# **Construction-functions versus construction-strategies**

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This paper discusses the contrast between two modes of typological comparison of grammatical constructions, following a distinction made by Croft (2022): We may start out from (construction-)functions and consider the diverse (construction-)strategies that languages use, or we may focus on the strategies themselves (e.g. reflexive constructions, passives, copula constructions). Both kinds of comparative concepts are widely practiced, but our traditional grammatical terms are often used in different ways. Here I suggest that we can avoid confusions and arrive at clearer terminologies if we take this distinction into account, and I discuss the concrete example of the term *existential construction* (best regarded as a construction-function, not a kind of construction-strategy).

# 1. Function-based comparison and form-based comparison

Cross-linguistic comparison in morphosyntax is based on comparing similar constructions across languages, and these similarities may be FUNCTIONAL or FORMAL. For example, the two sentences in (1a) and (1b) are functionally equivalent and thus comparable, even though they are rather different in terms of their form: First, the locative expression 'the table' comes first in English but last in German; second, English has an extra (prolocative) element *there*; and third, German uses the posture verb *liegen* 'lie' instead of the simple 'be' verb. By contrast, the two sentences from Latin and Russian in (2a) and (2b) are also formally quite similar in that the predicative possessor 'I' is expressed as an oblique nominal (*mihi*, *u menja*) and there is a copula (*est*, *est'*). In this way, these two languages differ markedly from English, whose counterpart construction (*I have a house*) has a transitive 'have' verb and a predpossessor in the nominative case.

- (1) existential clauses (an example of function-based comparison)
  - a. English

    There is a book on the table.
  - b. German

Auf dem Tisch liegt ein Buch. on the table lies a book 'There is a book on the table.'

- (2) oblique predpossessor clauses (an example of form-based comparison)
  - a. Latin

    Mihi est domus.

    me.DAT is house

    'I have a house.'
  - b. Russian

U menja est' dom. at me is house 'I have a house.' We can thus distinguish two kinds of construction types: function-based construction types or CONSTRUCTION-FUNCTIONS, and form-based construction types or CONSTRUCTION-STRATEGIES. This distinction is conceptually obvious, but it has only recently been highlighted by Croft (2016; 2022). This paper provides further general discussion, with some emphasis on locative and existential clauses (see §6 below). It should always be remembered that the concepts that I discuss here are comparative concepts, not categories of particular languages. My focus is on general linguistics, and hence on comparison, and while language-particular description is often enlightened by insights of general linguistics (Haspelmath 2020), comparative concepts are special because they are defined in a language-independent way. The term *construction* is usually defined as an element of a particular language (Haspelmath 2023b), but in a comparative context, we are dealing with construction types.

Construction-functions and construction-strategies have also been called *purely functional* and *hybrid* comparative concepts, respectively. Construction-strategies are not purely formal (but hybrid) because they are defined as formal ways of expressing a particular meaning or function. For example, the oblique predpossessor strategy in (2) is a way of expressing the predicative possession meaning, and it expresses only this meaning. (Purely formal comparative concepts exist as well, but mostly in phonology.<sup>2</sup>) By contrast, existential clauses are defined purely functionally, and can thus take diverse forms, as seen in (1).

While the distinction between construction-functions and construction-strategies is clear in principle, there is often terminological unclarity, because traditional grammatical terms are often used both for functions and for strategies (Croft 2016: 382). Ideally, we would always be fully explicit about the way a term is used, but this is not always practical. Thus, it is important that linguists are aware of the distinction, and of the potential polysemy of traditional terms.<sup>3</sup>

# 2. Construction-functions and construction-strategies in typological research

To give readers a better feel for the two kinds of construction types, I will simply list ten construction types for both, accompanied by corresponding well-known comparative studies.

- (3) examples of construction-functions
  - a. polar question constructions (Dryer 2005a)
  - b. comparative constructions (Stassen 1985; 2005)
  - c. predpossessive constructions (Heine 1997)
  - d. ditransitive constructions (Malchukov et al. 2010)
  - e. reciprocal constructions (Nedjalkov (ed.) 2007)

<sup>1</sup> Croft uses the term *construction* for construction-functions, and the term *strategy* for construction-strategies.

<sup>&</sup>lt;sup>2</sup> The three main purely formal comparative concepts relevant for morphosyntax are (i) precedence (A occurs before B), (ii) boundness (A does not occur in isolation), and (iii) overtness (meaning M is expressed by a form rather than by zero). Even with these, one might wonder whether they are phonological rather than morphosyntactic properties.

<sup>&</sup>lt;sup>3</sup> It should be noted that in the work of Bob Dixon and Sasha Aikhenvald, the term pair "construction vs. strategy" has been used in a rather different sense. The contrast that they have in mind will be discussed briefly in §7 below.

- f. imperative constructions (Aikhenvald 2010)
- g. causal-noncausal constructions (Haspelmath et al. 2014)
- h. standard negation constructions (Dryer 2013)
- i. adnominal possessive constructions (Koptjevskaja-Tamm 2002)
- j. coordination constructions (Mauri 2008)

# (4) examples of construction-strategies

- a. incorporation constructions (e.g. Olthof 2020)
- b. ergative constructions (e.g. Coon et al. 2017)
- c. serial verb constructions (e.g. Haspelmath 2016)
- d. causative constructions (e.g. Comrie 1975)
- e. antipassive constructions (e.g. Janic & Witzlack-Makarevich (eds.) 2021)
- f. person indexing constructions (e.g. Siewierska 2005)
- g. applicative constructions (e.g. Zúñiga & Creissels (eds) 2024)
- h. reflexive constructions (e.g. Janic & al. (eds) 2023)
- i. switch-reference constructions (e.g. Roberts 2017)
- j. reduplication constructions (e.g. Hurch & Mattes (ed.) 2005)

These lists make it clear that it is not true, as has sometimes been said, that typological comparison in morphosyntax must be based entirely on semantic and pragmatic function (I said this myself, erroneously, in Haspelmath 2007a: 126). The construction types listed in (4a-j) are all at least partially defined in formal terms, though they also have a functional component (they are hybrid comparative concepts, as mentioned above).<sup>4</sup>

Cross-linguistic research on construction-functions systematically asks different questions than cross-linguistic research on construction-strategies. For a construction-function, a typology may ask about types of strategies, e.g.

- (5) a. strategies for polar questions (Dryer 2005a, 2005b)
  - b. strategies for ditransitive constructions (Haspelmath 2005)
  - c. strategies for causal-noncaual constructions (Haspelmath 1993)
  - d. strategies for ordinal numerals (Stolz & Veselinova 2005)
  - e. strategies for plural number constructions (Dryer 2005c)

The strategies sometimes concern the order of elements (e.g. preposed vs. postposed question particles in Dryer 2005b), the presence or absence of a marker (e.g. double object constructions vs. indirective constructions in Haspelmath 2005), or different marking strategies (e.g. affix vs. clitic vs. tonal marking in Dryer 2005c). The general question is: What kinds of forms can a given function take in different languages? In the *World atlas of language structures*, we used different colours for the different strategies, usually including red and blue and yellow, as in Figure 1.

<sup>&</sup>lt;sup>4</sup> An exception is reduplication constructions (4j), which are defined in purely formal terms. They are thus more similar to the purely formal "prefixing constructions", or "zero-marking constructions" (see n. 2). But while one would not carry out typological studies of such extremely broad domains, typological studies of reduplication make more sense (compare also "clitic constructions" (Haspelmath 2024) and "infixing constructions" (Yu 2007), which are defined purely formally and have been studied separately).

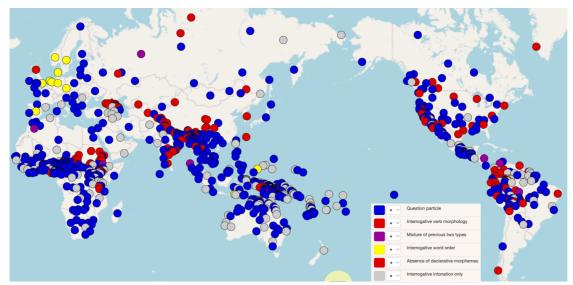


Figure 1: Polar question marking (different strategies, Dryer 2005a)

By contrast, when we study strategies cross-linguistically, we cannot easily typologize them according to subtypes, because the strategies themselves are formally defined. Instead, we can study their coexpression patterns. So here, the general question is: What kinds of (other) functions or meanings can a given form have in different languages? In the *World atlas of language structures*, there are a number of maps which address the question whether a form with one meaning can also have another meaning, and where yellow denotes coexpression of both meanings, while red denotes differentiation, as in Figure 2.

