

Workshop on Cross-Linguistic Semantics of Reciprocals, Utrecht University, 7-8 Oct 2019

Reflexive and reciprocal constructions: Comparisons and explanations without true analyses

MARTIN HASPELMATH
MPI-SHH Jena & Leipzig University

I. Universals of reciprocal and reflexive constructions

Some reciprocal universals from Haspelmath (2007):

Universal 4:

Only verb-marked reciprocals allow a discontinuous reciprocal construction.

Universal 7:

The more clearly two arguments differ in prominence, the easier it is for the more prominent argument to antecede the anaphor. Less prominent arguments cannot antecede more prominent arguments.

Universal 10:

If a language has verb-marked reciprocals based on intransitive verbs, it also has verb-marked reciprocals based on transitive verbs.

Universal 16:

All languages have allelic predicates (= lexical reciprocal predicates).

Some reflexive universals from Haspelmath (2008; 2020b):

Universal I

If a language has a reflexive voice marker or a reflexive argument marker, one of its uses is for autopathic coreference (agent-patient).

Universal II

If a language uses different constructions for agent-patient coreference for different verb types, then it uses shorter coding for introverted verbs than for extroverted verbs. (König & Vezzosi 2004; Haspelmath 2008: 44)

Universal III

In all languages, the usual coding of disjoint anaphoric reference is at least as short as the usual coding of agent-patient coreference. (Haspelmath 2008: 48)

Universal IV

If an anaphoric pronoun may also be used as a demonstrative, it is always obviative in the autopathic domain.

2. The efficiency theory of asymmetric coding

(Haspelmath 2020a)

Asymmetric coding phenomena are best explained by efficiency: frequently expressed meanings are more expected than rarely expressed meanings and can thus be coded in a shorter way.

expressing autopathic events (where agent = patient)

autopathic expected:

English	<i>Pedro shaved</i> Ø.	(= 'Pedro shaved himself.')
Russian	<i>Vanja bril-sja.</i>	
	Vanya shaved-REFL	

autopathic unexpected:

English	<i>María criticized</i> herself .
Russian	<i>Maša kritikovala</i> sebja .
	Masha criticized self

expressing mutual events (or "reciprocal events";
cf. Haspelmath (2007) for *mutual* vs. *reciprocal*)

mutual expected:

English	<i>María and Pedro hugged</i> Ø.	(= 'María and Pedro hugged each other.')
Russian	<i>Maša i Vanja obnimali-s'.</i>	
	Masha and Vanya hugged-REFL	

mutual unexpected:

English	<i>María and Pedro hate</i> each other .
Russian	<i>Maša i Vanja nenavidjat</i> drug druga .
	Masha and Vanya hate other other

These contrasts seem to be general across languages, and they can be explained as a functional-adaptive response to the greater predictability of certain kinds of autopathic and mutual events.

3. Thinking about the methodology

- **explanatory level:** general explanations require cross-linguistically general phenomena
- **global perspective:** generalizations must be based on broad cross-linguistic comparison
- **measurement uniformity:** comparisons must be based on the same criteria for all languages
- **structural uniqueness:** comparisons need not be based on true analyses of particular languages

3.1. Explanatory level

Most linguists do not engage primarily in comparison, but in language-particular analysis –

parochial semantic analysis
parochial morphosyntactic analysis

In such non-comparative research, the goal of analysis/explanation is **complete description**, and sometimes more ambitious:

- cognitively real description (sometimes called “descriptive adequacy”)
- “typologically informed description” (?)
- maximally elegant description (= the same as cognitively real???)

In practice, linguists frequently focus on providing “**unified**” **analyses** of superficially disparate phenomena – which often feels insightful, regardless of one’s theoretical orientation.

Cf. Beavers & Udayana (2019), at this workshop:
“Within the larger Generative tradition there has been considerable work focusing on the syntactic unity of middles...”

Cf. Shen Yuan (2019), at this workshop:
“An attempt is made to give a unified analysis of the licensing condition for *huxiang* in the varied situations.”

But elegance may be the wrong heuristic; moreover, different speakers may have different cognitive representations.

Complete description seems the only goal of analysis/explanation that is not in doubt.

