

ComPLETE project: First conference, JGU Mainz, 2022 November 14-16

# Biverbal constructions and related comparative concepts: (Retro-)definitions vs. analyses

MARTIN HASPELMATH

*Max Planck Institute for Evolutionary Anthropology (Leipzig)*

## 1. Some (retro-)definitions

Let us begin concretely, with some proposed definitions of terms.

Instead of VCP (**verb-based complex predicate**), I would propose the term *biverbal construction*, defined as follows

**Definition 1 (preliminary): Biverbal (predicate) construction**

A biverbal (predicate) construction is a monoclausal construction with a single set of argument positions and a predicate consisting of two “verb-like” forms.

→ as the predicate may consist of more than two verb-like forms, a more general term would be **multiverbal (predicate) construction**, but since the great majority of actual cases consist of just two, this is not necessary in practice.

(Moreover, *biverbal construction* is a new term, very suitable for a new project. “Multi-verb construction” has been used in the past, e.g. Aikhenvald & Muysken (2011); Unterladstetter (2019); Ross (2022).)

**Definition 2: Serial verb construction** (Haspelmath 2016: 296)

A serial verb construction is a monoclausal construction consisting of multiple independent verbs with no element linking them and with no predicate–argument relation between the verbs.

- (1) Barayin (Chadic)  
*gor-e kol-e siidi*  
 run-PRF go-PRF home  
 ‘[He] ran home. (Lovestrand 2018: 83)

→ on this definition, most serial verb constructions (SVCs) are biverbal constructions, but note that it contains no requirement of a single set of argument positions (SVCs may have two different patients, e.g. ‘fetch water wash your face’ in Ewe)

**Definition 3: Converbial clause**

A converbial clause is a subordinate clause that is neither a relative clause nor a complement clause and whose verb lacks person-marking and includes an affix that marks the clause as subordinate.

## (2) Beja

*i=ka:=iji haraw-a a-dif=ho:b*  
 DEF-camel-1SG seek-CVB 1SG-leave.PFV=when  
 ‘when I left to look for my camel...’ (Vanhove)

→ converbial clauses must be subordinate, which means that “narrative converbs” (Nedjalkov 1995) are not included, and neither are person-marked forms such as Ancash Quechua *-pti-*:

## (3) Ancash Quechua

*Chakra-chaw urya-pti-i, María pallamu-rqu-n wayta-kuna-ta.*  
 field-LOC work-SUBOR-1SG María pick-RPST-3SG flower-PL-ACC  
 ‘While I worked in the field, María picked flowers.’ (Cole 1983: 3)

**Definition 4: Auxiliary verb**

An auxiliary verb is a non-affixed bound form that has the same subject person marking as a verb and that combines with a verb in a monoclausal construction expressing TAME (tense, aspect, modality or evidentiality) meanings.

→ this means that languages without subject person marking on the verb do not have auxiliaries by definition; this is an unexpected condition on auxiliaries, but there is no other definition that is applicable cross-linguistically, as far as I can see

**Definition 5: Light verb combination**

A light verb combination is an expression consisting of (i) a verb that elsewhere means ‘do’, ‘take’, ‘put’, ‘hit’, ‘get’, ‘give’, ‘go’, ‘come’, ‘sit’, ‘fall’, ‘become’, or ‘have’ and (ii) an event-denoting form, and where the light verb contributes no meaning of its own or only aspectual, motional or benefactive meaning.

→ this is the weirdest of all definitions, due to the fact that “light verb” is not used very coherently in the literature; three typical examples are seen in (4)

## (4) a. English

*have a rest, take a shower, give a kiss, make a mistake*

## b. Urdu (Butt &amp; Geuder 2002: 295)

*Yaasiin nee keek khaa lii-yaa.*

Yasin ERG cake eat **take**-PRF.M.SG

‘Yasin ate the cake (completely, for the benefit of himself).’

