

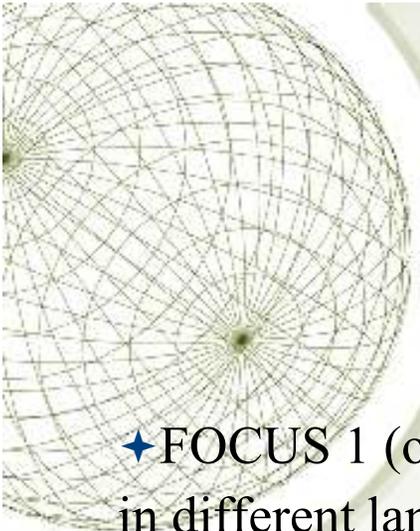
Lexical typology: the state of the art

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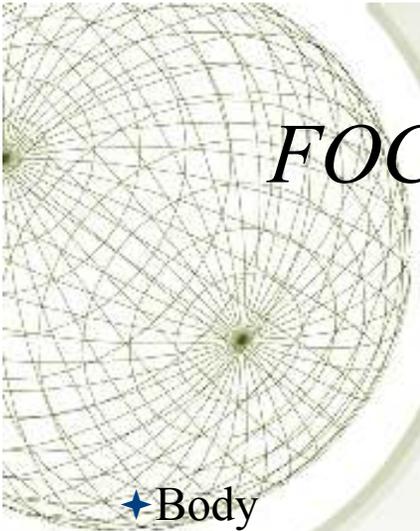
tamm@ling.su.se,

<http://www.ling.su.se/staff/tamm>



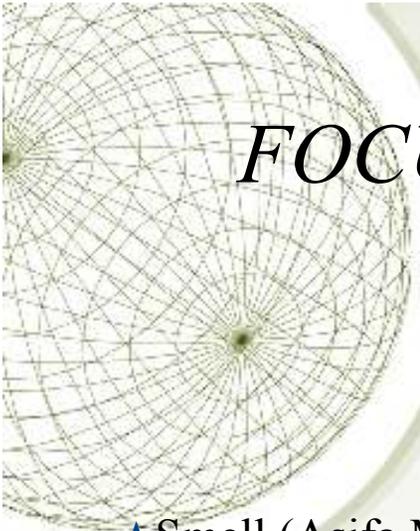
Lexical typology: major foci

- ★ FOCUS 1 (onomasiology): what meanings can(not) be encoded as single word in different languages, what distinctions are made in lexical systems for encoding a particular cognitive domain and what factors underlie them?
- ★ FOCUS 2 (semasiology): what different meanings can be expressed by one and the same lexeme or by lexemes synchronically and historically derived from each other (polysemy, semantic shifts etc.)?
- ★ FOCUS 3: how does the lexicon interact with the grammar?



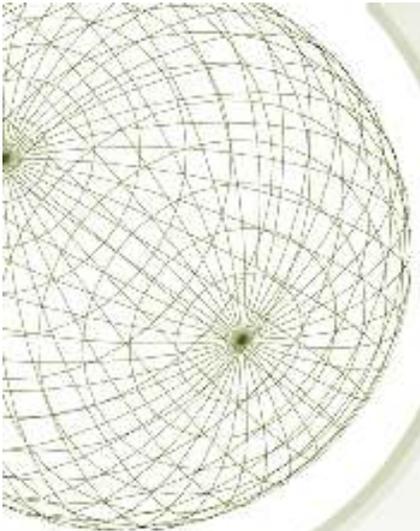
FOCUS 1, onomasiology: best researched lexical fields/ semantic domains

- ◆ Body
- ◆ Kinship
- ◆ Colour
- ◆ Perception
- ◆ Motion (both inspired by Talmy, but also deictic verbs - Ricca, multiple questions - Wälchli, aqua motion - Maisak & Rakhilina (Moscow))
- ◆ Dimension
- ◆ Posture (Ameka & Levinson 2007, Wälchli in progress)
- ◆ Cut / Break (Majid et al. 2007)
- ◆ Pain

A decorative wireframe sphere is positioned in the upper left corner of the slide. The sphere is composed of a grid of thin, light-colored lines that form a spherical shape, with a central point from which the lines radiate outwards. The background of the slide is a light, pale green color with faint, curved lines that create a sense of depth and movement.

FOCUS 1, onomasiology: ongoing research projects

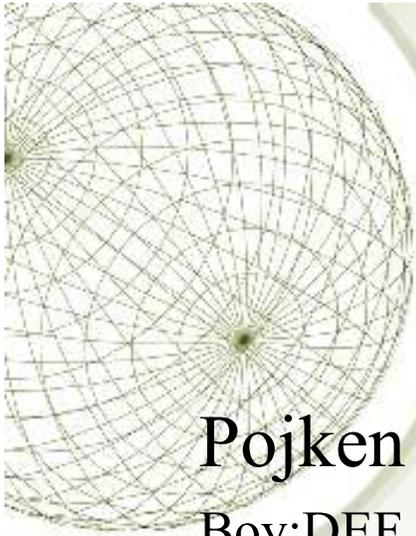
- ◆ Smell (Asifa Majid, MPI, Nijmegen)
- ◆ Sounds (Ekaterina Rakhilina, Moscow)
- ◆ Temperature (Maria Koptjevskaja-Tamm, Stockholm)



Motion verbs

Main-stream research

- ★ Much research following Talmy 1985, 1991, Slobin 2003 on how different components of a motion event are lexicalised in a verb and its satellite: path vs. manner => Path-verb languages (verb-framed languages), Manner-verb and Figure-verb languages (satellite-framed languages), equipollently-framed languages.



