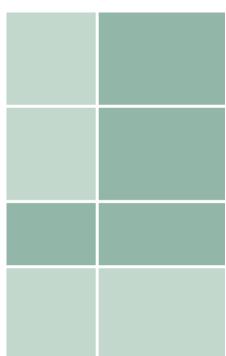




A cross-linguistic perspective on the interaction of predicate structure, valence orientation and canonicity in psych expressions

Julian A. Rott, Elisabeth Verhoeven & Paola Fritz-Huechante Institut für deutsche Sprache und Linguistik Humboldt-Universität zu Berlin

SWL VIII September 4th 2018, Inalco, Paris





Outline

- 1. Introduction: The psych alternation cross-linguistically
- 2. Method: Feelings and how to make people talk about them
- 3. Results & Discussion
- 4. Conclusion & Outlook



- Like other verbal domains, the psych domain is characterized by the existence of alternating stimulus- and experiencer-directed structures:
- (1) a. Global warming preoccupies George.
 - b. George is preoccupied with global warming.

- (2) a. Global warming worries George.
 - b. George worries about global warming.



- Like other verbal domains, the psych domain is characterized by the existence of alternating stimulus- and experiencer-directed structures:
- (1) a. Global warming preoccupies George.
 - b. George is preoccupied with global warming.

- (2) a. Global warming worries George.
 - b. George worries about global warming.
- Both arguments are governed by the verb



- Like other verbal domains, the psych domain is characterized by the existence of alternating stimulus- and experiencer-directed structures:
- (1) a. Global warming preoccupies George.
 - b. George is preoccupied with global warming.

- (2) a. Global warming worries George.
 - b. George worries about global warming.
- Both arguments are governed by the verb
- These alternations seem to be widespread



- Like other verbal domains, the psych domain is characterized by the existence of alternating stimulus- and experiencer-directed structures:
- (1) a. Global warming preoccupies George.
 - b. George is preoccupied with global warming.

- (2) a. Global warming worries George.
 - b. George worries about global warming.
- Both arguments are governed by the verb
- These alternations seem to be widespread
- Languages differ with respect to the morphological structure of the verbal inventory in the psych domain



- This seems to fall squarely within the parameters of valence orientation typology (Nichols et al. 2004):

1. Intransitivizing languages

a. Greek mediopassive
x enđiaféri y 'x interests y'
y enđiaférete ja x 'y is interested in x'

2. Transitivizing languages

- a. Turkish causativization y x *sevin-di* 'y is happy about x'
 - x y sevin-**dir**-di 'x makes y happy'

b. German reflexive, stative passive

x ärgert y 'x annoys y' y ärgert **sich über** x 'y is annoyed by x' **~**

- b. Yucatec causativization *chi'chnak ti'* x y 'y is annoyed about x'
- chi'chnak-**kuns** y x 'x annoys y'
- **3. Underspecified (Double derivation, auxiliary change, conversion, mixed)**
- a. Hungarian double derivation
 b. megrém-ít x y 'x frightens y' megrém-ül y x-tól 'y gets frightened by x'
- b. English conversion
 x worries y
 y worries about x



- At least for languages with a directed alternation, established areal distributions seem to hold in the psych domain as well:
- (3)

Icelandic (Europe – Intransitivizing)

Transitive E0 \rightarrow	Intransitive ES
<i>gleðja</i> 'please'	gleðja-st 'please-мıD'
heilla 'fascinate'	heilla-st 'fascinate-MID'
<i>hryggja</i> 'sadden'	hryggja-st 'sadden-мıD'

(4)

Korean (Asia – Transitivizing)

Intransitive FS Transitive FO *nollata* 'be.surprised' sulphuta 'be.sad'

pwukkulepta 'be.ashamed' pwukkulep-key hata 'be.ashamed-ADVR do' nolla-key hata 'be.surprised-ADVR do' sulphu-key hata 'be.sad-ADVR do'



- At least for languages with a directed alternation, established areal distributions seem to hold in the psych domain as well:
- (3)
- Icelandic (Europe Intransitivizing)

Transitive E0 \rightarrow	Intransitive ES
<i>gleðja</i> 'please'	gleðja-st 'please-мід'
heilla 'fascinate'	heilla-st 'fascinate-мıD'
<i>hryggja</i> 'sadden'	hryggja-st 'sadden-міD'

(4)

Korean (Asia – Transitivizing)

- Intransitive ES→Transitive EOpwukkulepta 'be.ashamed'pwukkulep-key hata 'be.ashamed-ADVR do'nollata 'be.surprised'nolla-key hata 'be.surprised-ADVR do'sulphuta 'be.sad'sulphu-key hata 'be.sad-ADVR do'
- Languages of the underspecified type and mixed-strategy languages present a more complex case



(5)

Basque (Europe – Auxiliary change)

Transitive EO ↔ nazkatu (edun) 'enrage (AUX.TR)' poztu (edun) 'gladden (AUX.TR)' larritu (edun) 'worry (AUX.TR)' Intransitive ES nazkatu (izan) 'enrage (AUX.INTR)' poztu (izan) 'gladden (AUX.INTR)' larritu (izan) 'worry (AUX.INTR)'