## c. Ngarinyin (McGregor 2002: 25)

*jarug andu-Ø-ma-nga-lu*

push.back 3PL.ACC-3SG.NOM-**take**-PA-PROX

‘He pushed them back this way.’ (Rumsey 1982a: 112)

## 2. Four requirements on comparative concept terms

**R1: The term must be applied uniformly, i.e. using the same criteria in all languages.**

This is the most basic requirement, and when it is not observed, one cannot compare languages in a nonsubjective way, cf.

“tests for monoclausality may vary across languages, depending on the internal structure and organisation of the language in question.” (Butt 2010: 57)

The CRITERION OF UNIFORM APPLICABILITY means that terms such as the following cannot be used in definitions:

*finite/nonfinite*  
*head/dependent*  
*word/phrase*  
*nucleus/core* (Foley & Olson 1985)  
*adverb(ial)*

**R2: Traditional labels should largely conform to traditional usage.**

It is confusing to propose a definition that does not correspond to the traditional usage. Thus, depictive and manner expressions are not normally included, but Croft (2022: 432) includes them:

resultative complex predicate:	<i>We <b>Painted</b> the door <b>red</b>.</i>
depictive complex predicate:	<i>I <b>ate</b> the carrots <b>raw</b>.</i>
manner complex predicate:	<i>We <b>crawled</b> down the slope <b>slowly</b>.</i>

**R3: Comparative terms should be useful for formulating generalizations (Haspelmath 2010).**

Descriptive concepts allow us to describe languages, and comparative concepts allow us to compare languages, with the goal of formulating universals (e.g. 9 universals of indexing in Haspelmath 2013; 10 universals of SVCs in Haspelmath 2016).

However: Not all comparisons have the goal of finding universal generalizations – We may compare languages because we are interested in specific distinctions and how they correlate with other phenomena (social complexity, writing systems, language acquisition findings, etc.).

Better: **Comparative terms should be useful for testing general claims or for talking about salient differences between languages.**  
 (a much weaker requirement)

**Not a requirement:****Non-R1: Comparative terms need not be useful for language-particular analyses.**

Many authors seem to assume that the concepts for comparison should be the same as the categories for description, and that descriptive insights automatically lead us to understanding at the general level.

But **p-linguistics** and **g-linguistics** (particular and general linguistics) are different in their goals and methods, and the relationship between them is non-trivial (Haspelmath 2021a).

Thus, more detailed language-particular research will not tell us whether a phenomenon corresponds to a general comparative concepts. The following represents a widespread view that I disagree with:

“Careful language-specific studies are needed to decide whether certain kinds of serial verbs may be auxiliaries or complex predicates, for example serial verbs which do not share their object, like causative or aspectual serial verbs, may be complex predicates or auxiliaries.” (Seiss 2009: 506)

**R4: Traditional terms which are used as general terms should have general definitions, i.e. we need retro-definitions for them (Haspelmath 2021b).**

Many traditional terms probably do not correspond to any deep reality but became well-known because of historical accidents, e.g. *serial verb construction* (cf. Haspelmath 2016: 304 on “verb seriation” as a possible better concept).

A good example is the term *affix*, which has a very complex definition:

“An affix is a bound morph that is not a root, that must occur on a root, and that cannot occur on roots of different root classes.” (Haspelmath 2021c: 8)

**3. Biverbal constructions and “complex predicate constructions”**

I propose that the COMPLETE project should be based on a notion of biverbal construction that is not dependent on a notion of “complex predicate”:

**Definition 1 (preliminary, repeated here): Biverbal (predicate) construction**

A biverbal (predicate) construction is a monoclausal construction with a single set of argument positions and a predicate consisting of two “verb-like” forms.

The problem is that “complex predicate” does not have a clear definition and extension in the literature. It seems to derive from the Stanford tradition of LFG and HPSG, e.g. Ishikawa (1985), Alsina (1993), Butt (1993), Alsina et al. (1997), Andrews & Manning (1999).

Butt (1993: 2):

- two or more semantic heads contribute arguments
- the grammatical functional structure is that of a simple predicate

This definition includes **affixal voice constructions** such as causatives and applicatives (as in Ishikawa 1985, Alsina 1993, Lomashvili 2011).

