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30 Applicatives cross-linguistically: Features and distribution

Abstract: This chapter constitutes an update on the overview chapter on applicative constructions that appeared in the World Atlas of Language Structures (Polinsky 2003, 2013). The update has been possible thanks to the novel empirical material represented in the current handbook and to new descriptive and theoretical work on applicatives that has appeared since the compilation of the original atlas. The chapter includes a static map showing the distribution of main values in applicatives and a link to the corresponding dynamic map. The values reflected in the map include the main semantic roles of the applied object (we distinguish between the beneficiary, as the most common role, and everything else) and transitivity of the base (transitive, intransitive, or both). The most common type of attested applicative constructions is the one where applicatives of different roles are formed from both verbal bases, transitive and intransitive. We also show several values that are unattested. The chapter concludes with a brief discussion of current approaches to applicative constructions.

1 Introduction

This chapter constitutes an update on the chapter originally submitted to the World Atlas of Language Structures, WALS (Polinsky 2003, 2013), building both on the rich material represented in this handbook and on new descriptive and theoretical work on applicatives that has appeared since the compilation of the original atlas. In light of the growing work on applicatives, some of the data points presented in the WALS chapter could be revised, to reflect the improved and expanded empirical base of applicatives. For instance, Mapudungun (Mapuche) was represented in WALS as lacking applicatives; however, as Zúñiga (this volume) convincingly shows, it does have an applicative construction. In general, the data presented in this chapter supersede the WALS maps.

On the research side, several overviews and analytical treatments appeared after the publication of the WALS chapter, in particular, Georgala (2012), McGinnis (2008, 2017), Peterson (2007, 2019), Pylkkänen (2008). Some of the current approaches to applicatives are sketched in Section 4 of this chapter.

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Following the definition by Zúñiga and Creissels (this volume), applicativization relates two constructions, the base construction (BC) and the applicative construction (AC) in the following way: (i) the predicates in both constructions are built upon the same root, but the one in the AC bears additional overt marking that distinguishes it from the one in the BC; (ii) the participant encoded as S or A in the BC appears as S or A in the AC; and (iii) the AC includes an applied phrase (AppP), which refers to a participant that either requires a non-core coding in the BC different from its coding in the AC or cannot be expressed at all in the BC.

For example, in Tukang Besi (Austronesian; Sulawesi, Indonesia), the verb 'fetch' takes one theme object in the basic construction (as shown in [1a]), but with the applicative marker it takes two objects, theme and beneficiary (as shown in [1b]).

(1) Tukang Besi (Donohue 1999: 256)

a. Basic construction, two-place predicate

no-ala	*te*	*kau*
3.REALIS-fetch	the	wood

'She fetched the wood.'

b. Applicative construction, three-place predicate

no-ala-ako	*te*	*ina-su*	*te*	*kau*
3.REALIS-fetch-APPL	the	mother-my	the	wood

'She fetched the wood (as a favor) for my mother.'

The term APPLICATIVE is used to denote either the applicative construction or the verb in that construction. The term was first used by early Spanish missionary grammarians in the description of Native American languages, in particular Uto-Aztecan; it was later adopted by Bantuists and is now used for similar constructions all over the world, although a popular perception of applicatives is primarily tied to these language families.

It is customary to restrict the designation APPLICATIVE to those cases where the addition of an object is overtly marked on the predicate (see Zúñiga and Creissels, this volume), which why English pairs such as *she baked a cake* vs. *she baked Oscar a cake* typically do not count as basic-applicative alternation (but see Zúñiga, Arkadiev and Hegedűs, this volume, and Polinsky, this volume, for further discussion). And in fact, there are clear instances where the derived applied object is different in its grammatical properties from the underived one, as in dative-object or double object constructions.

In contrast to other valency-changing alternations, applicativization is typically marked by an affix on the predicate, and does not involve reduplication, deletion of verbal morphology, ablaut, or stress shifts (see Dixon 2012: 301). However, the stem alternations observed in Otomanguean languages (Hernández-Green and López Nicolás, this volume) may present a counterexample to this observation.

