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Subject, PSA, macroroles, transitivity hierarchies:

capturing typological preferences in the domain of argument structure

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Introductory: RRG and linguistic typology

- RRG has pioneered typological approach to grammar, especially for the domain of argument structure and grammatical relations (see, e.g., Van Valin 1981; Van Valin 2005).
- In particular, its use of the Privileged Syntactic Argument (PSA) which may be different for different constructions had a liberating effect on linguistic theory (cf. Construction Grammar)
- The question however is how to capture (in a non-stipulative way) cross-linguistic preferences in the domain of grammatical relations and elsewhere
  - In principle, the RRG has the necessary tools in the forms of Hierarchies (such as AUH), or constraint hierarchies (combining Optimality Theory and RRG; Nakamura 1998),
  - But more work (both in RRG and typology) needs to be done to achieve fuller integration of the theory and typological research

Introductory: structure of the presentation

- In my talk I will address the question of how typological preferences can be captured
- My prime example is the discussion of PSA and subject; in particular how to capture alignment preferences
- In the second part I will discuss – more cursory - a number of other domains to show what advantages and possibly challenges brings addressing them in an RRG setting:
  - Microroles and role clustering
  - Transitivity hierarchies
  - Operator projection and transcategorial operations
  - Verb types in interaction with aspect
  - Interclausal relations hierarchy

Subject, PSA and alignment hierarchies

- RRG highlighted cross-linguistic (and intralinguistic) variation in the choice of PSA for particular constructions, but also variation among languages with regard to the PSA type (semantically determined vs. variable and pragmatically determined)
- In my previous work (Malchukov 2014), I addressed a related question:
- Given this cross-linguistic variation, are there any universal preferences of certain constructions for certain alignment patterns (e.g., accusative vs. ergative)?
  - Preferences in coding: case > agreement (→ accusative alignment)
- Can this approach be extended to syntactic constructions (control properties, reflexives, coordination, etc) for certain alignment patterns?

Alignment hierarchies: previous proposals

- Croft's (2001; cf. Kazenin 1994) Subject construction hierarchy:

Case > Agreement > Relativization > Control > Conjunction reduction

subject (S/A) preference

- Sometimes conceived as universal preferences; cf. Dixon (1994) and Manning (1996) on universal preference for the accusative alignment of imperatives and control constructions.
- Yet such generalizations have been plagued by availability of counterexamples, which challenge their validity (cf. Bickel 2011).

Problematic cases

- Thus, control constructions in Belhare operate on an ergative basis (the controllee must bear the {S,O}-relation).

Belhare (Bickel 2011)

a. *khoŋ-ma nui-ka*
play-INF may.NPST-2
'You may play.'

b. *lu-ma nui-ka*
tell-INF may.NPST-2s
'(They/someone) may tell you.', not *'You may tell someone.'

- This goes against the general tendency for control constructions to target the subject NPs (A,S)

Accounting for alignment patterns

- My approach (Malchukov 2014; cf. Malchukov 2008):
- A competing motivations approach (Du Bois 1985; Haiman 1985; Croft 1990),
- It is compatible with the functional Optimality Theoretic approaches (e.g., Aissen & Bresnan 2002).
  - OT approach to cross-linguistic variation has been pioneered in RRG setting by Nakamura (1998)
- Account for both recurrent patterns and exceptions through interaction of different factors (functional constraints).

Accounting for alignment patterns

- **Functional constraints**
- **Harmony:** syntactic behavior follows coding
  - Basically driven by analogy
- **Bias**: syntactic behavior is determined by functional (semantic and pragmatic) properties of the construction in question
  - NB on the competing motivations approach: these two factors may either strengthen each other (converge on the same pattern) or conflict.
  - In the former case, the pattern would be more consistent cross-linguistically, in the latter case, more cross-linguistic variation.

Example 1: Alignment of imperatives

- Imperatives are known to show a general preference for accusative (or active) alignment to the dispreference of ergative alignment (Dixon 1994).
- Imperatives have an accusative Bias
  - This Bias is determined by the semantics of the construction: addressee must be A/S argument
- Expectedly, in accusative languages, imperative formation treats A/S alike
  - e.g., both NPs omitted
  - also A/S-agreement may be omitted (e.g., in Ainu)

Ergative imperatives: Bias

- Ergative languages show more variation in that respect:
  - some languages (like Dyirbal and Yidiny; Dixon 1994) treat A and S alike insofar as 2nd person S/A addressees are deleted (an accusative behaviour)
- This is evidence for accusative Bias
- Evidence for accusative Bias also from languages with mixed alignment:
  - in Ket, only conjugation classes with accusative-style agreement have regular imperative forms (Nefedov, p.c.).

Ergative imperatives: Harmony

- other languages (e.g., some Daghestanian languages like Khvarshi; Khalilova 2009), retain the ergative pattern both in case (insofar as addressee is overt) and agreement:
- Khvarshi (Khalilova 2009)

a. Mižo m-ok'-o
2.PL.ABS pl-go-imp
'You (plural) go!'

b. Miže l-i-yo
2pl.erg iv-do-imp
'You do (it)!'

Ergative imperatives: blocking

- Still other languages restrict imperatives to S arguments; with transitive imperatives the verb is detransitivized

Kuikúro (Franchetto 1990: 414)

a. Kagá egé-la kupehé-ni

fish eat-pnct 1inc.erg-pl

'We all eat fish.'

b. *E-g-egé-ke kagá*.

2abs-detr-eat-imp fish

'Eat fish!'

Predicting imperative alignment

Imperatives in accusative languages

alignment	Bias	Harmony
☞ **S = A**		
S = P	*	*

In accusative languages, imperatives consistently follow the accusative pattern irrespective of the strength of the two constraints

Predicting imperative alignment

Imperatives in ergative languages: more variation, outcome depending on the strength of the two constraints

alignment	**Bias**	**Harmony**
(☞) S = A		*
(☞) S = P	*	

- **Bias >> Harmony → accusative alignment (Dyirbal)**
- **Harmony >> Bias → ergative alignment (Khwarshi)**
- **Or a compromise: resulting in blocking of transitive imperatives (Kuikúro)**

Other preferences in the monotransitive domain

- Other constructions may equally display Biases, as noted in the typological literature (Comrie 1978, 1989; Croft 1990; Dixon 1979, 1994; Givon 1990; Kibrik 1985; Lazard 1994; Moravcsik 1978; Plank 1979, 1985; Van Valin 1990)

Accusative Bias	**Ergative Bias**
imperatives	nominalization
control constructions	resultatives
reflexives	verbal plurality
switch reference	depictives
…	…

Accusative Bias: Control constructions

- As with imperatives, control constructions these constructions are unproblematic in accusative language, but show less consistency in ergative languages:
- **control constructions** in ergative languages
  - either accusative ({S,A} controllee): as in Tongan (cf. Anderson 1976; Croft 1990):
    - Bias >> Harmony
  - or ergative ({S,P} controllee), as in Belhare (Bickel 2011)
    - Harmony >> Bias

Control constructions

- or the controllee is restricted to S arguments:

Yucatec Mayan (Verhoeven 2005 cited in Bickel 2011)

a. *n=k'áat bin Cancun.*
   1sA-wish go C.
   'I want to go to Cancun'

- With an A-controlee a finite form should be used instead:

b. *in=k'áat in=kan Màaya.*
   1sA-wish 1sA-learn[-3sO] M.
   'I want to learn Maya.'