Cabécar (Central America – Double deriving) Transitive EO ↔ Intransiti

Iransitive EO ↔ suá-w-a_'fear-CAUS-INF' katsë-w-a_'rejoice-CAUS-INF' sh<u>iá</u>-w-a_'broken-CAUS-INF' Intransitive ES suá-n-a_'fear-MID-INF' katsë-n-a_'rejoice-MID-INF' sh<u>iá-n-a</u>'broken-MID-INF'

(7)

(6)

Marathi (Asia – Auxiliary change)

Transitive EO ↔ santāp āṇ-ṇē 'anger bring-INF' ānanda dē-ṇē 'happiness give-INF' kiļas āṇ-ṇē 'disgust bring-INF'

Intransitive ES santāp yē-ņē 'anger come-INF' ānanda hō-ņē 'happiness happen-INF' kiļas yē-ņē 'disgust come-INF'



(8)

Finnish (Europe – Mixed strategies)

Intransitive ES ↔ ärsy-yntyä 'irritate-INCH' huolest-ua 'worry-INCH'

Transitive EO \rightarrow huvi-ttaa 'fun-CAUS' innostaa 'excite'

Intransitive ES → ilaht-ua 'delight-INCH' huolest-ua 'worry-INCH' innost-ua 'excite-INCH' Transitive EO ärsy-ttää 'irritate-CAUS' huole-ttaa 'worry-CAUS'

Intransitive ES huvi-tt-ua 'fun-CAUS-INCH' innost-ua 'excite-INCH'

Transitive EO *ilahd-u-ttaa* 'delight-INCH-CAUS' *huolest-u-ttaa* 'worry-INCH-CAUS' *innost-u-ttaa* 'excite-INCH-CAUS'



(8)

Finnish (Europe – Mixed strategies)

Intransitive ES ↔ ärsy-yntyä 'irritate-INCH' huolest-ua 'worry-INCH'

Transitive EO \rightarrow huvi-ttaa 'fun-CAUS' innostaa 'excite'

Intransitive ES → ilaht-ua 'delight-INCH' huolest-ua 'worry-INCH' innost-ua 'excite-INCH' Transitive EO ärsy-ttää 'irritate-CAUS' huole-ttaa 'worry-CAUS'

Intransitive ES huvi-tt-ua 'fun-CAUS-INCH' innost-ua 'excite-INCH'

Transitive EO *ilahd-u-ttaa* 'delight-INCH-CAUS' *huolest-u-ttaa* 'worry-INCH-CAUS' *innost-u-ttaa* 'excite-INCH-CAUS'

– Why focus on the psych domain?



- Out of the two alternants created, EO verbs may show exceptional syntactic behavior: (Belletti & Rizzi 1988, Pesetsky 1995, Haspelmath 2001, Reinhart 2002, Bayer 2004, Landau 2010, Verhoeven 2014, Temme & Verhoeven 2016, etc.)
 - Linearization
 - Passivization
 - Extraction
 - Binding
 - ..



- Out of the two alternants created, EO verbs may show exceptional syntactic behavior: (Belletti & Rizzi 1988, Pesetsky 1995, Haspelmath 2001, Reinhart 2002, Bayer 2004, Landau 2010, Verhoeven 2014, Temme & Verhoeven 2016, etc.)
 - Linearization
 - Passivization
 - Extraction
 - Binding
 - ..

In just about any language where psych(ological) verbs have been studied in any depth, some special properties of these verbs have emerged



- Out of the two alternants created, EO verbs may show exceptional syntactic behavior: (Belletti & Rizzi 1988, Pesetsky 1995, Haspelmath 2001, Reinhart 2002, Bayer 2004, Landau 2010, Verhoeven 2014, Temme & Verhoeven 2016, etc.)
 - Linearization
 - Passivization
 - Extraction
 - Binding
 - ..

In just about any language where psych(ological) verbs have been studied in any depth, some special properties of these verbs have emerged

(Landau 2010:4)

 These are commonly referred to as "psych properties"



- Crucially, they do *not* appear in all languages:
- (9) Passive
 - a. Turkish:

Yaya(polistarafından)üz-dür-ül-dü.Pedestrianpolicemanbysadden-CAUS-PASS-PFV

b. Icelandic:

*Vegfarand-inn var gladd-ur (af lögreglumann-inum). Pedestrian-NOM.DEF was gladdened-NOM by policeman-DAT.DEF ((a) taken from Verhoeven 2008:88)

(10) Forward binding

a. Chinese:

Lăoshī hé xuéshēng (wúyìjiān) xiānghù jīnù-le. Teacher and student unconsciously each.other enrage-PFV

b. German:

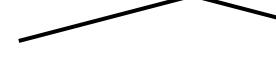
*Peter und Paul wundern/interessieren sich gegenseitig. Peter and Paul astonish/concern REFL each.other

(Verhoeven 2010:112f.)29



Further typological difference

Ls with a subclass of EO verbs with exceptional syntactic properties



<u>yes</u>

German Greek Icelandic Hungarian <u>no</u> (at least for ACC EOs)

Chinese Turkish Yucatec Maya Korean

(see Verhoeven 2010, 2014, Temme & Verhoeven 2016)



Further typological difference

Ls with a subclass of EO verbs with exceptional syntactic properties



<u>yes</u>

German Greek Icelandic Hungarian

intransitivizing Ls

<u>no</u> (at least for ACC EOs)

Chinese Turkish Yucatec Maya Korean

transitivizing Ls

(see Verhoeven 2010, 2014, Temme & Verhoeven 2016)

8 / 25



– Central hypothesis:

Transitive EO predicates only exhibit psych phenomena in languages with a significant preference for an intransitivizing alternation in their psych domain.