In order to make general claims about human language, we need to consider **cross-linguistically general phenomena**.

Types of general explanations of universals:

- functional-adaptive explanations (“Greenbergian”)
- biocognitive explanations (“Chomskyan”)
- mutational explanations (referring to regularities of change)
(Haspelmath 2019)

3.2. Should semantic analysis be tailored to reflect the morphological form?

cf. Piñón (2001):

“We should try to develop a [semantic] analysis that in no instance outright contradicts the surface morphology but at the same time does not always naively take the surface morphology at face value.”

cf. Koontz-Garboden (2007: 12; 35): “*Taking morphology seriously*”

“In the absence of evidence to the contrary, overt morphological derivation signals lexical semantic derivation.”

Both authors argue against a semantic analysis of anticausative markers as signaling the removal of a semantic operator, e.g.

Swahili *vunja* ‘break (tr.)’ *vunj-ika* ‘break (intr.)’

CAUSE [BECOME [broken]] > [BECOME [broken]]

The problem:

Asymmetric grammatical coding is typically due to differences in expectations, not differences in meanings. Asymmetrical coding is thus not a good guide to parochial semantic analysis.

The underlying problem:

These authors are looking for the true semantic analysis, but given their formal arsenal, there are probably several different analyses that are equally appropriate. It appears that they are not asking an answerable question.

3.3. Global perspective

a planned work that I am involved in:

Janic et al. (eds.) (2021): *Reflexive constructions worldwide*

An edited volume bringing together information on reflexive constructions from about 25-30 languages from all continents, in the spirit of Nedjalkov’s (2007) volumes on reciprocal constructions.

Of course, initial hypotheses can (and must) be based on a few languages (because no linguist can have dozens of languages in their head simultaneously), but these hypotheses are ideally **tested with data from many languages**.

4. Measurement uniformity

When testing a hypothesis, scientists generally apply the same measurement criteria to all test items.

In comparative linguistics, this means that we apply the same comparative concepts to all languages.

For example, for testing these universals:

Universal 4:

Only verb-marked reciprocals allow a discontinuous reciprocal construction.

Universal II

If a language uses different constructions for agent-patient coreference for different verb types, then it uses shorter coding for introverted verbs than for extroverted verbs.

we need **clear** and **uniform definitions** of these terms:

verb-marked reciprocal marker
discontinuous reciprocal construction
agent-patient coreference
introverted verb
extroverted verb
short coding

The literature contains many examples where this requirement is not met, e.g. the so-called “binding theory” with its term “anaphor”.

There are hundreds of papers that make claims like

- A. An anaphor is bound in its local domain. (Reinhart 1983)
- A'. A reflexive-marked predicate is reflexive. (Reinhart & Reuland 1993)

But what is an “anaphor”? What is “reflexive-marking” by a “SELF anaphor”?

Without **measurement uniformity**, we cannot test such claims, if they are meant as universal claims.

For example, are French reflexive constructions like *il se voit* ‘he sees himself’ intransitive or transitive?

Reinhart & Siloni (2005: §2.1) and Creissels (2006) say that they are intransitive, but they use French-specific criteria (e.g. behaviour in verb-subject constructions, behaviour in causative constructions). This does not respect measurement uniformity – we cannot use these criteria in all languages.

Alternative: Consider only the form of the reflexive marker
 (it occurs in the same slot as *me*, *te*, *le*, ...)

Since Chomsky (1981) and Reinhart (1983), it has often been thought that a notion of “c-command” is necessary to describe the occurrence of reflexive pronouns (and nonreflexive anaphoric pronouns) in English.

But “c-command” is based on arboreal structures, and these cannot be determined in the same way in all languages – so this does not respect measurement uniformity.

On the assumption that reflexive pronoun distribution is universally regulated by c-command asymmetry, many authors have made **claims about tree structures on the basis of reflexive pronoun distribution** (e.g. Reinhart (1983b: 81), Pesetsky (1987), Larson (1988), as discussed and criticized by Culicover & Jackendoff 2005: §2.1.3)).

Alternative: Consider syntactic-role concepts like “subject”, “object” and “oblique” (which are defined as in Haspelmath 2011a, based on semantic roles).