Godard & Samvelian (2021: 419-420, HPSG handbook):

- CPs: – when two or more predicates associated with words behave  
as if they formed just one predicate  
– while keeping their status as different words in the syntax

This definition does not include affixal constructions, but it includes all **auxiliary constructions** (*Paul a lu son livre* ‘Paul had read his book.’)

Bowern (2010: 42):

“Complex predicates are structures in which more than one element in the clause contributes information to the predicate which is **normally** associated with a verbal head.”

But what is “normal”? Isn’t this Eurocentric? (cf. the discussion in McGregor 2002)

Butt (2014: 171):

“Complex predicates are formed when two or more predicational elements enter into a relationship of co-predication. Each predicational element adds arguments to a monoclausal predication. Unlike what happens with control/raising, there are no embedded arguments and no embedded predicates at the level of syntax. **Tests for complex predicatehood are language specific.**”

But what about the ingredients of my proposed definition?

- argument position
- predicate
- verb-like forms
- monoclausal

**argument position:** this is a basic concept of valency, and I assume that it is given (see Haspelmath 2023b)

**predicate:**

- if a clause has a single verb, it is the (verbal) predicate;
- if a clause is nonverbal (Haspelmath 2023a), and if it is predicational, it has an adjectival, nominal or locational predicate;
- verbal predicates may include affixes and auxiliaries, they may be compound (include two roots), and they may consist of two nonadjacent “verb-like” forms

**verb root:** a root which denotes an action (but what is “verb-like”? see §8)

**monoclausal:** • a clause can only be negated in one way (Haspelmath 2016):

<i>She has to do it.</i> (monoclausal)	<i>She does not have to do it.</i> * <i>She has to not do it.</i>
---	--

<i>She is obligated to do it.</i> (biclausal)	<i>She is not obligated to do it.</i> <i>She is obligated not to do it.</i>
--	--

## 4. Serial verb construction

A serial verb construction is a subtype of biverbal construction, with additional requirements:

**Definition 2: Serial verb construction** (Haspelmath 2016: 296)

A serial verb construction is a monoclausal construction consisting of multiple independent verbs with no element linking them and with no predicate–argument relation between the verbs.

requirements: – no linking element (distinguishing them from **converb** constructions)  
 – independent verbs (unlike **auxiliaries**)  
 – no predicate-argument relation between the two verbs (unlike **control** constructions)

Aikhenvald (2018: 1):

“In many languages of the world, a sequence of several verbs **act together as one unit**. They form **one predicate**, and contain **no overt marker** of coordination, subordination, or syntactic dependency of any other sort. Such series of verbs are known as *serial verb constructions*, or serial verbs for short. Serial verbs describe what can be **conceptualized as a single event**. They are often pronounced as if they were **one word**.”

But: – we do not know what “a single event” is  
 – saying that they “act together as one unit” is too vague  
 – the phonological criterion is not well-founded  
 – control constructions are not excluded

Aikhenvald (2018: 18) criticizes Haspelmath (2016):

“This definition is fairly problematic. ... The obscure formulation ‘predicate–argument relation between the verbs’ **arbitrarily excludes** serialization of **complement-clause taking predicates** and **causative serial verb constructions** (widespread types of serial verbs in many languages...). **Sharing tense, aspect, modality, and mood** are deemed to be ‘unnecessary’ criteria for serial verb constructions.”

Aikhenvald is right that my 2016 definition is (partly) “arbitrary”, like any other proposal for a definition – but it is motivated:

– complement and causative relations are not normally treated as SVCs  
 – one could add TAM sharing as a criterion, but it is unclear what such an additional criterion would exclude

(See also Lovstrand (2021) for recent discussion.)

Note that on my 2016 definition, verb compounds are serial verb constructions, e.g.

(5) Japanese

*John-ga niwatori-o naguri-korosi-ta.*

John-NOM chicken beat-kill-PST

‘John beat a chicken and killed it.’ (cited by Haspelmath 2016: 298)

## 5. Converb constructions

A converbal construction is NOT a subtype of biverbal construction, because it is subordinate, forming a separate clause:

### Definition 3: Converb clause

A converbal clause is a subordinate clause that is neither a relative clause nor a complement clause and whose verb lacks person-marking and includes an affix that marks the clause as subordinate.