Central hypothesis:

Transitive EO predicates only exhibit psych phenomena in languages with a significant preference for an intransitivizing alternation in their psych domain.

 Functional motivation due to semantics of overt causation (Pesetsky 1995)

Base ES: Most prominent argument in prominent position, causative EO has clearly allocated functions

Base EO: Prominent argument is "downgraded" (Bickel 2006) in unmarked alternant



 Additional research question:
 How does the internal morphological structure of psych expressions (derivational or otherwise) interact with valency changing operations?





Core piece: A cross-linguistic database of alternating psych predicates



- Core piece: A cross-linguistic database of alternating psych predicates
- Issue of comparability: English translations as tertium comparationis are problematic

Every language imposes its own classification upon human emotional experience, and English words such as anger or sadness are cultural artifacts of the English language, not culture-free analytical tools.

(Wierzbicka 1992:546)



- Core piece: A cross-linguistic database of alternating psych predicates
- Issue of comparability: English translations as tertium comparationis are problematic

Every language imposes its own classification upon human emotional experience, and English words such as anger or sadness are cultural artifacts of the English language, not culture-free analytical tools.

(Wierzbicka 1992:546)

 Anthropological and psychological research suggests there may be a number of basic emotions elicited by *Universal Antecedent Events* (UAEs, see Boucher & Brandt 1981; Ekman 1999; Hupka et al. 1999)



Five basic emotion modes: (Johnson-Laird & Oatley 1989, Ekman 1994, Turner 2007)

(11)	(11) HAPPINESS Sub-goals being achieved		delight, like, enjoy, please, charm, enthuse, amuse, interest, fascinate,	
SADNESS Failure of major plan or loss of active goal		, ,	sadden, mourn, afflict, depress, grieve, disappoint, bore,	
ANGER Active plan obstructed		Active plan obstructed	annoy, anger, hate, irritate, bother, enrage, frustrate,	
	FEAR Self-preservation goal threatened		fear, frighten, worry, terrify, startle, shock, scare, dread	
	DISGUST	Gustatory goal violated	disgust, nauseate, gross out, repel, offend, appall, horrify,	



Five basic emotion modes: (Johnson-Laird & Oatley 1989, Ekman 1994, Turner 2007)

(11)	(11) HAPPINESS Sub-goals being achieved		delight, like, enjoy, please, charm, enthuse, amuse, interest, fascinate,	
	SADNESS	Failure of major plan or loss of active goal	sadden, mourn, afflict, depress, grieve, disappoint, bore,	
	ANGER	Active plan obstructed	annoy, anger, hate, irritate, bother, enrage, frustrate,	
	FEAR	Self-preservation goal threatened	fear, frighten, worry, terrify, startle, shock, scare, dread	
	DISGUST	Gustatory goal violated	disgust, nauseate, gross out, repel, offend, appall, horrify,	

Simple UAE scenarios are presented orally



Five basic emotion modes: (Johnson-Laird & Oatley 1989, Ekman 1994, Turner 2007)

(11)	(11) HAPPINESS Sub-goals being achiev		delight, like, enjoy, please, charm, enthuse, amuse, interest, fascinate,	
	SADNESS	Failure of major plan or loss of active goal	sadden, mourn, afflict, depress, grieve, disappoint, bore,	
	ANGER	Active plan obstructed	annoy, anger, hate, irritate, bother, enrage, frustrate,	
	FEAR Self-preservation goal threatened		fear, frighten, worry, terrify, startle, shock, scare, dread	
	DISGUST	Gustatory goal violated	disgust, nauseate, gross out, repel, offend, appall, horrify,	

- Simple UAE scenarios are presented orally
- Semantic subcomponents guide elicitation



Five basic emotion modes: (Johnson-Laird & Oatley 1989, Ekman 1994, Turner 2007)

(11)	11) HAPPINESS Sub-goals being achieved		delight, like, enjoy, please, charm, enthuse, amuse, interest, fascinate,	
_	SADNESS	Failure of major plan or loss of active goal	sadden, mourn, afflict, depress, grieve, disappoint, bore,	
- · ·		Active plan obstructed	annoy, anger, hate, irritate, bother, enrage, frustrate,	
	FEAR Self-preservation goal threatened		fear, frighten, worry, terrify, startle, shock, scare, dread	
	DISGUST	Gustatory goal violated	disgust, nauseate, gross out, repel, offend, appall, horrify,	

- Simple UAE scenarios are presented orally
- Semantic subcomponents guide elicitation
- Participants describe situations by referring to their own emotional ontologies

