

Is aspect in Hungarian grammatical?

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In a nutshell

- Slavic is known for having aspect as grammatical category and, at the same time, involving derivation (e.g. Dahl 1985; ?; Lehmann 1999).
- Hungarian also features verbal prefixation; at least some prefixes seem to be perfectivizers (e.g. Soltész 1959). As for Hungarian, it is not clear to what extent aspect is grammaticalized.
- German has verbal prefixes / particles as well, but they are not considered to be involved in aspectual marking. (e.g. Lüdeling 2001; Stiebels 1996)
- So far, there seems to be no empirical comparative study that investigates the similarities and differences between Slavic aspect marking and verb prefixes in Hungarian and German.
- Russian and Czech: "aspect" base line (potential inner-slavic variation (Dickey 2000; Wiemer 2008))
- German: "non-aspect" base line
- Hungarian: how much are aspectual functions and the use of the verbal prefix correlated?

In a nutshell

What new insights can we gain from a parallel corpus study?

- Semantics and pragmatics being controlled for, aspectual marking is directly comparable between the languages.
- More can be said about which formal properties are correlated with the functions of aspect across the four languages.ü
- The similarity between form-function mapping of aspect can be measured.
- Separating aspect from actionality (lexical properties), we see that in all languages, aspect is highly sensitive to lexical semantics of the verb, and that differences and similarities between languages depend on it as well.

Aspect in Slavic

Aspect and its core functions

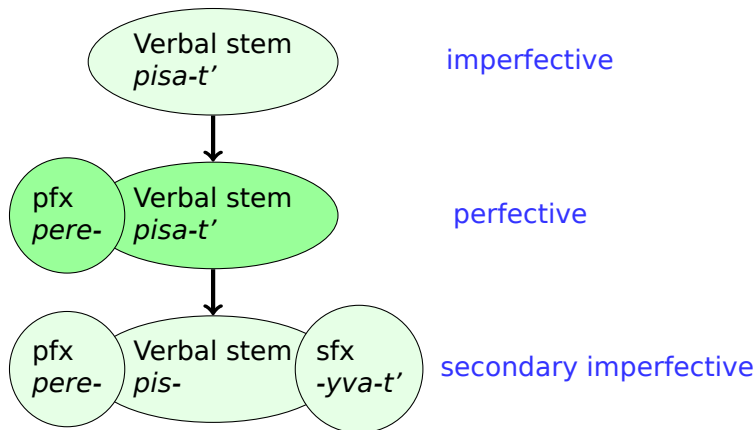
Aspect

- There is a general consensus that ‘aspectuality’ is a matter of ‘boundaries’”, meaning that we deal with boundaries of situations (Sasse 2001).
- It has to be a grammaticalized function, i.e. the phenomenon in question must represent a grammatical category (Dahl 1985: 23; Lehmann 1999: 218).

The core functions of perfective and imperfective aspect

	perfective	imperfective
Terminativity	bound	unbound
Taxis	sequence foregrounded	parallelism backgrounded
Actional frequency	single situations	repeated situations

Forms of perfectives and imperfectives



A note on the interaction with tense:

- Present-tense perfectives are reinterpreted as future tense
- Imperfectives form an analytic future

Aspect is not actionality

Aspect Externally set boundaries of a situation, independent of the inherent semantics of the verb.
(terminativity)

Actionality Inherent boundaries of a situation, depending on the semantics of the verb (Tatevosov 2002).
(telicity)

Telicity The potential limit of a given situation (Arkadiev 2014).

Combination of telicity and aspect

	telic	atelic
perfective	<i>po-stroit'</i> 'build (up)'	<i>po-rabotat'</i> 'work for some time'
imperfective	<i>na-xodit'</i> 'find'	<i>igrat'</i> 'play'

However: Aspect is actionality-sensitive

There are different proposals to integrate actional properties into the selection of aspectual values for Slavic (Breu 2000*b,a*; Lehmann 2009; Tatevosov 2002). The present study roughly follows Breu (1994, 2000*a*).

