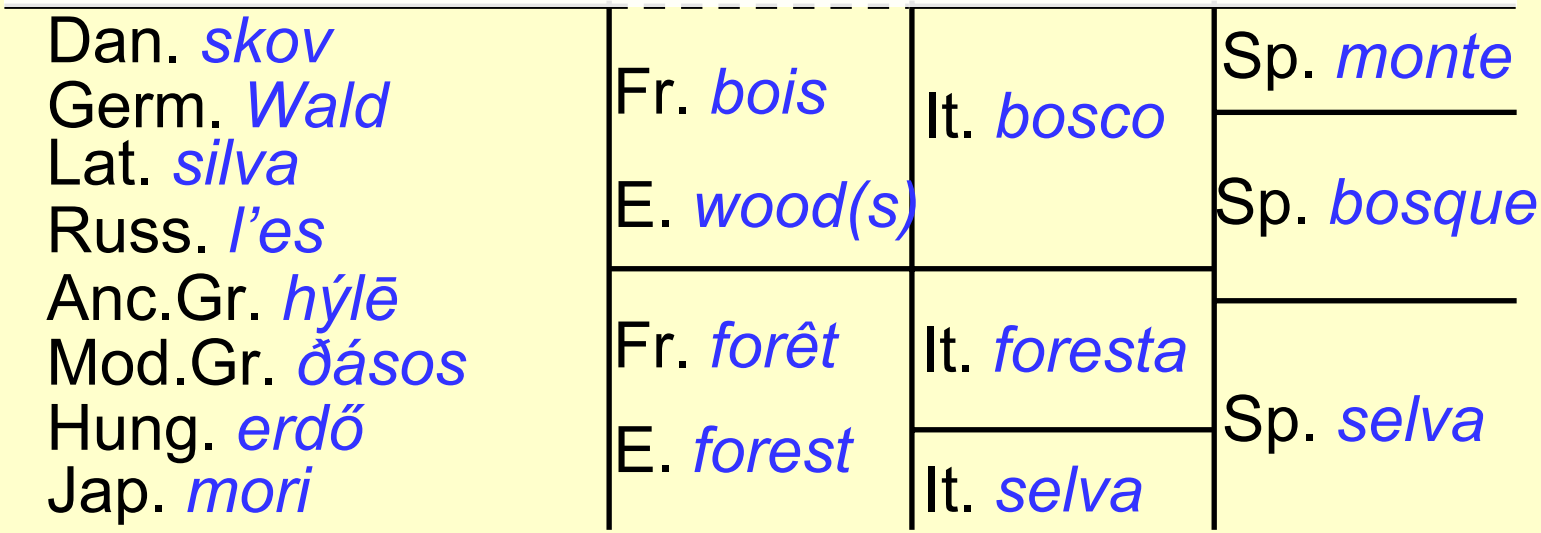
coarse-grained: Danish, German

fine-grained: French

(cf. Koch 1998; 2005)

Fig. 22

The typological relevance of taxonomic granularity



(cf. Koch 2005)

Fig. 23

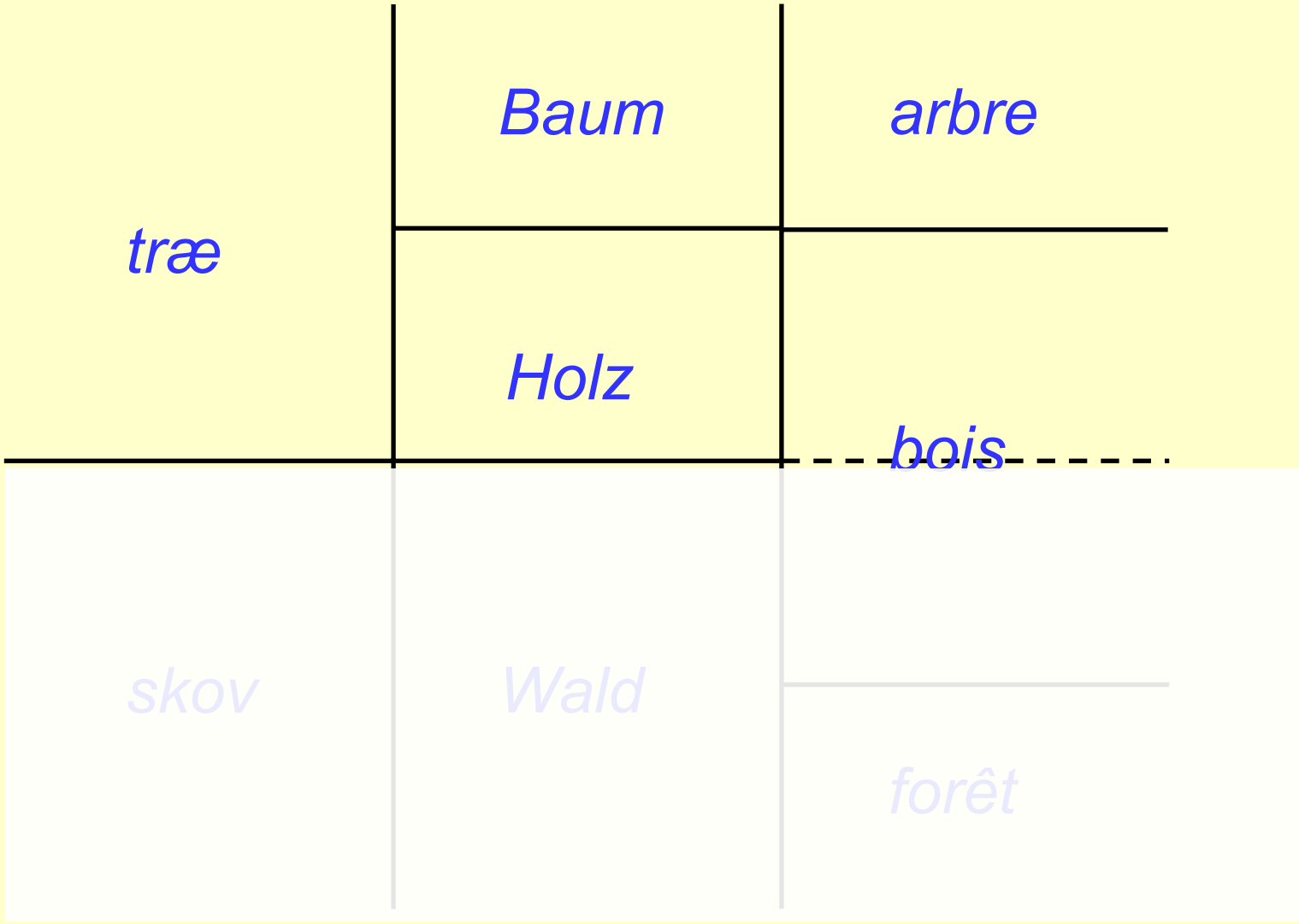


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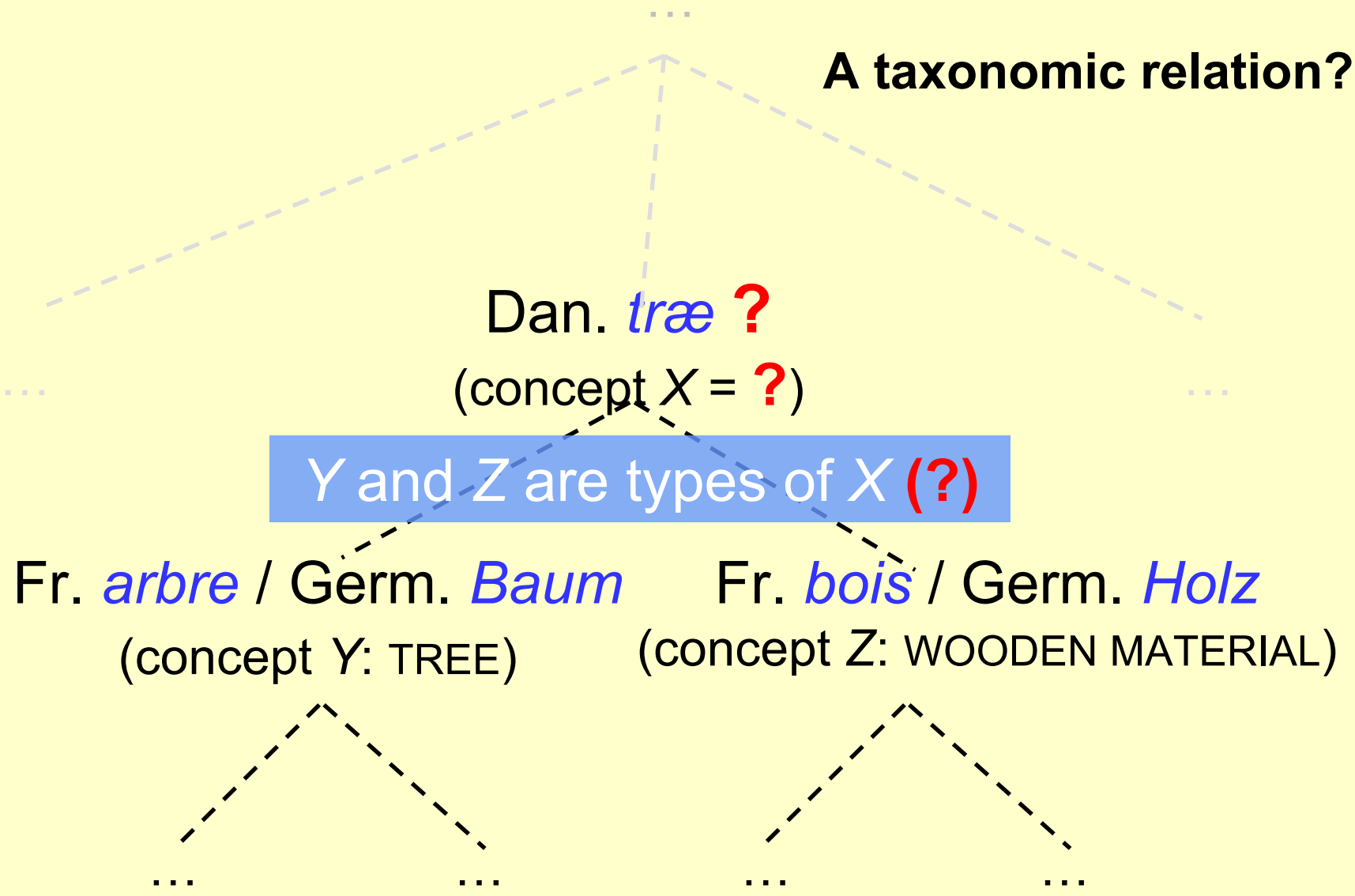
Fig. 24

A taxonomic relation?