- (6) a. meanings of reciprocal markers (e.g. reflexive; Maslova & Nedjalkov 2005)
  - b. meanings of comitative flags (e.g. instrumental; Stolz et al. 2005)
  - c. meanings of relativizers (e.g. genitive; Gil 2005)
  - d. meanings of nominal coordinators (e.g. verbal conjunction; Haspelmath 2005b)

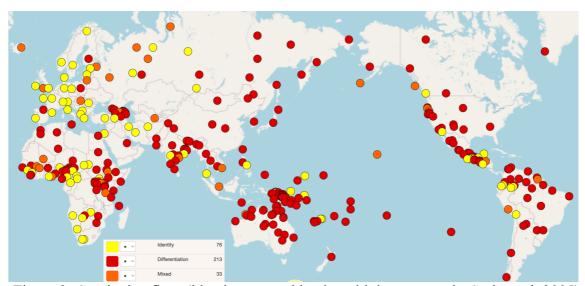


Figure 2: Comitative flags (identity or non-identity with instrumentals, Stolz et al. 2005)

This description of the distinction between function-based typologies and strategy-based typologies is idealized: In practice, mixed types occur. An example is the classical

typology of argument-coding alignment, where languages fall into the three broad types accusative, ergative, and neutral (omitting minor types for simplicity). This typology is illustrated by the map from Comrie (2005) in Figure 3, which shows flagging (or "case marking") of full nominals. On the one hand, this is a typology of strategies (see (4b) above) for the expression of events with an actor and an undergoer, so it is a function-based typology. But on the other hand, the typology is also about coexpression patterns: The accusative type is defined not by having a special accusative flag, but by using the same flagging pattern for the transitive A-argument and the intransitive S-argument. So this typology is also about coexpression of transitive and intransitive flagging patterns, not only about strategies for actor-undergoer events.

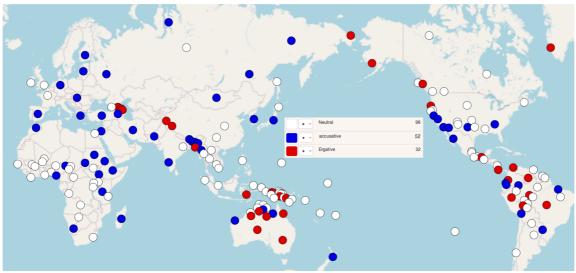


Figure 3: Alignment of transitive flagging (accusative, ergative, neutral; Comrie 2005)

Despite the existence of such mixed typologies, it is important to realize that classical grammatical typologizing takes somewhat different forms depending on whether it typologizes strategies used to express a given function or functions that a given strategy may have.

# 3. Terms for functional-semantic concepts and for hybrid concepts

The distinction between construction-functions and construction-strategies is an instance of a broader conceptual distinction that is important in many domains of general grammar: the distinction between functional-semantic and hybrid comparative concepts. Croft (2016) notes that there is no disagreement among linguists about the distinction between notional construction types (construction-functions) and hybrid construction types (construction-strategies), but often the terminology is not uniform:

"the disagreement appears to be basically about terminology: some authors use a traditional grammatical term for a construction, while others use it for a particular strategy found for that construction. One can usually figure that out by reading the supporting arguments." (Croft 2016: 382)

Even though the context often makes it clear which meaning is intended, it is better to have different terms for the functional-semantic concepts and the hybrid concepts. While terms are often ambiguous (or vague) with respect to this distinction, there is also a

tradition of distinguishing between these types of concepts by using different terms. Table 1 lists a number of cases where disfferent terms have been proposed for functional-semantic concepts and hybrid concepts.

NOTIONAL TERM	HYBRID TERM
time	tense
(biological) sex	(grammatical) gender
speech-act role	(grammatical) person
recipient	dative
adnominal possessor	genitive
semantic role	case marker
question	interrogative clause
speech act	sentence type
property concept	adjective
causal	causative (Haspelmath 2016a)
mutual	reciprocal (Haspelmath 2007)
agent-patient coreference	reflexive (Haspelmath 2023a)

Table 1: Contrasting notional and hybrid terms

Some of the distinctions in Table 1 are well-known and uncontroversial (e.g. *time* vs. *tense*, *property concept* vs. *adjective*, *semantic role* vs. *case marker*), others are not so well-known (e.g. *question* vs. *interrogative clause*, *speech-act role* vs. *person*), and some are fairly novel. In general, the distinctness of the concept types is evident to linguists, and they are often happy to adopt terminology that allows then to make the distinction. For example, I proposed the contrast between *causal* and *causative* fairly recently, but it has already been widely adopted (e.g. Allassonnière-Tang et al. 2022).

It should be noted that the contrast between the term pairs in Table 1 is more general than the contrast between construction-functions and construction-strategies that is the main focus of this paper. For example, time and sex are general semantic notions, not names of construction-functions. As Croft (2022: xxx) observes, construction-functions are combinations of semantic category and information-packaging functions, but *time* and *sex* are purely semantic categories. By contrast, *tense* and *(grammatical) gender* are hybrid concepts in the sense that they make reference to grammatical expression: Tense is the expression of temporal notions by grammatical markers, and gender is the classification of nouns in the context of grammatical agreement. While tense and gender are important for construction-strategies, we probably do not want to say that they are strategies themselves.

Croft (2016) says that in general, one should use the traditional terms for functional-semantic concepts:

"I would argue that it is better to use the basic traditional grammatical terms for a construction, not a strategy. The European grammatical tradition often did not make a distinction between construction and strategy, because the languages were typologically similar and used the same or similar strategies for the same constructions. Typology looks across all languages, of course, and finds other strategies used for various constructions. But the European grammatical terms are so deeply ingrained in usage that they are better used for the universal comparative concept, not a strategy that is restricted to a subset of languages." (Croft 2016: 382)

The argumentation seems sound, but de facto linguists have often introduced new terms that are specifically reserved for functional-semantic concepts. While in the 1960s and 1970s, terms *case* and *dative* were often used in a notional sense (e.g. Fillmore 1968; Givón 1984), they have been largely replaced more recently by *semantic role* and *recipient*, respectively. Other novel terms for functional-semantic concepts, introduced in the 20th century or even more recently, are *possessor*, *speech act*, *coreference*, and *causal verb*.

One argument that is sometimes made in discussions of terminology is that grammatical terms should be transparent. For example, Abraham (2006: 142) interprets ditransitive as 'doubly transitive', thus rejecting the use of the term for German Dative constructions, because in German "the dative is never transitive". And Creissels (2019: 37) notes that an existential clause such as *There is a bird on the roof* does not express existence, so he proposes a new term (*inverse-locational construction*). However, this consideration will play no role here. What matters for terminology is precise definitions and (if possible) continuity with the tradition, but transparency is not a major concern.

# 4. Function-based and form-based sense extensions of grammatical terms

Like the meanings of other words, the senses of many grammatical terms have been changing over the centuries and decades, and this has often led to polysemy and confusion within linguistics. In order to address such confusions, it is helpful to be aware that many of our traditional terms derive from the grammar of Latin and other important European languages (especially French, German and English). These languages are typologically similar, so that Latin (or French, German or English) terms were often carried over to other languages without too many problems (Croft 2016: 382).

But linguists do not have general (cross-linguistically applicable) definitions of these terms, so the sense extensions could go in multiple directions: A stereotypical use in a well-known language could be taken as the basis both for function-based extension and for form-based extension of the term. For example, the term *indirect object* originally meant objects that are introduced by a preposition in French, but it was extended both to objects that are marked by dative case, as in German, and to objects that have no specific marking but denote a recipient, as in English double object constructions:

# (7) indirect object

stereotype: They gave bananas to the children.

• form-based: Sie gaben den Kinder-n Bananen. (German, Dative -n)

• function-based: They gave the children bananas.

As a result, there is no coherent general sense of the term "indirect object", and recent cross-linguistic work such as Malchukov et al. (2010) uses the new term *indirective* specifically for dative-like marking of R-arguments (as a hybrid concept).<sup>6</sup>

Four further examples of the same kind of sense divergence are shown in (8)-(10) in a parallel way.