- **Thus blocking as a result of constraint conflict: neither A nor P can be a controllee**

Control constructions in ergative languages

Possible alignments:

- A/S controllee (Tongan), due to Bias
- S/P controllee (Belhare), due to Harmony
- neither A nor P can be a controllee (Yucatec Mayan)
- both A and P can be a controllee, as in Tindi (Daghestanian)
- Tindi (Van Valin 2001: 58 citing Kibrik 1985)

(a) WaCi wo?o, jaCi haawo
brother.ABS came sister.ABS saw
'Brother came and saw sister' (omitted NP = subject)

(b) WaCi wo?o, jaĊi buRo
brother.ABS came sister.ERG hit
'Brother came and sister hit (him)' (omitted NP = direct object)

- The two latter options (neither A and P, or both A and P are controlees) can be seen as a compromise in resolving a conflict between the accusative Bias and the ergative alignment.

Ditransitive alignment: basic patterns

- The same question about alignment preferences can be asked about **ditransitive alignment**
- Basic alignment types of ditransitive constructions (Malchukov, Haspelmath, Comrie 2010; cf. Haspelmath 2005; Dryer 1986), in terms of encoding of T (Theme) and R (Recipient) with respect to monotransitive P (Patient)
- indirect object/indirective alignment (T = P ≠ R); cf. German

Ich gab ihm ein Buch 'I (nom) gave him (dat) a book'

- neutral alignment (T = P = R); cf. English *I gave John a book*

- primary object construction/secundative alignment (T ≠ P = R);

Eskimo (West Greenlandic; Fortescue 1984: 88)

(Uuma) Niisi aningaasa-nik tuni-vaa

(that.ERG) Niisi money-INSTR.PL give-IND.3s->3s

'(He) gave Nisi money'

Ditransitive alignment in syntax

- Is it possible to predict ditransitive alignment (indirective vs secundative) for different constructions?
- As in the monotransitive domain, the ditransitive alignment is determined by interaction of Harmony and Bias constraints (Malchukov, Haspelmath, Comrie 2010)

Indirective Bias (T=P)	Secundative Bias (R=P)
incorporation	reciprocalization
nominalization	passivization
antipassivization	inversion
…	…

- As for monotransitive domain: if Harmony and Bias constraints conspire (converge on the same pattern), more cross linguistic consistency
- If Harmony and Bias constraints conflict, more variation (see Malchukov, Haspelmath, Comrie 2010 for illustration)

Ditransitive alignment: Bias vs. Harmony in antipassives

- Antipassive constructions have indirective Bias (that is, T=P are deleted/demoted)
- Languages with indirective alignment regularly delete/demote T in antipassives (if available)
- Languages with secundative alignment show variation w.r.t. formation of antipassives
  - For example, in West Greenlandic (Eskimo), Indirective Bias overrides secundative alignment: T (not R) is deleted in an antipassive construction:

West Greenlandic (Fortescue 1984: 267)

Uni-si-vuq.

give-ANTIP-IND.3SG

'(He) gave things.' (not: 'He gave (to) people.')

- In some other languages with secundative alignment, Harmony overrides indirective Bias: In Chamorro (Cooreman 1987) antipassivization of R arguments is possible

Conclusions: Resolution of alignment conflicts

- In case of a conflict between two factors/ constraints (Harmony; Bias), possible outcomes:
- Asymmetric patterns: The stronger factor "wins" (straightforwardly captured by an OT approach: 'strict domination')
  - Bias >> Harmony
  - Harmony >> Bias
- Symmetric patterns, as a result of more complex interaction:
  - Blocking: neither pattern is possible
    - Neither A or P can be a controllee in a control construction (Mayan)
  - Variation: both patterns possible:
    - Control in Tindi: either A or P can be a controllee

Subject and PSA: interim conclusions

- RRG demonstrated variation among languages and constructions in the choice of PSA, as well as variation in the type of PSA (semantically vs. pragmatically based PSA)
- Is there a universal ranking of constructions with regard to these properties?
- There are indeed preferences, captured by Bias constraints;
  - In some cases these Biases can be related to Actorhood
  - In other cases to topicality (Van Valin 2005 mentions topic chains/conjunction reduction as an example)
  - So it is not clear that these Biases can be ranked on a 1-dimensional hierarchy like Croft's
  - But these two factors (agentivity and topicality) are not independent (which complicates the issue of measuring their significance)
- On the other hand, Harmony constraints on PSA choice can be captured in RRG by '**Case Sensitivity**' parameter (Van Valin 2005: 112; Bickel 2003)

Other patterns I: Microroles, role clusters and semantic maps

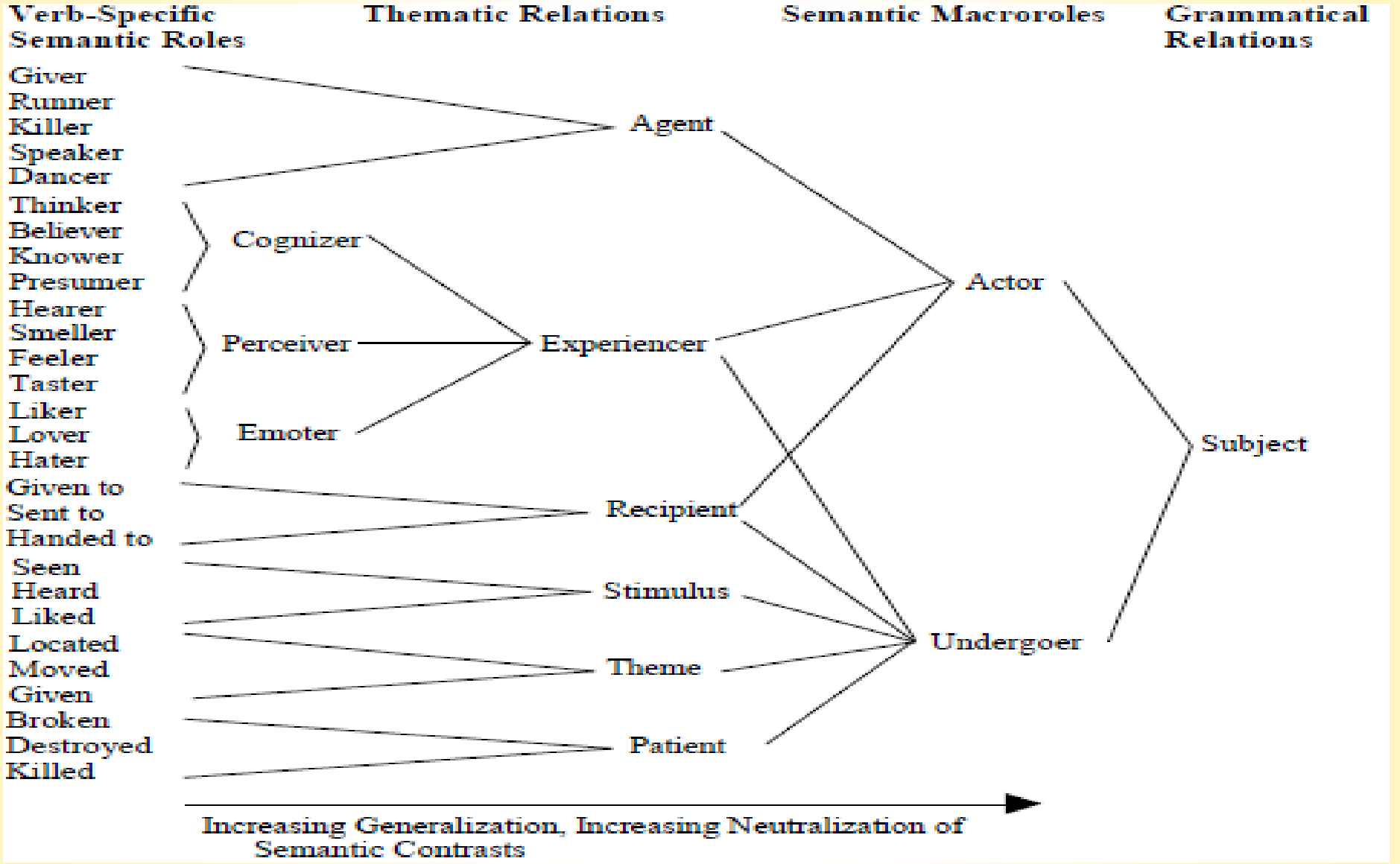
- In what follows I address some other typological patterns and how these can be captured in RRG
- My first two examples are related to the recent Leipzig Valency Classes Project