[Note that this definition is different from the definition in Haspelmath (1995), which makes reference to “non-finiteness” and “adverbial function” – but these terms cannot be defined using uniform criteria.]

However, SOME converbal forms occur in monoclausal constructions, not only in converbal clauses. We can call them MONOCONVERBAL:

### Definition 6: Monoconverb construction

A monoconverb construction is a monoclausal construction consisting of (i) a verb form that can also be used in converbal clauses and (ii) another verb form.

(6) Japanese (Shibatani 2009: 257-258)

a. **converb “conjunctive construction”**

*Taroo=wa tegami=o kai-te, gakkoo=ni it-ta.*  
 Taro=TOP letter=ACC write-CVB school=DAT go-PST  
 ‘Taro wrote a letter and went to school.’

b. **“converb complex predicate”** (i.e. monoconverb construction)

*Kare=ga koko=ni hon=o mot-te ki-ta.*  
 he=NOM here=DAT book=ACC take-CVB come-PST  
 ‘He brought the book here.’

But note that such constructions may simultaneously qualify as **auxiliary verb constructions** (if the other verb form is bound and expresses a TAME concept) and/or as **light verb constructions** (if the other verb elsewhere means elsewhere means ‘do’, ‘take’, ‘put’, ‘hit’, ‘get’, ‘give’, ‘go’, ‘come’, ‘sit’, ‘fall’, ‘become’, or ‘have’)

## 6. Auxiliary verb

Auxiliary verbs have not often been included in the “complex verb” category (but see Anderson 2011; Godard & Samvelian 2021).

For a long time, I did not know how to define them, but *auxiliary* is such an important term that **it needs to be defined** (see **Requirement 4** above) We can cut the Gordian knot by defining *auxiliary verb* with respect to the meanings it can express: TAME

### Definition 4: Auxiliary verb

An auxiliary verb is a non-affixed bound form that has the same subject person marking as a verb and that combines with a verb in a monoclausal construction expressing TAME (tense, aspect, modality or evidentiality) meanings.

- This means that e.g. “passive auxiliaries” and “negative auxiliaries” are not included, but these seem to be sufficiently marginal.
- Note that auxiliary verbs cannot be said to be “kinds of verbs”, because “verb” can only be defined semantically with respect to the notion of action or process meaning (Haspelmath 2023c).
- Therefore auxiliary verb must be defined with respect to **subject person indexing**.  
(which means that languages without subject person marking on the verb cannot have auxiliaries by definition)

Very few authors have tried to provide a general definition of “auxiliary verb”. Anderson (2006) does not really give a definition:

Anderson (2006: 4-5):

“ ‘Auxiliary verb’ is here considered to be an item on the “lexical verb – functional affix” continuum, which tends to be at least somewhat semantically bleached, and grammaticalized to express one or more of a range of salient verbal categories, most typically aspectual and modal categories, but also not infrequently temporal, negative polarity, or voice categories.”

## 7. Defining grammaticalization and lexicalization

Grammaticalization is often said to occur on a continuum of “degrees of grammaticalness”, but without a clear way of measuring such degrees, this remains vague and intuitive.

In objective terms, we can define *grammatical marker* as in Definition 7, and therefore *grammaticalization* as in Definition 8.

### Definition 7: (Grammatical) marker

A (grammatical) marker is a bound morph that is not a root.

Roots are nouns, verbs and adjectives (Haspelmath 2023c), and all other morphs are nonroots. It seems acceptable (and simplest) to say that **if a non-root morph cannot occur on its own**, then it is a grammatical marker.

(thus, all affixes, all adpositions and auxiliaries, all subordinators, all particles, and all articles are grammatical markers)

### Definition 8: Grammaticalization

Grammaticalization is a change in which a free form or a root becomes a grammatical marker.