Interaction of lexical semantics and aspect

- **Simple classes**

- statives, **relative-statives**
- **activities**
- **total**-terminatives

- **Complex classes**

- **gradual**-terminatives (activity + total-terminative)
- inceptive-statives (total-terminative + stative)
- inchoatives (activity + total-terminative + stative)

Verbal prefixation in Hungarian

(NB: Verbal prefixes in Hungarian are no canonical prefixes, since they can occur in other positions (E. Kiss 2006; Ladanyi 2015))

- Most prefixes originate from spatial expression (Ladanyi 2015):
be 'into', *ki* 'out', *fel* 'up', *le* 'down', *el* 'away', *meg* 'behind'
- Some occur as applicative markers:

(1) *James, ezt meg-beszéltük már.*
James this.acc pfx-speak.pst.1pl already
'James, we talked about this.'

- By semantically adding a goal / delimitation to the verbal meaning, the prefixes telicize the denoted situation.

(2) *sosem látott városokat építhetnek fel*
never seen cities.acc build.pot.3pl pfx:up
'to build [...] entire cities, things that never existed'

- There are verbal derivational suffixes in Hungarian; however, they are lexically restricted and occur idiosyncratically.

Verbal prefixation in Hungarian

Do prefixes also perfectivize?

- (3) *Idejött, hogy **meg**-öljön?*
 came.here.3sg comp **px**-kill.3sg
 'Are you here to kill me?'
- (4) *Persze nem történt volna **meg**,*
 of.course not happen.pst.3sg would **px**
 'Of course, none of it would have happened'
- (5) *Hogyan találta **meg**?*
 how find.pst.3sg **px**
 'How did you find it?'

Verbal prefixation in German

Verbal prefixes and particles in German are associated with the following functions:

- marking spatial values
 - (6) *Jake, kommen Sie **zurück**!*
 - (7) *Ok, ich gehe **rein**.*
- marking applicatives
 - (8) *Wieso starrt sie mich immer **an**?*
 - (9) *Ich bin schuld, weil ich sie **bedrängt** habe.*
- derivation, specification of the lexical semantics of the verbal root (also changing actional semantics)
 - (10) *Wärm dich **auf**.*
 - (11) *Liebes, du musst dich **ausruhen**.*
 - (12) *Das Herz ist nicht leicht zu **verändern**,*

Aspect in Hungarian and German?

Hypotheses

- High importance of verbal semantics (actionality) for aspectual interpretation indicates low grammaticality.
- More interaction (restrictions) of aspectual marking with other verbal category indicates higher indication into the grammatical system of the verb.
- In Hungarian, almost all verbs can take a prefix, the availability of prefixes should not restrict their application.
- In German, not all verbs can take a prefix, or, some verbs cannot occur without (with the same semantics). Therefore, availability of prefixes restricts their application.

Corpus

- 1 Parallel corpus of movie subtitles (Avatar, Black Swan, Frozen, Noah, Inception) (Levshina Forthc.)
- 2 1000 sentences with different verbal lexemes were extracted from the corpus.
- 3 From those, 578 instances of sufficiently similar verbs in Russian, Czech, Hungarian, and German were manually annotated for the four languages.

Annotation

The predicates were annotated for:

- ① lexical properties:
 - lexeme
 - actionality
(relative-stative, activity, gradual-terminative, total-terminative)
- ② aspect (perfective vs. imperfective)
- ③ formal properties:
 - pres.pfx: presence of a prefix
 - pres.sfx: presence of a suffix (in Slavic)
- ④ other relevant properties interacting with aspect:
 - negation
 - tense (present, past, future, infinitive)
 - mood (indicative, imperative, irrealis, infinitive)
 - acc: presence of an accusative object

Annotation. aspect

How is the value for *aspect* (pfv vs. ipfv) determined in the four languages?