https://www.eva.mpg.de/lingua/valency/index.php

- Goals of the Leipzig Valency Classes Project:
  - Systematic cross-linguistic investigation of valency patterns in 30 languages, based on the Leipzig Valency Questionnaire
- Main results of the Leipzig Valency Classes Project
  - Edited volume "Valency Classes: a comparative Handbook" (Malchukov & Comrie eds. 2015)
  - Online database ValPaL (Hartmann, Haspelmath & Taylor eds. 2013) with contributions on individual languages based on the Database Questionnaire;

  http://www.valpal.info/

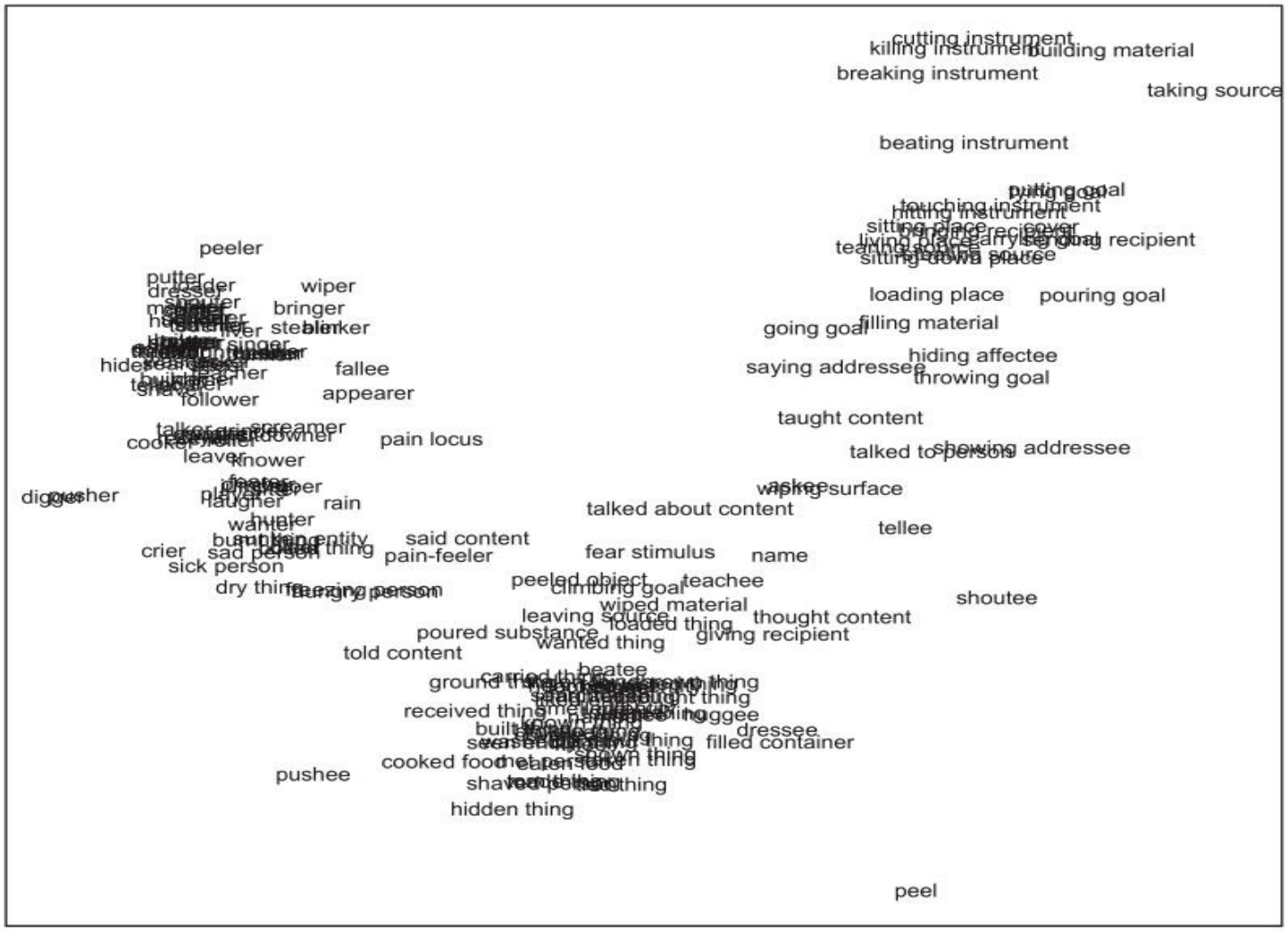
Role neutralization: RRG perspective



Role neutralization in ValPAL: empirical take

- In ValPAL (Hartmann, Haspelmath & Cysouw) we also started from a toy lexicon of 80 verb meaning, and microroles („verb-specific roles" in RRG) associated with them
- Consistent coding of microrole marking (through case, adposition, or through head-marking) enables to statistically assess clustering of individual microroles
- This clustering is performed through the use of Multidimensiional Scaling (MDS) in the graph below (from Hartmann et al 2014).
- Three fairly distinct micro-role clusters emerged: more actor-like roles, more patient-like roles & instrument/location-like roles.

Role clustering: MDS plot
(from Hartmann et al. 2014)