This includes, for example:

noun	>	adposition
verb	>	auxiliary
demonstrative	>	determiner
numeral	>	determiner
interrogative pronoun	>	relativizer
verb	>	subordinator (e.g. <i>suppose</i> )



The definition does not include changes such as “adposition > case affix”, or “auxiliary > TAM affix”, but the evidence for such changes is surprisingly weak (Haspelmath 2022b).

The term *lexicalization* cannot be defined in such simple terms. It seems to mean ‘a change by which something becomes a word’, but there are four senses of word:

- (A) word as grammatical word
- (B) word as content word (not function item), or lexeme
- (C) word as dictionary entry (not freely constructed)
- (D) word as mentally stored item

I propose that we replace “lexicalization” by four different terms, broadly corresponding to the four senses of lexical item (cf. Haspelmath 2022a):

- (A) **univerbation** = the transition from a word combination to a *grammatical word*
- (B) **lexemization** = the transition from an unrestricted combination to a lexeme
- (C) **inventorization** = the passing of an unrestricted combination into the **inventorium** (the set of dictionary entries, of elements that are not freely constructed)
- (D) **mentallicization** = the passing of an unrestricted combination into a speaker’s “mental lexicon” (or **mentalicon**)

Most of the time, linguists use the term lexicalization as in (C) and (D), typically without properly distinguishing between them. For comparative studies, only (C) seems to be relevant, i.e. INVENTORIZAZION.

However, there are two rather different criteria for inventorization:

(I) simple: **idiomaticization**

- think + leave > ‘forgive’
- look + steal > ‘spy’
- think + heavy > ‘respect’

(II) difficult: **clichéization** (*cliché* = fixed but compositional, Mel’čuk 2012)

- go + hold > ‘carry, go while holding’
- eat + full > ‘*satt werden*, eat oneself full’
- cut + small > ‘mince, *klein schneiden*’

A cliché is a compositional expression which is conventionally used to express a particular commonly expressed pragmatic meaning, to the exclusion of other possible ways of rendering that meaning, e.g.

*head-light* cf. German *Schein-werfer* ‘light + thrower’

The inventorium contains *conventional expressions* – including (i) **simple forms**; (ii) **idiomatic complex forms**; (iii) **clichés**

Finally, there is of course a fifth (synchronic) sense of “lexicalization”, as in “lexicalization patterns” (e.g. Talmy 1985). This should be replaced by LEXIFICATION (cf. *colexification*, François 2008).

(E) *lexification* = the mapping of meaning components onto roots or lexeme-stems

## 8. On “verb-like” forms

Recall that we can define *verb root* (= a root denoting an action or process; Haspelmath 2023c), but biverbal predicate constructions may also contain auxiliaries or light verbs such as ‘have’, ‘be’, ‘sit’, ‘be able’.

### Definition 1 (final): Biverbal (predicate) construction

A biverbal (predicate) construction is a monoclausal construction with a single set of argument positions and a predicate consisting of two **verboid** forms.

The definition in the application text (Vanhove & Bisang 2021) even includes “lexical items belonging, either **synchronically or historically**, to the class of verbs” – but this goes beyond the synchronic basis of a typological project.

A **verboid** is (i) a verb or (ii) a form that contains the same subject person marking as a verb.

(See also the definition of *auxiliary* in Definition 4.)

If a language has no person marking, then the class of verboids is the same as the class of verbs. For example, in Korean, (7) does not contain a biverbal predicate because *iss-* ‘be’ does not count as a verb.

(7) Korean

<i>Ku-nun</i>	<i>phyenci-lul</i>	<i>ssu-ko</i>	<i>iss-ta.</i>
he-NOM	letter-ACC	write-CVB	be-DECL

‘He is writing a letter.’

This conclusion is unintuitive, but apparently cannot be avoided if one wants to apply the same criteria in all languages.

## 9. Empty constructions, filled constructions and composite constructs

It appears that the ComPLETE project is intended to be both about **filled constructions** and **composite constructs**, while **empty constructions** will not be entered into the database as they are too general.