It has been claimed that some languages (such as Indonesian) have anaphors which are “exempt” from the “binding theory” (e.g. Cole et al. 2008). But if this is possible, then the “binding theory” would apply only to those anaphors that it applies to – and it would not make general claims at all.

The concept of measurement uniformity is hardly known in linguistics, and this basic requirement is often ignored. This is a fundamental problem throughout the discipline (cf. Haspelmath 2011b on “words”; 2016b on “serial verb construction”; 2018b on “polysynthesis”)

5. Structural uniqueness

Different languages have different categories – different semantic categories, different grammatical categories, and different constructions.

e.g. German *Uhr* ('timepiece')
English *watch* vs. *clock*

German *fahren* vs. *gehen* vs. *laufen*
English *drive* vs. *go* vs. *walk* vs. *run*

‘use bicycle’	‘use car’	‘use feet’	‘use feet fast’
————— <i>fahren</i> —————	————— <i>gehen</i> —————	————— <i>laufen</i> —————	
	————— <i>drive</i> —————	————— <i>walk</i> —————	————— <i>run</i> —————

e.g. different grammatical categories

German *sich* vs. *selbst*
English *himself*

inherent ‘turn around’	introverted ‘shave (himself)’	object ‘kill himself’	self-intensifier ‘came himself’
————— <i>sich</i> —————		————— <i>selbst</i> —————	
————— <i>himself</i> —————			

Here one might be tempted to say that each element is multiply polysemous, and that we first need to elucidate the various language-particular meanings or functions before we can engage in systematic comparison.

But this would be wrong (in the general case).

German *fahren* ‘go by wheeled vehicle’ is NOT polysemous in the following way:

1. ‘go by carriage’
2. ‘go by train’
3. ‘go by bicycle’
4. ‘go by car’
- (5. ‘go by e-scooter’, etc.)

Diagnosing polysemy vs. vagueness is often very difficult, and nobody wants to posit polysemy merely on the basis of differences in a different language.

(And of course, a lot of energy is going into “unified analyses” – this would be pointless if all forms and constructions had to have massively polysemous analyses.)

Thus:

Languages have forms/constructions with general meanings/functions that do not map onto each other.

This entails that to describe the meanings/functions, and to compare the languages, we must use different methodologies:

- language-particular **descriptive categories** for language-particular phenomena
- **comparative concepts** for comparisons (uniformly defined across languages)

The structural uniqueness of languages means that we cannot base our comparisons on their structures. This also means that we do not need “true analyses” for comparison.

This is perhaps easiest to see in semantic maps of concrete spatial adpositions, as in Levinson et al. (2003: 498):

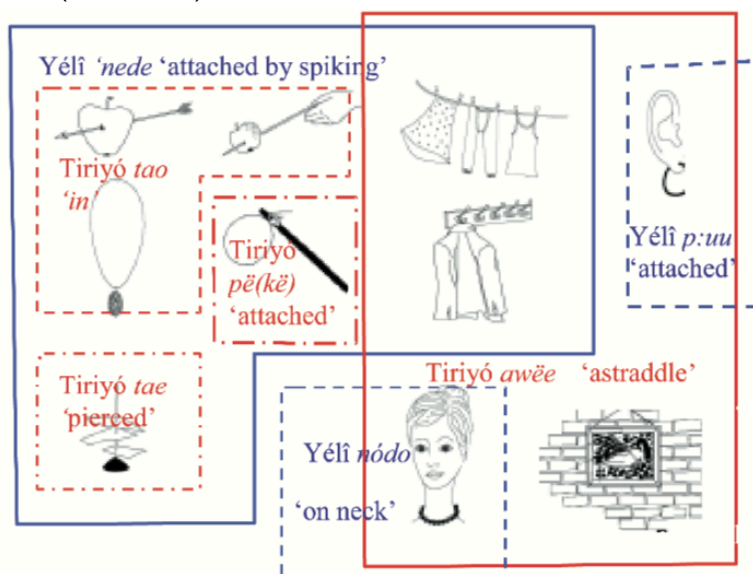


FIGURE 6. Language-specific adpositional categories.