- Russian and Czech:
 - *aspect* is systematically expressed by the verb form.
- Hungarian and German:
 - *aspect* is not as systematically marked. Therefore, the context was taken into account to determine whether a given predicate refers to a situation as temporarily bound (pfv) or unbound (ipfv).

- | | | |
|------|--|------|
| (13) | <i>Du hast unsere Beute gefunden.</i> | pfv |
| (14) | <i>Wir graben hier.</i> | ipfv |
| (15) | <i>Azután történt,</i>
that.after happen.pst.3sg
'It happened after...' | pfv |
| (16) | <i>Senki sem fogja meg-látni.</i>
no.one not will pfx-see.inf.
'No one will see it.' | pfv |

Annotation. actionality

Relative-stative

- The situation can but does not have to be inalienably bound to its participants.
- A temporal delimitation is possible, but not implied.
- No supply of energy is required to maintain the situation.

(17) *Either way, you'll **shine**.*

ru *Так или иначе, но ты будешь **блистать**.*

cz *Ať to dopadne jakkoli, budeš **zářit**.*

hu *Így vagy úgy, de **ragyogni** fogsz.*

de *Auf die ein oder andere Weise, du wirst auf der Bühne **strahlen**.*

(18) *It **looks** so yummy.*

ru ***Выглядит** вкусно.*

cz ***Vypadá** chutně.*

hu *Nagyon jól **néz ki**.*

de ***Sieht** köstlich **aus**.*

Annotation. actionality

Activity

- The situation is non-culminating, homogeneous.
- A temporal delimitation is possible, but not implied.
- A constant supply of energy is required to maintain the situation.

(19) *Go **play** by yourself.*

ru *Иди и **играй** одна.*

cz *Běž si **hrát** sama!*

hu ***Játssz** egyedül!*

de ***Spiel** allein.*

(20) *I **was dancing** the White Swan.*

ru *Я **танцевала** партию белой лебеди.*

cz ***Tancovala jsem** roli Bílé labutě.*

hu *Én **táncoltam** a Fehér Hattyút.*

de *Ich **tanzte** den weißen Schwan.*

Annotation. actionality

Total

- The situation is culminating.
- A temporal delimitation is inherently given by the lexical semantics.
- (It does not have to be a punctual situation.)

(21) *Are you here to kill me?*

ru Ты пришел **убить** меня?

cz Jste zde, abyste mě **zabil**?

hu Idejött, hogy **megöljön**?

de Sind Sie hier, um mich **umzubringen**?

(22) *Killing him would just **wake** him **up**.*

ru Убийство лишь **разбудит** его.

cz Zabitím se **probudí**.

hu Ha megölöm, csupán **felébred**,

de Ihn zu töten, würde ihn nur **aufwecken**.

Annotation. actionality

Gradual

- The situation consists of two parts: activity and culmination.
- The imperfective aspect points to the activity part.
- The perfective aspect points to the culmination (total) part.

(23) *Do you want to **build** a snowman?*

ru Ты хочешь **с-лепить** снеговика?

cz **Po-stavíme** sněhuláka?

hu **Építünk** hóembert?

de **Bauen** wir einen Schneemann?

(24) *We 'll **lock** the gates.*

ru Мы **закроем** ворота.

cz **Zavřeme** brány.

hu **Bezárjuk** a kapukat.

de **Verschließen** wir die Tore.