• an **empty construction** consists only of empty slots, e.g.

sentence:	NP + VP
serial verb construction:	NP + V + (NP +) V (+ NP)
auxiliary verb construction:	AUX + V

- in a **filled construction**, there are some empty slots, but also some filled elements, e.g.

perfect aspect:            *have* + V-PTCP            (e.g. *have done, have taken*)  
 andative construction: *go* + V            (e.g. *go get it, go take it*)  
 light *give* construction: *give a* V            (e.g. *give a thought, give a kiss*)

- in a **composite construct**, both verboid positions are filled, e.g.

Japanese	<i>oshi-taoshi</i>	[push-topple]	‘push down’
	<i>nagori-koroshi</i>	[beat-kill]	‘beat and kill’
	<i>oi-tsui</i>	[chase-attach]	‘chase and catch up with’
	<i>koroge-ochi</i>	[roll-fall]	‘roll down’
	<i>umare-kawari</i>	[be.born-change]	‘be reborn’

(Nishiyama 1998)

Most or all filled constructions, and most or all composite constructs are instances of a general empty construction, but the purpose of the database presumably is to collect those elements (filled constructions and composite constructs) that have some idiosyncrasies.

## 10. A few notes on the presentation of the database

When constructing a typological database, one needs to keep in mind that there are two perspectives from which one can record (and present) cross-linguistic data

- the language perspective:            distinguishing various language types
- the unit perspective:            distinguishing various types of units

*WALS* and other geographical databases:    language perspective

*WOLD, MAGRAM* and other databases:    unit perspective

Language-oriented databases can be easily presented in map format, whereas unit-oriented databases are less amenable to map presentation. One can show the units if they can be identified via comparative concepts, but it’s not so straightforward to show their properties

## 11. Conclusion

Most importantly, I argue here that the best definitions **will not emerge from the research** – they have to be set up in advance of the data collection.

If grammatical concepts such as *SVC* or *auxiliary verb* were natural kinds, then it would be a good strategy to collect data before arriving at a final definition – but since they are NOT natural kinds, the strategy of starting with a preliminary definition makes no sense (though it may be OK to change the definition somewhat along the way).

In general, the notion of a “**working definition**” is really odd – unlike working hypotheses, it seems that working definitions have no useful role in science.

Grammatical terms do not become clearer as more research is done, even though some authors seem to expect this, e.g.

Nolan & Diedrichsen (2017: 2)

“Many different definitions of multi-verb constructions exist in the literature and it is clear that there is **(still) no unified consensus** on the characteristics of these in the world’s languages.”

Fleischhauer & Hartmann (2021: 136)

“Although light verb constructions (LVCs) have been analyzed from many different perspectives for decades, **there still exists no consensus** regarding some fundamental issues. Even the very definition of the concept is still subject to debate.”

For the present project, it may be best to try to work simply with the concept of biverbal construction, and to avoid the other three concepts (*SVC*, *auxiliary*, *light verb*). The resulting picture may then show (or not show) clusters that may (or may not) correspond to some traditional notions.