OTDT-UNIL HASITA

2. Method

- Citation form
- Approximate translations
- Emotion domains
- Lexical sources
- Derivational status of individual forms

WDH. TO BERLIN

2. Method

- Citation form
- Approximate translations
- Emotion domains
- Lexical sources
- Derivational status of individual forms
- Morphological:
 - Nichols et al.'s (2004) alternation type
 - Inventory of morphemes employed



- Citation form
- Approximate translations
- Emotion domains
- Lexical sources
- Derivational status of individual forms
- Morphological:
 - Nichols et al.'s (2004) alternation type
 - Inventory of morphemes employed
- Syntactic:
 - Valence orientation
 - Case frames
 - Facultativeness of arguments
 - Word order variation
 - Usage in naturalistic declarative sentences
 - Negative evidence: ungrammatical structures



- Citation form
- Approximate translations
- Emotion domains
- Lexical sources
- Derivational status of individual forms
- Morphological:
 - Nichols et al.'s (2004) alternation type
 - Inventory of morphemes employed
- Syntactic:
 - Valence orientation
 - Case frames
 - Facultativeness of arguments
 - Word order variation
 - Usage in naturalistic declarative sentences
 - Negative evidence: ungrammatical structures
- Pragmatic:
 - Usage restrictions (animacy, WO preferences)
 - Different registers



Language	Bases total	%ES	%EO	%Double
Icelandic	30	6.67	90	3.34
Spanish	119	0	100	0
Korean	59	96.61	0	3.39
Chinese	75	92	2.67	5.34
Tamil	20	85	10	5
Turkish	64	68.75	12.5	18.75
Cabécar	26	29.92	11.54	61.54
Basque	17	5.89	0	94.11
Finnish	60	48.34	33.34	18.34
Bété	0	0	0	0

Table 1. Distribution of base orientation in sample (n = 470 pairs)

base = morphologically less complex alternant (Nichols et al. 2004)



Language	Bases total	%ES	%EO	%Double
Icelandic	30	6.67	90	3.34
Spanish	119	0	100	0
Korean	59	96.61	0	3.39
Chinese	75	92	2.67	5.34
Tamil	20	85	10	5
Turkish	64	68.75	12.5	18.75
Cabécar	26	29.92	11.54	61.54
Basque	17	5.89	0	94.11
Finnish	60	48.34	33.34	18.34
Bété	0	0	0	0

Table 1. Distribution of base orientation in sample (n = 470 pairs)

base = morphologically less complex alternant (Nichols et al. 2004)

Intransitivization in European languages vs.
 Transitivization in Asia (Nichols 2004, Cysouw 2011)

 Icelandic and Spanish: strongly detransitivizing





 Icelandic and Spanish: strongly detransitivizing
 → clear psych effects.
 (see e.g. Zaenen et al. 1985, Franco 1990, Landau 2010)



- Icelandic and Spanish: strongly detransitivizing
 → clear psych effects.
 (see e.g. Zaenen et al. 1985, Franco 1990, Landau 2010)
- Korean and Chinese: overwhelmingly transitivizing



Icelandic and Spanish:
 strongly detransitivizing
 → clear psych effects.

(see e.g. Zaenen et al. 1985, Franco 1990, Landau 2010)

Korean and Chinese:
 overwhelmingly transitivizing
 → psych domain patterns with canonical action predicates

(Verhoeven 2010, Temme & Verhoeven 2015)



- Icelandic and Spanish:
 strongly detransitivizing
 → clear psych effects.
 - (see e.g. Zaenen et al. 1985, Franco 1990, Landau 2010)
- Korean and Chinese:
 overwhelmingly transitivizing
 → psych domain patterns with canonical action predicates
 (Verhoeven 2010, Temme & Verhoeven 2015)
- Turkish: heterogeneous, but predominantly transitivizing



Icelandic and Spanish:
 strongly detransitivizing
 → clear psych effects.

(see e.g. Zaenen et al. 1985, Franco 1990, Landau 2010)

- Korean and Chinese:
 overwhelmingly transitivizing
 → psych domain patterns with canonical action predicates
 (Verhoeven 2010, Temme & Verhoeven 2015)
- Turkish: heterogeneous, but predominantly transitivizing

→ Canonicity observed in psych domain (Özsoy 2009, Kutscher 2009, Verhoeven 2014)



 Hypothesis seems to be borne out so far: Valence orientation is a predictor for psych properties



- Hypothesis seems to be borne out so far: Valence orientation is a predictor for psych properties
- Three issues to tackle:
 - 1. Comparable data is lacking for most languages



- Hypothesis seems to be borne out so far: Valence orientation is a predictor for psych properties
- Three issues to tackle:
 - 1. Comparable data is lacking for most languages
 - Nature of the relationship between intransitivization and psych effects such as oblique subject-like arguments is unclear



- Hypothesis seems to be borne out so far: Valence orientation is a predictor for psych properties
- Three issues to tackle:
 - 1. Comparable data is lacking for most languages
 - Nature of the relationship between intransitivization and psych effects such as oblique subject-like arguments is unclear
 - 3. How do languages with non-directed and other strategies pattern?