Difficulties in identifying applicatives on the basis of verbal marking may arise as in a number of languages, some verbs can be overtly marked as applicative and others, are not, thus creating what can be called "masked applicatives", lexicalized applicatives, or deponents (see Zúñiga and Creissels, this volume). All told, we face the situation with applicative which may be described as "now you see it, now you don't". Some chapters in this volume address this issue by introducing the distinction between obligatory and optional applicatives. In mapping out the applicatives, we have adopted a more conservative approach, relying on reports that identify at least some verbal marking; we have also chosen to exclude clearly lexicalized occurrences and some constructions that are still under debate (for example, locative-object verbs or relational verb constructions of Algonquian — see Lockwood and Macaulay, this volume).

In terms of typical semantic roles associated with more specialized applicatives, the most common role is that of beneficiary. This role of the applied argument is often close to or get collapsed with goal, recipient, maleficiary (some researchers group all four under the rubric of goal or recipient, consider Dixon 2012: Ch. 25). The other common roles include instrument; comitative/sociative; location, broadly understood, and substitutive (a participant on whose behalf the action is performed). A number of terms have been proposed for the latter, including "deputative beneficiary" (Van Valin and LaPolla 1997) and "surrogate" (Zúñiga 2014).

Comitative/sociative applicatives formed from intransitives seem to be particularly common in languages of Australia (see Austin, this volume). Comitatives and substitutives are quite common in applicatives of intransitives, consider a comitative applicative in Mapudungun and a substitutive/surrogate applicative in Kinyarwanda (3):

(2) Mapudungun (Zúñiga, this volume)
Amu-ye-fi-n *ñi* *wen̲üy.*
go-APPL-3.OBJ-1SG.SBJ.IND 1SG.PSR friend
'I went with my friend.' (comitative)

(3) Kinyarwanda (Maria Polinsky, field notes)
Umugabo *a-ra-geend-er-a* *umugóre.*
man 3SG-PRES-travel-APPL-ASP woman
'The man is travelling instead/on behalf of the woman.' (substitute)

The applicative derivation can also add causee and possessor as separate arguments, but there is less consensus among researchers as to whether or not these arguments should count as applied or not (see Polinsky, this volume, for more discussion).

Some languages have dedicated markers for different roles (consider the discussion of "applicative arrays" in Dixon 2012: 312–315, and see Beck, this volume, on

Totonac, which has a rich array of dedicated applicative markers),[1] whereas others group many roles under the GENERALIZED APPLICATIVE, which is a syncretic exponent used to add an argument with a variety of interpretations. If different exponents are used to index different semantic roles, we commonly find a contrast between beneficiary (often with the associated meanings of goal and recipient), location, and instrument/comitative.

Generalized applicative and dedicated applicative markers can co-occur in a single language, as for example, in Ktunaxa (Gatchalian, submitted), or Uto-Aztecan languages (Álvarez González and Estrada Fernández, this volume; Thornes, this volume). Variation is observed even in such "classic" applicative languages as Bantu languages; for instance, Pacchiarotti (this volume) writes:

> Languages where the applicative is obligatory on a root-by-root basis to introduce any given set of semantic roles except Agent (and occasionally Instrument) have a very restricted set of prepositions or no prepositions at all, e.g., the Chaga E60 language group. . . . Languages with optional applicative constructions usually have a fairly developed system of prepositions, but the applicative might still be obligatory with certain verb roots to introduce certain semantic roles, e.g. Mongo-Nkundo C61.

Languages also vary depending on whether or not more than one applicative marker can be used within a single verb. Applicative stacking is not uncommon (see § 4.3 below); it is found in Bantu (Creissels, this volume; Pacchiarotti, this volume), Kartvelian (Tuite, this volume),[2] Northwest Caucasian (Arkadiev, Lander, and Bagirokova, this volume), Mapudungun (this volume), Totonac (Beck, this volume), just to give a few examples.