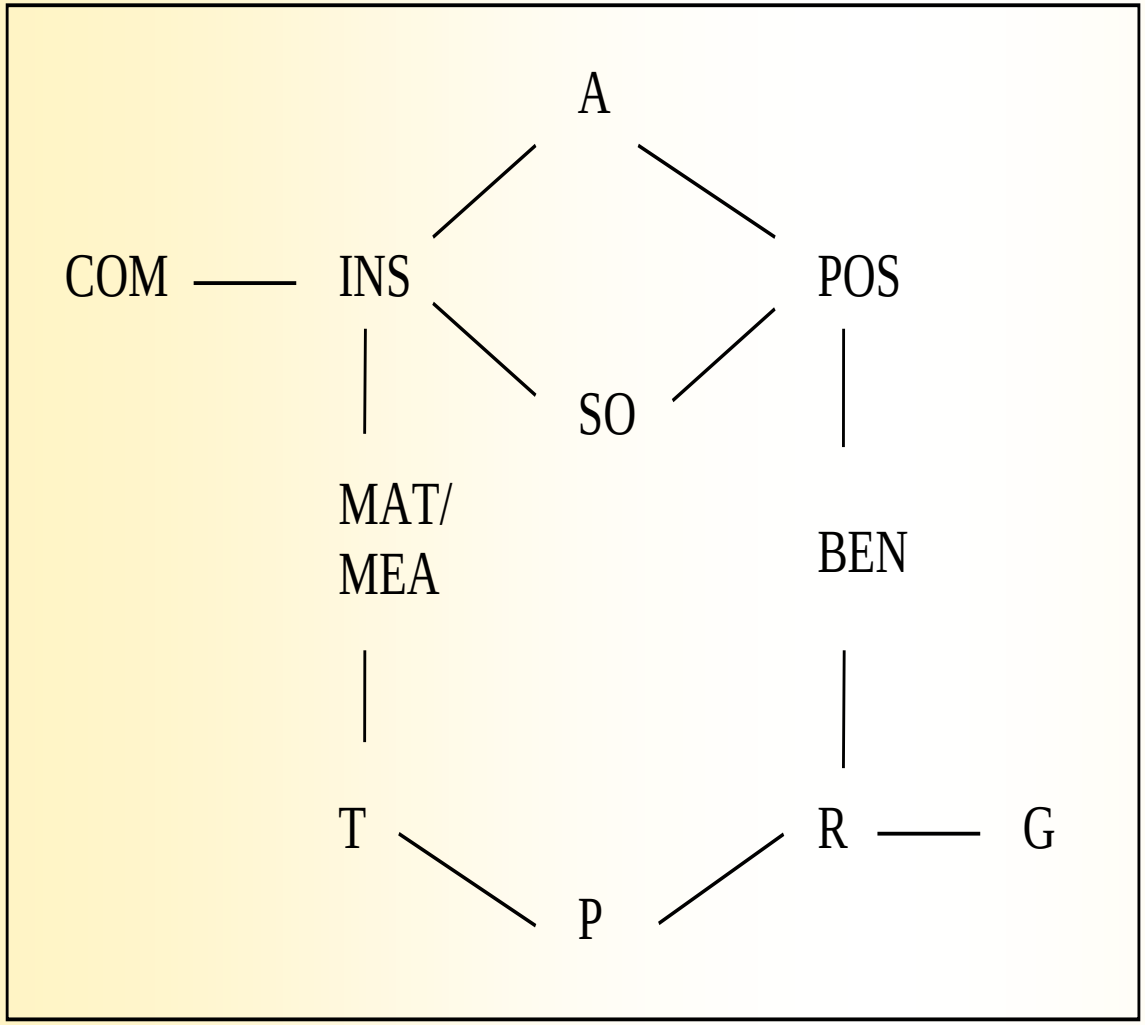


First two dimensions of a multidimensional scaling of the weighted average met-
e 181 microroles, showing clear semantic separation into meso- or macroroles

Semantic maps

- Clustering techinques like MDS, can be seen as a statistical implementation of the idea of a semantic maps, used to constraint and describe possible polysemy patterns in typology (Croft 2001; Haspelmath 2003; Cysouw, Haspelmath & Malchukov 2010)
- Semantic maps represent semantically related categories as adjacent (and connected) nodes in the space
- On iconicity assumption it is assumed that identical marking will reflect similarity, that is individual categories (case-markers on ther map below) will be extended contiguously in the semantic space
- The following map (from Malchukov & Narrog 2009) shows the semantic space for non-locative case functions

Semantic map for case functions (Malchukov & Narrog 2009)



Non-spatial roles:

A agent
INS instrument
SO source
POS possessor
Mat material
COM comitative
MEA means
BEN benefactive
T ditransitive theme
R recipient
P (monotransitive) patient
G goal

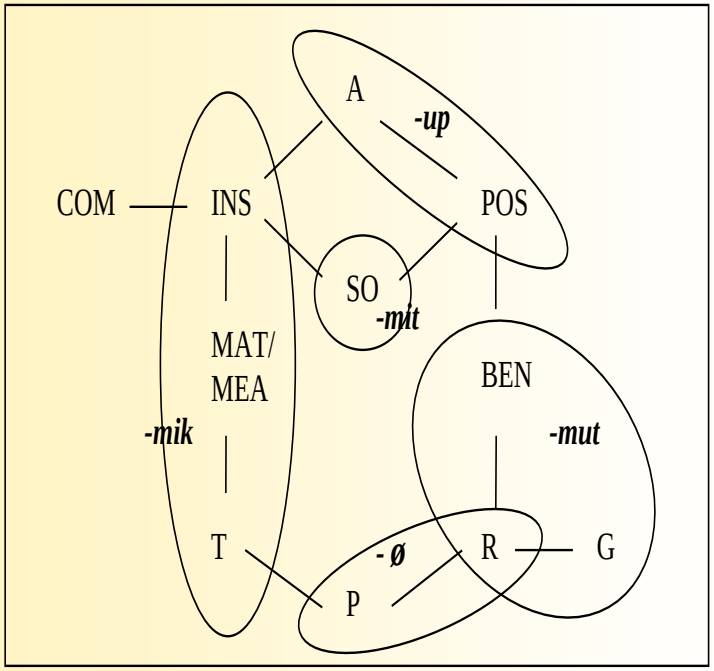
Semantic map for case functions

- This map has semantic plausibility:
  - Agents and Possessors are controlling entities;
  - Agents, Possessors, Beneficiaries and Recipients are typically animate (sentient);
  - Patients and Themes are affected entities;
  - Agents and Instruments are instigating entities;
  - Instruments, Means and Themes are moving entities;
  - Material, Themes and Patients share the feature of incrementality.
- It also has empirical support (see Malchukov & Narrog 2009 for references, in particular to other contributions to *Handbook of Case* dealing with individual cases)

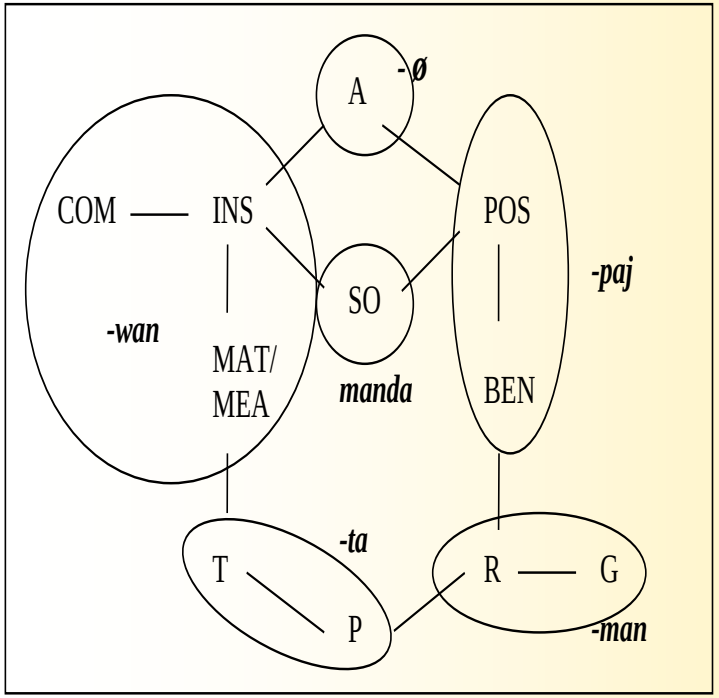
Semantic map for case functions

It can be used to represent meaning extensions of cases in individual languages (Malchukov & Narrog 2008)