- Hypothesis seems to be borne out so far: Valence orientation is a predictor for psych properties
- Three issues to tackle:
 - 1. Comparable data is lacking for most languages
 - Nature of the relationship between intransitivization and psych effects such as oblique subject-like arguments is unclear
 - 3. How do languages with non-directed and other strategies pattern?



- (12) a. Júrú jé cícéjī sībā (dàgű kádō ó jé). anger PRF little.one sting (brother big POSS reason)
 `The little brother is enraged because of the big brother.'
 - b. Dàgú kấdo jé cícéjī jớrớ sīb-à.
 brother big PRF little.one anger sting-CAUS
 `The big brother has enraged the little brother.'
- (13) a. *Nếpếlù súrú gű mớná wớ.* toy pour child joy onto.

`The toy pleases the child.'

b. Műná jé gű wű súr-ó.
 joy PRF child onto pour-MID
 `The child was pleased.'



- (12) a. Júrú jé cícéjī sībā (dàgű kádō ó jé). anger PRF little.one sting (brother big POSS reason)
 `The little brother is enraged because of the big brother.'
 - b. Dàgú kấdo jé cĩcếjī jớrớ sīb-à.
 brother big PRF little.one anger sting-CAUS
 `The big brother has enraged the little brother.'
- (13) a. *Nếpếlù súrú gű mớná wớ.* toy pour child joy onto.

`The toy pleases the child.'

- b. Műná jé gű wű súr-ó. joy PRF child onto pour-MID
 `The child was pleased.'
- Stimulus argument is not governed by the verb across alternants \rightarrow No psych alternation



- (12) a. Júrú jé cícéjī sībā (dàgű kádō ó jé). anger PRF little.one sting (brother big POSS reason)
 `The little brother is enraged because of the big brother.'
 - b. Dàgú kấdo jź cĩcếjī jứrứ sīb-à.
 brother big PRF little.one anger sting-CAUS
 `The big brother has enraged the little brother.'
- (13) a. *Nɛ̃nɛ̃lù súrú gű mʊ̃ná wʊ̃.* toy pour child joy onto.

`The toy pleases the child.'

- b. Műná jé gű wű súr-ó.
 joy PRF child onto pour-MID
 `The child was pleased.'
- Stimulus argument is not governed by the verb across alternants \rightarrow No psych alternation
- Derivations often entirely unavailable



Experiencer constructions in Bété tend to show a certain structure:



- Experiencer constructions in Bété tend to show a certain structure:
 - The experiencer tends to be an object or the possessor of a bodypart.
 - The emotion is usually specified in nominal form
 - Its effect is expressed via semantically bleached general action predicates.
 - Verbs may convey emotion meaning via metaphor, e.g. 'sting' or 'seethe' for anger.



- Experiencer constructions in Bété tend to show a certain structure:
 - The experiencer tends to be an object or the possessor of a bodypart.
 - The emotion is usually specified in nominal form
 - Its effect is expressed via semantically bleached general action predicates.
 - Verbs may convey emotion meaning via metaphor, e.g. 'sting' or 'seethe' for anger.
- Dyadic structure → No slot for a governed expression of the stimulus in transitive form?



- Experiencer constructions in Bété tend to show a certain structure:
 - The experiencer tends to be an object or the possessor of a bodypart.
 - The emotion is usually specified in nominal form
 - Its effect is expressed via semantically bleached general action predicates.
 - Verbs may convey emotion meaning via metaphor, e.g. 'sting' or 'seethe' for anger.
- Dyadic structure → No slot for a governed expression of the stimulus in transitive form?
- Although the language would provide the morphological means for alternating psych predicates, they do not occur



 Finnish bases are distributed across valence orientation patterns



- Finnish bases are distributed across valence orientation patterns
- ES bases around 1.5 times as frequent as EO bases, but substantial number of double derived pairs



- Finnish bases are distributed across valence orientation patterns
- − ES bases around 1.5 times as frequent as EO bases, but substantial number of double derived pairs
 → No clear preference



- Finnish bases are distributed across valence orientation patterns
- ES bases around 1.5 times as frequent as EO bases, but substantial number of double derived pairs
 → No clear preference
- Landau (2010) claims non-canonical behavior for psych passives



- Finnish bases are distributed across valence orientation patterns
- ES bases around 1.5 times as frequent as EO bases, but substantial number of double derived pairs
 → No clear preference
- Landau (2010) claims non-canonical behavior for psych passives
- Nelson (1999) finds that at least a subset of Finnish causativized EO alternants with stative event structure also displays non-canonical behavior (cf. also Pylkkänen 2000)



- Finnish bases are distributed across valence orientation patterns
- ES bases around 1.5 times as frequent as EO bases, but substantial number of double derived pairs
 → No clear preference
- Landau (2010) claims non-canonical behavior for psych passives
- Nelson (1999) finds that at least a subset of Finnish causativized EO alternants with stative event structure also displays non-canonical behavior (cf. also Pylkkänen 2000)
- Others have argued that at least Finnish passive is uninformative in this regard due to lack of comparability (e.g. Sakuma 2013)