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(cf. Koch 1998; 2005)

Fig. 25

Aristotle: *(sýn)engys*
'close, contiguous'

'Engynomic' hierarchy

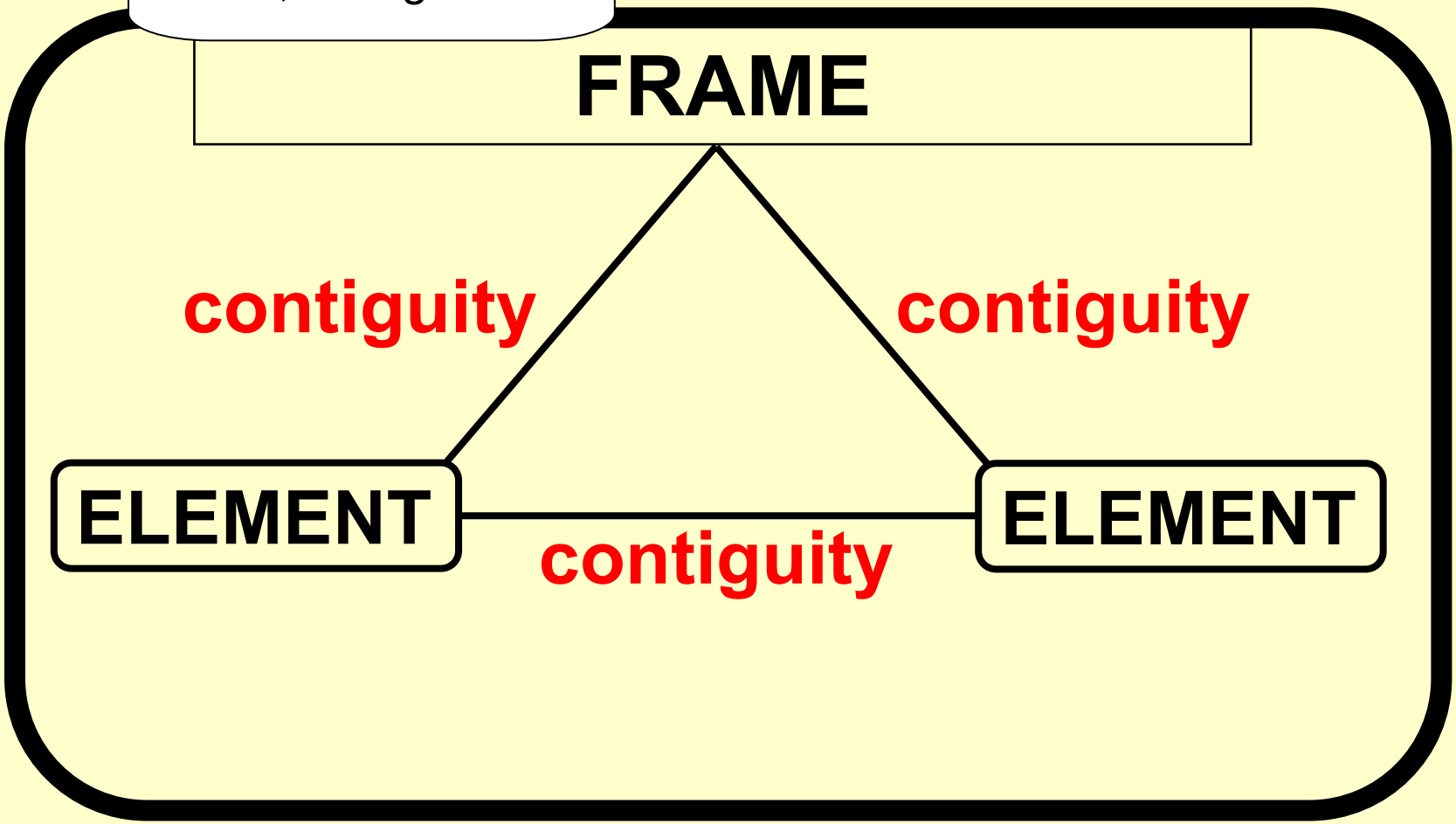
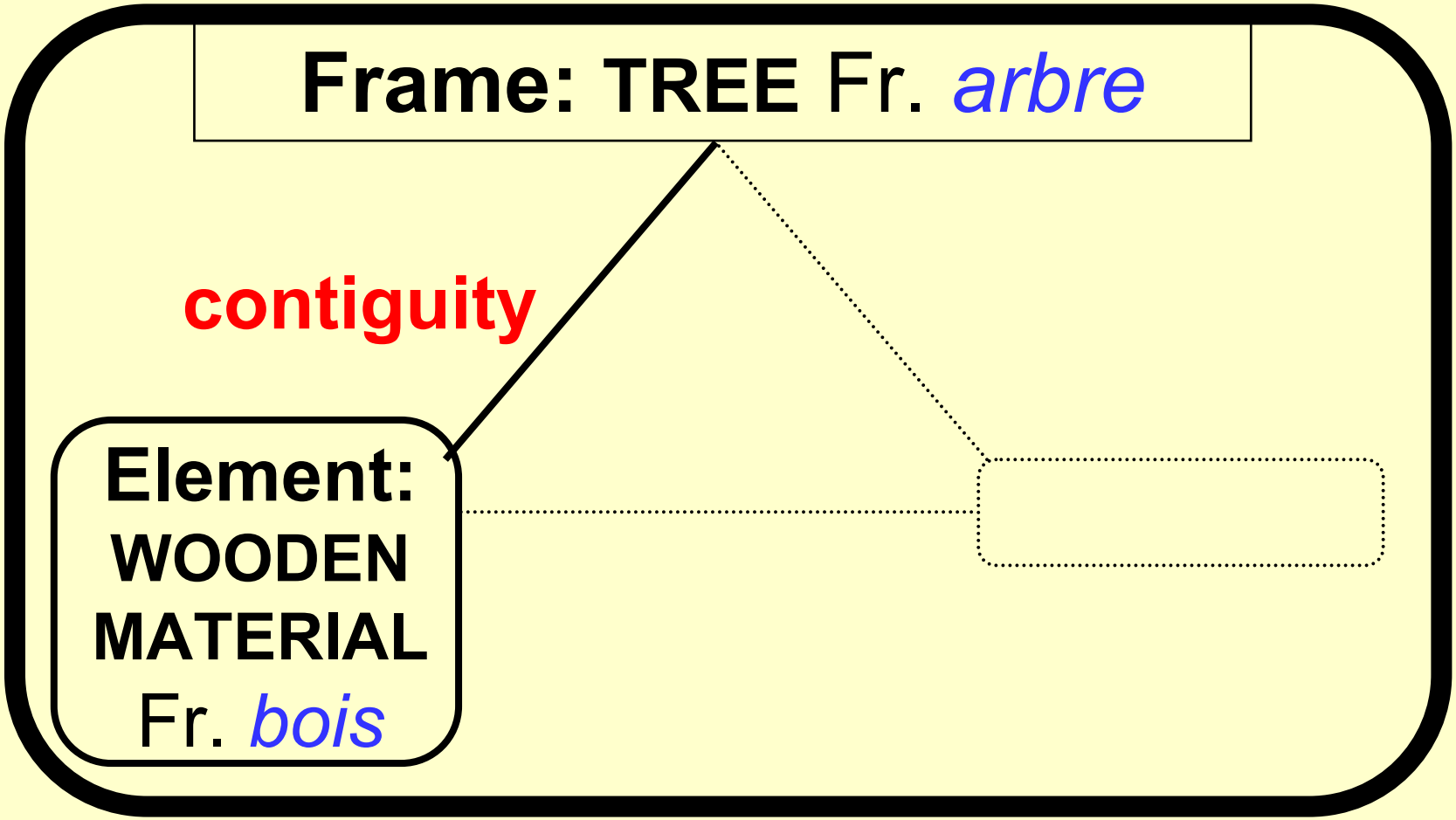


Fig. 27

(cf. Koch 1999)