And here is a completely analogous picture on the basis of about 200 different semantic micro-roles of 80 verb types (Hartmann et al. 2014: 473).

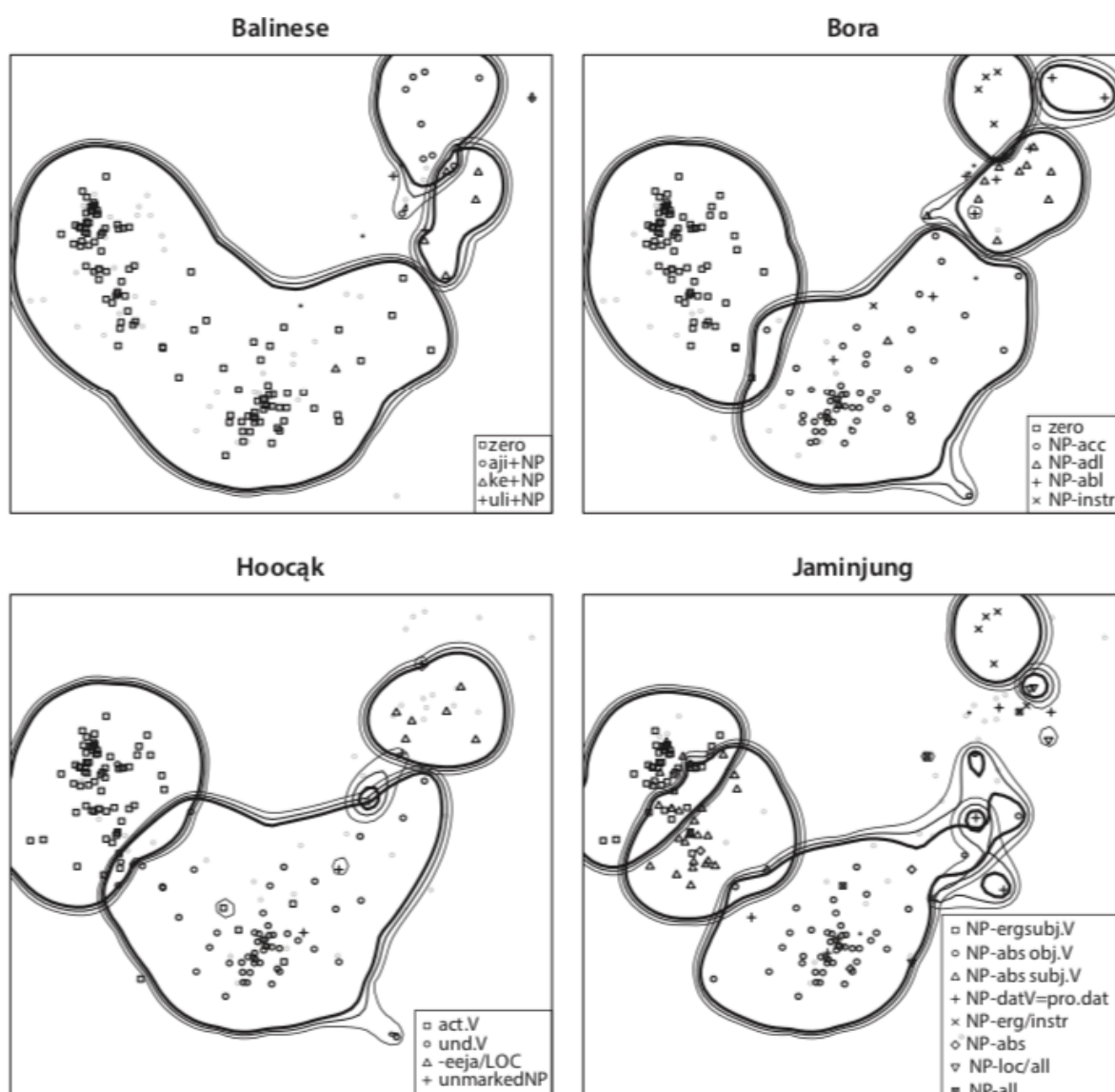


Figure 5. Four additional languages showing different distributional ranges of coding sets

Each language is different in the way it maps meanings onto forms and constructions, in a way that is historically accidental to a large extent.