(8)



Finnish verb formation:

- Intransitive ES ↔ ärsy-yntyä 'irritate-ınсн' huolest-ua 'worry-ınсн'
 - Transitive EO \rightarrow huvi-ttaa 'fun-CAUS' innostaa 'excite'
 - Intransitive ES → ilaht-ua 'delight-INCH' huolest-ua 'worry-INCH' innost-ua 'excite-INCH'

Transitive EO ärsy-ttää 'irritate-CAUS' huole-ttaa 'worry-CAUS'

Intransitive EO huvi-tt-ua 'fun-CAUS-INCH' innost-ua 'excite-INCH'

Transitive EO *ilahd-u-ttaa* 'delight-INCH-CAUS' *huolest-u-ttaa* 'worry-INCH-CAUS' *innost-u-ttaa* 'excite-INCH-CAUS'





Finnish verb formation:

- (8) Intransitive ES ↔
 ärsy-yntyä 'irritate-INCH'
 huolest-ua 'worry-INCH'
 - Transitive EO \rightarrow huvi-ttaa 'fun-CAUS' innostaa 'excite'
 - Intransitive ES → ilaht-ua 'delight-INCH' huolest-ua 'worry-INCH' innost-ua 'excite-INCH'

Transitive EO ärsy-ttää 'irritate-CAUS' huole-ttaa 'worry-CAUS'

Intransitive EO huvi-tt-ua 'fun-CAUS-INCH' innost-ua 'excite-INCH'

Transitive EO *ilahd-u-ttaa* 'delight-INCH-CAUS' *huolest-u-ttaa* 'worry-INCH-CAUS' *innost-u-ttaa* 'excite-INCH-CAUS'

 Causatives and inchoatives used both for alternations and as verbalizers



Finnish verb formation:

- (8) Intransitive ES ↔
 ärsy-yntyä 'irritate-INCH'
 huolest-ua 'worry-INCH'
 - Transitive EO \rightarrow huvi-ttaa 'fun-CAUS' innostaa 'excite'
 - Intransitive ES → ilaht-ua 'delight-INCH' huolest-ua 'worry-INCH' innost-ua 'excite-INCH'

Transitive EO ärsy-ttää 'irritate-CAUS' huole-ttaa 'worry-CAUS'

Intransitive EO huvi-tt-ua 'fun-CAUS-INCH' innost-ua 'excite-INCH'

Transitive EO *ilahd-u-ttaa* 'delight-INCH-CAUS' *huolest-u-ttaa* 'worry-INCH-CAUS' *innost-u-ttaa* 'excite-INCH-CAUS'

- Causatives and inchoatives used both for alternations and as verbalizers
- Psych verbs are mostly secondary, derived from nominals



Finnish verb formation:

- (8) Intransitive ES ↔
 ärsy-yntyä 'irritate-INCH'
 huolest-ua 'worry-INCH'
 - Transitive EO \rightarrow huvi-ttaa 'fun-CAUS' innostaa 'excite'
 - Intransitive ES → ilaht-ua 'delight-INCH' huolest-ua 'worry-INCH' innost-ua 'excite-INCH'

Transitive EO ärsy-ttää 'irritate-CAUS' huole-ttaa 'worry-CAUS'

Intransitive EO huvi-tt-ua 'fun-CAUS-INCH' innost-ua 'excite-INCH'

Transitive EO *ilahd-u-ttaa* 'delight-INCH-CAUS' *huolest-u-ttaa* 'worry-INCH-CAUS' *innost-u-ttaa* 'excite-INCH-CAUS'

- Causatives and inchoatives used both for alternations and as verbalizers
- Psych verbs are mostly secondary, derived from nominals
- Factitives create EO verbs



– "Microcosm" of variation within a single language?



- "Microcosm" of variation within a single language?"
- Word-order effects occur with EO verbs regardless of base orientation:

(14) a. **Transitivizing:**

Anttisano-o, että mummo-a ilahdutt-ikirja.Antti:NOM say-3.SG that granda-PTV delight-3.SG.PST book:NOM`Antti says that grandma was delighted by the book.'

b. Intransitivizing:

Heikkisano-o, että päällikkö-ä huvitt-imainostaulu.Heikki:NOM say-3.SG that boss-PTVamuse-3.SG.PST billboard:NOM`Heikki says that the boss was amused by the billboard.'

b. Double deriving:

Noora sano-o, että naapuri-a ärsytt-i maalaus. Noora:NOM say-3.SG that neighbor-PTV annoy-3.SG.PST painting:NOM `Noora says that the neighbor was annoyed by the painting.'



- "Microcosm" of variation within a single language?"
- Word-order effects occur with EO verbs regardless of base orientation:

(14) a. **Transitivizing:**

Anttisano-o, että mummo-a ilahdutt-ikirja.Antti:NOM say-3.SG that granda-PTV delight-3.SG.PST book:NOM`Antti says that grandma was delighted by the book.'

b. Intransitivizing:

Heikkisano-o, että päällikkö-ä huvitt-imainostaulu.Heikki:NOM say-3.SG that boss-PTVamuse-3.SG.PST billboard:NOM`Heikki says that the boss was amused by the billboard.'

b. Double deriving:

Noora sano-o, että naapuri-a ärsytt-i maalaus. Noora:NOM say-3.SG that neighbor-PTV annoy-3.SG.PST painting:NOM `Noora says that the neighbor was annoyed by the painting.'