<sup>&</sup>lt;sup>5</sup> In Western scholarship, apart from Latin, French was the most important language in the 18th century, German in the 19th, and English has been dominant since the 20th century.

<sup>&</sup>lt;sup>6</sup> In current generative grammar, IO (indirect object) seems to be still used in the notional sense (e.g. Anagnostopoulou & Sevdali (2020), for what others call R-argument.

## (8) **reflexive construction** (cf. Haspelmath 2023a)

stereotype: They saw themselves in the mirror.

• form-based: They behaved themselves.

• function-based: They dressed. (cf. Reuland 2011: "reflexive predicate")

## (9) adjectival construction

stereotype: (English) *the new house*• form-based: (English) *the royal family* 

• function-based: (Mandarin) fángzi hĕn dà 'the house is big' (predicative Verb)

## (10) nominalization construction

stereotype: the construct-ion of the city
• form-based: the construct-ions in French

• function-based: [that the city was constructed] (cf. Shibatani 2019)

## (11) **impersonal construction** (cf. Malchukov & Ogawa 2011)

stereotype: (Latin) *curritur* 'there is running' (impersonal passive)

• form-based: (Spanish) *llueve* ('it is raining', no subject)

• function-based: (French) on court ('one runs', no specified agent)

Examples like these can be multiplied, and apparent disagreements in typology often boil down to different terminological choices: One and the same term can be used for a construction-strategy or for a construction-function, as pointed out by Croft (2022: xxx). In the next section, I will discuss a few further terminological issues that can be resolved by making a clear distinction between functions and strategies.

Lehmann (2007) was the first to highlight this contrast from the perspective of the history of linguistics. He notes that there is a general tendency for structural (construction-strategy) terms to be extended to other kinds of strategies, thus becoming terms for construction-functions. Unlike Croft (2016) (as seen in the quotation in the preceding section), Lehmann prefers conservative terminological usage (e.g. for the terms *case*, *voice*, *incorportation*, and *transitivity*), but he recognizes the general tendency for terminological usage to shift from hybrid to notional.

# 5. Some important distinctions that are not always made

In this section, I will briefly revisit a few grammatical domains where the terminology has sometimes been unclear, and where the function vs. strategy distinction can illuminate earlier misunderstandings.

### 5.1. Agent-patient coreference vs. reflexive constructions

The most typical constructions with agent-patient coreference include a reflexivizer such as a reflexive pronoun (e.g. 12a) or a reflexive affix (e.g. 12b).

### (12)a. English

The man saw **himself** in then mirror.

b. Anindilyakwa (van Egmond 2023: 530) *Dhə-dharrəngka yingə-ngambaja-jungu-na*.

3.F-female 3.F-wash-REFL-PST

'The woman washed herself.'

But languages may express agent-patient coreference also without reflexivizers, as in (13a-b). The Jambi Malay pronoun *dio* is neutral between disjoint reference or agent-patient coreference

(13)a. English *The man shaved.* 

b. Jambi Malay (Cole et al. 2015: 147)

 $Dio_1$  cinto  $dio_{1/2}$ . he love he

'He loves him.' OR: 'He loves himself.'

So how should we use the traditional term *reflexive*? In Haspelmath (2023a), I proposed that only constructions with a reflexivizer (a grammatical marker or a reflexive noun or pronoun) should be called reflexive constructions, but other terminological choices would of course be possible.<sup>7</sup> The crucial point in the current context is that agent-patient coreference constructions are construction-functions, while reflexive constructions are construction-strategies.

# 5.2. Transitivity: Agent vs. A, patient vs. P

Semantic roles such as agent, patient and recipient are often used to characterize groups of syntactic arguments, but in typological discussions of the syntax of arguments, the terms A-argument (or simply A) and P-argument (or simply P) have proved the most useful. The difference is that only the first two terms refer to semantic functions, while the second two refer to formal strategies. As noted in Haspelmath (2011), an A-argument is generally thought of as an argument that has the same coding (in terms of flagging and/or indexing) as a typical agent (of a physical-effect verb such as 'kill' or 'break'), and a P-argument is an argument that has the same coding as a typical patient. A and P are thus not simply functional notions: The two arguments of a verb like see (e.g. Kim saw Lee) are A and P, respectively, even though they are not agent and patient. A and P are better for describing alignment types (accusative, ergative) and voice constructions than agent and patient, because many transitive verbs do not have "agent" and "patient" arguments in the literal sense but still behave in the same way syntactically. The notions of A- and P-arguments play a very similar role as the traditional "subject" and "object" notions, and in fact, we can basically equate the terms in many comparative contexts. 8 So again, we have a contrast between functions (agent, patient, ...) and strategies (A, P, ...).

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<sup>&</sup>lt;sup>7</sup> If (13a) were included in the definition and English *shave* were regarded as a "reflexive predicate" (as in Reinhard & Reuland 1993; Reuland 2011), it would be difficult to provide a general definition of the term *reflexive* that includes long-distance reflexive constructions. These do not involve either agent-patient coreference or "reflexive predicates", but they are generally included in discussions of reflexive constructions. For this reason, I chose to exclude constructions such as English (6a) and to require that a reflexive construction includes a reflexivizer as in (12a-b).

<sup>&</sup>lt;sup>8</sup> The most salient context in which a subject is not an agent is in passives (e.g. *Kim was pushed by Lee*). Such voice constructions are best characterized as demoting the A to an oblique and shifting the P to an S

Both agents/patients and A/P are often called *arguments*, without distinguishing the semantic (functional) and the morphosyntactic (strategy) level. For clarity, it would seem best to call agents and patients (at the semantic level) *participants*, and A and P (at the syntactic level) *arguments* (or *actants*) (e.g. Lazard 1998: 12; Lehmann 2015: 1548). Similarly, it would seem ideal to distinguish between participant structure (or semantic role structure) at the semantic level, and *argument structure* or *valency* at the syntactic level. These distinctions are not always made, and one often needs to examine the context to find out which level is intended. But conceptually, there is a clear contrast between them.

Once we have the syntactic argument types (or syntactic functions) A and P, we can define the term *transitive* as a comparative concept (Haspelmath 2011: xxx), as in (14).

## (14) transitive clause

A transitive clause is a clause that has an A-argument and a P-argument.

A transitive construction is thus a type of construction-strategy, not a type of construction-function. As the functional core of the transitive strategy, linguists have identified the functional notion of "effective action" (Tsunoda 1985; 2015) or "physical-effect action" (Lazard 2002). In the literature, the term *transitivity* is often used in a functional-semantic sense, but as noted by Lehmann (2007: §2.5), it is best reserved for a type of strategy.

## 5.3. Causal vs. causative, noncausal vs. anticausative

Although causative verbs are not very prominent in the biggest European languages, the term *causative* has been used since the 19th century for Sanskrit verbs with the suffix - *aya*, so it has long been familiar to many linguists. When the first systematic crosslinguistic works appeared in the 1960s (Nedjalkov & Sil'nickij 1969 and related work), morphological causatives were placed in a larger semantic context, and they were contrasted with "lexical causatives" such as *kill* or *wash*. Kulikov (2001: 886) said that "causatives can be defined as verbs which refer to a causative situation, that is, to a causal relation between two events, one of which is believed by the speaker to be caused by another". This was a function-based sense extension of the term.

On the other hand, Nedjalkov & Sil'nickij (1969; 1973) introduced the term *anticausative*, but they restricted it to verbs with an overt marker that seems to "remove" the causative component from the verb's meaning, e.g. Russian *otkryt'-sja* 'to open (intr.), to become open', derived from *otkryt*' 'to open (tr.), cause to become open'. So this term referred to a specific strategy for expressing inchoative (or otherwise non-caused) events.

The term *anticausative* was first adopted in the original sense (e.g. Comrie 1985; Haspelmath 1993), but some authors later generalized it to verbs such as English *open* or *break* which can be used intransitively or transitively (e.g. Alexiadou et al. 2006). The resulting situation was one where both terms, the old *causative* and the new *anticausative*, had two meanings, referring either to a construction-function (an event with actor and

<sup>(</sup>see Haspelmath 2022), so they, too, are compatible with the equation of "subject" with A (and S) in comparative contexts.

<sup>&</sup>lt;sup>9</sup> Etymologically, of course, the term *argument* refers to the semantic level, as it comes from logic. But in linguistics, it has been used for the syntactic level since the 1980s, and the older term *actant* (from Tesnière 1958; 2015) has remained marginal.