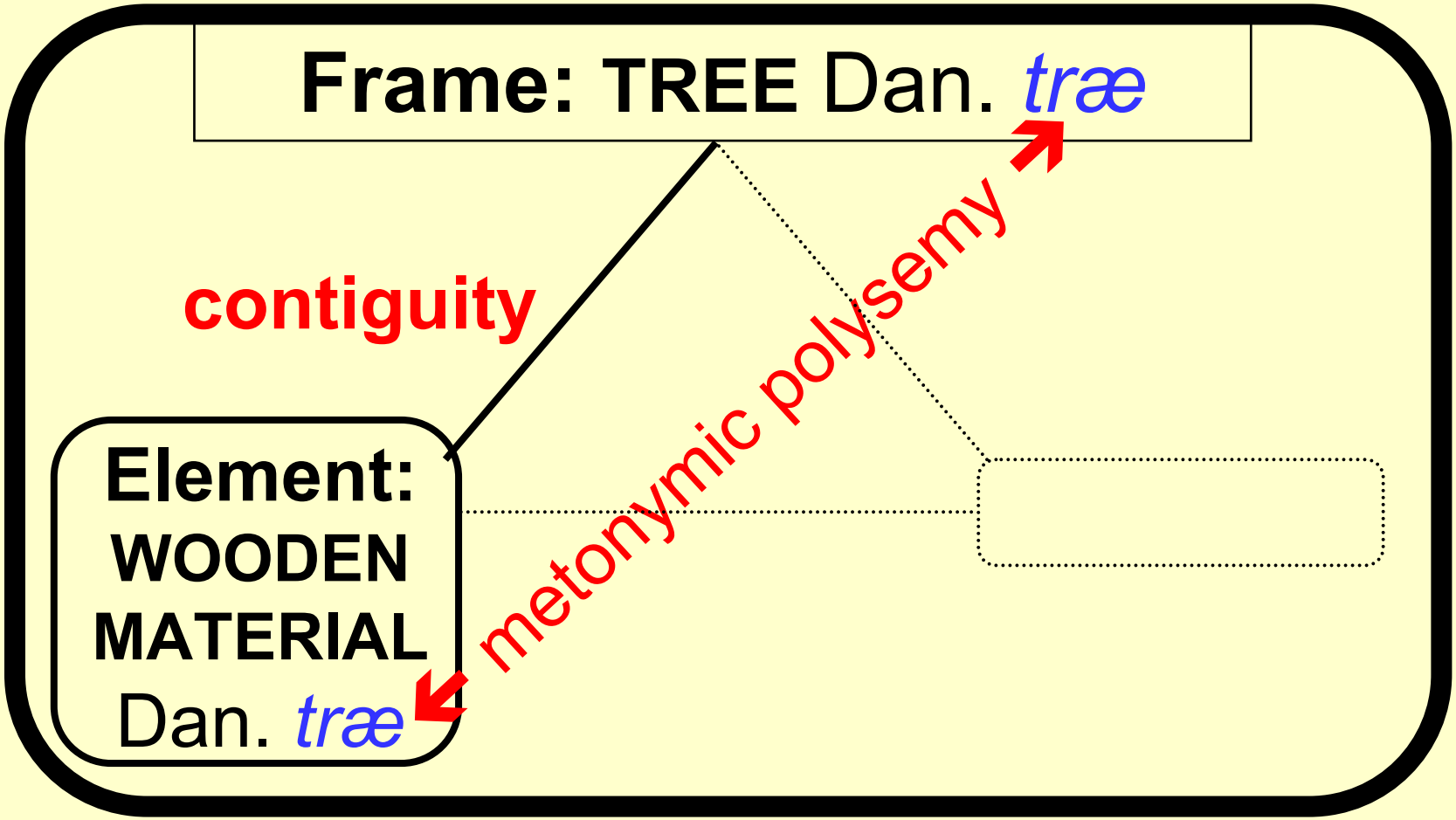
(cf. Koch 2001: 1154; 2005)



Typological relevance of ± polysemy within 'engynomic' hierarchies ➔ 5.1.

Fig. 28a

(cf. Koch 2001: 1154; 2005)



Typological relevance of ± polysemy within 'engynomic' hierarchies ➔ 5.1.