We can provide general explanations only if we have cross-linguistically general patterns, and we do not need “true analyses” for these (Haspelmath 2004).

It is sufficient if we know the phenomenological facts (Haspelmath 2018a: §10).

6. More on the efficiency theory of asymmetric coding

The specific research programme is to explain coding asymmetries that are world-wide tendencies:

Table 1: Examples of universal grammatical coding asymmetries

singular	plural	(<i>book</i> – <i>book-s</i>)
present	future	(<i>go</i> – will <i>go</i>)
3 rd person	2 nd person	(Spanish <i>canta</i> – <i>canta-s</i>)
nominative	accusative	(Hungarian <i>ember</i> – <i>ember-t</i>)
affirmative	negative	(<i>go</i> – don't <i>go</i>)
allative	ablative	(<i>to</i> – from)
positive	comparative	(<i>small</i> – <i>small-er</i>)

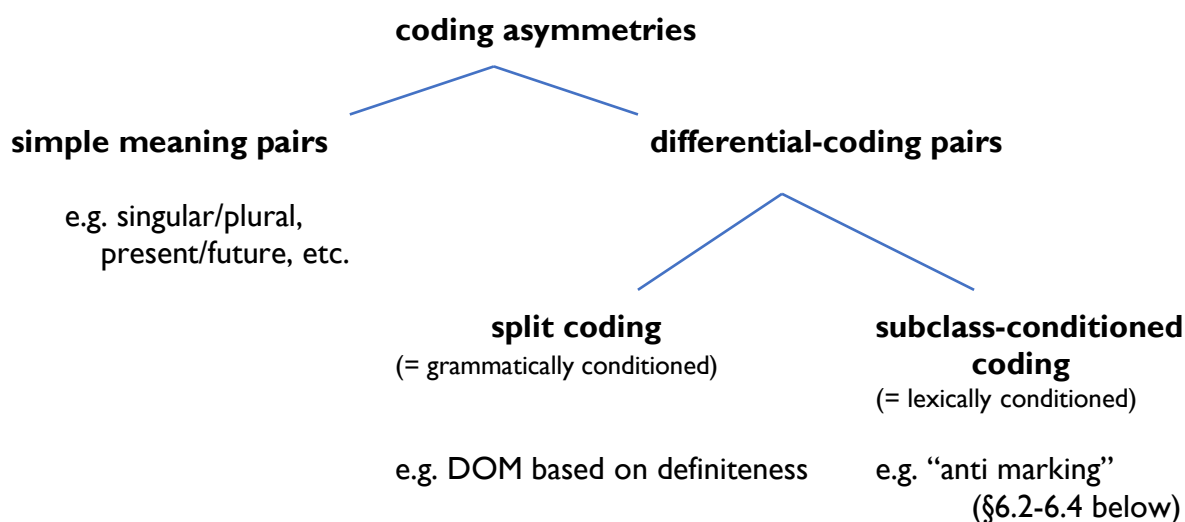
– a *coding asymmetry* is a pattern in which languages may show asymmetric or symmetric coding, but not “counter-symmetric coding” (= asymmetric in the opposite direction)

e.g.	<i>book-Ø</i>	<i>book-s</i>	(English)
	<i>knig-a</i>	<i>knig-i</i>	(Russian)
	<i>shu-Ø</i>	<i>shu-Ø</i>	(Mandarin)
but not:	* <i>book-sig</i>	* <i>book-Ø</i>	

– “world-wide tendency” means that in any representative sample, there will be evidence for the asymmetry, or at least no counterevidence

The proposal is that these tendencies can be explained by **functional adaptation** – communication is facilitated for speakers and hearers if languages show a tendency to have **shorter shapes for more predictable information**. Some meanings are conveyed more frequently, and are hence more **predictable**, so these can be conveyed with shorter coding.