Motion event, components: Swedish

Pojken sprang in i grottan.

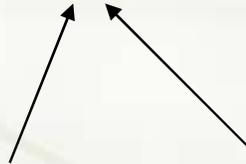
Boy:DEF ran into in cave:DEF

Pojken sprang ut ur grottan.

Boy:DEF ran out of cave:DEF

Verb

satellites



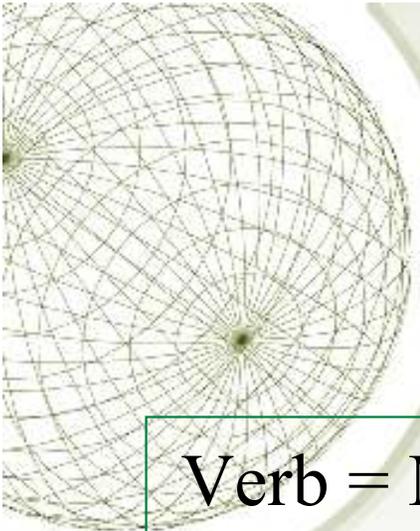
figure

motion

manner

path

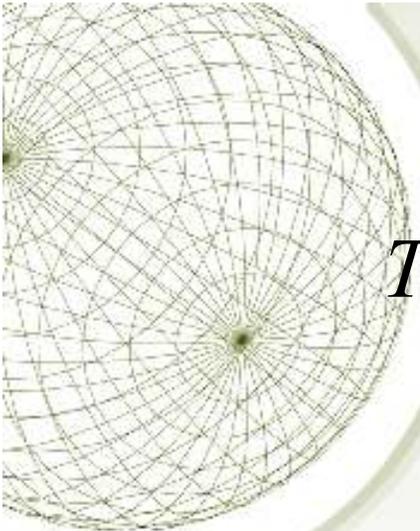
ground



The Swedish lexicalization pattern

Verb = Motion + Manner interflated,
Path = particles etc. (satellites)

Pojken simmade in i grottan.
(The boy swam into in the_cave)
Pennan rullade ner i hålet.
(The_pen rolled down in the_hole.)
Fågeln flög ner från trädet.
(The_bird flew down from the_tree.)



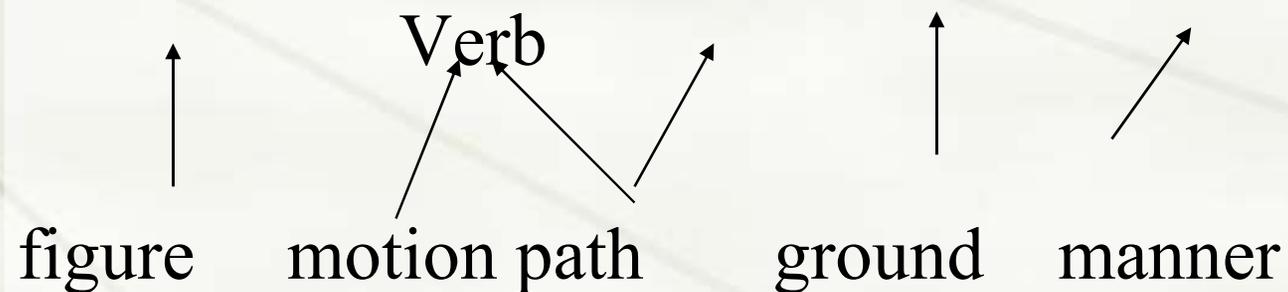
The motion event, components: Spanish

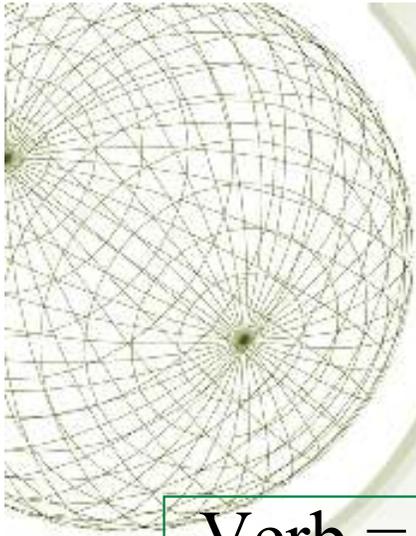
La botella entró a la cueva (flotando)

the bottle entered into the cave (floating)

La botella salió de la cueva (flotando)

the bottle went.out from the cave (floating)





The Spanish lexicalization pattern

Verb = Motion + Path interflated,

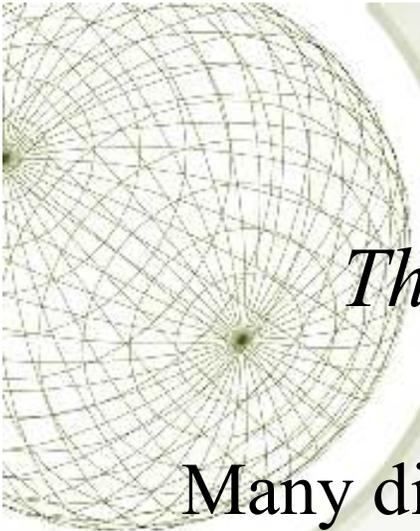
Manner = non-finite verb forms

La botella volvió a la orilla (flotando).

The bottle returned to the shore floating.

La botella cruzó el canal (flotando).

The bottle crossed the channel floating.