<sup>&</sup>lt;sup>10</sup> Linguists often talk about "syntactic valency" and "semantic valency" (e.g. Herbst & Schüller 2008: 126). My preference is to restrict *valency* to the morphosyntactic level (Haspelmath 2022). (Conversely, Mel'čuk extends the syntactic term *actant* to "semantic actants"; e.g. Mel'čuk 2004.)

undergoer and a cause component; or an event without a cause component), or to a specific strategy (a verb with an affix expressing either the presence or the absence of the cause component).

To remedy this situation, Haspelmath et al. (2014) (and Haspelmath 2016a) proposed a new term pair: *causal* vs. *noncausal*, for the construction-functions: verbs or verbal expressions that include a cause component, vs. verbs that lack a cause component. They also proposed that the terms *causative* and *anticausative* should be restricted to a specific type of construction-strategy, namely verbal expressions in which there is a marker that indicates causal or noncausal meaning. Thus, *causative* relates to *causal* as *dative* relates to *recipient*, or as *declarative* relates to *statement*. The new terminology is illustrated with examples from English and Turkish in (15): The first two columns show verbs with noncausal function, and the second two columns show verbs with causal function. Each function can be expressed by two different strategies (basic and overtly marked). English has the causative marker *make* and no anticausative marker, while Turkish has both an anticausative marker (*-il*) and a causative marker (*-dur*/*-dūr*).

(15)	NONCAUSAL	,	CAUSAL	
	BASIC	ANTICAUSATIVE	BASIC	CAUSATIVE
English	break (intr.)	_	break (tr.)	(*make break)
English			kill	(*make die)
Turkish	<i>öl-</i> 'die'	_	_	<i>öl-dür-</i> 'kill'
Turkish		kır-ıl- 'break'	kır- 'break'	kır-dır- 'make break'
English	talk	_	_	make talk

Even though this new terminology was proposed fairly recently, it has already been adopted fairly widely (e.g. Aralova & Pakendorf 2022; Creissels 2022).

### 5.4. Grammatical voice constructions

The term *voice* was originally a general term for the active/passive distinction in the classical languages Latin and Greek, and it referred to an inflectional category (alongside tense, mood, and others). For example, Latin *videt* means 'sees' (active voice), and *videtur* means 'is seen' (cf. *curritur* lit. 'is run' in (11) above). But when the term was transferred to modern languages such as French and English, which lack such an inflectional category, *passive voice* was applied to a specific syntactic construction type, exemplified by *The thief was caught by the police*. This construction shows a special mapping of semantic roles onto syntactic functions, and over time, other special constructions with unusual role-function mapping were included as well, in particular reflexive, middle, antipassive, applicative, and causative (e.g. Kulikov 2011; Zúñiga & Kittilä 2019). In a recent paper (Haspelmath 2022), I characterize a voice alternation as a valency alternation with verbal coding. A valency alternation is a pair of sister valency constructions with argument postions that are linked by correspondence variables. In (16), we see a labile alternation, which has no verb coding (e.g. *the door opened/we opened the door*), and (17) shows two alternations with verb coding (i.e. voice alternations or voices):

<sup>&</sup>lt;sup>11</sup> The first paper to adopt such a conception of the notion of voice was Mel'čuk & Xolodovič (1970). Kulikov's (2011) paper clearly stands in this European tradition, and both Zúñiga & Kittilä (2019) and Haspelmath (2022) were strongly influenced by it (see also Creissels 2024). (Givón 1994 and Croft 2022 represent an American tradition that was less influenced by this European tradition of voice typology; however, Comrie (1978) and Farrell (2005) are American authors whose conception is similar to the "European" one.)

a passive voice alternation in (17a), and an antipassive voice alternation in (17b). In the uncoded alternants  $\langle V, A_X, P_Y \rangle$  of the both voice alternations, there are two argument positions (A and P), of which one becomes S in the coded alternation, while the other one is downgraded (demoted to oblique or suppressed).

(16) labile 
$$\langle V, A_x, P_y \rangle$$
 'X causes Y to change'  $\approx \langle V, S_Y \rangle$  'Y changes'

(17) a. passive  $\langle V, A_x, P_y \rangle$   $\approx \langle V-PASS, \{obl\}_x, S_y \rangle$  '(X) acts on Y'

b. antipassive  $\langle V, A_x, P_y \rangle$   $\approx \langle V-ANTIPASS, S_x, \{obl\}_y, \rangle$  'X acts (on Y)'

The passive and antipassive constructions are thus very clearly construction-strategies (not construction-functions), as they are defined through formal (or hybrid) notions such as A, P, oblique flagging, and verbal affixation.

But alternatively, the terms *passive* and *antipassive* can be extended in a notional sense, as we saw for the term *causative* in the previous subsection. For the term *passive*, a construction-function view is clearly articulated by Givón (1994: 9), who says that a passive is a construction in which "the patient is more topical than the agent, and the agent is extremely non-topical ("suppressed", "demoted")." He thus defines *passive* as a construction-function, and he is very explicit about his reasons for this. He notes that passives in different languages are structurally quite diverse (reflexive-based, nominalization-based, participle-based, etc.), and he dismisses a structural definition on the grounds that it would not be revealing: "While the synchronic function [of the diverse passive constructions in different languages] may be that of passive voice, their structure reflects lingering vestiges of the earlier point of origin" (Givón 1994: 6). Givón is of course right that there are a wider range of structurally defined types with passive-like functions than the construction type in (17a), but he does not consider the alternative possibility of choosing a different term for the functionally defined type.<sup>12</sup>

Croft's (2022) terminology in the domain of "voice" is similar in that it adopts a construction-function perspective: He defines "passive-inverse voice construction" as expressing a situation in which the patient has higher discourse salience than the agent, and "antipassive voice construction" as expressing a situation in which the patient is less salient than usually (see also Vigus 2018). As a result, antipassives are represented not only by examples like (18b) from Kuku Yalanji (which are antipassive construction-strategies according to the definition in (17b), but also by (19b) and (20b), which are not antipassive construction-strategies (Croft 2022: xxx).

(18) Kuku Yalanji (Patz 2002: 152)

a. Nyulu dingkar-angka minya-Ø nuka-ny. 3SG.NOM man-ERG meat-ABS eat-PST 'The man ate meat.'

<sup>12</sup> He says that "in grammatical typology, one enumerates the main structural means by which different languages code – or perform – the same function" (Givón 1994: 7), but this describes only one way of doing typology. As we saw in §2, typologies may focus on construction-functions or on construction-strategies, and for a comprehensive picture, we need both approaches.

- b. *Nyulu* dingkar-Ø minya-nga muka-ji-ny. 3sg.nom man-ERG meat-LOC eat-ANTP-PST 'The man had a good feed of meat (he wasted nothing).'
- (19)a. The coyote chewed the deer bone.
  - b. The covote chewed on the deer bone.
- (20) a. *She ate the spaghetti*.
  - b. She ate.

From the point of view of terminological continutity, it seems to me that it is best to avoid a broadening of the meaning of then terms passive and antipassive in such a way that these terms can refer to constructions which have no verbal marking at all, but in any event, this is primarily a terminological issue. 13 Givón and Croft are surely right that it is worth considering passives and antipassives in a broader perspective (involving construction-functions in which the agent or the patient have lower discourse salience than usual), and it is a secondary matter which terms to use for this broader perspective.

# 5.5. Property-concept words and adjectives

Finally in this section, let us consider the terms adjective and property-concept word. Linguists often say that not all languages have adjectives. For example, Hieber (2023: 214) observes that "most North American languages arguably lack an adjective class, such that property concepts are a subcategory of noun or verb or divided between both." On this view, one would be inclined to say that a property-predicating clause such as (21b) from Krongo is a verbal clause (as it contains a "Qualifying Verb"), just like the actionpredicating clause in (21a).

(21) Krongo (Sudan; Reh 1985: 236)

- a. *K-àdìyà* óow. PL-come.PRF we 'We have come.'
- b. *K-àdéelá* óow. PL-beautiful we 'We are beautiful.'

By contrast, for the English translations, one often says that we have come is a verbal clause, while we are beautiful is a nonverbal clause.