## References

- Aikhenvald, Alexandra & Muysken, Pieter (eds.). 2011. *Multi-verb constructions*. Leiden: Brill.
- Aikhenvald, Alexandra Y. 2018. *Serial verbs*. Oxford: Oxford University Press.
- Alsina, Alex. 1993. *Predicate composition: A theory of syntactic function alternations*. Stanford: Stanford University. (PhD dissertation.)
- Alsina, Alex & Bresnan, Joan & Sells, Peter (eds.). 1997. Introduction. *Complex predicates*. Stanford: CSLI Publications.
- Anderson, Gregory D. S. 2011. Auxiliary verb constructions (and other complex predicate types): A functional–constructional overview. *Language and Linguistics Compass* 5(11). 795–828. (doi:10.1111/j.1749-818X.2011.00311.x)
- Anderson, Gregory D.S. 2006. *Auxiliary verb constructions*. Oxford: Oxford University Press.
- Andrews, Avery D. & Manning, Christopher D. 1999. *Complex predicates and information spreading in LFG*. Stanford: Center for the Study of Language and Information.
- Bowern, Claire. 2010. The typological implications of Bardi complex predicates. *Linguistic Typology* 14(1). 39–70. (doi:10.1515/lity.2010.002)
- Butt, Miriam. 1993. *The structure of complex predicates in Urdu*. Stanford: Stanford University. (PhD dissertation.)
- Butt, Miriam. 2014. Control vs. complex predication. *Natural Language & Linguistic Theory* 32(1). 165–190. (doi:10.1007/s11049-013-9217-5)
- Butt, Miriam & Geuder, Wilhelm. 2003. Light verbs in Urdu and grammaticalization. In Eckardt, Regine & von Heusinger, Klaus & Schwarze, Christoph (eds.), *Words in time: Diachronic semantics from different points of view*. Berlin: Walter de Gruyter.
- Cole, Peter. 1983. Switch-reference in two Quchuan languages. In Haiman, John & Munro, Pamela (eds.), *Switch-reference and universal grammar*, 1–16. Amsterdam: Benjamins.
- Croft, William. 2022. *Morphosyntax: Constructions of the world’s languages*. Cambridge: Cambridge University Press. (<http://www.unm.edu/~wcroft/WACpubs.html>)
- Fleischhauer, Jens & Hartmann, Stefan. 2021. The emergence of light verb constructions: A case study on German kommen ‘come.’ *Yearbook of the German Cognitive Linguistics Association* 9(1). 135–156. (doi:10.1515/gcla-2021-0007)

- Foley, William A. & Olson, M. 1985. Clausehood and verb serialization. In Nichols, Johanna & Woodbury, Anthony C. (eds.), *Grammar Inside and Outside the Clause*, 17–60. Cambridge: Cambridge University Press.
- François, Alexandre. 2008. Semantic maps and the typology of colexification: Intertwining polysemous networks across languages. In Vanhove, Martine (ed.), *From polysemy to semantic change: Towards a typology of lexical semantic associations* (Studies in Language Companion Series 106), 163–216. Amsterdam: Benjamins.
- Godard, Danièle & Samvelian, Pollet. 2021. Complex predicates. In Müller, Stefan & Abeillé, Anne & Borsley, Robert D. & Koenig, Jean-Pierre (eds.), *Head-driven Phrase Structure Grammar: The handbook*, 419–488. Berlin: Language Science Press. (<https://zenodo.org/record/5599838>)
- Haspelmath, Martin. 1995. The converb as a cross-linguistically valid category. In Haspelmath, Martin & König, Ekkehard (eds.), *Converbs in cross-linguistic perspective*, 1–56. Berlin: Mouton de Gruyter. (<https://zenodo.org/record/227108>)
- Haspelmath, Martin. 2010. Comparative concepts and descriptive categories in crosslinguistic studies. *Language* 86(3). 663–687. (doi:10.1353/lan.2010.0021)
- Haspelmath, Martin. 2013. Argument indexing: A conceptual framework for the syntax of bound person forms. In Bakker, Dik & Haspelmath, Martin (eds.), *Languages across boundaries: Studies in memory of Anna Siewierska*, 197–226. Berlin: De Gruyter Mouton. (<https://zenodo.org/record/1294059>)
- Haspelmath, Martin. 2016. 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. 2021a. Bound forms, welded forms, and affixes: Basic concepts for morphological comparison. *Voprosy Jazykoznanija* 2021(1). 7–28. (doi:10.31857/0373-658X.2021.1.7-28)
- Haspelmath, Martin. 2021b. General linguistics must be based on universals (or nonconventional aspects of language). *Theoretical Linguistics* 47(1–2). 1–31. (doi:10.1515/tl-2021-2002)
- Haspelmath, Martin. 2021c. Towards standardization of morphosyntactic terminology for general linguistics. In Alfieri, Luca & Arcodia, Giorgio Francesco & Ramat, Paolo (eds.), *Linguistic categories, language description and linguistic typology*, 35–57. Amsterdam: Benjamins. (DOI: 10.1075/tsl.132.02has, <https://ling.auf.net/lingbuzz/005489>)
- Haspelmath, Martin. 2022a. Against lexicalization (ans what to replace it with). London: UCL. (doi:<https://zenodo.org/record/6408756>)
- Haspelmath, Martin. 2022b. Is cliticization an intermediate stage between free lexeme and affix status? Oxford. (doi:<https://zenodo.org/record/7054292>)
- Haspelmath, Martin. 2023a. Nonverbal clause constructions (to appear).
- Haspelmath, Martin. 2023b. Valency and voice constructions. Leipzig, MPI-EVA, ms. (<https://ling.auf.net/lingbuzz/005941>)
- Haspelmath, Martin. 2023c. Word class universals and language-particular analysis. In van Lier, Eva (ed.), *Oxford handbook of word classes*. Oxford: Oxford University Press (to appear).
- Ishikawa, Akira. 1985. *Complex predicates and lexical operations in Japanese*. Stanford: Stanford University. (Ph.D. dissertation)
- Lomashvili, Leila. 2011. *Complex predicates: The syntax-morphology interface* (Linguistik Aktuell). Amsterdam: Benjamins.
- Lovstrand, J. 2018. *Serial verb constructions in Barayin: Typology, description and lexical-functional grammar*. Oxford: University of Oxford. (PhD dissertation.) (<https://ora.ox.ac.uk/objects/uuid:39406562-02d3-46f5-abf3-180d2225925>)
- Lovstrand, Joseph. 2021. Serial verb constructions. *Annual Review of Linguistics* 7(1). 109–130. (doi:10.1146/annurev-linguistics-031920-115317)
- McGregor, William B. 2002. *Verb classification in Australian languages*. Berlin: Mouton de Gruyter.
- Mel'čuk, Igor. 2012. Phraseology in the language, in the dictionary, and in the computer. *Yearbook of Phraseology* 3(1). 31–56. (doi:10.1515/phras-2012-0003)