6.1. Types of coding asymmetries



6.2. Causative and anticausative

(cf. Haspelmath 2016a)

subclasses:

more spontaneous events vs. less spontaneous events

Agentive verbs (and transitive verbs in general) tend to require a special marker for causal use, because it is unexpected to hear about a causal event with an agentive (or even transitive) verb as the base event. (Agentive events are very likely to occur spontaneously, without a causer.)

		noncausal		causal	
causative	Turkish	<i>koş-</i>	'run'	<i>koş-tur-</i>	'make s.o. run'
anticausative	Swahili	<i>vunj-ika</i>	'break (intr.)'	<i>vunja</i>	'break (tr.)'

By contrast, patientive verbs tend to require a special (**anticausative**) marker for noncausal use, because it is less expected to hear about a noncausal event with a patientive base event. (Such verbs are not likely to occur without a causer, i.e. spontaneously – events of spontaneous breaking are rare.)

spontaneity scale (Haspelmath 2016a: 34):

transitive ('cut') > unergative ('run') > automatic ('freeze (intr.)') > costly ('break')

6.3. Plural and antiplural

(Haspelmath & Karjus 2017)

subclasses:

individualist nouns vs. gregarious nouns

Individualist nouns tend to require a special plural marker for multiplex use, because it is unexpected to hear about a multiplex individualist thing. (Individualist thing concepts are very likely to occur as uniplexes.)

		uniplex		multiplex	
plural	English	<i>house</i>		<i>hous-es</i>	
antiplural	Welsh	<i>plent-yn</i>	'child'	<i>plant</i>	'children'

By contrast, gregarious nouns (small animals, fruits, children) tend to require a special (**antiplural**, or **singulative**) marker for uniplex use, because it is less expected to hear about a uniplex use of a gregarious noun. (Such nouns are not likely to occur as uniplexes.)

individuation scale (Grimm 2018):

individuals ('house') > aggregates ('peas') > substances ('water')

6.4. Reflexive vs. antireflexive

subclasses:

object pronouns vs. possessive pronouns

Object pronouns tend to require a special reflexive marker for coreferential use, because it is unexpected to hear that the object is coreferential with the subject. (Objects are more likely to be referentially disjoint from the subject.)

		disjoint		coreferential
reflexive	English	<i>Rita saw her</i>		<i>Rita saw her-self</i>
<u>antireflexive</u>	Finnish	<i>hänen</i> <i>ruoka-nsa</i> ‘her food’		<i>ruoka-nsa</i> ‘her _{REFL} food’

By contrast, possessive pronouns tend to be zero-coded when used coreferentially (cf. *Rita brought her-Ø food*), and sometimes require a special (**antireflexive**) form for disjoint use, because it is less expected to have a possessive pronoun with disjoint reference. (Admittedly, antireflexive marking has not been reported frequently – but linguists have not paid much attention to coreferential/disjoint use of possessive pronouns.)

reflexive domain scale (Haspelmath 2008):

direct object > possessive modifier > argument of subordinate clause

6.5. “Natural” reciprocals are verbs that are frequently used in mutual scenarios

Kemmer (1993: 102) calls verbs like ‘hug’ **naturally reciprocal**, but what is it about their meaning that makes their mutual use “natural”? (cf. also Winter 2018)

I do not know, and **it does not matter**:

Short coding (as in *María and Pedro hugged*, see above) is a consequence of expectedness/predictability, and this need not have semantically uniform causes.

6.6. Change-of-state roots and property-concept roots (Beavers et al. 2017)

Beavers et al. (2017) observe that overwhelmingly, languages use different coding types for **result states** (like ‘broken’) and **property concepts** (like ‘big’).

	state	change of state	
English:	<i>red</i>	<i>redd-en</i>	(property root)
	<i>brok-en</i>	<i>break</i>	(result root)
Tzeltal:	<i>tut</i>	<i>tut-ubtes</i>	(property root)
	<i>chijk'-em</i>	<i>chik'</i>	(result root)
Kakataibo:	<i>ani</i>	<i>ani-o</i>	(property root)
	<i>churio-kë</i>	<i>churio</i>	(result root)

The efficiency theory of asymmetric coding explains this pattern through frequency of use: With result roots ('break'), the change of state meaning is much more frequent, while with property concepts ('red'), the state meaning is more frequent.