However, they seem to be limited to inanimate stimuli





Scope of psych properties in Finnish is not yet established



- Scope of psych properties in Finnish is not yet established
- Diffusion of psych properties from an "incipient set" in the base EO forms along established lines of event structure?



- Scope of psych properties in Finnish is not yet established
- Diffusion of psych properties from an "incipient set" in the base EO forms along established lines of event structure?
- Behavior of purely double deriving languages is not clear, but hypothesis predicts that there should be no psych effects



Hypothesis borne out for transitivizing and detransitivizing languages (so far)



- Hypothesis borne out for transitivizing and detransitivizing languages (so far)
- May need modification for double deriving languages



- Hypothesis borne out for transitivizing and detransitivizing languages (so far)
- May need modification for double deriving languages
- Behavior of the psych domain does not necessarily follow from the available morphosyntactic means of a given language



- Hypothesis borne out for transitivizing and detransitivizing languages (so far)
- May need modification for double deriving languages
- Behavior of the psych domain does not necessarily follow from the available morphosyntactic means of a given language
- Psych predicates seem to have a tendency to be internally complex (cf. Klein & Kutscher 2002)



- Hypothesis borne out for transitivizing and detransitivizing languages (so far)
- May need modification for double deriving languages
- Behavior of the psych domain does not necessarily follow from the available morphosyntactic means of a given language
- Psych predicates seem to have a tendency to be internally complex (cf. Klein & Kutscher 2002)
- The morphological means of creation fundamentally inform their behavior



 Do "psych properties" as a concept hold up across a bigger language sample?



- Do "psych properties" as a concept hold up across a bigger language sample?
- Dataset still largely limited to well-researched languages



- Do "psych properties" as a concept hold up across a bigger language sample?
- Dataset still largely limited to well-researched languages
- In particular, all intransitivizing languages in sample have close ties to Standard Average European



- Do "psych properties" as a concept hold up across a bigger language sample?
- Dataset still largely limited to well-researched languages
- In particular, all intransitivizing languages in sample have close ties to Standard Average European
- Other phyla with similar structures needed



- Do "psych properties" as a concept hold up across a bigger language sample?
- Dataset still largely limited to well-researched languages
- In particular, all intransitivizing languages in sample have close ties to Standard Average European
- Other phyla with similar structures needed
- More languages coming: Hungarian, Tagalog, Georgian, Greek, Romanian, Yucatec Maya, Khoekoegowab, Marathi, Nafsan, Mapudungun, Igbo, Persian



- Do "psych properties" as a concept hold up across a bigger language sample?
- Dataset still largely limited to well-researched languages
- In particular, all intransitivizing languages in sample have close ties to Standard Average European
- Other phyla with similar structures needed
- More languages coming: Hungarian, Tagalog, Georgian, Greek, Romanian, Yucatec Maya, Khoekoegowab, Marathi, Nafsan, Mapudungun, Igbo, Persian
- Goal: 30 languages from 5 macro-areas



Construction of parallelized rating studies based on database material





- Construction of parallelized rating studies based on database material
- Statistical evaluation of hypothesis within and across sample languages



- Construction of parallelized rating studies based on database material
- Statistical evaluation of hypothesis within and across sample languages
- Clear definition of relation to psych effects outside of valence orientation pairs



- Construction of parallelized rating studies based on database material
- Statistical evaluation of hypothesis within and across sample languages
- Clear definition of relation to psych effects outside of valence orientation pairs
- Incorporation into a typologically adequate and empirically founded theory of psych expressions

References



- Bayer, J. (2004). "Non-nominative subjects in comparison". In: Non-nominative Subjects. Ed by P. Bhaskararao and K. V. Subbarao. 2 vols. Amsterdam/Philadelphia: Benjamins. 49-76.
- Belletti, A. & L. Rizzi (1988). "Psych-verbs and θ-Theory". In: Natural Language and Linguistic Theory 6. 291-352.
- Bickel, Balthasar (2006): "Clause-level vs. predicate-level linking. In: I. Bornkessel, M. Schlesewsky, B. Comrie & A. D. Friederici (Eds.). Semantic Role Universals and Argument Linking. Theoretical, Typological and Psycholinguistic Perspectives. Berlin: De Gruyter. 155-190.
- Boucher, J. D. & M. E. Brandt (1981). "Judgment of Emotion. American and Malay Antecedents". In: Journal of Cross-Cultural Psychology 12 (3). 272-283.
- Cysouw, M. (2011). "Quantitative explorations of the world-wide distribution of rare characteristics, or: the exceptionality of north-western European languages". In: Expecting the unexpected , Ed. by Simon, H. & H. Wiese (eds.). Berlin: De Gruyter. 411-431.
- Ekman, P. (1994). "Antecedent Events and Emotion Metaphors". In: The Nature of Emotion. Fundamental questions. Ed. by P. Ekman and R. J. Davidson. Oxford: Oxford University Press. 146-149.
- Ekman, P. (1999). "Basic Emotions". In: Handbook of Cognition and Emotion. Ed. by T. Dalgleish and M. Power. New York: John Wiley & Sons. 45-60.
- Franco, J. (1990). "Towards a typology of psych verbs: Evidence from Spanish." In: MITWPL 12: Proceedings of the 2nd Meeting of SCIL. Ed. by T. Green & S. Uziel. 46–62. Cambridge, MA: MIT Press.
- Haspelmath, M. (2001): "Non-canonical marking of core arguments in European languages". In: Noncanonical marking of subjects and objects. Ed by A. Y. Aikhenvald, R.M.W. Dixon & M. Onishi. Amsterdam/Philadelphia: John Benjamins. 53–83.