2 Definition of map values

At the time the original WALS maps were created, the editors of the Atlas asked the authors of individual chapters to survey a list of about two hundred languages, mapping the relevant feature in that sample. As a result, the WALS applicative atlas divided languages into those that have applicative constructions and those that do not. In this chapter, we adopt a different approach, mapping only those languages which have been claimed to have applicative constructions. Languages that are not on the map may therefore be excluded for two different reasons: either they genuinely lack applicatives or no definitive data to this point are available. We believe that this approach is more appropriate at the present stage of our knowledge; as new languages with applicatives are found, they could be added to the current map.

1 In mapping languages with multiple dedicated applicatives, we used the option "Benefactive and other roles". The semantics of individual roles indexed by applicative markers tends to be quite fluid, so grouping them all together appears to be a descriptively safe option.

2 Tuite refers to applicative stacking as "double applicatives".

Two main parameters in which applicatives vary cross-linguistically include the transitivity of the base and the semantic role of the applied object. The map presented in this chapter reflects the values of these parameters.

With respect to the TRANSITIVITY OF THE BASE, the main distinctions are between applicatives formed (i) from a TRANSITIVE BASE ONLY, (ii) from an INTRANSITIVE BASE ONLY, and (iii) from BOTH BASES (these distinctions are shown by different shapes of the symbols on the map). There are also constraints on the number of arguments of the base verb; they are not shown in the map because they are harder to determine on the basis of grammars.

With respect to the SEMANTIC ROLES OF THE APPLIED OBJECT, the most common role of the applied object is that of beneficiary (sometimes also associated with recipient/goal). Accordingly, the map differentiates applicatives whose applied object (i) is LIMITED TO BENEFICIARY; (ii) corresponds to the BENEFICIARY AND SOME OTHER ROLES; (iii) corresponds to OTHER ROLES TO THE EXCLUSION OF THE BENEFICIARY. These distinctions are shown by the different colors of the symbols on the map.

Of nine logically possible values, six are actually attested. We summarize all the options in Table 1 (we also include the unattested values), with each cell showing the number of languages instantiating that particular option:

Table 1: Main values in the distribution of applicatives.

	Verb base		
	Intransitive	**Transitive**	**Both intransitive and transitive**
Benefactive object only	Unattested	Attested (24)	Attested (32)
Benefactive and other objects	Unattested	Attested (5)	Attested (68)
Non-benefactive object only	Attested (2)	Unattested	Attested (13)

With respect to the unattested values, it remains to be seen if they are not found for principled reasons or for lack of data. We return to some of the reasons behind lack of attestation in Section 4.2.

The static map below (Figure 1) presents all the attested values in their geographical distribution; the attested numbers shown in Table 1 are also included. The map was created with R (R Core Team 2022) package lingtypology (Moroz 2017). The dynamic version and raw data are available at: https://lingconlab.github.io/supplementary_applicative_constructions/; the language data on the dynamic map also include their genetic affiliations. While the static map has to remain as is, the dynamic map can be updated with new or corrected data (directly on github https://github.com/LingConLab/supplementary_applicative_constructions/issues/new or by emailing the authors of this chapter).