Deviations from the frequent associations of root meaning and aspectual meaning get special coding.

7. Concluding remarks

The efficiency theory of asymmetric coding explains asymmetric coding tendencies very elegantly in a wide range of grammatical domains (Haspelmath 2020a).

It requires formulation in terms of comparative concepts to ensure uniform measurement across languages – because of the structural uniqueness of languages, parochial analyses are not directly relevant to the comparison.

It is understandable that most linguists work on individual languages, and their descriptions of the phenomena provide the basis for the comparisons. But general explanations do not come from language-particular analyses.

Much of generative grammar, in the Principles and Parameters tradition, is based on a very different view of the world – in this tradition, authors universally accept the idea that **all languages should be described/analyzed through the same analytical devices**. Instead of measurement uniformity, this tradition is built on “building block uniformity”.

This can be called the “Mendeleyevian Dream” – the hope that sooner or later, we will hit upon **the correct innate categories and features** that allow us to describe all languages, and at the same time to explain their similarities. The hope is that there will soon be something like a “periodic table of **elementary syntactic features**”.

But while we do not have those categories (with evolutionary considerations making it very unlikely that there is a smallish number of innate categories), the approach sketched here seems to be the best option for an empirical research programme.

References

- Beavers, John, Michael Everdell, Kyle Jerro, Henri Kauhanen, Andrew Koontz-Garboden, Elise LeBovidge & Stephen Nichols. 2017. Two types of states: A cross-linguistic study of change-of-state verb roots. *Proceedings of the Linguistic Society of America* 2(0). 38-1–15. doi:[10.3765/plsa.v2i0.4094](https://doi.org/10.3765/plsa.v2i0.4094).
- Chomsky, Noam A. 1981. *Lectures on government and binding*. Dordrecht: Foris.
- Cole, Peter & others 2008. A binding theory exempt anaphor. In Ekkehard König & Volker Gast (eds.), *Reciprocals and reflexives: Theoretical and typological explorations*, 577–590. Berlin: Mouton de Gruyter.
- Creissels, Denis. 2006. *Syntaxe générale: Une introduction typologique*. 2 vols. Paris: Lavoisier-Hermès science.
- Culicover, Peter W. & Ray S. Jackendoff. 2005. *Simpler Syntax*. Oxford: Oxford University Press.
- Grimm, Scott. 2018. Grammatical number and the scale of individuation. *Language* 94(3). 527–574. doi:[10.1353/lan.2018.0035](https://doi.org/10.1353/lan.2018.0035).