Fig. 28b

3.2. Taxonomic vs. engynomic hierarchies

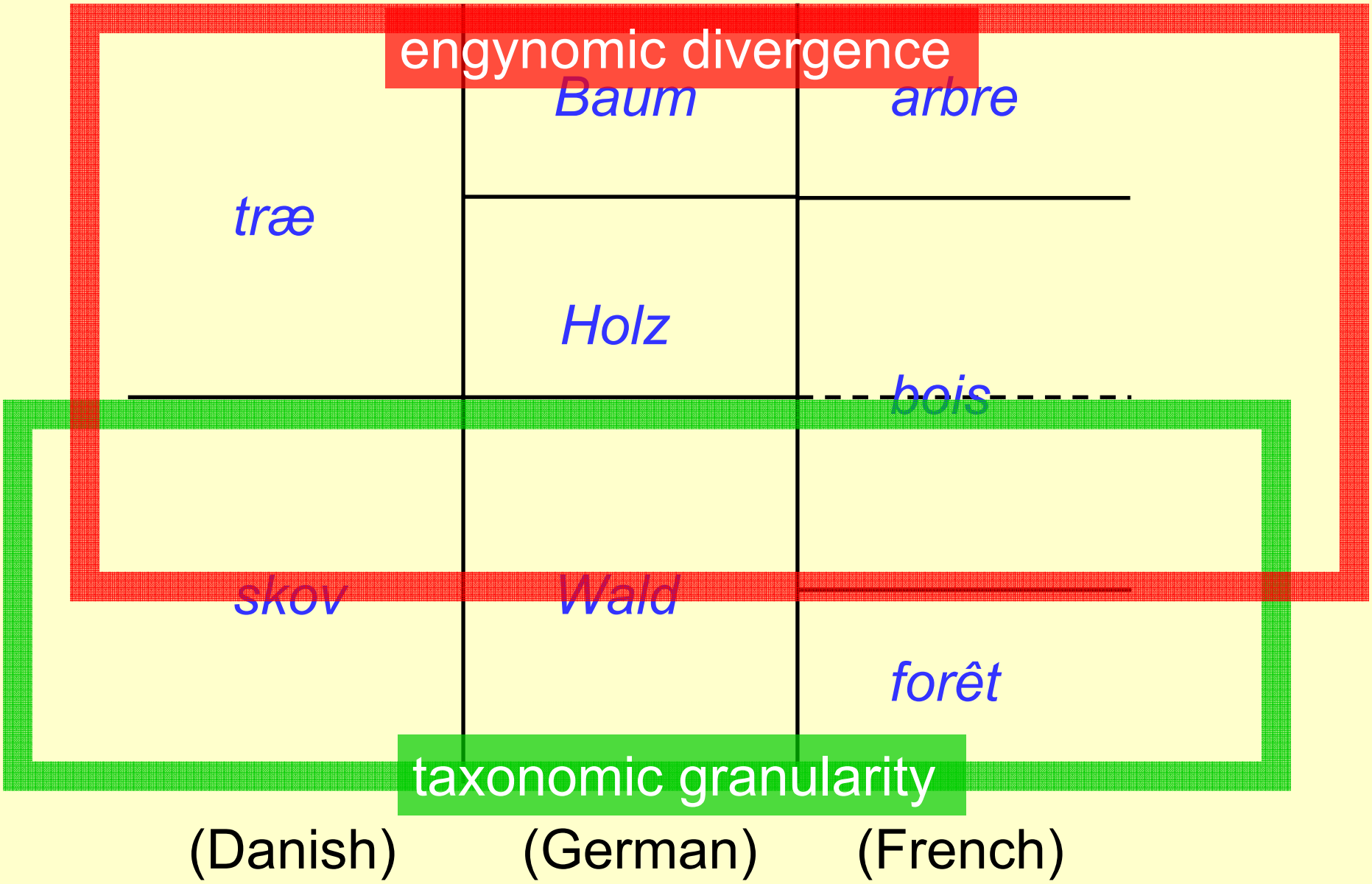


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Fig. 29

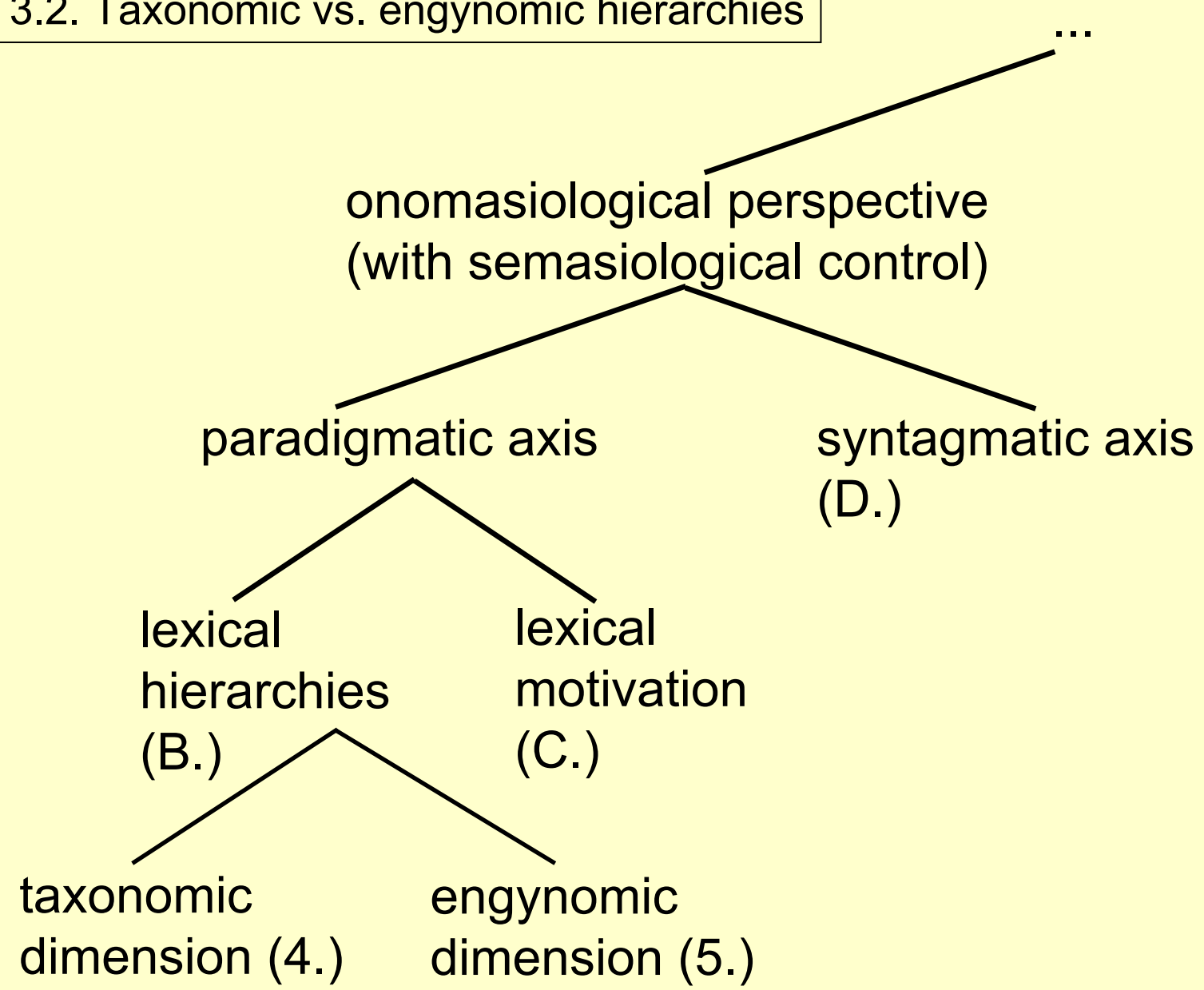
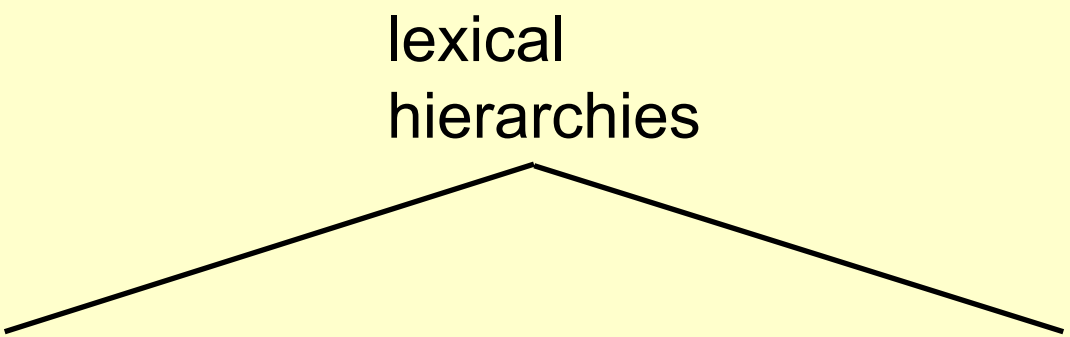

...
onomasiological perspective
(with semasiological control)
paradigmatic axis
syntagmatic axis
(D.)
lexical
hierarchies
(B.)
lexical
motivation
(C.)
taxonomic
dimension (4.)
engynomic
dimension (5.)

Fig. 15c



taxonomic dimension

- conceptual ‘fields’
- extension of categories
- categorization
- relations of inclusion
- “*Y* is a *X*”, “*Y* and *Z* are *X*”

engynomic dimension

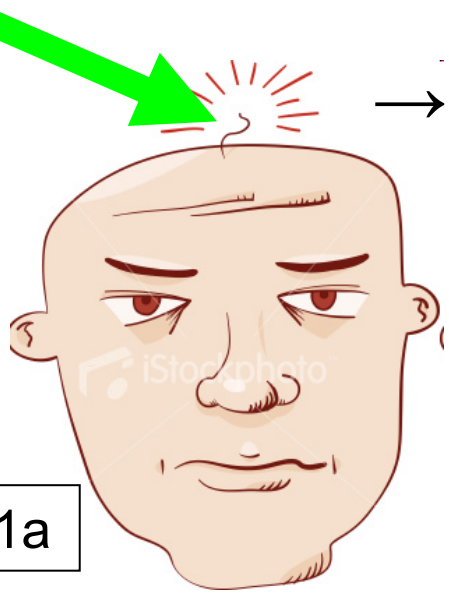
- conceptual ‘domains’
- frames
- joint lexicalization
- relations of contiguity
- “*Y* is part of *X*”, “*Y* and *Z* are part of *X*”, “*Y* (and *Z*) belong(s) to *X*”, etc.

Fig. 30

Task ❶ for students

conceptual field/domain HAIR

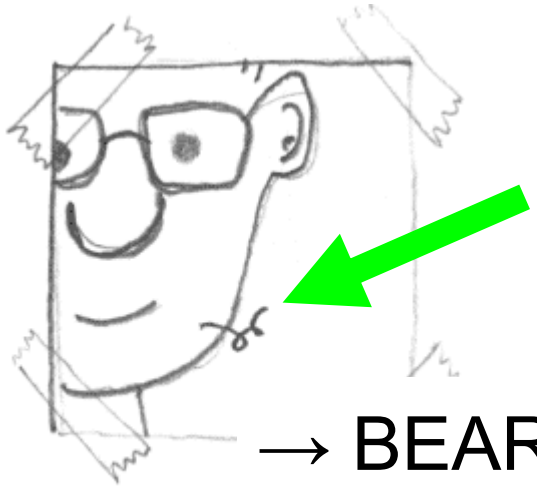
Task ❶ for students: HAIR



→ HEAD

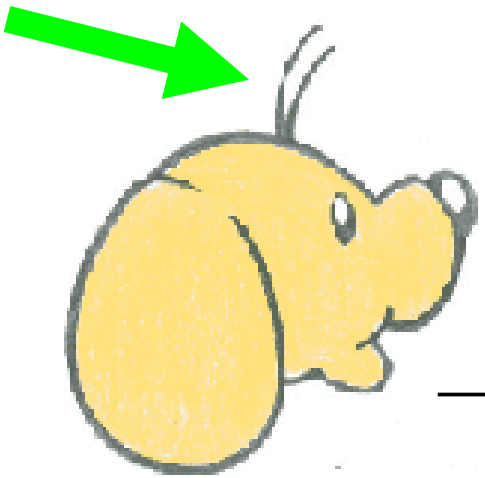
Fig. 31a

FILAMENT GROWING FROM THE SKIN



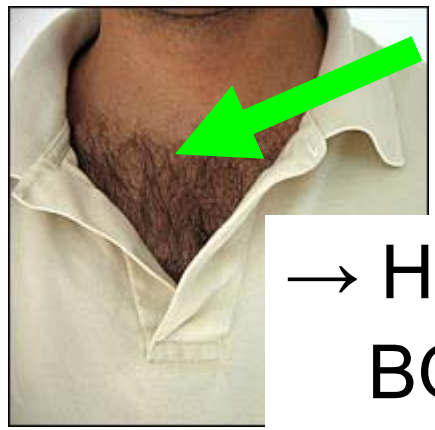
→ BEARD

Fig. 31b



→ ANIMAL

Fig. 31d



→ HUMAN BODY

Fig. 31c

Koch, Lexical typology, 2010-8-24

Task ❶ for students: HAIR

A **taxonomic** problem for lexical typology: HAIR as a conceptual field

<table>
<tr><th>→ HEAD</th><th>→ BEARD</th><th>→ H. BODY</th><th>→ ANIMAL</th></tr>
<tr><td>Swahili
unywele</td><td>Swahili udevu</td><td>Swahili laika</td><td>Swahili
(u)nyoya</td></tr>
<tr><td>Guaraní ava /
acäragüe</td><td>Guaraní
tendîvá</td><td colspan="2">Guaraní tagué</td></tr>
<tr><td>Fr. cheveu</td><td colspan="3">Fr. poil</td></tr>
<tr><td colspan="4">E. hair</td></tr>
</table>

Task ❶ for students: HAIR

Questions with respect to the **taxonomic** level:

1. To which taxonomic type belong(s)
   – your mother tongue?
   – the language(s) of your speciality?
2. Are there other types in your material?
3. Is their some kind of implicational hierarchy with respect to the taxonomic distinctions? Possible explanation?