Case system of Eskimo

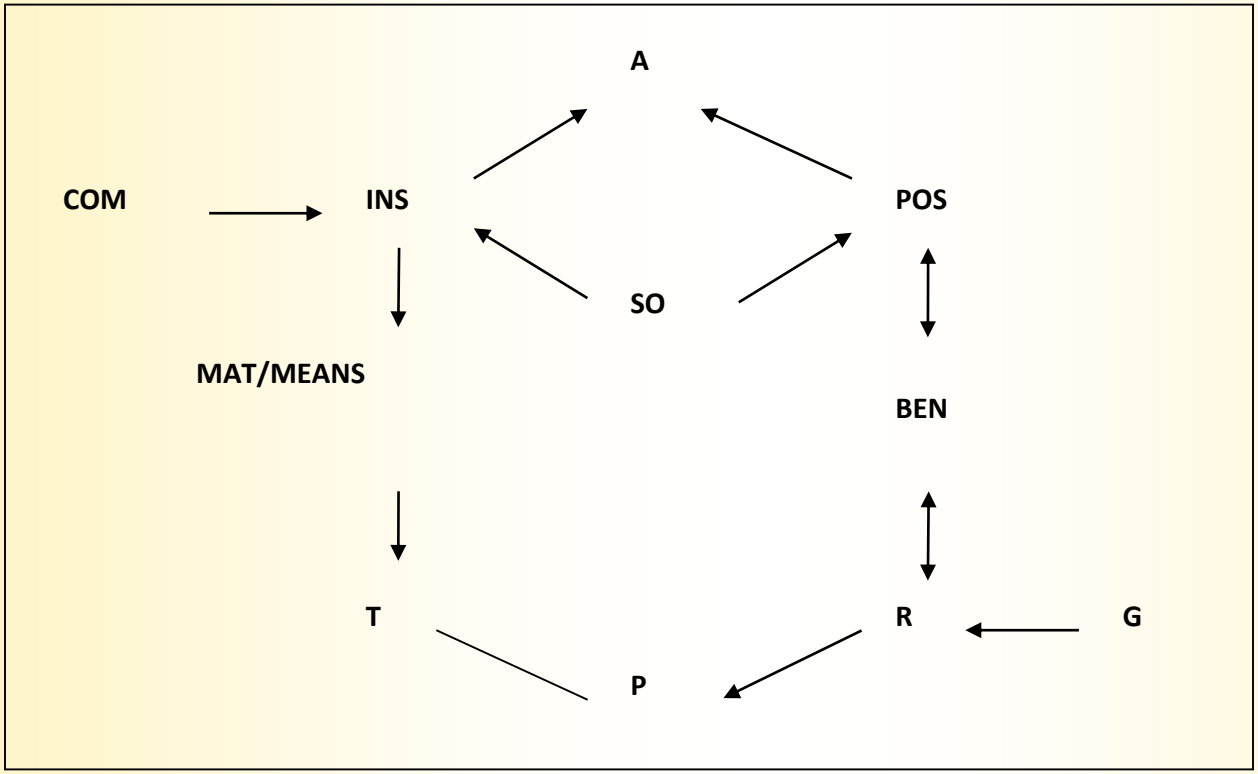


Case system of Quechua



Semantic map for case functions

- It can be given diachronic interpretation (directions of meaning extensions indicated by arrows)



Diachonic dimension also explains contiguity requirements on semantic maps („no gaps"), as meaning extension proceed gradually via related functions

Semantic maps and RRG

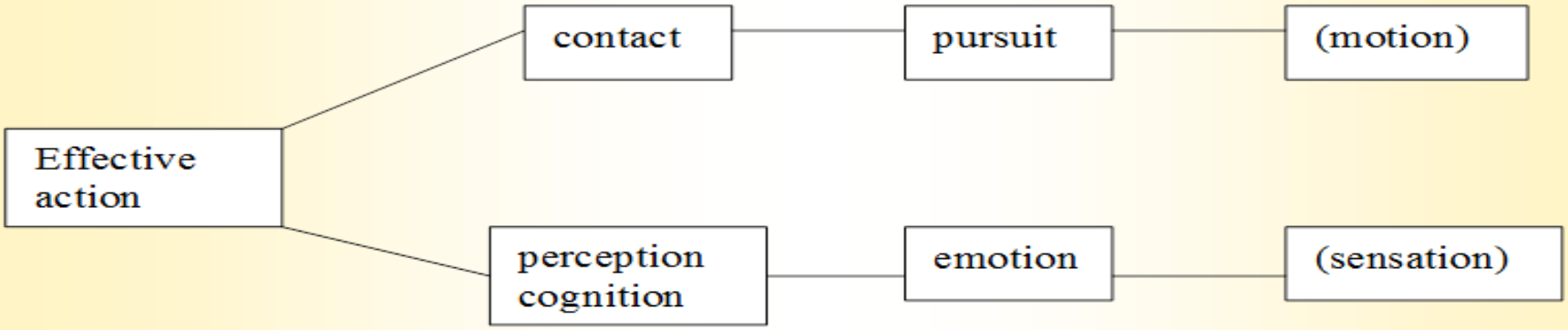
- Clearly RRG with its clustering/neutralization approach opened new non-aprioristic way of approaching the study of argument structure
- These studies should be further pursued empirically (extending studies of Hartmann, Haspelmath & Cysouw 2014, and Bickel et al. 2014)
- It should be followed-up conceptually to see which features (discussed in connection to the case map) have typological significance
- It has to be explored further in a RRG setting, since neutralization of roles in RRG in the initial representation is based exclusively on subsumption relations (seer is a kind of perceiver, perceiver is a kind of experiencer, etc)
  - Some other features contributing to macrorole definitions could be „visible" in the Logical Structure (volitionality as DO operator, instigator as CAUSE, etc)
  - Certain other roles assumed in RRG can be integrated by zooming in on particular fragments of the map (thus, Agent-Instrumental link can be represented as Agent-Effector-Instrument-Implement link on maps of greater granularity)

Other patterns II: Transitivity hierarchies

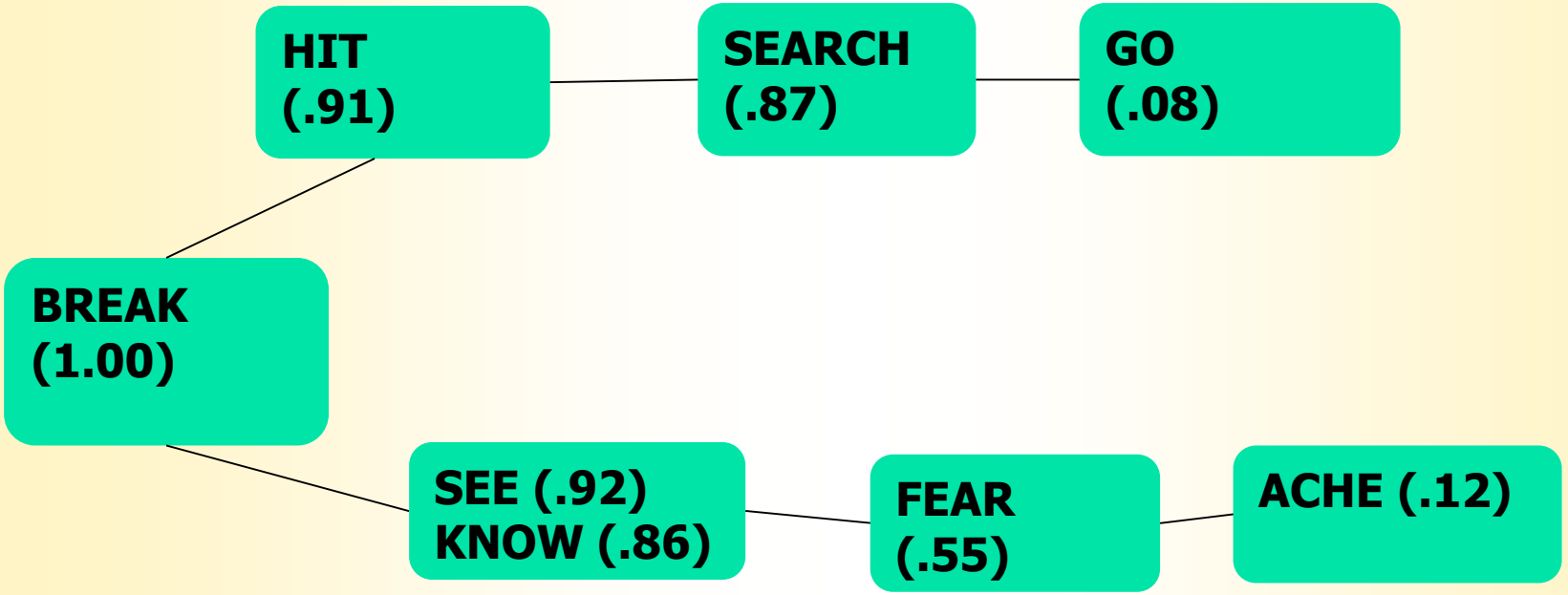
- **Similar issues pertain to Transitivity Hierarchies**
  - Measuring similarities between verbs involves measuring simalarities in coding of multiple (here two) microroles.
- **Tsunoda's (1981) Transitivity Hierarchy**