General distributions

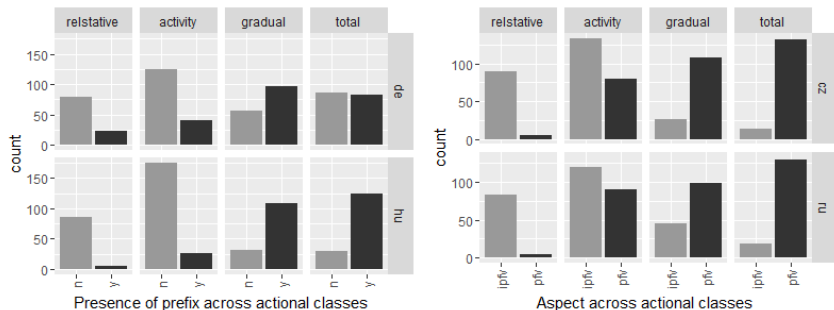
Russian, Czech

perfective
imperfective

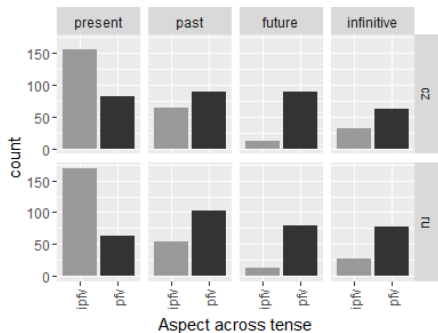
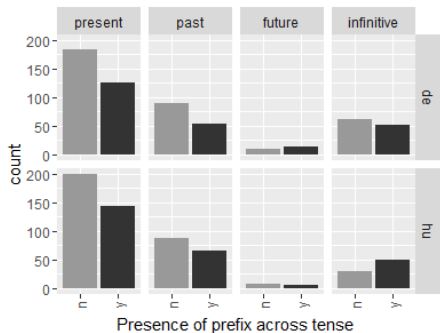
Hungarian, German

prefix
no prefix

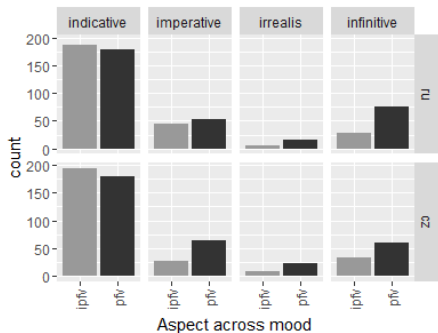
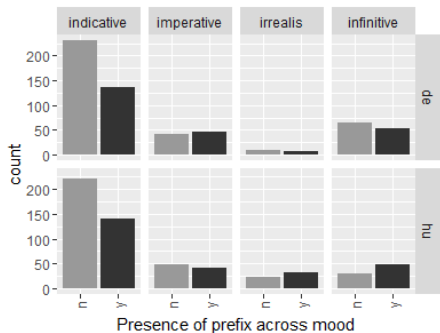
Aspect / prefixation across actionality



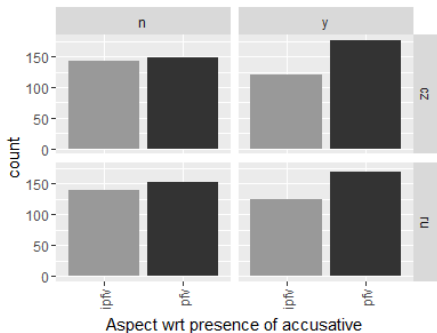
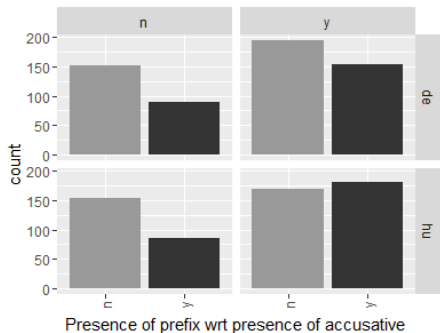
Aspect / prefixation across tense



Aspect / prefixation across mood



Aspect / prefixation across acc



Examples. (Relative) statives

German shows more prefixes with stative verbs than the other languages:

(25) *do the children **miss** me?*

ru *дети по мне **скучают**_{ipfv}?*

cz ***Chybím**_{ipfv} dětem?*

hu *Mondd, **hiányzom** a gyerekeknek?*

de ***vermissen** mich die Kinder?*

In general, relative statives show least prefix / pfv marking:

(26) *What are you so **afraid** of?*

ru *Чего ты так **боишься**_{ipfv}?!?*

cz *čeho se pořád **bojíš**_{ipfv}?*

hu *Mitől **félsz** ennyire?*

de *Was **fürchtest** du so?*

Examples. Activity

For activity verbs, prefixes are less available in German and Hungarian:

(27) Will He **help** us?

ru Он нам **поможет**_{pfv}?

cz **Pomůže**_{pfv} nám?

hu **Segít** rajtunk?

de Wird Er uns **helfen**?

(28) May I **see**?

ru Могу я **глянуть**_{pfv}?

cz Můžu se **podívat**_{pfv}?

hu **Megnézhetem**?

de Darf ich **sehen**?

Examples. Gradual-terminative

Gradual-terminatives occur with less prefixes in German:

(29) **Open** those gates (...)

ru **Открой**_{pfv} СВОИ ВОРОТА,

cz **Otevřete**_{pfv} brány,

hu **Nyisd ki** kapuidat,

de **Öffnet** die Tore,

Gradual-terminatives without prefix, but as pfv:

(30) They **sprout**. (...) and more flowers **grow**.

ru Они **прорастают**_{ipfv}. (...) и **вырастают**_{ipfv} НОВЫЕ ЦВЕТЫ.

cz **Vyklíčí**_{pfv}, (...) **vyroste**_{pfv} více květin.

hu **Növekszenek**. (...) újabb virág **sarjad** belőlük.

de Sie **sprießen** (...) noch mehr Blumen **wachsen**.

Examples. Gradual-terminative

More often, gradual-terminatives with prefix / as pfv:

(31) *Before they **dug** it all **up**.*

ru *Всё **выкопали**_{pfv}.*

cz *Všechen ho **vyrubali**_{pfv}.*

hu *Mielőtt mindet **kiásták**.*

de *Bevor sie alles **ausgruben**.*

(32) *You **slipped** on ice.*

ru *Вы **подскользнулись**_{pfv} на льду.*

cz ***Uklouzl**_{pfv} jste na ledu.*

hu *Csak **megcsúszott!***

de *Du bist **ausgerutscht**.*

Examples. Total-terminative

Total-terminatives occur more frequently without prefixes in German:

(33) *Although, I dreamed I was **kissed** by a troll.*

ru *Хоть мне и приснилось, что меня **поцеловал**_{pfv} тролль.*

cz *I když se mi kdysi zdálo, že mě **políbil**_{pfv} troll.*

hu *Bár álomban **megcsókolt** egy troll.*

de *Aber ich träumte, ein Troll hat mich **geküsst**.*

(34) *How did you find it?*

ru *Как вы её **нашли**_{pfv}?*

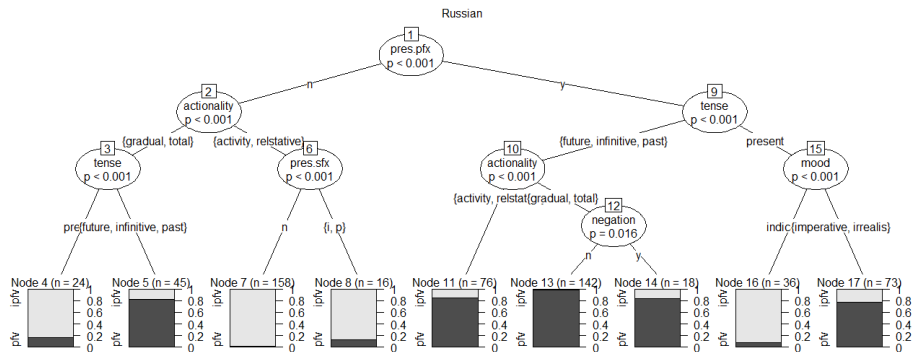
cz *Jak jste to **našel**_{pfv} vy?*

hu *Hogyan **találta meg**?*

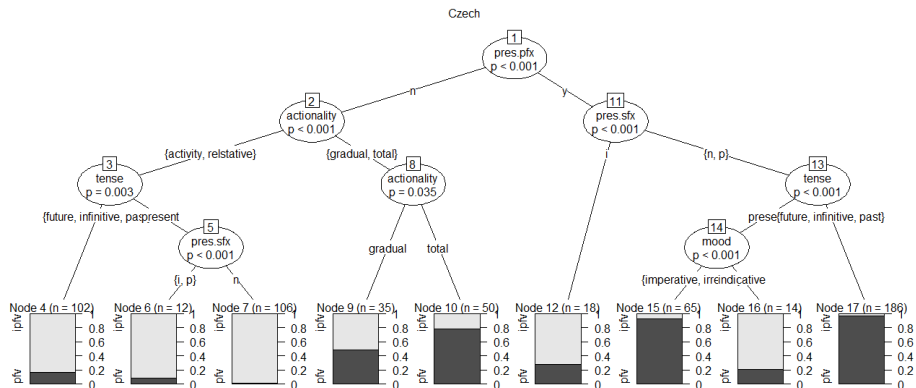
de *Wie haben Sie es **gefunden**?*

Importance of the factors

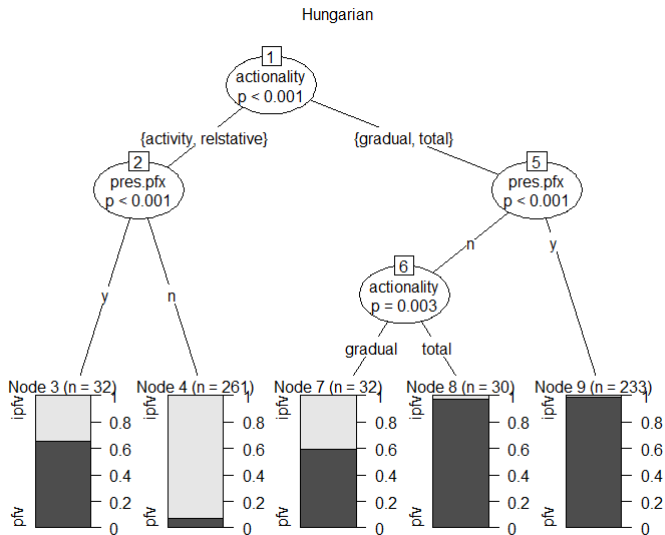
Russian



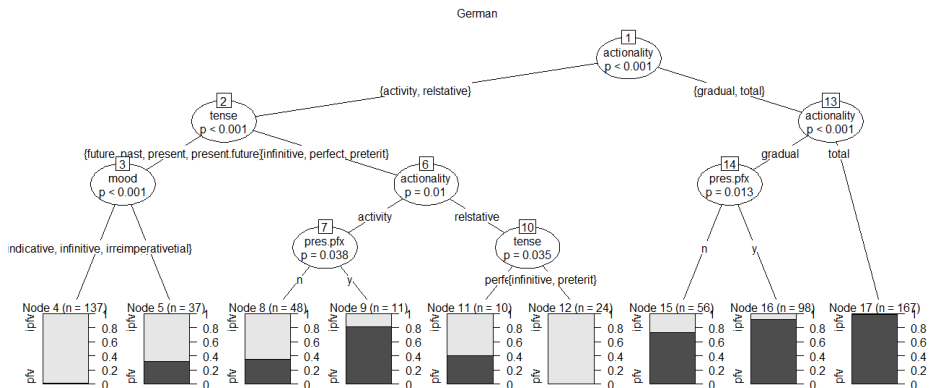
Czech



Hungarian



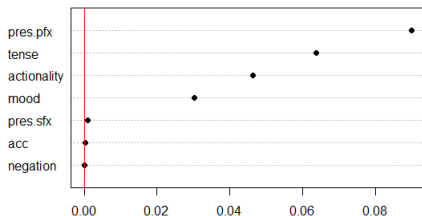
German



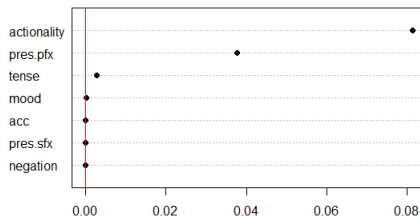
Comparing the strength of factors

Conditional variable importance based on random forests

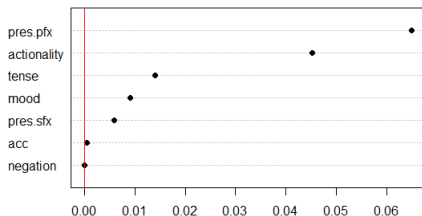
conditional variable importance RU



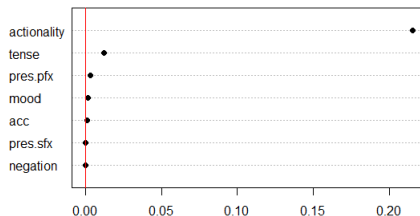
conditional variable importance HU



conditional variable importance CZ



conditional variable importance DE

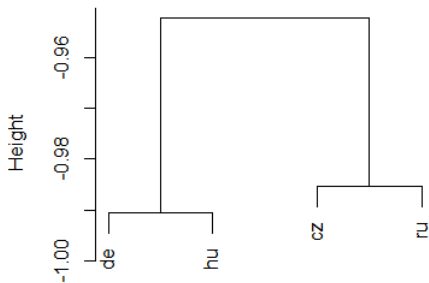


How similar are the languages with respect to aspect marking?

Overall similarity

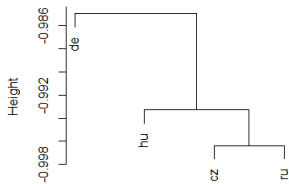
Factors considered:

aspect, negation, tense, mood, acc, pres.pfx, (pres.sfx)

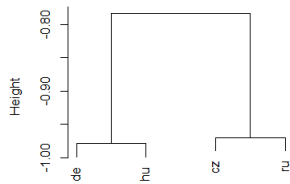


distance languages