An **engynomic** problem for lexical typology: HAIR as a conceptual domain

ISOLATED HAIR

Fig. 32a

AGGREGATE OF HAIRS

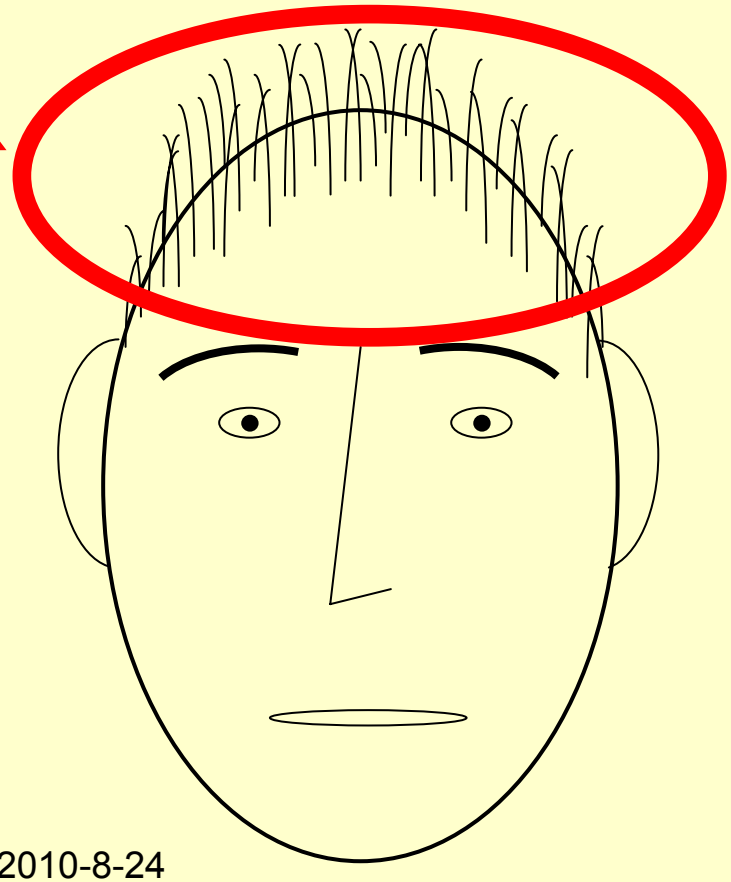


Fig. 32b

Task ❶ for students: HAIR

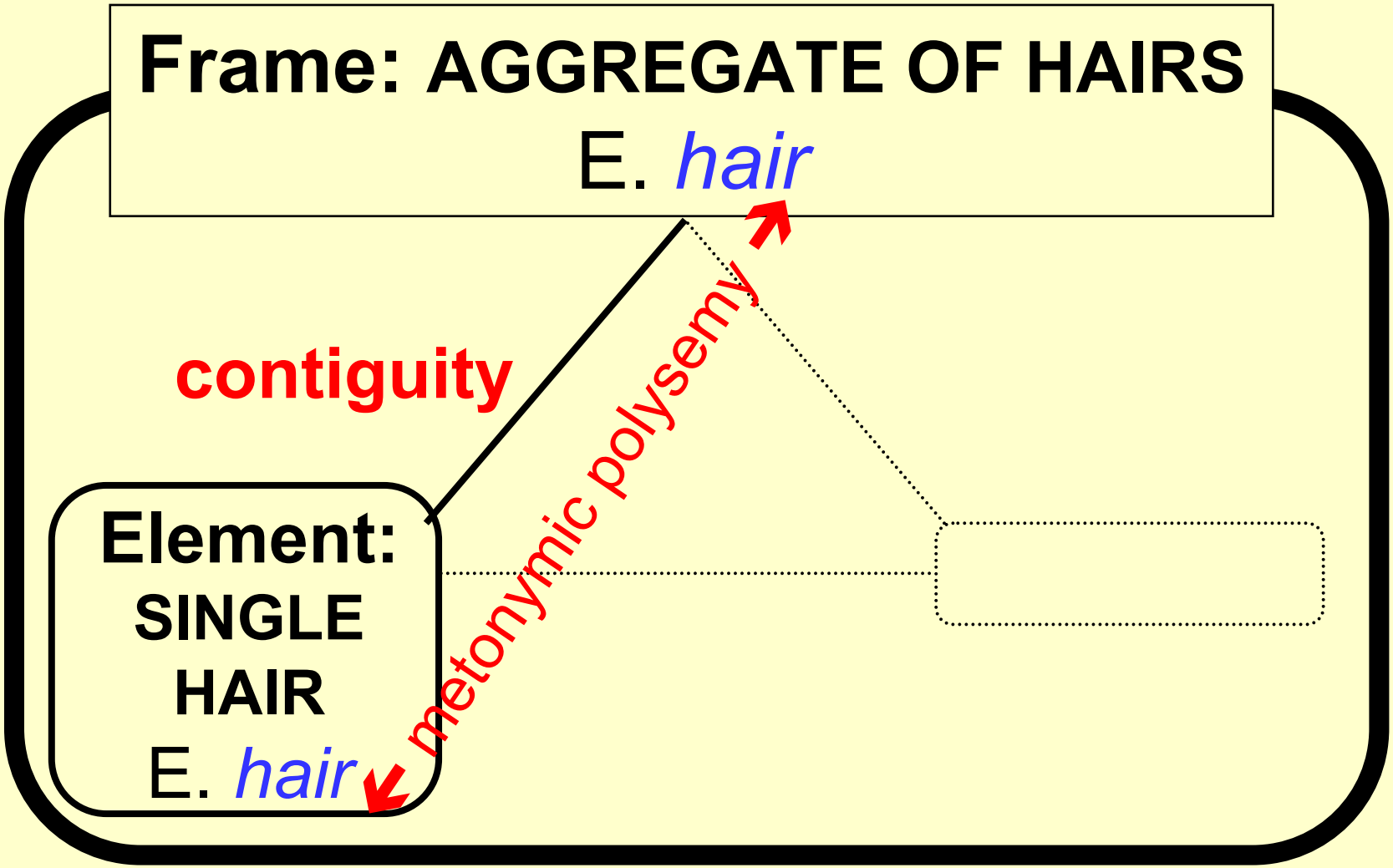


Fig. 33b

Task ❶ for students: HAIR

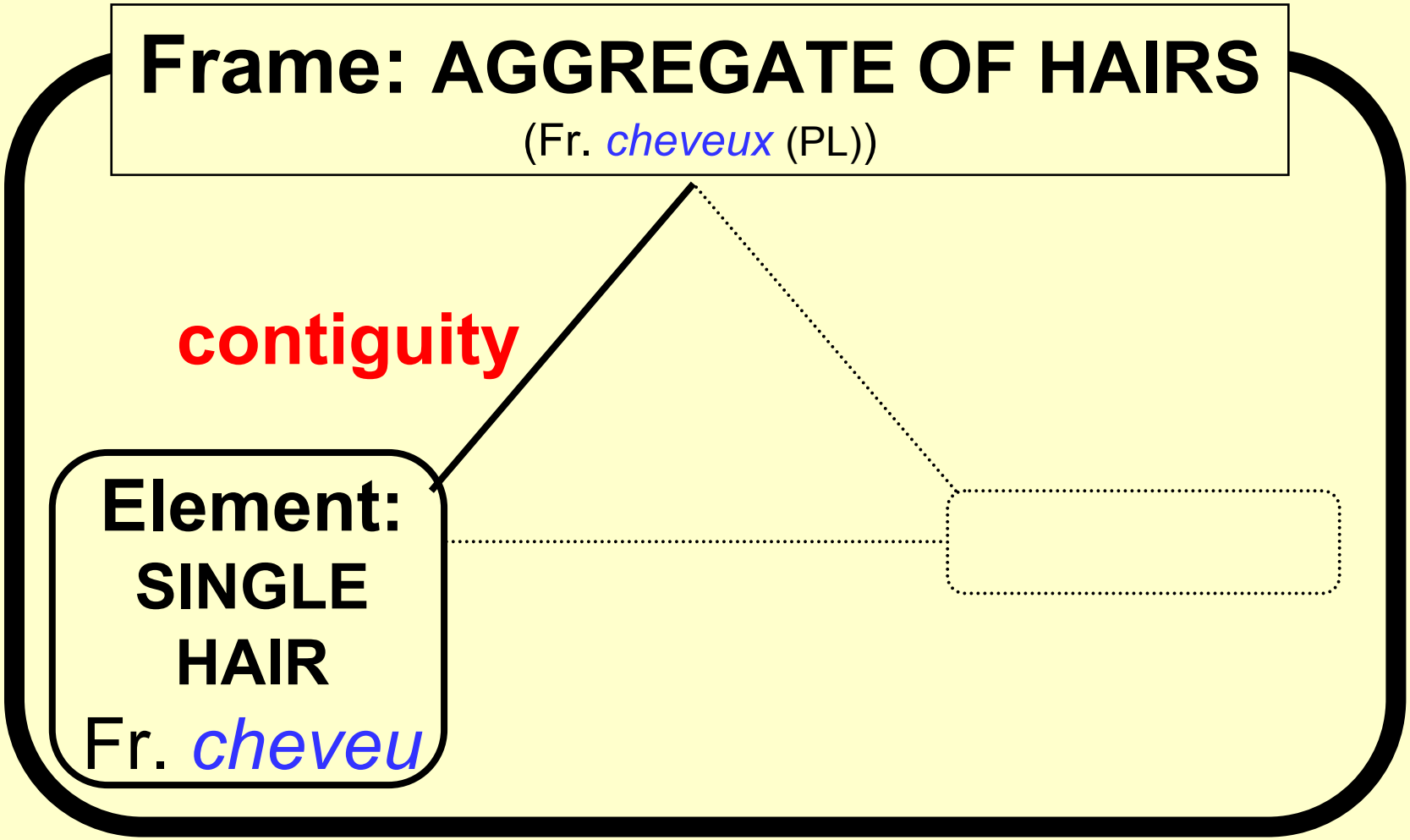


Fig. 33c

Task ❶ for students: HAIR

Questions with respect to the **engynomic** level:

1. To which engynomic type belong(s)
   – your mother tongue?
   – the language(s) of your speciality?
2. Why seems joint lexicalization of SINGLE HAIR and of AGGREGATE OF HAIRS so "natural"?