The motion event, components: Atsugewi

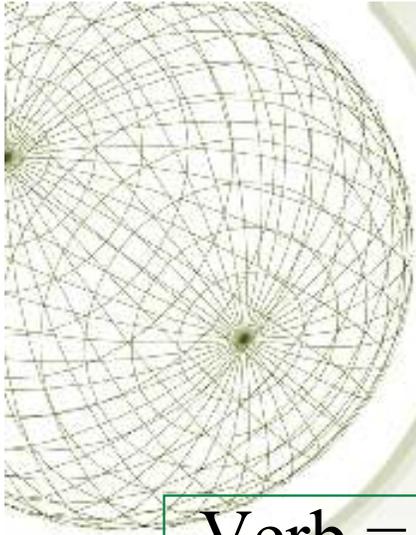
Many different roots for describing motion / location of various objects:

-lup- 'for a small shiny spherical object'

-caq- 'for a slimy lumpish object'

-swal- 'for a limp linear object suspended by one end'

-qput- 'for loose dry dirt'

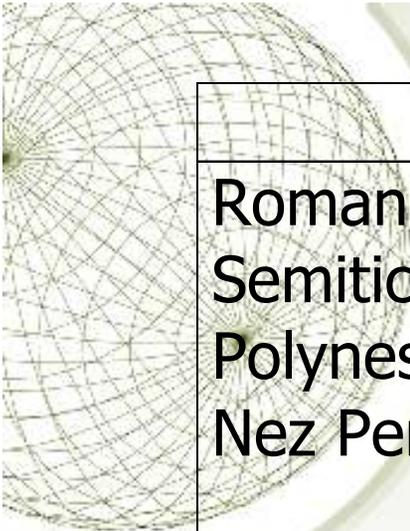


The Atsugewi lexicalization pattern

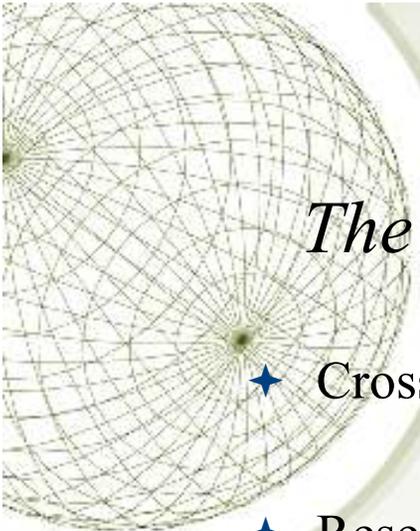
Verb = Motion + Figure interflated,

Manner = Satellites

Typical for a number of North American Indian
languages

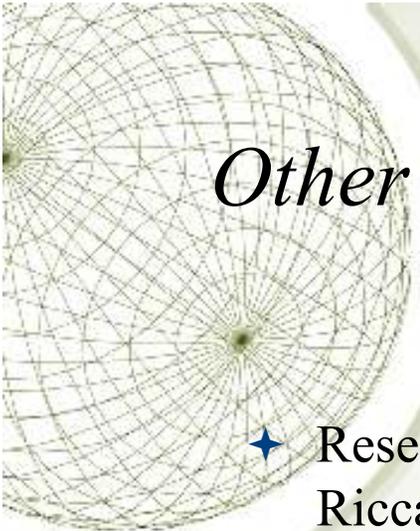


	Talmy 1985	Talmy 2000	Slobin
Romance Semitic Polynesian Nez Perce	Motion + Path	Verb-framed	
Indo- European (apart from Romance)	Motion + Manner	Satellite-framed	
Atsugewi (+ Nordhokan) Atabaskian	Motion + Figure		
Tai			Equipollent



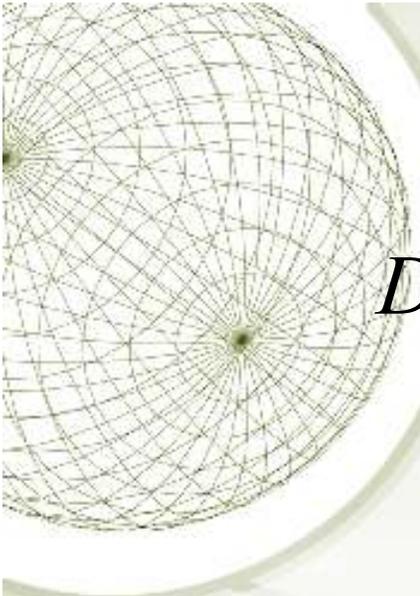
The impact of the Talmy-Slobin paradigm

- ★ Cross-linguistic research on child language acquisition
- ★ Research on non-verbal behaviour (gestures)
- ★ Slobin's "thinking for speaking" hypothesis (a milder variant of the Sapir-Whorf hypothesis)



Other cross-linguistic research on motion verbs

- ✦ Research on deictic verbs ('come' vs. 'go') in European languages: Ricca 1993 (Pavia – Torino)
- ✦ Research on subdomains within motion-verb domain: "Aqua-motion", "Jumping", etc. – Moscow typologists / semanticists Maisak & Rakhilina.
- ✦ Bernhard Wälchli's (Zürich) research on multiple aspects of motions verbs across languages; Lorenzo Spreafico (Pavia – Bolzano)



Deictic verbs: 'go' vs. 'come' (Ricca 1993)

Centripedal

A: -Look! It's John.

B.: -Are you sure?

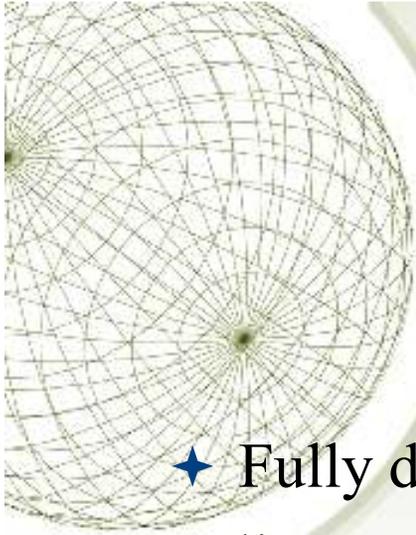
A.: -Definitely. **He MOVE towards us** [at this very moment].