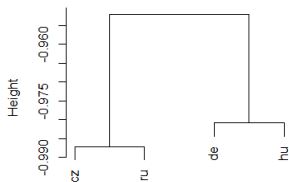
Similarity across actionality



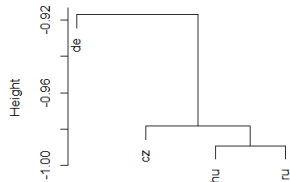
relative stative



activity



gradual



total

Similarity across actionality

- We would expect the class of gradual-terminatives to be the first one that shows aspect-sensitivity in prefix application (?).
- However, Hungarian patterns with German here.
- That Hungarian and Russian pattern together for totally-terminatives is unexpected as well.
- The latter could be due to the frequency of prefix occurrence:

	no pfx / ipfv	pfx / pfv
hu	30	124
ru	32	116
de	86	82
cz	50	90

To sum up

- At first sight, the distribution of the prefix in Hungarian and aspectual values in Slavic seemed to be relatively similar, German showing more differences for totally-terminative verbs.
- In both Hungarian and German, prefixes are less available for activity verbs.
- Based on random forests, different factors could be determined to be relevant to the encoding of aspectual meaning:
 - Slavic: pres.pfx, tense, actionality, mood, (pres.sfx for Czech)
 - Hungarian: actionality, pres.pfx, tense
 - German: actionality, tense, (pres.pfx)
- Similar to Slavic, Hungarian shows a correlation between prefixation and expression of aspect.
- Total-terminative verbs show a greater correlation of aspect marking than gradual-terminative verbs. This differs from what has been shown for the development of aspect in Slavic.