The SIBLING section of the KINSHIP field:

<table>
<tr><td>Malay</td><td colspan="8">[born of the same parents]
saudara</td></tr>
<tr><td rowspan="2">E.</td><td colspan="8">sibling</td></tr>
<tr><td colspan="4">[female]
sister</td><td colspan="4">[male]
brother</td></tr>
<tr><td>Fr.</td><td colspan="4">sœur</td><td colspan="4">frère</td></tr>
<tr><td rowspan="2">Hung.</td><td colspan="4">nővér</td><td colspan="4">fivér</td></tr>
<tr><td colspan="2">[elder]
néne</td><td colspan="2">[younger]
hug</td><td colspan="2">[younger]
öcs</td><td colspan="2">[elder]
bátya</td></tr>
<tr><td>Malay</td><td colspan="2">kakak</td><td colspan="4">adik</td><td colspan="2">abang</td></tr>
<tr><td>Jap.</td><td>[+own]
ane</td><td>[–own]
imōto</td><td>[+own]
onē-san</td><td>[–own]
imōto-san</td><td>[+own]
ōtōto</td><td>[–own]
ōtōto-san</td><td>[+own]
ani</td><td>[–own]
onīsan</td></tr>
</table>

Fig. 34

(cf. Ullmann 1966: 251f.; Greenberg 1980; Baldinger 1984; Koch 2001: 1145; Evans, in press: 508-511)

4.2. Case study II: LOCATIVE predicates

(4a) E.
The book is on the table.

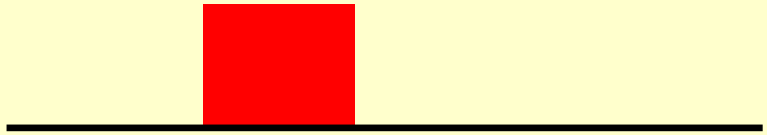
(4b) Germ.
Das Buch liegt auf dem Tisch.

Fig. 35a

(5a) E.
The cup is on the table.

(5b) Germ.
Die Tasse steht auf dem Tisch.

Fig. 35b



(6a) E.
The picture is on the wall.

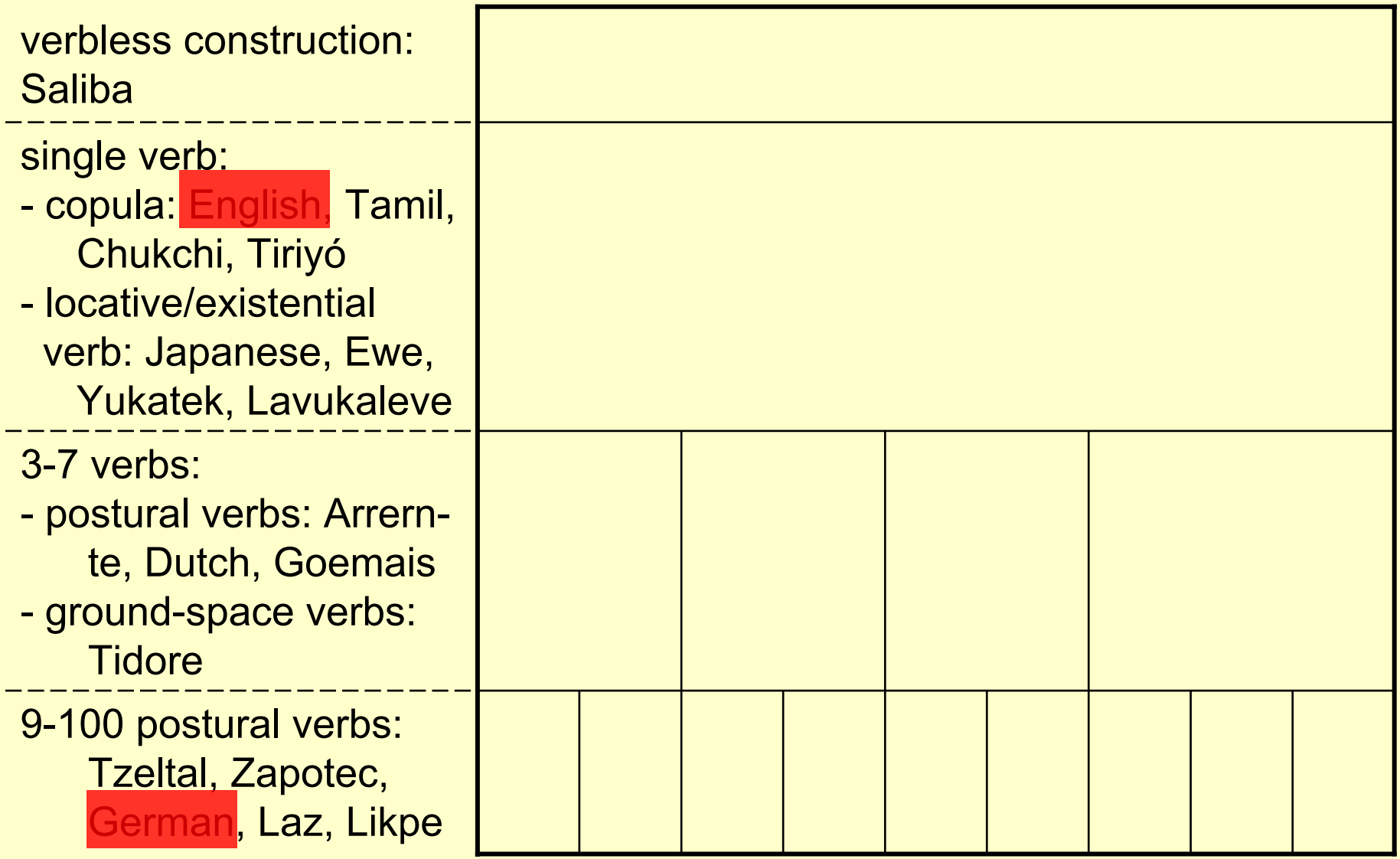
(6b) Germ.
Das Bild hängt an der Wand.

etc.

Fig. 35c

(cf. Ameka/Levinson 2007)