Centrifugal

A.: -Look! It's John.

B.: -Are you sure?

A.: -Definitely. **He MOVE towards that house over there** [at this very moment].



Deictic verbs in Europe

- ★ Fully deictic languages:

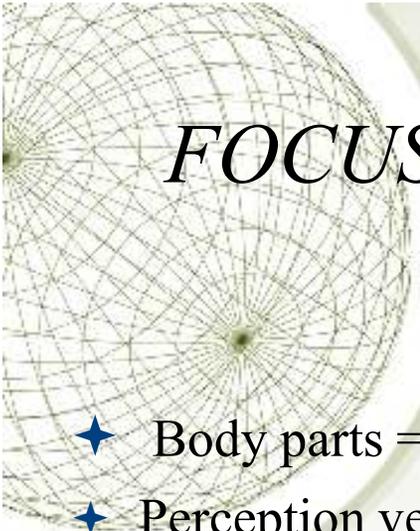
Italian: *sta venendo – sta andando*

- ★ Predominantly deictic languages:

English: *is on his way*

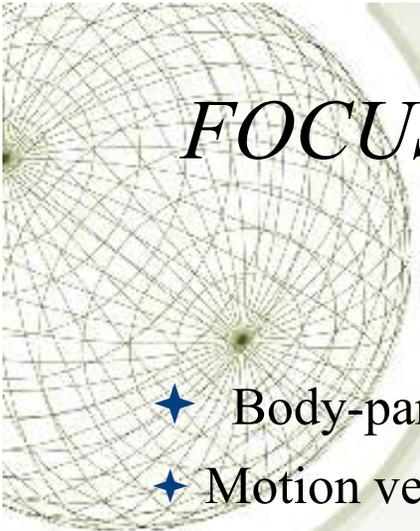
- ★ Non-deictic languages:

Russian: *idët – idët*



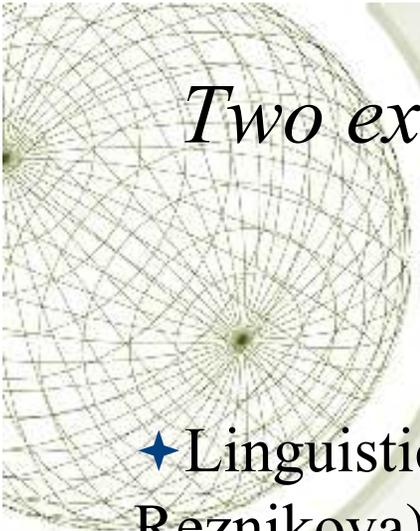
FOCUS 2, semasiology : best researched areas relevant for semantic shifts

- ◆ Body parts => multiple functions
- ◆ Perception verbs => cognition etc.
- ◆ Grammaticalisation of motion verbs (primarily as TMA markers) – e.g., Maisak 2002
- ◆ Posture verbs => copulas
- ◆ ‘Eat’, ‘drink’, ‘meat’, ‘breath’ etc. => X (Vanhove ed. 2007)
- ◆ Acquire/get => multiple functions (Enfield 2003; Viberg; Auwera, Kehayov, Vittrenat)
- ◆ Aqua-motion => aeromotion, terramotion; losing one’s contours, functioning smoothly, etc.
- ◆ X => pain expressions



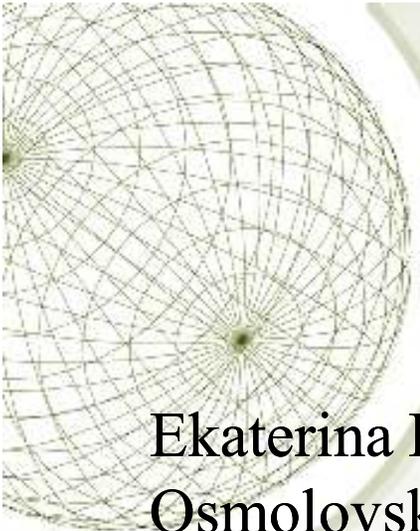
FOCUS 3: Interaction between vocabulary and grammar: a few examples

- ★ Body-parts: multiple connections
- ★ Motion verbs: multiple connections
- ★ Kin terms: ‘proper name’ properties, peculiarities in possessive constructions (Dahl & Koptjevskaja-Tamm 2001), possible lexicalisation as verbs (Evans), etc.
- ★ ‘Give’ and the associated syntactic patterns (Newman, Kittilä, Haspelmath, Frajzyngier, Enfield)
- ★ ‘Die’ and the problem of aktionsart (Botha)
- ★ ‘Eat’ and ‘drink’ and the problem of transitivity (Næss)
- ★ Count-mass distinctions within the nominal domain, singularia and pluralia tantum (Wierzbicka; Koptjevskaja-Tamm & Wälchli)



Two examples of current projects with multiple applications

- ◆ Linguistics of pain (Bonch-Osmolovskaja, Rakhilina, Reznikova)
- ◆ The Catalogue of Semantic Shifts (Zalizniak, Bulakh, Ganenkov, Grountov, Maisak, Rousseau)