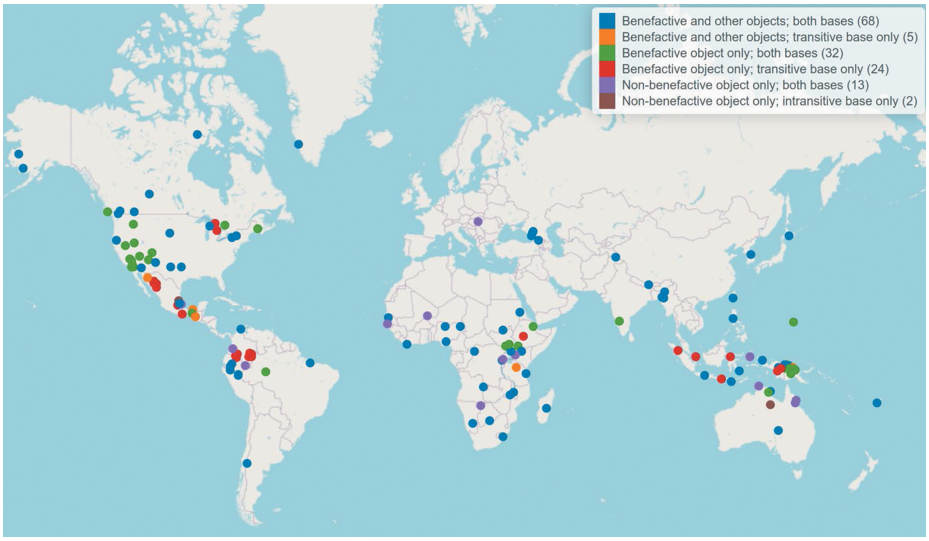

Figure 1: The crosslinguistic distribution of applicative constructions.

3 Areal and genetic distribution of applicatives

Applicatives are common in three geographical areas: Africa (mostly in Bantu), the western Pacific region (Austronesian), and North and Meso-America (Salish, Mayan, Uto-Aztecan). The main generalization seems to be that applicatives are commonly found in those languages that have little or no case-marking of noun phrases in a clause and that have sufficiently rich verbal morphology to mark applicative formation on the predicate. There may be a weak correlation between the use of the applicatives and impoverished nominal marking; this would account for what can be called typical applicative languages, such as Bantu, but it is still worth noting that not all languages with applicatives lack nominal morphology — consider Kartvelian, where rich verb morphology coexists with rich nominal marking (see Tuite, this volume).

4 Linguistic puzzles related to applicatives

Applicative verbs and constructions have generated a significant amount of research dealing with the morphosyntax of applicatives, transitivity, VP structure, distinct object relations, argument structure, and mapping from argument to syntactic structure. For an overview of theoretical issues, see Alsina (1996), Alsina and Mchombo (1993), Peterson (1999, 2007, 2019), and McGinnis (2008, 2017).

4.1 Transitivity of the base

The intransitive base of applicatives is less common than the transitive base. This is quite clear from the map; few languages in the sample that form applicatives exclusively from the intransitive base (see Table 1 and Figure 1). The overall tendency is that if a language has applicatives formed from the intransitive base, it also has applicatives formed from the transitive base.

The following explanation may be offered as to why the applicative is uncommon with intransitives. Adding an object to an intransitive base amounts to creating a transitive verb. In order to transitivize an intransitive, languages typically use causativization, thus increasing the complexity of the event structure (V > CAUSE V); with the applicative, the event structure is not modified, just another participant is added. Under causativization, the argument added to the argument structure of the verb is agent; under simple transitivization, the added argument is theme (or patient). Note that applicative formation results in adding arguments other than agent and theme, and may thus be constrained by the general hierarchy of semantic roles (see, among others, Dowty 1991; Baker 1998; Primus 1999; Levin and Rappaport Hovav 2055):

(4) agent > theme (patient) > goal (recipient, beneficiary) > location > other roles

Although the constraint on applicative formation from intransitives seems not to be absolute, a particular subset of intransitives, namely unaccusative predicates (those whose subject originates as an object in the underlying structure), resist applicativization (see Baker 1998). However, even this generalization does not hold in some languages, for instance, in Halkomelem (Gerdts 1988 and this volume), Lai (Peterson 2007) and Sesotho (Machobane 1989), which suggests that it is just a strong tendency.