Effective action>> Perception >> Pursuit >>Knowledge >>Feeling >> Relation

- **Malchukov's (2005) semantic map for two-argument events**
  - The Transitive-Motion route (decrease in affectedness)
  - The Transitive - Psych-verbs route additionally decrease in agentivity



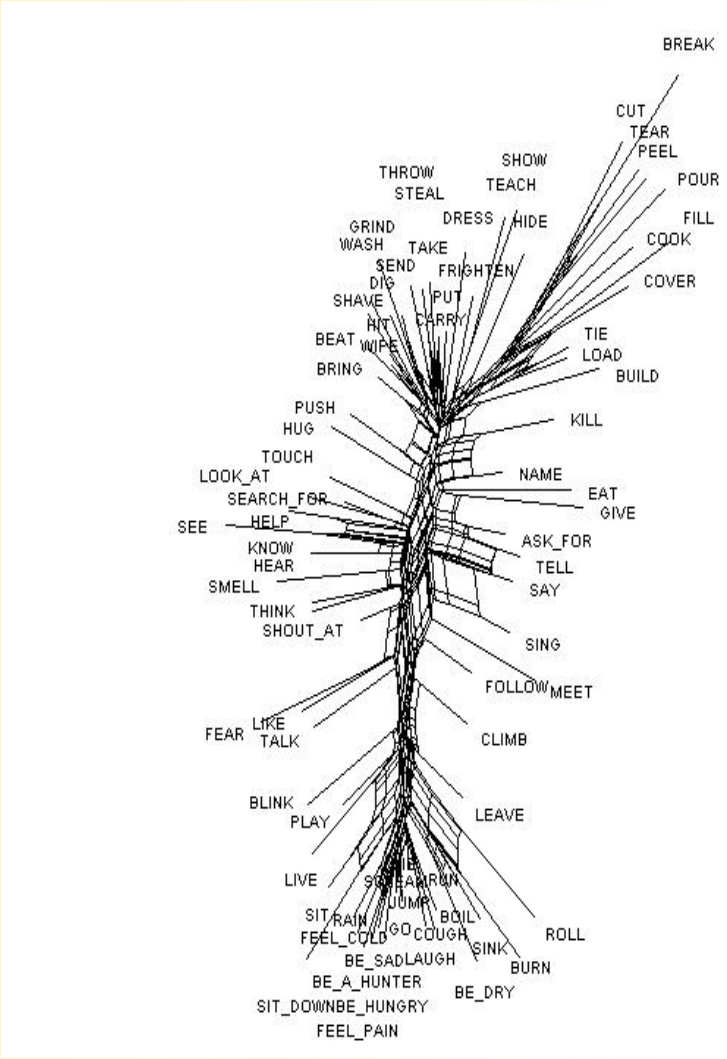
Transitivity hierarchies in ValPAL



- The following numbers (from Haspelmath 2015) indicate percentages of a transitive coding for the selection of verbs from ValPAL; the numbers show a steady decrease in transitivity, as predicted in the previous literature (Tsunoda 1981; Malchukov 2005)

Hierarchies for alternations

- Similar hierarchies can be established for alternations, including voice alternations (Wichmann 2015)



Here a NeighbourNet plot for Subject demoting/deleting alternations (passives and the like) (Wichmann 2015)

Hierarchies for alternations: passives

- Hierarchy (Guttmann–Scale) for Subject-demoting/deleting (Wichmann 2015)

- CUT > BREAK, TEAR, POUR > FILL > PEEL > COVER, BUILD > COOK, TAKE > HIDE, LOAD > SHOW > TIE > WASH, KILL, SHAVE, SEND > THROW > GRIND, BEAT, TEACH > CARRY, PUT > DRESS, FRIGHTEN, WIPE > STEAL, GIVE > HIT, HUG > EAT > BRING > LOOK AT, PUSH, TELL > DIG, ASK FOR > SEE, NAME, THINK > SMELL > HELP, SAY, TOUCH, SING > BLINK > SEARCH FOR, BURN > KNOW > HEAR, SHOUT AT, CLIMB, LIVE > LIKE > MEET, FEAR, ROLL, TALK > FOLLOW, SIT > SIT DOWN > LEAVE, PLAY > RUN, COUGH, SINK, JUMP, FEEL COLD > BE DRY, LAUGH, BE HUNGRY > FEEL PAIN > DIE, BOIL > GO > BE SAD > SCREAM > RAIN, BE A HUNTER.

- Semantic transitives (the Effective Action verbs of Tsunoda 1985 = **M-transitives**) tend to occur towards the top of hierarchy, followed by two argument verbs, which do not conform to the transitivity prototype (**M-intransitives**), and monovalent verbs cluster at the bottom of the hierarchy
- The hierarchy shows also the effect of the verb's actionality, since accomplishments rank on balance higher than activities on the hierarchy

Transitivity Hierarchies and RRG

- Transitivity hierarchies are related to the notion of M-Transitivity
  - Tsunoda‘s initial one-dimensional hierarchy can be conceived as stretching from M-transitives to M-intransitives,
  - Malchukov‘s two-dimensional hierarchy as stretching from M-transitives to A-based M-intransitives (from ‚break‘ to ‚go‘), on the one hand, and to U-based M-intransitives (from ‚break‘ to ‚ache‘), on the other hand
- Also alternations can be sensitive to (and diagnostic of) Macroroles (cf. passive test for Undergoers);
  - Subject-demoting alternations (and also Object demoting/deleting alternations – not shown here) support the approach of RRG (Van Valin 2005 et passim), which assumes that activity verbs are intrinsically intransitive (that is, do not select for an Undergoer argument), hence not eligible for passive or antipassive construction.