Linguistics of pain

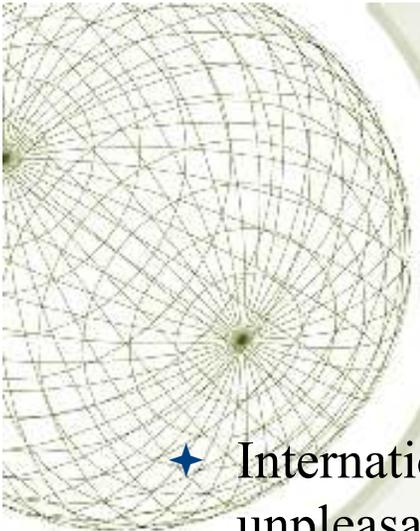
Ekaterina Rakhilina, Tatiana Reznikova, Anastasia Bonch-Osmolovskaya

(Moscow)

Bonch-Osmolovskaja et al. 2009;

Reznikova et al. Submitted

The project combines all the three perspectives –
onomasiology, semaseology, lexicon-grammar interaction



Pain

- ✦ International Association for the Study of Pain (IASP): pain is “an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage”.
- ✦ Pain is universal, highly important for humans, but also subjective and private
- ✦ The (almosty) only way to share one’s pain experience with others is by verbalization
- ✦ A precise characterization of one’s pain is a crucial step towards healing



Appendix IV (i)

SHORT FORM MCGILL PAIN QUESTIONNAIRE and PAIN DIAGRAM

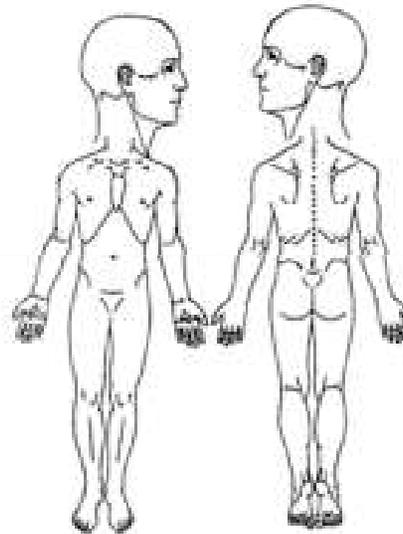
(Reproduced with permission of author © Dr. Ron Melzack, for publication and distribution)

Date: _____

Name: _____

Check the column to indicate the level of your pain for each word, or leave blank if it does not apply to you.

	Mild	Moderate	Severe
1 Throbbing	_____	_____	_____
2 Shooting	_____	_____	_____
3 Stabbing	_____	_____	_____
4 Sharp	_____	_____	_____
5 Cramping	_____	_____	_____
6 Gnawing	_____	_____	_____
7 Hot-burning	_____	_____	_____
8 Aching	_____	_____	_____
9 Heavy	_____	_____	_____
10 Tender	_____	_____	_____
11 Splitting	_____	_____	_____
12 Tiring-Exhausting	_____	_____	_____
13 Sickening	_____	_____	_____
14 Fearful	_____	_____	_____
15 Cruel-Punishing	_____	_____	_____



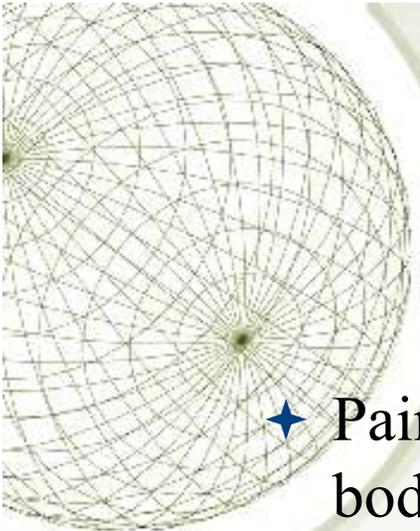
Mark or comment on the above figure where you have your pain or problems.

Indicate on this line how bad your pain is—at the left end of line means no pain at all, at right end means worst pain possible.

No Pain	_____	Worst Possible Pain
---------	-------	---------------------

S	/33	A	/12	VAS	/10
---	-----	---	-----	-----	-----

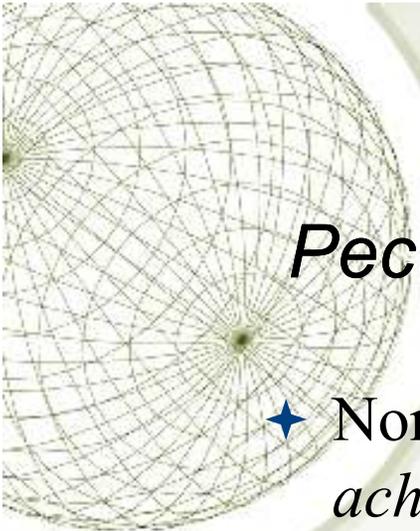
McGill's pain questionnaire



Pain as defined in the project

- ✦ Pain \approx all kinds of unpleasant sensations related to human body as a matter of our interest. Two subdomains:
- ✦ painful or unpleasant sensations *per se* (cf. sensation of burning in the eyes caused by soap)
- ✦ “loss of functionality” effects (like sensation of mouth frozen after anaesthesia, cf. also *my ears are blocked, my leg fell asleep*).

The opposition between the two is clearly seen in lexical sources for the corresponding predicates.