It may thus seem that adjective is a strategy for expressing the property-concept function, and *verb* is an alternative strategy chosen by many languages outside of Europe. However, it is unclear how *noun*, verb and adjective can be defined as cross-linguistically applicable strategies. Linguists typically use different criteria for identifying adjectives in different languages, but this is not a way to single out a uniform cross-linguistic class.

In the end, whether something is accepted as an adjective or not hinges on the semantic criterion of denoting a property concept. Thus, Hieber (2023: 217) argues that Seneca (Iroquoian) does not even have a verbal subclass of adjectives (following Chafe 2012),

<sup>&</sup>lt;sup>13</sup> A similar case is the term *inverse*, which is used for a construction-function by Givón (1994), whereas most other authors (such as Jacques & Antonov 2014; Creissels 2024; Haspelmath 2024) use it for a construction-strategy (employing special inverse markers in particular person scenarios).

although adjectives can be said to belong to a subclass of stative verbs (e.g. otge' 'it's heavy', hohsë:h 'he's fat'). The reason is that the subclass of stative verbs includes other verbs that do not denote property concepts (e.g. otga:h 'it's making a noise', hóio'de' 'he's working'). Linguists never consider the possibility of extending the adjective concept to such event-denoting words, which shows that by adjective, they generally mean 'word denoting a property concept'. More generally, we can define noun, verb and adjective as 'root denoting an object, an action and a property', respectively (Haspelmath 2024).

There are indeed general trends in the kinds of strategies that languages use to refer to objects (as opposed to actions and properties), to predicate actions (as opposed to objects and properties), and to modify via properties (as opposed to objects and actions), but these strategies do not apply uniformly and thus cannot be used in identifying nouns, verbs and adjectives across languages. Thus, the term *nonverbal clause* must be defined semantically in contrast with *verbal clause*, which means that in a comparative perspective, a Krongo clause such as *k-àdéelá óow* 'we are beautiful' is a nonverbal clause (see Haspelmath 2024a).

# 6. Revisiting existential and hyparctic clauses

Let us now consider existential and related clause types, such as those in (22a-d).

- (22) a. There is a boat on the shore.
  - b. The boat is on the shore.
  - c. I have a boat.
  - d. The boat is mine.

In Haspelmath (2024a), I take up the discussion of Koch (2012) (who was inspired by Clark 1978 and Bickerton 1981) and I distinguish between four main clause types as shown in Table 2.

	locational	possessional
indefinite	EXISTENTIAL	PREDPOSSESSIVE
locatum/possessum	(22a: There is a	(22c: I have a
	boat on the shore.)	boat.)
definite	PREDLOCATIVE	APPERTENTIVE
locatum/possessum	(22b: The boat is	(22d: The boat is
	on the shore.)	mine.)

 Table 2: Four locopossessional construction-functions

The term *existential* for (20a) has been used since Jespersen (1924), and the terms *predicative possession* and *predicative location* are well-established, too (I abbreviate them to *predpossessive* and *predlocative*, because this makes it easier to be fully specific; just saying *possessive* and *locative* is not always clear enough). The term *appertentive* for 'belong' constructions (Stolz & Levkovych 2019) is new but seems appropriate, as it comes from the Latin verb for 'belong' (cf. *pertain, appurtenance*).<sup>14</sup>

<sup>&</sup>lt;sup>14</sup> Bickerton (2016: 212-220) (originally 1981) used the terms *existence*, *location*, *possession*, and *ownership*. He built on Clark (1978), who talked about *existential*, *locative*, *possessive*<sub>1</sub> and *possessive*<sub>2</sub>

The clause types in Figure 1 are construction-functions, but the terminology has not always been clear in the past. As we saw in §4, traditional terms may be extended along the functional dimension or along the formal dimension. The first prominent paper on locopossessional constructions, Lyons (1967), starts out by distinguishing three types along purely semantic lines, ignoring formal aspects and discourse pragmatics: existential (e.g. *Lions exist; There are lions (in Africa)*), locative (*The book is on the table; There is a book on the table*), and possessive (*The book is John's; John has a book*). Thus, English *there* clauses fall into two different types here (existential and locative), even though Jespersen did not limit the term *existential* in this way and seemed to use the term for counterparts of *there* sentences and their presentational discourse function. However, in Clark's (1978) paper, which was inspired by Lyons's work, these terms are used in a clearly functional sense. It is this tradition of Clark which has been followed de facto by much of the literature, and which I build on in my 2024 paper.

The difference between Lyons's (1967) usage and Haspelmath's (2024a) can be summarized as in Table 5, using Lyons's examples.

Lyons' terms	examples from Lyons	Haspelmath's terms
	Lions exist.	HYPARCTIC
EXISTENTIAL	There are lions in Africa.	
	There is a book on the	EXISTENTIAL
LOCATIVE	table.	
	The book is on the table.	PREDLOCATIVE

Table 3.

While Lyons's terminology is perfectly coherent in that it opposes permanent existence to temporary location, Haspelmath's terminology has several advantages, in addition to being in line with most of the actual terminological usage in the field over the last few decades.<sup>17</sup>

First, my terminology is based on two clear criteria: the semantic criterion of location (singling out existential and predlocative clauses as opposed to hyparctic clauses), and the discourse-pragmatic criterion of definiteness, which distinguishes predlocative from existential clauses, just as it distinguishes appertentive from predpossessive clauses. By contrast, the distinction between permanent location (there are lions in Africa) and temporary or episodic location (there is a book on the table) is much less clear. It cannot be described as "existence" in the literal sense because when we talk about a table having a book on it, we do of course presuppose the existence of the book. And there seem to be many intermediate cases, with different degrees of permanence, e.g. there is a sofa in the living room, there is a restaurant in our street, there are two bathrooms in her apartment.<sup>18</sup>

constructions. Her cover term for all four was "locationals" (cf. my new term *locopossessional constructions*, Haspelmath 2024a: xxx).

<sup>&</sup>lt;sup>15</sup> Jespersen (1924: 155) characterized existential sentences as "sentences corresponding to English sentences with *there is* or *there are*, in which the existence of something is asserted or denied". Among his examples were *there is no money in the box*, and *there were many people present*.

<sup>&</sup>lt;sup>16</sup> An earlier version of Clark (1978) was published as Clark (1970), and Clark's dissertation was completed at the University of Edinburgh in 1969, under John Lyons's supervision.

<sup>&</sup>lt;sup>17</sup> Of course, the term *hyparctic* is an innovation, but such clauses (of "pure existence") have hardly been discussed by linguists.

<sup>&</sup>lt;sup>18</sup> German is well-known for making a clear distinction between permanent existence (using *es gibt*, e.g. *es gibt Löwen in Afrika*) and temporary presence (e.g. using a posture verb, e.g. *es liegt ein Buch auf dem Tisch*). However, as noted by Creissels (2019), the distinction is often related to other factors such as

Second, the new term *hyparctic* for "pure existence" (with no location or possession implied) has the advantage that it assigns a clear place to sentences such as (23a-c), which have sometimes been subsumed under existential clauses on the assumption that existential clauses are about existence.

## (23) a. God exists.

b. There is beer without alcohol.

c. Latin

Cogito, ergo sum. I.think therefore I.exist 'I think, therefore I am.' (René Descartes, 1637)

However, the main features of existential clauses (in the usual sense) are location and an indefinite locatum.

Third, and most importantly in the present context, the terminology I propose does not restrict the domain of existential clauses to particular strategies. Existential clauses (as well as predpossessive clauses) are defined as construction-functions, and the kinds of construction-strategies used to express these functions may be quite diverse (this was already noted above in §1). Thus, we can distinguish various construction-strategies (formally defined construction types) that are used to express the existential construction-function, e.g.

# (24) existive-copula strategy: Hungarian

Van vaj a hűtő-ben. there.is butter the fridge-LOC 'There is butter in the fridge.'

(25) transpossessive-existential strategy: Modern Greek (Kampanarou, this volume)

Exi kati skilus stin peðiki xara. has some dogs at.the play ground 'There are some dogs at the playground.'

### (26) *prolocative strategy*: Italian

Ci sono molte montagne in Svizzera.

PROLOC are many mountains in Switzerland 'There are many mountains in Switzerland.'

Importantly, constructions which do not have any formal specificities count as existential constructions as well. Creissels gives the examples in (27) and (28), which show constructions that can be used both for predlocative and for existential functions.