Other patterns III: Mixed categories and operator hierarchies

Operators and their scopes in RRG

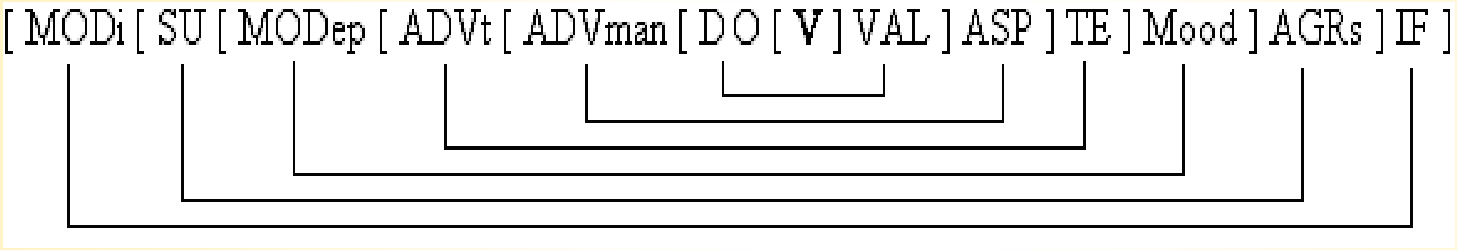
Nuclear Operators:	Aspect
	Negation
	Directionals (only those modifying orientation of action or event without reference to participants)
Core Operators:	Directionals (only those expressing the orientation or motion of one participant with reference to another participant or to the speaker)
	Event quantification
	Modality (root modals: e.g. ability, permission, obligation)
	Internal (narrow scope) negation
Clausal operators:	Status (epistemic modals, external negation)
	Tense
	Evidentials
	Illocutionary Force

The ordering (scope) of operators has been motivated by typological evidence; the preferred order of affixes (Foley & Van Valin 1984; Bybee 1985)

Mixed categories and Operator hierarchies

Somewhat similar structure – inspired by RRG (VVL 1997) and Functional Grammar (Dik 1997) is assumed in Malchukov (2004; 2006)

Figure 1. Hierarchy of verbal categories



In Malchukov (2006) I used the layered clause structure and operator hierarchies to constrain transcategorial operations such as nominalization

Operator hierarchies and nominalization clines

- Categories belonging to external layers are more readily affected (i.e. acquired/lost) by transcategorial operations such as nominalization as compared to internal categories.
  - This has a functional motivation: outermost operators reflect the syntactic/pragmatic function of a given lexical item more directly

5. The cline of deverbalization

[[[[[[[[V]VAL]Voice]ASP]Tense]Mood]AGR] IF

1) ----------
2) ----------
3) ----------
4) ----------
5) ----------
6) ----------
7) ---

Deverbalization cline

- Nama **(*IF)**

(5) Nama (Hagman 1973: 235)

Tiíta ***ke*** *//nãatí kè ≠'aj hãa 'ií*

I DC this.way PST think PST.PFV

'I had thought that way.'

(6) *Tiíta //nãatí kè ≠'aj hãa 'ií-s*

I this.way PST think PST.PFV-NZR

'my thinking/that I had thought that way.'

- Even **(*AGR/IF)**

(7) *Hin nakat-u ma-cha-vu-s dolda-ri-v*

your bear-ACC kill-PAST.PART-ACC-2SG.POS learn-PAST-1SG

'I heard that you killed the bear' (lit. your killing the bear)

Deverbalization cline

- (8) Korean (Sohn 1994: 55) **(*Mood/AGR/IF)**

  Na-nun apeci-ka o-si-ess-um-ul al-ass-ta

  I-TOP father-NOM come-SH-PST-NZR-ACC know-PST-DC

  'I knew that father came'

- (9) Eskimo (Fortescue 1984: 45) **(*Tense/Mood/AGR/IF)**

  Umiarsu-up qassi-nut tikin-ni-ssa-a nalunngil-ara

  ship-REL how.many-ALL arrive-NZR-NOM.FUT-its know-IND.1s->3

  'I know when the ship will arrive'.

- (10) Abkhaz (Hewitt 1979: 84) **(*TAM/AGR/IF)**

  A-ç-š-rà ø-yə-taxə-wp'

  the-self-kill-NZR it-he-want-STAT

  'He wants to kill himself.'

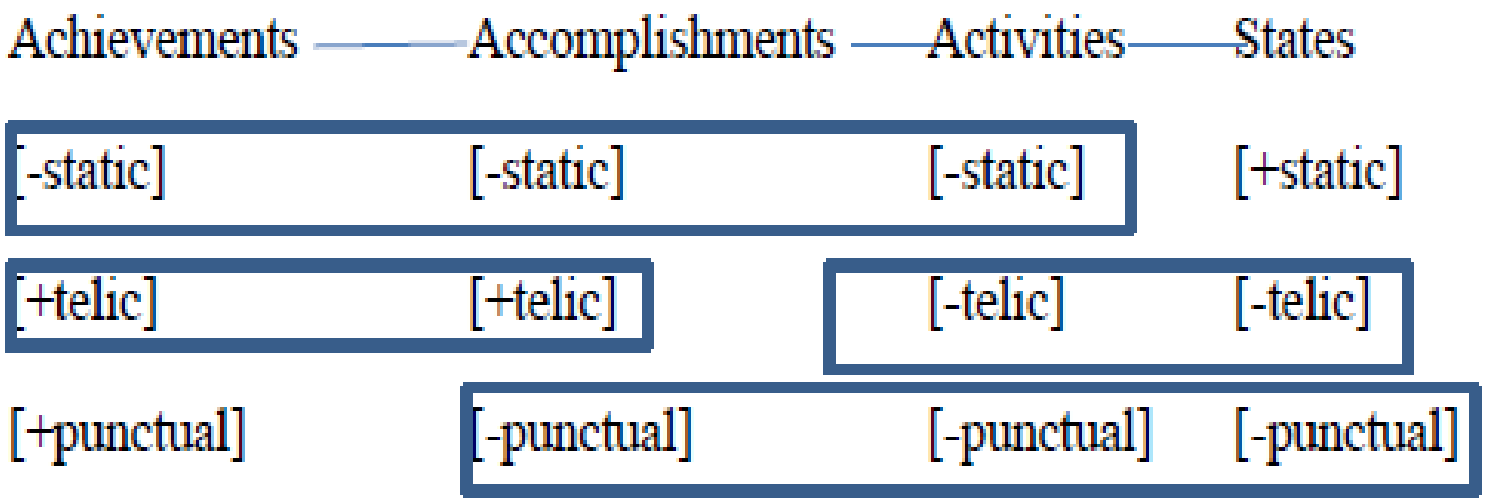
Mixed categories and operator hierarchies

- Thus, RRG provides a ready framework for constraining typology of transcategorial operations
  - Can be extended to the order of nominal categories acquired
  - And to transcategorial operations other than nominalizations
- Potential challenges:
  - Assumes more granularity than tri-partite distinction in terms of levels (clause vs. core vs. nucleus)
  - One needs extra mechanism to capture subject/object asymmetries in nominalizations (POS-ACC nominalizations) without appeal to the notion of subject.
  - In Malchukov (2006) it is proposed to deal with in terms of information structure (i.e. preference for possessive coding of topical arguments)
    - T-hierarchy: Top > Focus
    - M-hierarchy (cf. Nunes 1993): U > A

Other patterns IV: verb classes and operator interaction

- A representation of verb classes (simplified after Van Valin 2005)
- The boxed regions indicate intersectiion of features between individual verb classes
- Intersecting features support the view of verb classes as a hierarchy or semantic map supported by overlapping features