4.2 Morphosyntax

In applicatives derived from the transitive base, the question arises which object, basic or applied, has more object-like properties, which can point to its being structurally superior. Three possibilities can be anticipated:

(5) a. the base object and the applied object have same/similar grammatical properties
b. the applied object has more object properties than the base object
c. the base object has more object properties than the applied object

In some languages both objects, basic and applied, are accessible for passivization and relativization, can bind a reflexive, can trigger agreement on the verb, or can license coreferential deletion across clauses. Such languages are called “symmetrical”, instantiating scenario (5a). In other languages, only one object, either applied or basic, can

show the relevant grammatical behaviors. Such languages are called “asymmetrical”, instantiating options (5b) and (5c).

Thanks to the influential work by Bresnan and co-authors (Bresnan and Mchombo 1987; Bresnan and Moshi 1990), the symmetrical-asymmetrical distinction has been tested primarily in Bantu languages. A number of chapters in this handbook explore it with respect to other languages, demonstrating a common tendency for object asymmetry. Furthermore, more recent work on Bantu suggests that treating individual languages as symmetrical or asymmetrical leads to missed generalizations because symmetry and asymmetry may co-occur within the same language, with respect to different verb classes or object types (van der Waal 2017).

The morphosyntax of applicatives and object asymmetries can be captured under Baker’s (1988) approach to incorporation. According to Baker, applicative formation is the result of the incorporation of a preposition into a verb — thus, what appears to be an applicative affix starts out as an adposition introducing an oblique object. The oblique becomes an object following adposition incorporation. This account fits well with the observation that many (but not all) applicative markers originate as adpositions, and may also explain the empirical generalization that applicatives are not marked via reduplication, stress shift or stem reduction (but see § 1 for possible exceptions).

In exploring the syntax of applicatives, Pylkkänen (2008) proposes a dedicated functional head, ‘Appl’, which can be merged in different places in the structure, namely, high and low, hence the distinction between high and low applicatives. When the applicative head is added to the structure low, inside the verb phrase, it serves a particular function of relating the two objects, the base object (patient) and the applied one; very often this is the relationship which can be captured in terms of possession/inclusion, transfer, or affectedness of the applied object. This explains the common association between applicativization and transitive base, and the common albeit not obligatory benefactive interpretation of the applied object (the subscripts on the object denotations in (6) indicate the semantic roles):

(6) $[_{VP}$ V $[_{ApplP}$ APPLIED OBJECT$_{BEN}$ $[_{Appl}$ Appl [BASE OBJECT$_{PATIENT/THEME}$]]]]

In high applicatives, the Appl functional head is added outside (above) the verb phrase, and the applied object is causally connected to the entire eventuality denoted by that verb phrase, not to the object inside that verb phrase. Accordingly, high applicatives can occur with intransitive predicates which do not introduce an object or with transitive verbs where no clear semantic relation between the two objects is presumed. The structure is as follows (by putting the base object in parentheses we indicate that it is not always present in this structure).

(7) $[_{ApplP}$ APPLIED OBJECT $[_{Appl}$ Appl $[_{VP}$ V (BASE OBJECT)]]]

The structure in (7) allows for a variety of semantic roles associated with the applied object, as long as this object can be construed as associated with the entire event (as a location, associate, etc.).

Pylkkänen's analysis has been criticized on semantic grounds, primarily because it does not establish a stronger connection between the event expressed by the low applicative and the possession (Larson 2010). On the structural side, however, this account has been influential and predictive with respect to argument properties of the applied object. It is worth noting that Pylkkänen's account predicts that low applicatives would occur with transitive bases, and that benefactive would be particularly common among such applicatives. This is confirmed by the attested cross-linguistic distribution (see the map in Figure 1 and also Table 1).

4.3 Multiple applicatives: Applicative-marker stacking

The view of applicative formation as preposition incorporation has played an important role in approaches to *applicative morphology*. The basic idea is that morphological derivations must directly reflect syntactic derivations (and vice versa) (Baker 1985; Alsina 1999), and this isomorphism should be reflected in affix ordering (so-called Mirror Principle). Crucial evidence for the Mirror Principle has been drawn from the interaction between applicative morphology and morphology of other morphosyntactic operations (passive, reciprocal) in Bantu.