# (27) Welsh (Feuillet 1998: 691; cited from Creissels 2019: 51)

a. Mae 'r car yma. is the car here. 'The car is here.'

availability. Thus, we can say es gibt Schokolade heute bei Aldi 'there is chocolate today at Aldi's', using es gibt for temporary availability.

```
b. Mae car yma.
is car here
'There is a car here.'

(28) Mandinka (Mande; Creissels 2019: 51)
Wùlôo bé yíròo kótò.
dog.DET LCOP tree.DET under
'The dog is under the tree.' OR: 'There is a dog under the tree.'
```

In Welsh, the only difference is the presence of the definite article in the predlocative clause, while there is no difference at all in Mandinka. For Mandinka, it is probably unnecessary (and perhaps even confusing) to make a distinction between existential and predlocative clauses. However, this does not affect the way we define our comparative concepts.

There is a tendency in the literature to see an existential construction as a kind of construction-strategy (i.e. a hybrid concept) rather than as a purely notional concept. For example, McNally (2016) wants to restrict the term *existential* to a subclass of existential clauses that are "noncanonical" in some way, i.e. to some types of strategies. However, this is not a homogeneous class, because "what is canonical differs from language to language" (as McNally (2016: 212) notes). Thus, it is better to treat existential clauses as a kind of construction-function, and to use different terms for the various construction-strategies (as seen in (22)-(24)) that can express this function.