Figure 3. Semantic map for actionality types



Verb types and aspectual marking

The semantic map (hierarchy) below can be used to predict/constrain appearence of aspectual operators (Xrakovskij & Malchukov 2016)

- Perfective grams are less marked and most felicitous with perfectives, imperfective grams with states
- Conversely, infelicitous combinations imperfective with achievements, perfective with states will be either unavailable or coerce the verb class into another interpretation (imperfective achievements coerced into iteratives, perfective states into inchoatives)

Figure 2. Actionality markedness scale for aspect

Achievements > Accomplishments > Activities > States

Perfective ← Imperfective →

Verb types and aspectual marking

Same preferences can be detected in interpretation (Bohnemeyer & Swift 2004), (Xrakovskij & Malchukov 2016)
If a perfective interpretation is available for a less natural combination (e,g, perfective of activities, it will be found with more natural, perfectives of achievements)

Figure 3. Default perfective and actionality classes in 3 languages

Legend:

default perfective in Inuktikut: .....

default perfective in Even: - - - - - -

default perfective in Evenki: ———

Illustrated for Even (Tungusic):

(a) *nulge-re-n*
nomadize-AOR-3SG
‚he nomadizes'

(b) *em-re-n*
arrive-AOR-3SG
‚he just arrived'

With activities, „aorist" has a present interpretation (see (a)), with achievements and accomplishments, it refers to recent past (see (b))

Actionality: conclusions

- Certain behavior falls out from decompositional definitions of Vendlerian verbs classes in RRG
- These classes can be arranged on the semantic map/hierarchy
- the map can be used for predictions on combinability with aspectual operators
- Markedness constraints can be put to use to capture this pattern in RRG
- RRG is also capable of capturing markedness patterns both in production and interpretation (cf. Linking from semantics to syntax and from syntax to semantics in RRG)
  - BUT: Semantic decompositions (definitions) of (aspectual) operators might be necessary to achieve this goal (to make the constraints non-stipulative)

Other patterns V: Interclausal relations hierarchy

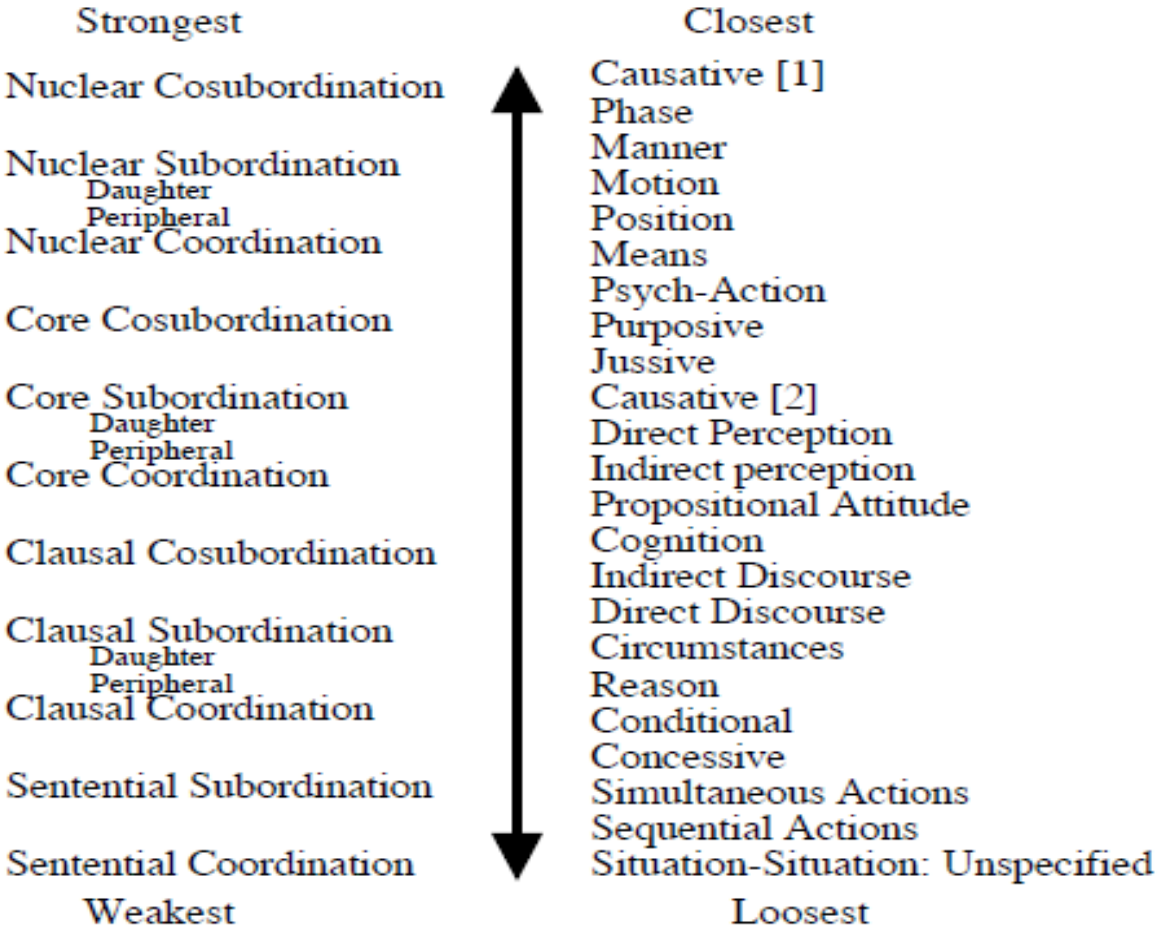


Figure 20: Interclausal relations hierarchy

Interclausal relations hierarchy

- One of the „success stories" in RRG is the Interclausal Relations Hierarchy has been established by Van Valin & Lapolla (1997: 481) and semantically motivated in Ohori (2001) and Van Valin (2005)
- It is interesting to compare it to Cristofaro's (2003) scale constraining predicting deranking (reduction) of a particular construction
- The Subordination Deranking Hierarchy (Cristofaro 2003)

Phasals, modals > Desideratives, Manipulatives, Purpose > Perception > Before, After, When > Reality condition, Reason > Knowledge, Propositional attitude, Utterence

- If a deranked verb form is used to code a dependent SoA at any point on the hierarchy, then it is used at all points to its left

Interclausal relations hierarchy

- There are certain similarities between the two hierarchies but also differences (note, in particular, higher position of temporal relations on Cristofaro's hierarchy)
- It should be clarified what is behind these similarieties and discrepancies, in particular, what is the relative contribution of juncture level (clause > core > nucleus) and the nexus type (coordination > subordination > cosubordination) in explaining the choice of construction (deranking vs. balancing)
  - It should be also clarified how morphosyntactic reflexes of the hierarchies (TAM marking lost, AGR-marking lost) correlate with the parameters above (nexus, juncture level), as well as with more substantial dimensions behind the hierarchy (Temporal Hierarchy, Causal Hierarchy, discussed in Van Valin 2005: 211)
- Thus there is still room for further integration of RRG and language typology in this domain

General conclusions

- RRG is exceptionally well suited to capture typological variation, but also typological generalizations
- In part this is because the RRG has from the outset been informed by typological research
- Importantly though, RRG can go beyond its empirical database (for example, layered operator projection has been informed by ordering principles, but can be extended to constrain transcategorial operations)
- As conceptual tools hierarchies, constraint hierarchies, or semantic maps can be put to use
- In some cases more conceptual work in RRG needs to be done (for example, to make relation between verbs classes and aspect non-stipulative)

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