- Nishiyama, Kunio. 1998. VV compounds as serialization. *Journal of East Asian Linguistics* 7(3). 175–217.
- Nolan, Brian & Diedrichsen, Elke (eds.). 2017. Introduction: Argument realisation in complex predicates and complex events at the syntax-semantic interface. *Argument realisation in complex predicates and complex events: Verb-verb constructions at the syntax-semantic interface*, 1–12. Amsterdam: Benjamins.
- Ross, Daniel. 2022. Pseudocoordination and serial verb constructions as multi-verb predicates. In Giusti, Giuliana & Di Caro, Vincenzo Nicolò & Ross, Daniel (eds.), *Pseudo-coordination and multiple agreement constructions* (Linguistik Aktuell/Linguistics Today), 315–336. Amsterdam: Benjamins.
- Seiss, Melanie. 2009. On the difference between auxiliaries, serial verbs and light verbs. In Butt, Miriam & King, Tracy Holloway (eds.), *Proceedings of the LFG09 Conference*, 501–519. Stanford, CA: CSLI Publications.
- Shibatani, Masayoshi. 2009. On the form of complex predicates: Toward demystifying serial verbs. In Helmbrecht, Johannes & Nishina, Yoko & Shin, Yong-Min & Skopeteas, Stavros & Verhoeven, Elisabeth (eds.), *Form and function in language research: papers in honour of Christian Lehmann*, 255–282. Berlin: Mouton de Gruyter.
- Talmy, Leonard. 1985. Lexicalization patterns. In Shopen, Timothy (ed.), *Language typology and syntactic description (Volume III)*, 57–149. Cambridge: Cambridge University Press.
- Unterladstetter, Volker. 2019. *Multi-verb constructions in Eastern Indonesia* (Studies in Diversity Linguistics 28). Berlin: Language Science Press. (<https://langsci-press.org/catalog/book/213>)
- Vanhove, Martine & Bisang, Walter. 2021. *Complex predicates in languages: Emergence, typology, evolution (ComPLETE)*. Paris and Mainz: ANR-DFG Project application. ([https://marama.huma-num.fr/ComPLETE/data/ANR-DFG\\_2021\\_ComPLETE\\_Project\\_Main.pdf](https://marama.huma-num.fr/ComPLETE/data/ANR-DFG_2021_ComPLETE_Project_Main.pdf))