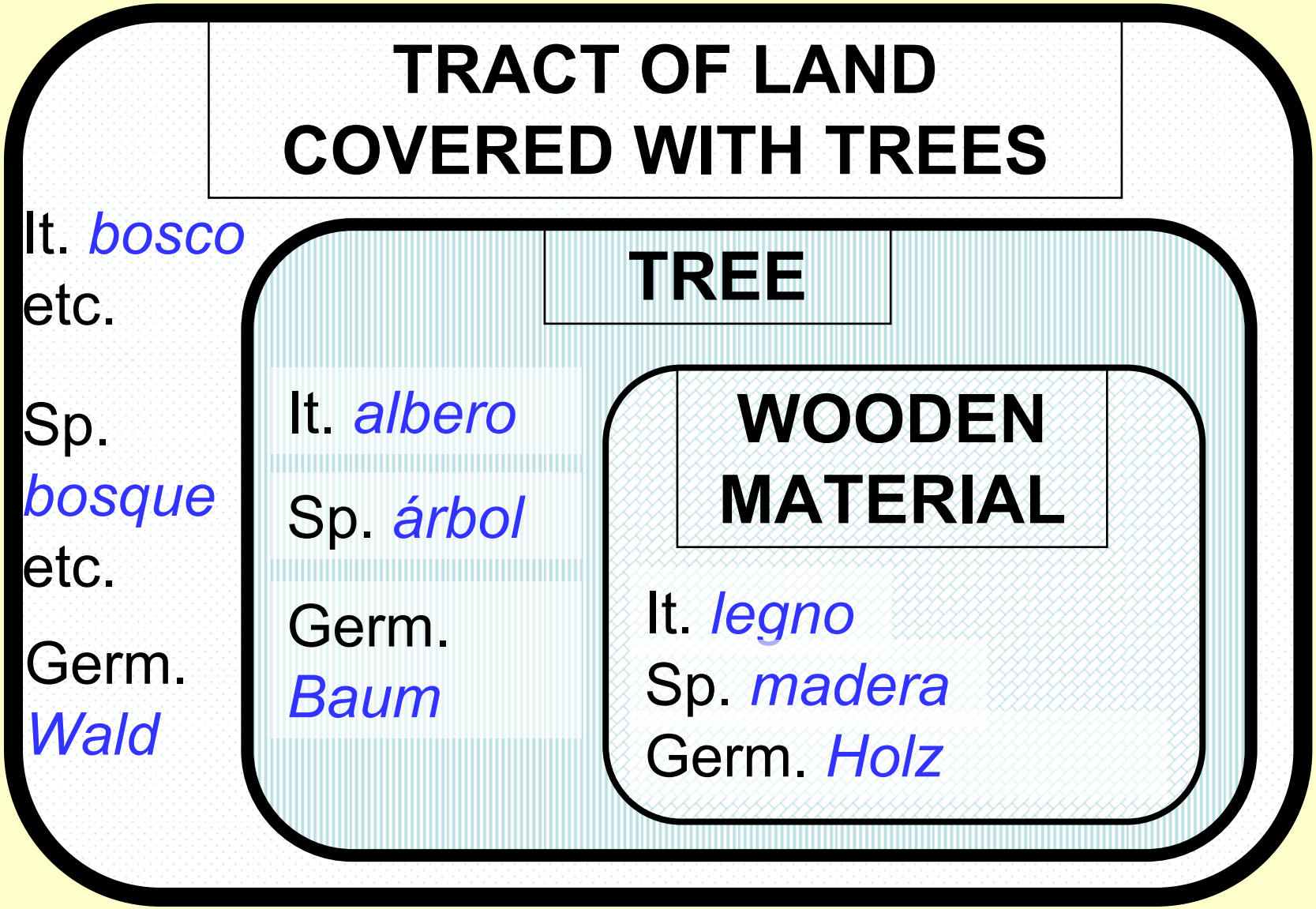
4.2. Case study II: LOCATIVE predicates



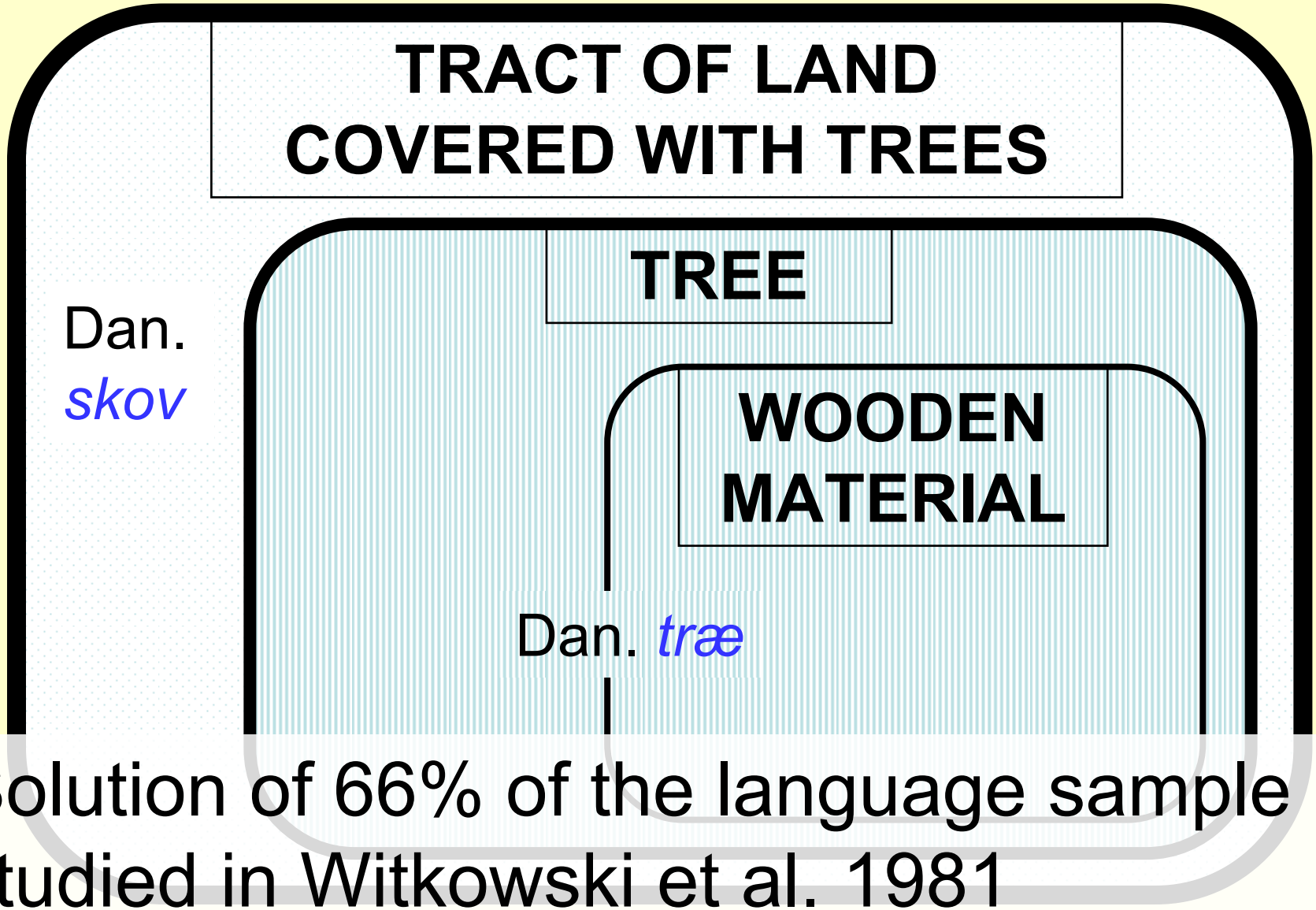
(cf. Ameka/Levinson 2007)

Fig. 36

(cf. Koch 1998; 2001: 1154; 2005: 15f.; 20f.)

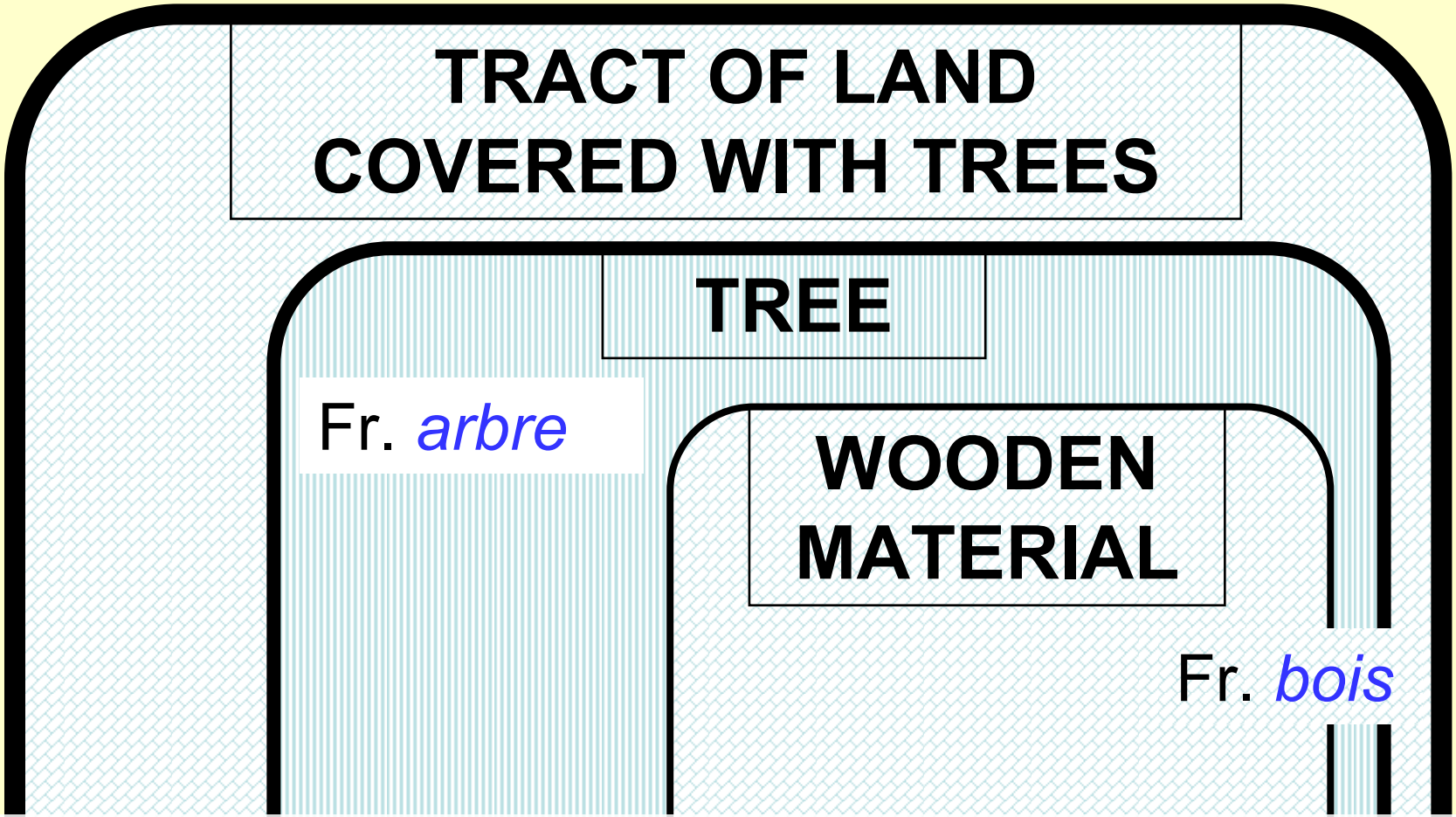


(cf. Koch 1998; 2001: 1154; 2005: 15f.; 20f.)



Solution of 66% of the language sample studied in Witkowski et al. 1981

(cf. Koch 1998; 2001: 1154; 2005: 15f.; 20f.)



Rather rare:
French, Breton, English (*wood(s)*) [Old Irish]

+Causative/–causative alternation

(7) Germ. *Das Parlament hat die Gesetze* *geändert.*

S = (PROTO-)AGENT

DO = (PROTO-)PATIENT

'Parliament has changed the laws.'

(8) Germ. *Die Gesetze haben sich geändert.*

S = (PROTO-)PATIENT

'The laws have changed.'