Peculiarities of the linguistic pain domain

- ✦ Normally very few primary expressions, e.g., *pain, hurt, ache...*
- ✦ Most expressions come from other domain (e.g., *my eyes are burning, my throat is scratching...*)



Data for the moment: > 20 languages

✦ genetically close:

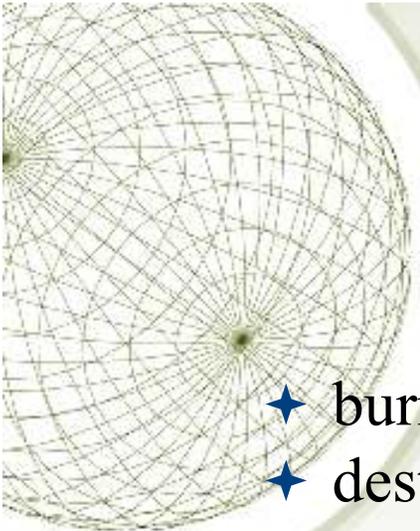
- *Slavic* – Russian, Ukrainian, Bulgarian, Serbian, Polish, Czech
- *Germanic* – English, German
- *Romance* – French, Spanish, Italian
- *Finno-Ugric* – Hungarian, Estonian, Erzya (Mordvin)

✦ areally close:

- *Caucasian* – Georgian, Balkar (Turkic), Agul (Daghestanian)

✦ other:

- *Lithuanian*
- *Hindi*
- *Arabian*
- *Japanese*
- *Chinese*
- *Khmer*



Painful sensations: source domains for secondary expressions

- ◆ burning
- ◆ destruction
 - ◆ agentive
 - ◆ instrumental
 - ◆ quasi-instrumental (using teeth, claws, and alike)
 - ◆ non-instrumental:
 - ◆ structure deformation
 - ◆ soft deformation
 - ◆ non-agentive
- ◆ sound
- ◆ motion

Source domains for pain expressions

★ Burning

Arabic: *fa qad 'aħassa bi=Iabhat-i=hi*
and PST feel(PRF) in=forehead-GEN-3SG.M.POSS

taltahib-u

burn(IMPF)-IND

‘He felt that his forehead was burning’ (in case of fever)

★ Destruction

★ agentive

★ instrumental (needle, knife..., e.g. pick, cut, stab)

Spanish: *Me pica-ba-n los ojo-s*

I.DAT prick-DUR.PST-3PL DEF.M.PL eye-PL

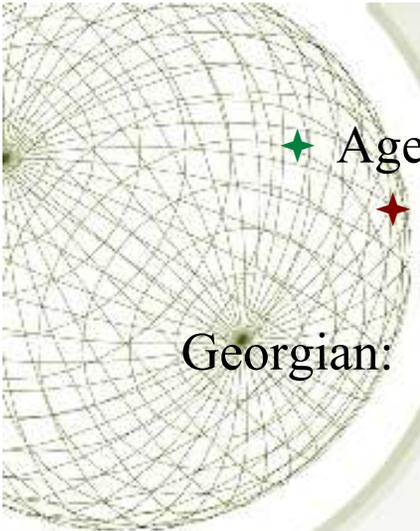
(e.g. in case of soap in one’s eyes)

★ quasi-instrumental (using teeth, claws, and alike)

German: *Es kratz-t im Hals*

it scratch-3SG.PRS in.DEF.DAT.M throat

(e.g. as a reaction to smoke)



✦ Agentive destruction (cont.)

✦ non-instrumental (bare hands):

✦ structure deformation

Georgian:

saxsr-eb-ṣ̌i

m-tex-av-s

joint-PL-LOC

1SG.OBJ-**break**-PSF-3SG.SBJ.PRS

(rheumatic pain)

✦ soft deformation

Hungarian:

Húz

a

hát-am

pull.3SG.PRS

DEF

back-1SG.POSS

(back pain, e.g., during pregnancy)

✦ Non-agentive

Bulgarian:

puk-a mi

se

glava-ta

burst-3SG.PRS

I.DAT

REFL

head-DEF

(headache caused e.g. by intensive mental activity)

★ Sound

French: *j'ai des bourdonnement-s dans les oreille-s*

I_have INDF.PL **humming-PL** in DEF.PL ear-PL

Serbian: *mi svir-a u glav-i*

I.DAT play.mus.instr.IPFV-3SG.PRS in head-LOC

Crim. Tatar:

bolduriv-dan ayaq-lar-ım uvulda-y

weariness-ABL leg-PL-1SG.POSS(NOM) hoot-3SG.PRS

(sensation of tired legs)

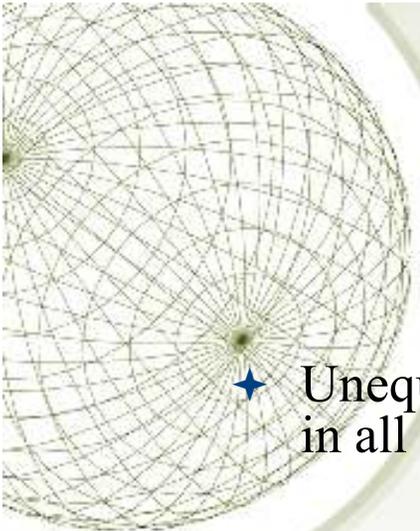
Hindi: *dāⁿt pinpinā rahā hai*

tooth whimper AUX(PRS.PROG)

(toothache of low intensity)

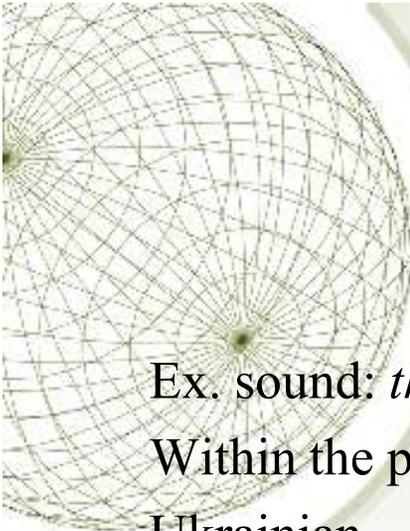
★ Motion (often circular movement)