Instances of multiple applicative marking and multiple applied objects are found in Bantu languages, Tukang Besi (and possibly other Austronesian languages), and Northwest Caucasian languages (Arkadiev, Lander and Bagirokova, this volume; O'Herin 2001).[3] In Cahuilla, applicative formation is achieved either via prefixation (for adding a locative object) or via suffixation (for adding a beneficiary/recipient), which suggests that the diachronic origin of these markers may be different. In those cases where identical applicative morphemes allow iteration, as in Bantu, it is unclear whether their number is constrained by grammar or by processing limitations.

4.4 Semantics of the applied object

It is sometimes hard to tell from grammatical descriptions whether the beneficiary is differentiated from the recipient/goal, or other common roles associated with the applied object. It is also unclear how many languages merge the beneficiary and the malefi-

3 Koyraboro Senni is another language with multiple-applicative marking mentioned in Polinsky (2013), whose data were based on Heath (1999: 168–169). However, a closer examination of this language suggests that it may actually lack applicatives (Denis Creissels, p.c.), so we do not include it in the list presented here.

ciary (i.e., the adversely affected object), and whether their separation or their merger is more typical. In addition, the applied object can be mapped onto a possessor, whose place in the hierarchy of semantic roles is not quite clear (see Polinsky, this volume, for more discussion of the possessor role in applied objects). The beneficiary, the goal, and the possessor are typically animate participants, which may create an impression that the applied object has to be an animate participant. Indeed, in some languages (e.g., Halkomelem) the referent of the applied object must be animate regardless of its semantic role (Gerdts 1988, 1993, and this volume). In some languages, e.g. Kinyarwanda, the linear order of the base and applied object varies depending on animacy (Kimenyi 1988; Polinsky 1995); animacy plays a big role in the structure and interpretation of Algonquian applicatives (see Lockwood and Macaulay, this volume; Rhodes 2010). For a more detailed discussion of semantic roles of the applied object, see Zúñiga and Creissels (this volume) and Dixon (2012: Ch. 25).

Abbreviations

APPL	applicative
ASP	aspect
IND	indicative
OBJ	object
PRES	present
PSR	possessor
SBJ	subject
SG	singular

References

Alsina, Alex. 1996. Passive types and the theory of object asymmetries. *Natural Language and Linguistic Theory* 14. 673–723.

Alsina, Alex. 1999. Where's the Mirror Principle? *The Linguistic Review* 16. 1–42.

Alsina, Alex & Sam Mchombo. 1993. Object asymmetries and the Chichewa applicative construction. In Sam Mchombo (ed.), *Theoretical aspects of Bantu grammar*, 17–45. Stanford: CSLI Publications.

Baker, Mark C. 1985. The Mirror Principle and morphosyntactic explanation. *Linguistic Inquiry* 16. 373–416.

Baker, Mark C. 1988. *Incorporation: A theory of grammatical function changing*. Chicago: University of Chicago Press.

Baker, Mark C. 1998. On the structural positions of themes and goals. In Johan Rooryck & Laurie Zaring (eds.), *Phrase structure and the lexicon*, 7–34. Dordrecht: Kluwer.

Bresnan, Joan & Sam Mchombo. 1987. Topic, pronoun, and agreement in Chichewa. *Language* 63(4). 741–782.

Bresnan, Joan & Lioba Moshi. 1990. Object asymmetries in comparative Bantu syntax. *Linguistic Inquiry* 21. 147–185.