Lexical +causative/–causative alternation

(9) Fr. *Le parlement a changé les lois.*

S = (PROTO-)AGENT DO = (PROTO-)PATIENT

'Parliament has changed the laws.'

(10) Fr. *Les lois ont changé.*

S = (PROTO-)PATIENT

'The laws have changed.'

(cf. Koch 2005: 24-28)

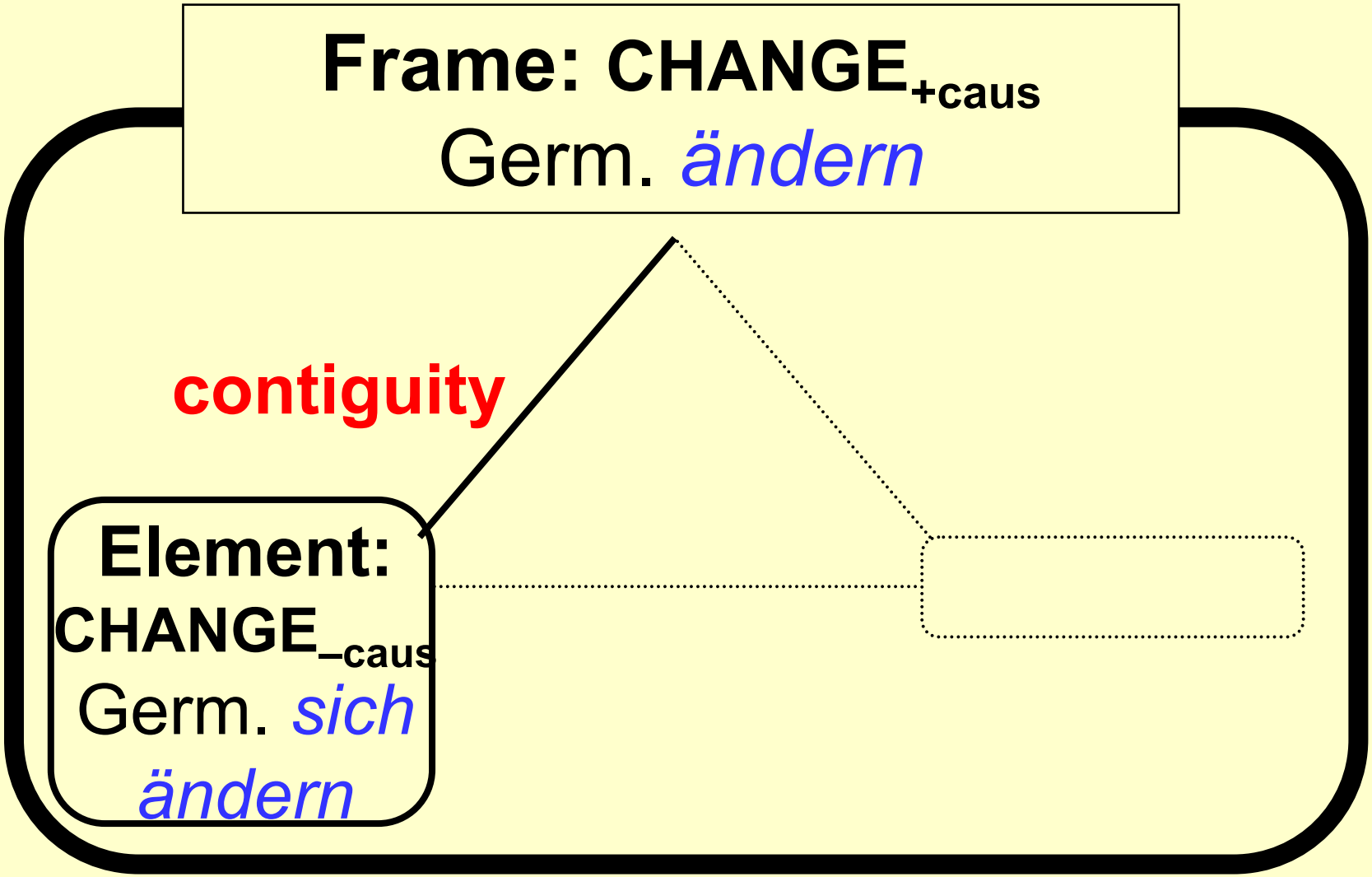


Fig. 28a

(cf. Koch 2005: 24-28)

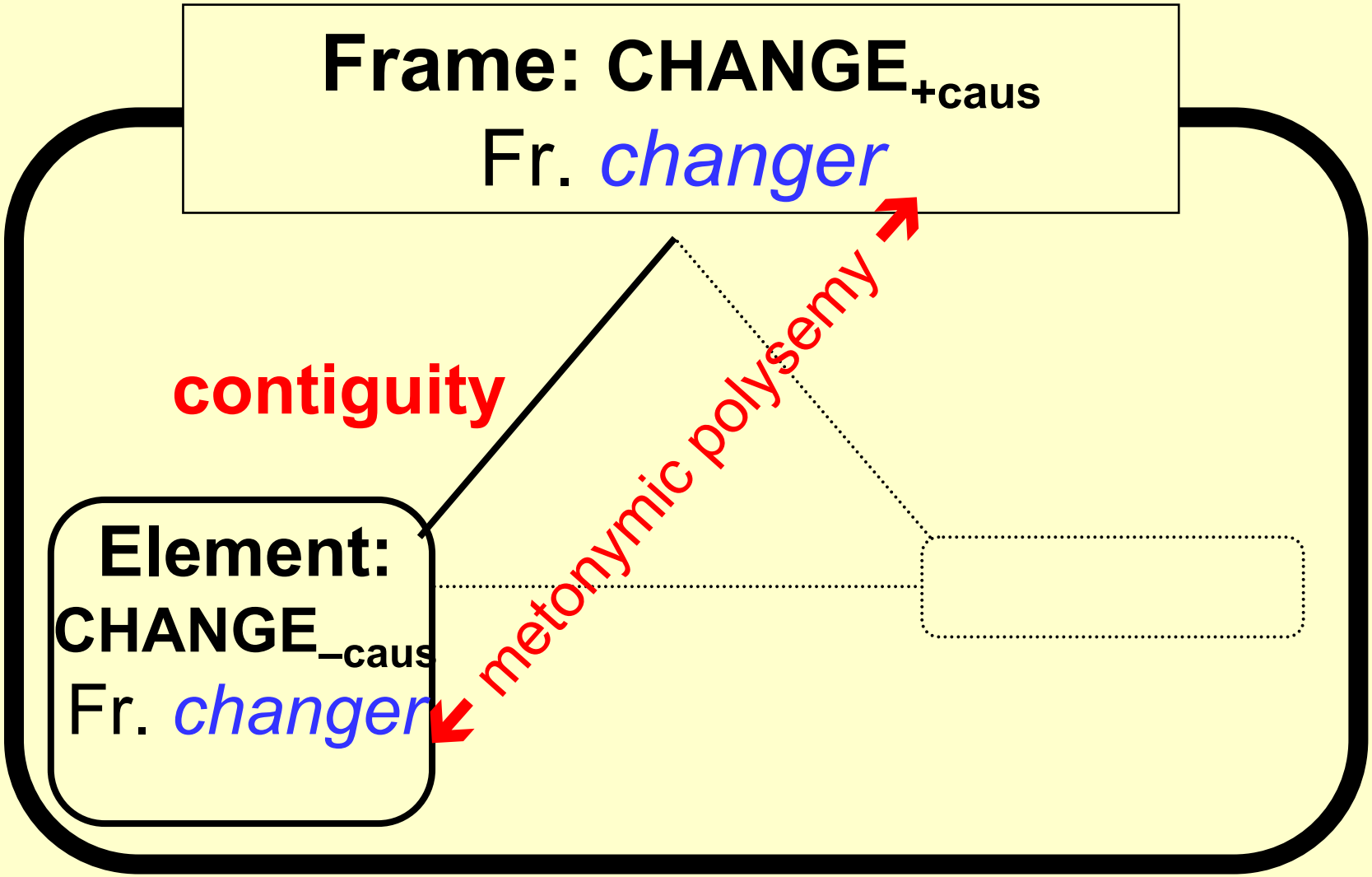


Fig. 28a

Lexical ±causative alternation

sample: 21 languages	**concepts tested: 31**
English	25
Modern Greek	16,5
German	9,5
French	8
Lezgian	5
Romanian	3
Udmurt	2,5
Hindi-Urdu	2
Arabic, Hebrew	1
Finnish, Japanese, Lithuanian	0,5
Armenian, Georgian, Indonesan, Mongolian, Russian, Swahili, Turkish, Hungarian	0

(numbers according to Haspelmath 1993)

Lexical ±causative alternation

sample: 80 languages	concepts tested: 18
Ossetic	9
German, Hausa, Mandarin, Thai	5,5–6
Efik, **Lezghi**	4,5–5
Greek, Nharo, Piro, Portuguese	4
Drehu, Siberian, Tibetan, Yupik	2,5–3
Fula, Garawa, Knwme, Malay, Ngbandi, Tolai, Tunica, Vietnamese	1,5–2
Araona, Arabic, Ewe, Ingush, Kolami, Martuthunira, Mixe, Neneta , Nunggubuyu, Papago, Seneca, Tiwi, Warao, Western Desert, Yagaria, Yimas	0,5–1
(42 languages)	0

(numbers according to Nichols et al. 2004)