My stomach is churning



Preliminary generalizations

- ★ Unequal cross-linguistic popularity of source domains: burning occurs in all the languages, whereas sounds are much less frequent
- ★ Connections between source domains and the type of pain experience: burning => unpleasant skin and mucosa sensations, fever, inflammation; instrumental destruction => internal pain; instrumental destruction => more intensive pain than soft deformation
- ★ Connections between type of pain and body-parts
- ★ Frequent morpho-syntactic reorganization of expressions to be used as pain expressions



Morpho-syntactic reorganization

Ex. sound: *the boy is whistling, the owl is hooting...*[Agent + V intr]

Within the pain domain: Experiencer, Reason, Body-part

Ukrainian

Tilo jiji gu-l-o vid utom-y

body 3SG.F.POSS **hoot**.IPFV-PST-N from tiredness-OBL

(unpleasant sensation after physical exertion)

German

Es saus -t mir in den Ohr-en

it **whistle**-3SG.PRS I.DAT in DEF.DAT.PL ear-PL

(unpleasant sensation in the ears, e.g., when feeling dizzy)

Syntax of the derived pain constructions

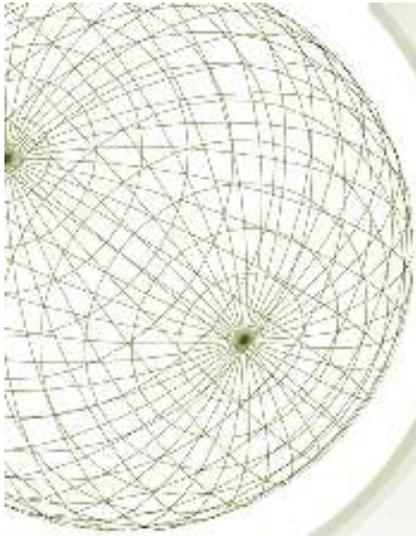
source verb: intransitive
 derived verb intransitive

V_{intr}-physical ex. <make noise>			X_S		
V_{intr}-pain	1	REASON ∅/OBL	BP_S	EXP_{DAT/POSS}	
	2	REASON ∅/OBL		EXP_{DAT/POSS}	BP_{LOC}

Syntax of the derived pain constructions

source verb: transitive
 derived verb: transitive

V_{tr} -physical ex.. <cut>			X_A	Y_o	
	1	REASON \emptyset /OBL	BP_A	EXP_o	
V_{tr} -pain	2		$REASON_A$	BP_o	$EXP_{DAT/POSS}$
	3	REASON \emptyset /OBL		BP_o	$EXP_{DAT/POSS}$
	4	REASON \emptyset /OBL		EXP_o	$BP_{DAT/POSS}$

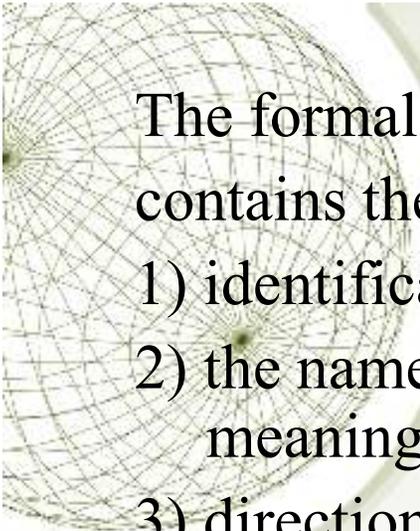


The Catalogue of Semantic Shifts

*Anna Zalizniak, Maria Bulakh,
Dmitrij Ganenkov, Ilya Grountov,
Timur Maisak, Maxim Rousseau*

Types of realizations of a semantic shift:

1. Synchronic **polysemy**, ex.: Engl. *to catch* ‘to catch’, ‘to understand’.
2. Diachronic **semantic evolution** (within one and the same language or an evolution from an ancestor language to a descendant language), ex.: Lat. *demoror* ‘stay too long, linger’ and French *demeurer* ‘live, inhabit <in some place>’.
3. **Cognates**, ex.: Russ. *meškat* ‘to be slow <in doing something>’ and Polish *mieszkać* ‘live, inhabit <in some place>’; Germ. *Zahl* ‘number’ and Engl. *tale* ‘story’.
4. Morphological **derivation**, ex.: Ital. *contare* ‘to count’, *raccontare* ‘to narrate’ (prefixation); Russ. *skazat* ‘to say’, *ukazat* ‘to indicate’ (prefixation); Germ. *Zug* ‘train’, from *ziehen* ‘to draw’ (syntactic derivation).
5. **Borrowing**, ex.: Kurd. *čavt* ‘wrong’, from Persian *čaft* ‘curved’; Romanian *a munci* ‘to work’ from Old Church Slavonic *mōčiti* ‘to torture’; OE *jaw* ‘jaw’ from French *joue* ‘cheek’.
6. **Grammaticalization** (the target meaning B is a grammatical one), ex.: Port. *chegar* ‘to come’, ‘to begin <to to do smth>’.



The formal description of the semantic shift contains the following fields:

- 1) identification number;
- 2) the name of semantic shift: SOURCE-meaning (A), TARGET-meaning (B);
- 3) direction of the semantic shift: ®, «, –;
- 4) type of meanings A and B: verb, noun, adjective, adverb;
- 5) a taxonomic classifier for meanings A and B;
- 6) comments to the semantic shift;
- 7) contributor's name;
- 8) the status of the shift (ready, in work, new).
- 9) related shifts.