# 7. Dedicated and co-opted constructions

Constructions of particular languages are often extended semantically to expressing further meanings, beyond the meanings they had originally. For example, the English there construction was originally used for presentational and existential constructions such as there is a bird on the roof, but it was extended to hyparctic clauses (such as there is beer without alcohol, where no location is implied). Or languages may extend an originally locational construction to be used for predicative possession, as in (29) from Irish.

```
(29) Irish

Tá teach mór ag do uncail.

is house big at your uncle

'Your uncle has a big house.' (Lit. 'There is a big house at your uncle.')
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For such extensions of the meanings of constructions, Croft (2022) uses the term "recruitment", and others talk about "co-opting" constructions.

In the terminology used in a number of works by R.M.W. Dixon and Alexandra Aikhenvald, the term *strategy* is used for a construction that expresses a meaning B but also (and originally) expresses meaning A. Strategies thus contrast with constructions that only express a single meaning (that are "dedicated" to this meaning). Aikhenvald puts it as follows:

"[N]ot all meanings, and not all functions, have a dedicated means of expression in a language. One language may require obligatory marking of information source (known as evidentiality). Another may co-opt other means – conditional modality or reported speech – to express similar meanings as required. Many languages have a dedicated imperative paradigm used for commands. Some do not: they use a subjunctive or another verb form instead. If a language does not have a dedicated construction of a certain type, for example complement clause, or imperative, it may render the relevant meanings by using an established construction in a secondary sense. This is then a 'strategy': we can have evidentiality strategies, imperative strategies, complementation strategies, and so on." (Aikhenvald (2015: 53)

In other words, a "strategy" for a given meaning is a construction that has another meaning as its primary meaning. (See also Dixon (2006) on "complementation strategies", contrasting with complement clauses, and Dixon (2008) on "comparative strategies", contrasting with comparative constructions.)

A problem with this distinction is that it is not clear how we can systematically distinguish the primary meaning from a "co-opted" (or "recruited") meaning. In some cases, it may seem obvious which is the primary and which is the secondary meaning (as in the examples of English hyparctic and Irish predpossessive constructions given above), but there may be other cases where it is not clear because we do not have diachronic information. And in many cases, there are three or four different meanings or functions, so that we might have "secondary" meanings which are "basic" with respect to a "tertiary" meaning. More generally, it is not clear to me what larger relevance the distinction between "dedicated", "primary" and "recruited/co-opted" strategies might have.

But in any event, Dixon's and Aikhenvald's way of using the term "strategy" is very different from Croft's. Croft follows the earlier usage by authors such as Keenan & Comrie (1977) and Stassen (1997), and in this paper, I follow Croft's distinction and older meaning of the term (construction-)strategy.

## 8. Conclusion

This paper has highlighted a distinction between functionally defined comparative construction concepts and comparative construction concepts defined in a hybrid way, including both formal and functional-semantic elements. Croft (2022) calls these two types constructions and strategies, but I find it better to distinuish between construction-functions and construction-strategies, because both are types of constructions. For example, an existential construction is a type of construction (defined functionally, §6), and a reflexive construction is a type of construction (defined in a hybrid way, §5.1). Both types of constructions have been important in typological research (§2), despite what some typologists have claimed (e.g. Givón 1994, who said that typology must always focus on a functional domain).

Traditional grammatical terms are based on the terms of Latin grammar, and they have often been extended from an original prototypical sense in different ways – either to formally similar constructions with different meanings, or to semantically similar constructions with different formal properties (the latter tendency was observed by Lehmann 2007). This has often led to divergent terminological usage, and also to confusion because linguists are not always aware of the divergent usage traditions. In §5, I discussed a few terms that have been used differently in the literature (e.g. *reflexive*, *transitive*, *causative*, *antipassive*, *adjective*). While I indicate my own preferences in each case, the main purpose is to make readers aware of the reasons for the divergence. Linguists do not have standardization committees, so such developments are normal, and they are surely not due to sloppiness on anyone's part. The innovation in Croft (2022) is

that for each term, he says clearly whether it is a construction(-function) or a (construction-)strategy, and this information is even included in the 87-page glossary for his book. Thus, there are reasons to be confident that these problems will be fewer in the future.

While Croft says that in general, the traditional grammatical terms should be used for construction-functions (which are universal) (see the quotation from his 2016 paper in §3 above), I do not think that such a general recommendation can be given. As I mentioned earlier, linguists have repeatedly come up with novel terms that are used notionally and that contrast with the traditional terms that are used for hybrid strategy concepts, e.g. notional *agent-patient coreference* (vs. hybrid *reflexive*, §5.1), notional *causal/noncausal* (vs. hybrid *causative/anticausative*, §5.3), notional *patient foregrounding/backgrounding* (vs. hybrid *passive/antipassive*, §5.4). On the other hand, for the term *existential* (which was first used for English *there* clauses), I have given reasons for preferring the notional sense in §6 (as there are a range of diverse strategies in different languages to which the term has been applied, a definition in terms of a single strategy type is impossible). Thus, I think that our terminology must be opportunistic and cannot be very systematic because it should preserve continuity to the extent possible.

The distinction between two kinds of comparable constructions (functionally defined construction types and hybrid construction types) also allows us to understand why we sometimes talk about "a construction A encoding (or expressing) a construction B", or a language having "construction A for construction B". If "construction" were taken in its most basic, language-particular sense (Haspelmath 2023b), such ways of talking about grammar would be nonsensical. For example, we sometimes talk about "encoding relative clauses", or "having verbs for adjectives", or "expressing adnominal possession", or even the different constructions used in a language for the comparative construction. <sup>19</sup> This way of talking may sound awkward, but is it actually in line with our general concepts: We work with language-particular constructions at the level of particular languages (they could be called *p-constructions*, as they are part of p-linguistics; Haspelmath 2021), with comparable constructions defined functionally (construction-functions), and comparable constructions defined in a hybrid way (construction-strategies). All three are called "constructions", and in any particular context, we usually know what is meant, but it is still worth reflecting on the basic ontology of grammatical research in order to improve the communication in our field.

### References

Abraham, Werner. 2006. Bare and prepositional differential case marking: The exotic case of German (and Icelandic) among all of Germanic. In Leonid I. Kulikov, Andrej L. Malchukov & Peter de Swart (eds.), *Case, valency and transitivity*, 115–145. Amsterdam: Benjamins.

Aikhenvald, Alexandra Y. 2010. *Imperatives and commands*. Oxford: Oxford University Press. Aikhenvald, Alexandra Y. 2015. *The art of grammar: A practical guide*. Oxford: Oxford University Press.

Alexiadou, Artemis, Elena Anagnostopoulou & Florian Schäfer. 2006. The properties of anticausatives crosslinguistically. In Mara Frascarelli (ed.), *Phases of interpretation*, 187–211. Berlin: Mouton de Gruyter.

<sup>19</sup> Dixon (2008: 789) talks about the "constructions for the comparative scheme", using the ad hoc term *scheme*. What he evidently means is the (construction-)strategy types that can encode the comparative construction(-function).

- Anagnostopoulou, Elena & Christina Sevdali. 2020. Two modes of dative and genitive case assignment: Evidence from two stages of Greek. *Natural Language & Linguistic Theory* 38(4). 987–1051. https://doi.org/10.1007/s11049-020-09465-z.
- Aralova, Natalia & Brigitte Pakendorf. 2022. The causal-noncausal alternation in the Northern Tungusic languages of Russia. In Andreas Hölzl & Thomas E. Payne (eds.), *Tungusic languages: Past and present*, 21–62. Berlin: Language Science Press.
- Bickerton, Derek. 1981. *Roots of language*. Ann Arbor: Karoma Publishers [Republished in 2016 by Language Science Press: https://langsci-press.org/catalog/book/91].
- Clark, Eve V. 1978. Locationals: Existential, locative, and possessive constructions. In Joseph H. Greenberg (ed.), *Universals of human language, Vol. 4: Syntax*, 85–126. Stanford: Stanford University Press.
- Cole, Peter, Gabriella Hermon, & Yanti. 2015. Grammar of binding in the languages of the world: Innate or learned? *Cognition* 141. 138–160. https://doi.org/10.1016/j.cognition.2015.04.005.
- Comrie, Bernard. 1975. Causatives and universal grammar. *Transactions of the Philological Society* 1974. 1–32.
- Comrie, Bernard. 1985. Causative verb formation and other verb-deriving morphology. In Timothy Shopen (ed.), Language typology and syntactic description, volume 3: Grammatical categories and lexicon, 309–348. Cambridge: Cambridge University Press.
- Comrie, Bernard. 2005. Alignment of case marking. In Martin Haspelmath, Matthew S. Dryer, David Gil & Bernard Comrie (eds.), *The world atlas of language structures*, 398–405. Oxford: Oxford University Press. (http://wals.info/chapter/98).
- Coon, Jessica, Diane Massam & Lisa deMena Travis (eds.). 2017. *The Oxford handbook of ergativity*. Oxford: Oxford University Press.
- Creissels, Denis. 2019. Inverse-locational predication in typological perspective. *Italian Journal of Linguistics* 31(2). 37–106.
- Creissels, Denis. 2024. Transitivity, valency and voice. Oxford: Oxford University Press.
- Croft, William. 2016. Comparative concepts and language-specific categories: Theory and practice. *Linguistic Typology* 20(2). 377–393. https://doi.org/10.1515/lingty-2016-0012.
- Croft, William. 2022. *Morphosyntax: Constructions of the world's languages*. Cambridge: Cambridge University Press.
- Dixon, R. M.W. 2006. Complement clauses and complementation strategies in typological perspective. In R. M. W Dixon & Alexandra Y Aikhenvald (eds.), *Complementation: A cross-linguistic typology*, 1–48. Oxford: Oxford University Press.
- Dixon, R.M.W. 2008. Comparative constructions: A cross-linguistic typology. *Studies in Language* 32(4). 787–817.
- Dryer, Matthew S. 2005a. Coding of nominal plurality. In Martin Haspelmath, Matthew S. Dryer, David Gil & Bernard Comrie (eds.), *The world atlas of language structures*, 138–141. Oxford: Oxford University Press. https://wals.info/chapter/33.