Dixon, R. M. W. 2012. *Basic Linguistic Theory, Vol. 3: Further grammatical topics*. Oxford: Oxford University Press.
Donohue, Mark. 1999. *A grammar of Tukang Besi.* Berlin: Mouton de Gruyter.
Dowty, David. 1991. Thematic proto-roles and argument selection. *Language* 67(3). 547–619.
Gatchalian, Terrance. Submitted. Building Ktunaxa causatives.
Georgala, Effi. 2012. *Applicatives in their structural and thematic function: A minimalist account of multitransitivity*. Ithaca, NY: Cornell University dissertation.
Gerdts, Donna B. 1988. *Object and absolutive in Halkomelem Salish*. New York: Garland.
Gerdts, Donna B. 1993. Mapping Halkomelem grammatical relations. *Linguistics* 31. 591–621.
Heath, Jeffrey. 1999. *Grammar of Koyraboro (Koroboro) Senni, the Songhay of Gao.* Cologne: Rüdiger Köppe Verlag.
Kimenyi, Alexandre. 1988. Passives in Kinyarwanda. In Masayoshi Shibatani (ed.), *Passive and voice*, 355–386. Amsterdam: John Benjamins.
Larson, Richard K. 2010. On Pylkkänen's semantics for low applicatives. *Linguistic Inquiry* 41. 701–704.
Levin, Beth & Malka Rappaport Hovav. 2005. *Argument realization*. Cambridge: Cambridge University Press.
Machobane, Malillo. 1989. *Some restrictions on the Sesotho transitivizing morphemes*. Montreal: McGill University dissertation.
McGinnis, Martha. 2008, Applicatives. *Language and Linguistics Compass* 2. 1225–1245.
McGinnis, Martha. 2017. Applicatives. In Martin Everaert & Henk C. van Riemsdijk (eds.), *The Wiley Blackwell Companion to Syntax*, Second Edition https://doi.org/10.1002/9781118358733.wbsyncom124
Moroz, George. 2017. lingtypology: Easy mapping for Linguistic Typology. https://CRAN.R-project.org/package=lingtypology
O'Herin, Brian. 2002. Abaza applicatives. *Language* 77(3). 477–493.
Peterson, David A. 1999. *Applicative constructions*. Berkeley: University of California dissertation.
Peterson, David A. 2007. *Applicative constructions*. Oxford: Oxford University Press.
Peterson, David A. 2019. Applicatives. *Oxford Bibliographies Online*. DOI: 10.1093/OBO/9780199772810-0227
Polinsky, Maria. 1995. Double objects in causatives. *Studies in Language* 19(1). 121–221.
Polinsky, Maria. 2003. Applicative constructions. In Martin Haspelmath, Matthew Dryer, David Gil & Bernard Comrie (eds.), *World Atlas of Language Structures*, 442–445. Oxford: Oxford University Press.
Polinsky, Maria. 2013. Applicative constructions. In Matthew S. Dryer & Martin Haspelmath (eds.), *The World Atlas of Language Structures Online*. Leipzig: Max Planck Institute for Evolutionary Anthropology.
Primus, Beatrice. 1999. *Case and thematic roles*. Berlin: Max Niemeyer.
Pylkkänen, Liina. 2008. *Introducing arguments*. Cambridge, MA: MIT Press.
R Core Team. 2022. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL https://www.R-project.org/.
Rhodes, Richard. 2010. Relative root complement: a unique grammatical relation in Algonquian syntax. In Jan Wohlgemuth & Michael Cysouw (eds.), *Rara & rarissima*, 305–324. Berlin: De Gruyter Mouton.
van der Wal, Jenneke. 2017. Flexibility in symmetry: An implicational relation in Bantu double object constructions. In Michelle Sheehan & Laura R. Bailey (eds.), *Order and structure in syntax II: Subjecthood and argument structure*, 115–152. Berlin: Language Science Press.
Van Valin, Robert D. & Randy LaPolla. 1997. *Syntax: Structure, meaning, and function*. Cambridge: Cambridge University Press.
Zúñiga, Fernando. 2014. Benefaction proper and surrogation. *Studies in Language* 38(3). 543–565.