References I

- Arkadiev, Peter (2014): 'Towards an Areal Typology of Prefixal Perfectivization', *Scando-Slavica* **60**(2), 384-405.
- Breu, Walter (1994): 'Interactions between Lexical, Temporal and Aspectual Meanings', *Studies in Language* **18**(1), 23-44.
- Breu, Walter (2000a): Zur Position Des Slavischen in Einer Typologie Des Verbalaspekts (Form, Funktion, Ebenenhierarchie Und Lexikalische Interaktion). In: *Probleme Der Interaktion von Lexik Und Aspekt (ILA)*. Linguistische Arbeiten 412, Max Niemeyer Verlag, Tübingen.
- Breu, Walter, ed. (2000b): *Probleme Der Interaktion von Lexik Und Aspekt (ILA)*. Linguistische Arbeiten 412, Max Niemeyer Verlag, Tübingen.
- Dahl, Östen (1985): *Tense and Aspect Systems*. Blackwell, Oxford.
- Dickey, Stephen M. (2000): *Parameters of Slavic Aspect: A Cognitive Approach*. Center for the Study of Language and Information., Stanford, CA.
- E. Kiss, Katalin (2006): The Function and the Syntax of the Verbal Particle. In: K. É. Kiss, ed., *Event Structure and the Left Periphery. Studies on Hungarian, Vol. 68*. Studies in Natural Language and Linguistic Theory, Springer, Budapest, pp. 17-56.
- Ladanyi, Maria (2015): Particle Verbs in Hungarian. In: P. O. Müller, I. Ohnheiser, S. Olsen & F. Rainer, eds, *Word-Formation. An International Handbook of the Languages of Europe.. Vol. 1*, De Gruyter Mouton, Berlin/Boston, pp. 660-672.

References II

- Lehmann, Volkmar (1999): Der Aspekt. In: H. Jachnow, ed., *Handbuch Der Sprachwissenschaftlichen Russistik Und Ihrer Grenzdisziplinen*. Harrassowitz, Wiesbaden, pp. 214-242.
- Lehmann, Volkmar (2009): Formal-Funktionale Theorie Des Russischen Aspekts. .
- Levshina, Natalia (Forthc.): Verbs of Letting in Germanic and Romance: A Quantitative Investigation Based on a Parallel Corpus of Film Subtitles.. To appear in *Languages in Contrast*.
- Lüdeling, Anke (2001): *On Particle Verbs and Similar Constructions in German*. Dissertations in Linguistics, CSLI, Stanford, CA.
- Sasse, Hans-Jürgen (2001): Recent Activities in the Theory of Aspect: Accomplishments, Achievements, or Just Non-Progressive State?. In: *Arbeitspapiere Des Instituts Für Sprachwissenschaft Der Universität Zu Köln*. Vol. 40.
- Soltész, Katalin J. (1959): *Az Ősi Magyar Igekötők. Meg, El, Ki, Be, Le, Fel*. Akadémiai Kiadó, Budapest.
- Stiebels, Barbara (1996): *Lexikalische Argumente Und Adjunkte: Zum Semantischen Beitrag von Verbalen Präfixen Und Partikeln*. Vol. 39 of *Studia Grammatica*, Akademie Verlag, Berlin.
- Tatevosov, Sergej (2002): 'The Parameter of Actionality', *Linguistic Typology* **6**(3), 317-401.

References III

Wiemer, Björn (2008): Zur Inner-slavischen Variation bei der Aspektwahl und der Gewichtung ihrer Faktoren. In: K. Gutschmidt, U. Jekutsch, S. Kempgen & L. Udolph, eds, *Deutsche Beiträge zum 14. Internationalen Slavistenkongress, Ohrid 2008*. Vol. 30 of *Die Welt der Slaven. Sammelbände*, Sagner, München, pp. 383-409.

Thank you!