- Dryer, Matthew S. 2005b. Polar questions. In Martin Haspelmath, Matthew S. Dryer, David Gil & Bernard Comrie (eds.), *The world atlas of language structures*, 470–473. Oxford: Oxford University Press. https://wals.info/chapter/116.
- Dryer, Matthew S. 2005c. Position of polar question particles. In Martin Haspelmath, Matthew S. Dryer, David Gil & Bernard Comrie (eds.), *The world atlas of language structures*, 374–377. Oxford: Oxford University Press. https://wals.info/chapter/92A.
- Dryer, Matthew S. 2013. Negative morphemes. In Matthew S. Dryer & Martin Haspelmath (eds.), *WALS online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. https://wals.info/chapter/112.
- Egmond, Marie-Elaine van. 2023. The reflexive voice construction in Anindilyakwa. In Katarzyna Janic, Nicoletta Puddu & Martin Haspelmath (eds.), *Reflexive constructions in the world's languages*, 515–539. Berlin: Language Science Press.
- Feuillet, Jack (ed.). 1998. *Actance et valence dans les langues de l'Europe* (Empirical Approaches to Language Typology: EUROTYP 20–2). Berlin: Mouton de Gruyter.

- Fillmore, Charles J. 1968. The case for case. In Emmon Bach & Robert T. Harms (eds.), *Universals in linguistic theory*, 1–88. New York: Holt, Rinehart and Winston. doi: 10.5281/zenodo.5809982.
- Gil, David. 2005. Genitives, adjectives and relative clauses. In Martin Haspelmath, Matthew S Dryer, David Gil & Bernard Comrie (eds.), *The world atlas of language structures*. Oxford: Oxford University Press. https://wals.info/chapter/60.
- Givón, T. 1984. Direct object and dative shifting: Semantic and pragmatic case. In Frans Plank (ed.), *Objects: Towards a theory of grammatical relations*, 151–182. London: Academic Press.
- Haspelmath, Martin. 1993. More on the typology of inchoative/causative verb alternations. In Bernard Comrie & Maria Polinsky (eds.), *Causatives and transitivity*, 87–120. Amsterdam: Benjamins.
- Haspelmath, Martin. 2005a. Ditransitive constructions: The verb "give." In Martin Haspelmath, Matthew S. Dryer, David Gil & Bernard Comrie (eds.), *The world atlas of language structures*, 426–429. Oxford: Oxford University Press.
- Haspelmath, Martin. 2005b. Nominal and verbal conjunction. In Martin Haspelmath, Matthew S. Dryer, David Gil & Bernard Comrie (eds.), *The world atlas of language structures*, 262–265. Oxford: Oxford University Press. https://wals.info/chapter/64.
- Haspelmath, Martin. 2007a. Further remarks on reciprocal constructions. In Vladimir P. Nedjalkov (ed.), *Reciprocal constructions*, vol. 5 vols, 2087–2115. Amsterdam: John Benjamins.
- Haspelmath, Martin. 2007b. Pre-established categories don't exist: Consequences for language description and typology. *Linguistic Typology* 11(1). 119–132.
- Haspelmath, Martin. 2011. On S, A, P, T, and R as comparative concepts for alignment typology. *Linguistic Typology* 15(3). 535–567.
- Haspelmath, Martin. 2016a. The serial verb construction: Comparative concept and cross-linguistic generalizations. *Language and Linguistics* 17(3). 291–319. https://doi.org/10.1177/2397002215626895.
- Haspelmath, Martin. 2016b. Universals of causative and anticausative verb formation and the spontaneity scale. *Lingua Posnaniensis* 58(2). 33–63. https://doi.org/10.1515/linpo-2016-0009
- Haspelmath, Martin. 2020. The structural uniqueness of languages and the value of comparison for description. *Asian Languages and Linguistics* 1(2). 346–366. https://doi.org/10.1075/alal.20032.has.
- Haspelmath, Martin. 2021. General linguistics must be based on universals (or nonconventional aspects of language). *Theoretical Linguistics* 47(1–2). 1–31. https://doi.org/10.1515/tl-2021-2002.
- Haspelmath, Martin. 2022. Valency and voice constructions. Leipzig, MPI-EVA, ms. https://ling.auf.net/lingbuzz/005941.
- Haspelmath, Martin. 2023a. Comparing reflexive constructions in the world's languages. In Katarzyna Janic, Nicoletta Puddu & Martin Haspelmath (eds.), *Reflexive constructions in the world's languages*, 19–62. Berlin: Language Science Press.
- Haspelmath, Martin. 2023b. On what a construction is. *Constructions* 15(1). https://doi.org/10.24338/cons-539.
- Haspelmath, Martin. 2023c. Word class universals and language-particular analysis. In Eva van Lier (ed.), *Oxford handbook of word classes*. Oxford: Oxford University Press (to appear). Haspelmath, Martin. 2024a. Nonverbal clause constructions (to appear).
- Haspelmath, Martin. 2024b. Types of clitics in the world's languages. *Linguistic Typology at the Crossroads (to appear)*. https://ling.auf.net/lingbuzz/007071.
- Haspelmath, Martin. 2025. Inverse indexing systems: Beyond transitivity in core argument coding (in prep.).
- Haspelmath, Martin, Andreea Calude, Michael Spagnol, Heiko Narrog & Elif Bamyacı. 2014. Coding causal–noncausal verb alternations: A form–frequency correspondence explanation1. *Journal of Linguistics* 50(3). 587–625. https://doi.org/10.1017/S0022226714000255.

- Heine, Bernd. 1997. *Possession: Cognitive sources, forces, and grammaticalization*. Cambridge: Cambridge University Press.
- Hurch, Bernhard & Veronika Mattes (eds.). 2005. *Studies on reduplication*. Berlin: Mouton de Gruyter.
- Jacques, Guillaume & Anton Antonov. 2014. Direct/inverse systems. *Language and Linguistics Compass* 8(7). 301–318. https://doi.org/10.1111/lnc3.12079.
- Janic, Katarzyna, Nicoletta Puddu & Martin Haspelmath (eds.). 2023. *Reflexive constructions in the world's languages*. Berlin: Language Science Press.
- Janic, Katarzyna & Alena Witzlack-Makarevich (eds.). 2021. *Antipassive: Typology, diachrony, and related constructions. tsl.130.* Amsterdam: Benjamins.
- Jespersen, Otto. 1924. The philosophy of grammar. London: Allen & Unwin.
- Keenan, Edward Louis & Bernard Comrie. 1977. Noun phrase accessibility and universal grammar. *Linguistic Inquiry* 8. 63–99.
- Koch, Peter. 2012. Location, existence, and possession: A constructional-typological exploration. *Linguistics*. De Gruyter Mouton 50(3). 533–603. https://doi.org/10.1515/ling-2012-0018.
- Koptjevskaja-Tamm, Maria. 2002. Adnominal possession in the European languages: form and function. *STUF Language Typology and Universals* 55(2). 141–172. https://doi.org/10.1524/stuf.2002.55.2.141.
- Kulikov, Leonid I. 2011. Voice typology. In Jae Jung Song (ed.), *The Oxford handbook of linguistic typology*, 368–398. Oxford: Oxford University Press.
- Lazard, Gilbert. 1998. Actancy. Berlin: Mouton de Gruyter.
- Lazard, Gilbert. 2002. Transitivity revisited as an example of a more strict approach in typological research. *Folia Linguistica* 36(3–4). 141–190. https://doi.org/10.1515/flin.2002.36.3-4.141.
- Lehmann, Christian. 2007. On the upgrading of grammatical concepts. In Fons Moerdijk, van Santen, Ariane & Rob Tempelaars (eds.), *Leven met woorden: Opstellen aangeboden aan Piet van Sterkenburg.*, 409–422. Leiden: Brill. (http://christianlehmann.eu/publ/upgrading.pdf).
- Lehmann, Christian. 2015. Situation types, valency frames and operations. In Andrej L. Malchukov & Bernard Comrie (eds.), *Valency classes in the world's languages: A comparative handbook*, vol. 2, 1547–1595. Berlin: De Gruyter Mouton.
- Lyons, John. 1967. A note on possessive, existential and locative sentences. *Foundations of Language* 3(4). 390–396.
- Malchukov, Andrej, Martin Haspelmath & Bernard Comrie. 2010. Ditransitive constructions: A typological overview. In Andrej Malchukov, Martin Haspelmath & Bernard Comrie (eds.), *Studies in ditransitive constructions*, 1–64. Berlin: Mouton de Gruyter.
- Malchukov, Andrej L. & Akio Ogawa. 2011. Towards a typology of impersonal constructions: A semantic map approach. In Andrej Malchukov & Anna Siewierska (eds.), *Impersonal constructions: A cross-linguistic perspective*, 19–56. Amsterdam: Benjamins.
- Maslova, Elena & Vladimir P. Nedjalkov. 2005. Reciprocal constructions. In Martin Haspelmath, Matthew S. Dryer, David Gil & Bernard Comrie (eds.), *The world atlas of language structures*. Oxford: Oxford University Press. https://wals.info/chapter/106.
- Mauri, Caterina. 2008. Coordination relations in the languages of Europe and beyond. Berlin: Mouton de Gruyter.
- McNally, Louise. 2016. Existential sentences crosslinguistically: Variations in form and meaning. *Annual Review of Linguistics* 2(1). 211–231. https://doi.org/10.1146/annurev-linguistics-011415-040837.
- Nedjalkov, Vladimir P. (ed.). 2007. Reciprocal constructions (5 volumes). Amsterdam: Benjamins.
- Nedjalkov, Vladimir P. & Georgij G. Sil'nickij. 1969. Tipologija morfologičeskogo i leksičeskogo kauzativov [Typology of morphological and lexical causatives]. In Aleksandr A. Xolodovič (ed.), *Tipologija kauzativnyx konstrukcij [Typology of causative constructions*], 20–60. Moskva: Nauka.

- Nedyalkov, Vladimir P. & Georgy G. Silnitsky. 1973. The typology of morphological and lexical causatives. In Ferenc Kiefer (ed.), *Trends in Soviet theoretical linguistics*, 1–32. Dordrecht: Reidel.
- Olthof, Marieke. 2020. Formal variation in incorporation: A typological study and a unified approach. *Linguistics*. De Gruyter Mouton 58(1). 131–205. https://doi.org/10.1515/ling-2019-0036.
- Reinhart, Tanya & Eric Reuland. 1993. Reflexivity. Linguistic Inquiry 24(4). 657–720.
- Reuland, Eric J. 2011. Anaphora and language design. Cambridge, Mass: MIT Press.
- Roberts, John R. 2017. A typology of switch-reference. In Alexandra Y. Aikhenvald & R. M. W Dixon (eds.), *The Cambridge handbook of linguistic typology*, 538–573. Cambridge: Cambridge University Press. doi:10.1017/9781316135716.017.
- Shibatani, Masayoshi. 2019. What is nominalization? Towards the theoretical foundations of nominalization. In Roberto Zariquiey, Masayoshi Shibatani & David W. Fleck (eds.), *Nominalization in languages of the Americas*, 15–167. Amsterdam: Benjamins.
- Stassen, Leon. 1985. *Comparison and universal grammar*. Oxford, OX, UK; New York, NY, USA: B. Blackwell.
- Stassen, Leon. 1997. Intransitive predication. Oxford: Oxford University Press.
- Stassen, Leon. 2005. Comparative constructions. In Martin Haspelmath, Matthew S. Dryer, David Gil & Bernard Comrie (eds.), *The world atlas of language structure*. Oxford: Oxford University Press. http://wals.info/chapter/121.
- Stolz, Thomas & Nataliya Levkovych. 2019. On belonging: Preliminary thoughts on the typology of belong-constructions. In Lars Johanson, Lidia Federica Mazzitelli & Irina Nevskaya (eds.), *Possession in languages of Europe and North and Central Asia*, 313–363. Amsterdam: Benjamins. https://benjamins.com/catalog/slcs.206.
- Stolz, Thomas, Cornelia Stroh & Aina Urdze. 2005. Comitatives and instrumentals. In Martin Haspelmath, Matthew S Dryer, David Gil & Bernard Comrie (eds.), *The world atlas of language structures*. Oxford: Oxford University Press. https://wals.info/chapter/52.
- Stolz, Thomas & Ljuba Veselinova. 2005. Ordinal numerals. In Martin Haspelmath, Matthew S Dryer, David Gil & Bernard Comrie (eds.), *The world atlas of language structures*. Oxford: Oxford University Press. https://wals.info/chapter/67.
- Tsunoda, Tasaku. 1985. Remarks on transitivity. *Journal of Linguistics* 21. 385–396.
- Tsunoda, Tasaku. 2015. The hierarchy of two-place predicates: Its limitations and uses. In Andrej L. Malchukov & Bernard Comrie (eds.), *Valency classes in the world's languages: A comparative handbook*, vol. 2, 1597–1625. Berlin: De Gruyter Mouton.
- Wang, Yong & Jie Xu. 2013. A systemic typology of existential and possessive constructions. *Functions of Language* 20(1). 1–30. https://doi.org/10.1075/fol.20.1.01wan.
- Yu, Alan C. L. 2007. A natural history of infixation. Oxford: Oxford University Press.
- Zúñiga, Fernando & Denis Creissels (eds.). 2024. *Applicative constructions in the world's languages*. Berlin: De Gruyter Mouton.
- Zúñiga, Fernando & Seppo Kittilä. 2019. *Grammatical voice*. Cambridge: Cambridge University Press.