- Hartmann, Iren, Martin Haspelmath & Michael Cysouw. 2014. Identifying semantic role clusters and alignment types via microrole coexpression tendencies. *Studies in Language* 38(3). 463–484.
- Haspelmath, Martin. 2004. Does linguistic explanation presuppose linguistic description? *Studies in Language* 28. 554–579. doi:[10.1075/sl.28.3.06has](https://doi.org/10.1075/sl.28.3.06has).
- Haspelmath, Martin. 2007. Further remarks on reciprocal constructions. In Vladimir P. Nedjalkov (ed.), *Reciprocal constructions*, vol. 5 vols, 2087–2115. Amsterdam: John Benjamins.
- Haspelmath, Martin. 2008. A frequentist explanation of some universals of reflexive marking. *Linguistic Discovery* 6(1). 40–63. doi:[10.1349/PSI.1537-0852.A.331](https://doi.org/10.1349/PSI.1537-0852.A.331).
- Haspelmath, Martin. 2010. Comparative concepts and descriptive categories in crosslinguistic studies. *Language* 86(3). 663–687. doi:[10.1353/lan.2010.0021](https://doi.org/10.1353/lan.2010.0021).
- Haspelmath, Martin. 2011a. On S, A, P, T, and R as comparative concepts for alignment typology. *Linguistic Typology* 15(3). 535–567.
- Haspelmath, Martin. 2011b. The indeterminacy of word segmentation and the nature of morphology and syntax. *Folia Linguistica* 45(1). 31–80.
- Haspelmath, Martin. 2016a. Universals of causative and anticausative verb formation and the spontaneity scale. *Lingua Posnaniensis* 58(2). 33–63. doi:[10.1515/linpo-2016-0009](https://doi.org/10.1515/linpo-2016-0009).
- Haspelmath, Martin. 2016b. The serial verb construction: Comparative concept and cross-linguistic generalizations. *Language and Linguistics* 17(3). 291–319. doi:<http://doi.org/10.1177/2397002215626895>.
- Haspelmath, Martin. 2018a. How comparative concepts and descriptive linguistic categories are different. In Daniël Van Olmen, Tanja Mortelmans & Frank Brisard (eds.), *Aspects of linguistic variation: Studies in honor of Johan van der Auwera*, 83–113. Berlin: De Gruyter Mouton. <http://doi.org/10.5281/zenodo.570000>.
- Haspelmath, Martin. 2018b. The last word on polysynthesis: A review article. *Linguistic Typology* 22(2). 307–326. doi:[10.1515/lingty-2018-0011](https://doi.org/10.1515/lingty-2018-0011).
- Haspelmath, Martin. 2019. Can cross-linguistic regularities be explained by constraints on change? In Karsten Schmidtke-Bode, Natalia Levshina, Susanne Maria Michaelis & Ilija A. Seržant (eds.), *Competing explanations in linguistic typology*, 1–23. Berlin: Language Science Press. <http://langsci-press.org/catalog/book/220>.
- Haspelmath, Martin. 2020a. Explaining grammatical coding asymmetries: Form-frequency correspondences and predictability. to appear. <https://ling.auf.net/lingbuzz/004531>.
- Haspelmath, Martin. 2020b. Comparing reflexive constructions in the world's languages. To appear.
- Haspelmath, Martin. 2020c. Towards standardization of morphosyntactic terminology for general linguistics. vol. (to appear in an edited volume).
- Haspelmath, Martin & Andres Karjus. 2017. Explaining asymmetries in number marking: Singulatives, pluratives, and usage frequency. *Linguistics* 55(6). 1213–1235. doi:[10.1515/ling-2017-0026](https://doi.org/10.1515/ling-2017-0026).
- Kemmer, Suzanne. 1993. *The middle voice*. Amsterdam: John Benjamins.
- König, Ekkehard & Letizia Vezzosi. 2004. The role of predicate meaning in the development of reflexivity. In Walter Bisang, Nikolaus Himmelmann & Björn Wiemer (eds.), *What makes grammaticalization?: A look from its fringes and its components*. Berlin: de Gruyter.
- Koontz-Garboden, Andrew. 2007. *States, changes of state, and the monotonicity hypothesis*. Stanford: Stanford University PhD dissertation.
- Larson, Richard K. 1988. On the double object construction. *Linguistic Inquiry* 19(3). 335–391.
- Levinson, Stephen, Sérgio Meira & The Language and Cognition Group. 2003. “Natural concepts” in the spatial topological domain-adpositional meanings in crosslinguistic perspective: An exercise in semantic typology. *Language* 79(3). 485–516.
- Nedjalkov, Vladimir P. (ed.). 2007. *Reciprocal constructions. 5 vols*. Amsterdam: Benjamins.
- Pesetsky, David. 1987. Binding problems with experienter verbs. *Linguistic Inquiry* 18(1). 126–140.
- Piñón, Christopher. 2001. A finer look at the causative-inchoative alternation. *Proceedings of Semantics and Linguistic Theory*, vol. 11, 346–364.
- Reinhart, Tanya. 1983. *Anaphora and semantic interpretation*. London: Routledge.
- Reinhart, Tanya & Eric Reuland. 1993. Reflexivity. *Linguistic Inquiry* 24(4). 657–720.
- Reinhart, Tanya & Tal Sioni. 2005. The lexicon-syntax parameter: Reflexivization and other arity operations. *Linguistic Inquiry* 36(3). 389–436. doi:[10.1162/0024389054396881](https://doi.org/10.1162/0024389054396881).
- Winter, Yoad. 2018. Symmetric predicates and the semantics of reciprocal alternations. *Semantics and Pragmatics* 11. doi:[10.3765/sp.11.1](https://doi.org/10.3765/sp.11.1).