References



- Hupka, R. B., A. P. Lenton, and K. A. Hutchison (1999). "Universal Development of Emotion Categories in Natural Language". In: Journal of Personality and Social Psychology 77 (2). 247-278.
- Johnson-Laird, P. & K. Oatley (1989). "The language of emotions: An analysis of a semantic field". In: Cognition & Emotion 3 (2). 81-123.
- Klein, K. & S. Kutscher (2002): "Psych verbs and lexical economy". In: Theorie des Lexikons. Universität Düsseldorf.
- Kutscher, S. (2009). Kausalität und Argumentrealisierung. Zur Konstruktionsvarianz bei Psychverben am Beispiel europäischer Sprachen. Tübingen: Niemeyer.
- Landau, I. (2010). The Locative Syntax of Experiencers. Cambridge, Massachusetts/London: MIT Press.
- Nelson, D. (1999). "Events, Arguments and Causative Psych Predicates in Finnish". In: Leeds Working Papers in Linguistics and Phonetics 7. Ed. By P. Foulkes. University of Leeds.
- Nichols, J., D. A. Peterson & J. Barnes (2004). "Transitivizing and detransitivizing languages". In: Linguistic Typology 8. 149-211.
- Özsoy, A. S. (2009). "Argument structure, animacy, syntax and semantics of passivization in Turkish: a corpus-based approach". In: Corpus Analysis and Variation in Linguistics. Ed. by Kawaguchi, Y., Minegishi, M. & Durand, J. Amsterdam: Benjamins. 259-279.

Pesetsky, D. (1995). Zero Syntax: Experiencers and Cascades. Cambridge, Massachusetts: The MIT Press.

Pylkkänen, L. (2000). "On stativity and causation". In: Events as Grammatical Objects, Ed. by C. Tenny & J. Pustejovsky .Stanford CA: CSLI. 417–444.

Reinhart, T. (2002). "The Theta System - an overview". In: Theoretical Linguistics 28. 229-290.

References



- Sakuma, Sun'Ichi (2013). "Reflexive verbs and anti-causativity in the Finnish language". In: JSL 9. 21-32.
- Verhoeven, E. (2010). "Transitivity in Chinese experiencer object verbs". In: Brandt, P. & García García, M. (ed.), Transitivity: Form, Meaning, Acquisition, and Processing. Amsterdam: Benjamins, 95-118.
- Verhoeven, E. (2014). "Thematic prominence and animacy asymmetries. Evidence from a crosslinguistic production study". In: Lingua 143. 129-161.
- Temme, A. & E. Verhoeven (2016). "Verb class, case, and order: A crosslinguistic experiment on nonnominative experiencers". In: Linguistics 54 (4). 769-813.
- Turner, J. H. (2007). Human Emotions. A sociological theory. London / New York: Routledge.

Wierzbicka, A.(1992). "Defining Emotion Concepts". In: Cognitive Science 16. 539-581.

Zaenen, A., J. Maling, & H. Þráinsson (1985). "Case and grammatical functions: The Icelandic passive". In: Natural Language and Linguistic Theory 3. 441–483.



Merci de votre attention! Thank you for your attention! Vielen Dank für Ihre Aufmerksamkeit!



Target domain:SADNESSStimulus:inanimate

A girl loses her favorite toy and is unable to find it again.

- 1. [NOW] Which words would best describe the way the loss of his favorite toy makes the girl feel?
- 2. [SHORT LATENCY] Which words could be used to describe the way the girl felt in the very moment when she noticed that she had lost the toy?
- 3. [HIGH DEGREE] Which words could be used to best describe the way the girl felt if the toy she lost was not only her favorite, but also the only one she owned?
- 4. [ELSE] Which other words might be used to describe the way the girl feels when losing her toy?



Target domain:FEARStimulus:animate

A woman encounters a robber.

- 1. [NOW] Which words would best describe the way the loss of his favorite toy makes the girl feel?
- 2. [SHORT LATENCY] Which words could be used to describe the way the robber made the woman feel by suddenly appearing in front of her?
- 3. [HIGH DEGREE] Which words could be used to best describe the way the woman feels about the robber when he pulls a gun on her and threatens to kill her?
- 4. [ELSE] Which other words could be used to describe how the robber makes the woman feel?