ID	Source	Direction	Target	Status	Author
0644.00	to burn (intr.) Physical processes	→	angry Non-physical	Accepted	MB

Realizations

	Source	Target	
Language	Amharic	Amharic	Realization Type Polysemy
Lexeme	tākattälä	tākattälä	Direction → <input checked="" type="checkbox"/> Accepted
Meaning	to burn	to be angry	Submitted by MB
Examples	betu ahunem ?əyyätākattälä nāw	bānəddet tākattälä	Comments on the realization K 829
Translation	'the house is still burning' (Leslau 1973: 150)	'to burn with rage' (K 829)	<input type="button" value="ADD"/> <input type="button" value="DELETE"/>

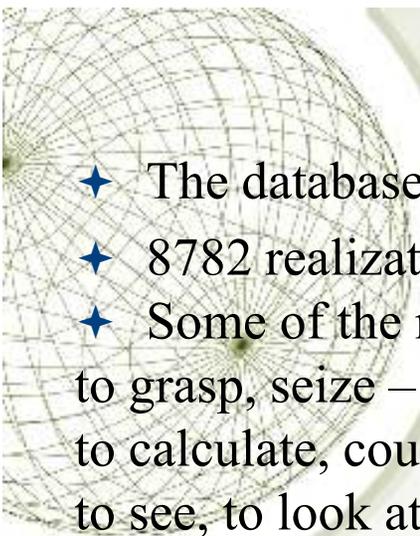
Запись: 6 из 7

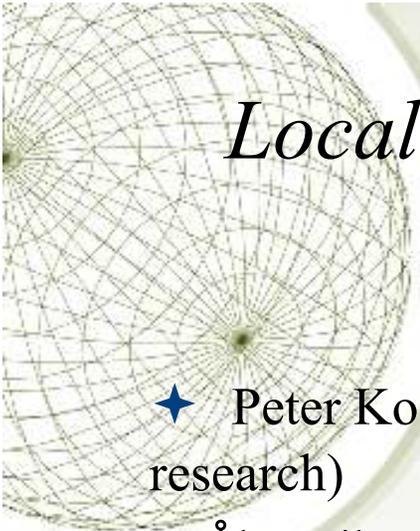
Comments on the shift | **Technical comments**

This example well illustrates Lakoff's metaphor "Anger is fire" (see. Lakoff Women, Fire, and Dangerous Things, 1990, 380-415)

Related shifts

	ID	Source	Target
▶	0733	hot	passionate
	2026.00	hot	angry
*			

- 
- ★ The database contains 3032 semantic shifts
 - ★ 8782 realizations from 319 languages
 - ★ Some of the most frequent shifts: to listen – to obey
to grasp, seize – to understand
to calculate, count – to have opinion
to see, to look at – to care for, to look after
boy – servant
back (body part) – mountain ridge, edge
to calculate, count – to read
woman - wife; man – husband
<vessel> - <head>
<place name> - <fish>
heavy (of weight) - pregnant
to see, to look at – to wait
cattle – property, possessions



Local lexical typology vs. lexical-typological profiles of languages

- ◆ Peter Koch et al.: motivational profiles (also Matthias Urban's on-going research)

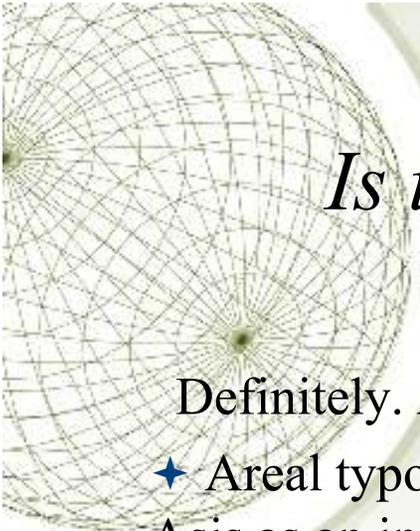
- ◆ Åke Viberg: “nuclear” verbs

- ◆ Andrej Kibrik: basic vs. non-derived verbs

...

- ◆ The issue of basic vocabulary: Martin Haspelmath & Uri Tadmor, the Loan Word Typology project

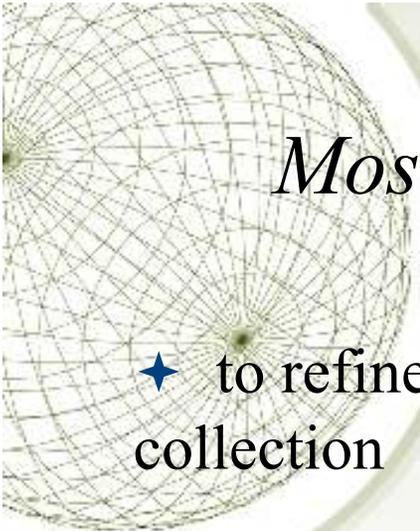
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Is it worth to develop lexical typology?

Definitely. A few interesting results and applications:

- ★ Areal typology: polysemy patterns of ‘acquire’ across mainland Southeast Asia as an indicator of prolonged areal contacts (Enfield 2003);
- ★ Universal vs. culture-specific factors in linguistic phenomena: ‘seeing’ => ‘cognition’ as universal (Sweetser 1990= vs. ‘hearing’ => ‘cognition’ in Australian Aboriginal languages (Evans & Wilkings 2000).
- ★ Cognitive linguistics: claims about universality of metaphors needs to be checked cross-linguistically



Most urgent problems in lexical typology

- ★ to refine the existent and develop new methods of data collection
- ★ to improve standards in cross-linguistic identification of studied phenomena and in their (semantic) analysis, and
- ★ to achieve a reasonable consensus on the meta-language used for semantic explications and on the ways of representing meanings