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# *Nisi paria non pugnant*: argument structure alternations with lexical reciprocal verbs in Latin

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**Abstract:** Lexical reciprocal verbs, defined as those verbs that inherently lexicalize a symmetric situation, e.g., *consentio* 'agree', occur in at least three distinct argument structure constructions, depending on whether their participants are expressed as a single (plural) subject, asymmetrically expressed – one as subject and the other one as oblique – or only one is overtly realized. Drawing from extensive data from a corpus of Latin texts (extracted from the LASLA corpus) and by resorting to quantitative analyses, I investigate the extent to which these three constructions are used with a sample of lexical reciprocal verbs and explore possible motivations for the alternation. Corpus data shows that a multiplicity of factors co-operate in motivating speakers' choice of one construction over the other, pointing to the need to integrate fine-grained corpus analyses in the study of argument structure constructions and their alternations more generally.

**Keywords:** argument structure alternation; coding frame; corpus linguistics; discontinuous construction; lexical reciprocal

## 1 Introduction

The last decades have witnessed an increasing interest in the study of reciprocal constructions in Latin, partly in the wake of recent advances in the study of reciprocals across languages (see Evans et al. 2011; König and Gast 2008; Nedjalkov et al. 2007; among others). Scholarly interest has particularly concerned the morpho-syntactic strategies that Latin employs to express reciprocal, or better *mutual* (Haspelmath 2007: 2087), situations starting from non-reciprocal ones, and comparatively less attention has been paid to those verbs that inherently express

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reciprocal situations, that is, *lexical reciprocal verbs*. This class includes verbs such as *consentio* 'agree' or *iungo* 'join' (see Section 2 for a more exhaustive discussion).

Lexical reciprocals typically feature (at least) two participants, termed *reciprocants*, and as such belong to the class of semantically bivalent verbs. However, cross-linguistically they do not fully partake in the morphosyntactic behavior of prototypically transitive verbs (that is, verbs that display the same argument coding pattern of verbs of breaking, e.g., Croft 2022: 183–186). Firstly, they are often associated with non-active voice marking. Secondly, their argument structure may differ considerably from that of transitive verbs and, based on how the two participants are expressed, they typically occur in a variety of syntactic constructions. For example, the English verb *fight* can be used in at least two constructions: *Mark and Peter fought against each other* and *Mark fought with Peter* (I return to the full range of constructions available in Section 2).

Far from being a peculiarity of Latin, similar constructional alternations with lexical reciprocals have been detected in several languages (e.g., Dimitriadis 2004; Siloni 2008: 473–490), and different factors have been pointed out as playing a role in determining the choice of a specific construction with individual verbs: discourse and information structure (Knjazev 2007: 120), the conceptualization of the event as more or less symmetric (Allan 2003: 52–53; Fanelli 2009: 141; Mocciaro 2011), the semantics of individual verbs (Dimitriadis 2008b: 387–390), and individual verbs' preferences (Inglese and Zanchi 2020: 141). Nevertheless, we still lack a comprehensive account of why lexical reciprocals showcase such a variety of argument structure constructions and what motivates constructional alternation with these verbs, both within and across languages.

Against this background, in this paper I offer an in-depth investigation of the existing range of variation in the argument structure constructions of lexical reciprocals in Latin. To this aim, I undertake a corpus study of the syntax of a number of lexical reciprocal verbs pertaining to different semantic domains, including verbs of rivalry and collaboration (e.g., *pugno* 'fight', *paciscor* 'agree') and verbs denoting spatial relationships of proximity/remoteness (e.g., *congrego* 'assemble', *separo* 'separate'), based on a sample of their occurrences extracted from the LASLA corpus. Looking at how these verbs behave in corpus data will also allow me to empirically evaluate which of the factors proposed in the literature plays a role in explaining the observed variation. Specifically, instead of testing individual factors in isolation, I resort to a multifactorial model (random forest model) to assess the role of multiple factors and their weight, thus approaching the study of the alternation from a probabilistic and usage-based perspective (see Pijpops et al. 2024).

This paper is structured as follows. Section 2 offers a brief introduction to the encoding of reciprocity in Latin, while Section 3 illustrates argument structure alternations with lexical reciprocals. Section 4 features an illustration of the data,

methodology and the statistical model used for the quantitative analysis. In Section 5, I discuss in detail the result of the statistical model, and explore several factors at play in the alternation among different argument structure constructions (Sections 5.1–5.5). Section 6 takes a closer look at discourse motivations in the use of the discontinuous construction. Section 7 recapitulates the findings of this work.

## 2 The encoding of reciprocity in Latin

Reciprocal verbs express situations that feature at least two participants, that (a) are in an identical reverse relation to each other and (b) perform two identical semantic roles each (Nedjalkov 2007: 6–7). The past decades have witnessed a surge in typological studies dedicated in part or in whole to reciprocal constructions, so that we now have a fairly good understanding of how these behave within and across languages (see e.g., Evans et al. 2011; Frajzyngier and Curl 2000; Lichtenberk 1985; Nedjalkov et al. 2007). A major distinction is that between *grammatical* and *lexical* reciprocals. In a nutshell, the former are transparently derived via reciprocalization from a verb that otherwise does not encode a mutual/symmetric situation (e.g., *hit* > *hit each other*), while the latter are not. This entails that the mutual semantics is derived in grammatical reciprocals but is somewhat inherent to the lexical ones, where it is stored as lexical information (see Siloni 2012). On a morphosyntactic level, while grammatical reciprocals are typically marked in some way or another (e.g., by means of dedicated pronouns such as *each other*), lexical reciprocals may lack any overt marking of reciprocity. In the remainder of this section, we will take a closer look at how the two groups behave in Latin.

Latin has a number of strategies to encode grammatical reciprocals (see Cuzzolin 2015; Fanelli 2009; Pinkster 2015). The two main strategies are the use of the polyptotic pronoun based on *ali-* or *alter* 'other', as in (1a), and the use of the preposition *inter* 'between' combined with reflexive pronouns, as in (1b).[1] Other, more marginal, strategies include the use of adverbs such as *mutuo* and *invicem* 'mutually', as in (1c), as well as the use of verbal prefixes such as *dis-* and *com-*, e.g., *loquor* 'speak' > *colloquor* 'speak to one another' (on prefixes see especially Revuelta 2015, 2017).[2]

**1** Verbal voice, which in other ancient Indo-European languages such as Ancient Greek (Inglese and Zanchi 2020) is marginally connected with the encoding of reciprocity, is not used in Latin as a strategy to express grammatical reciprocals. Similarly, the use of reflexive pronouns in isolation to express reciprocity, while being a widespread pattern in Romance languages, is virtually unattested in Latin (see Cennamo [1999: 114] and Pinkster [2015: 273] for a handful of examples).

**2** Translations of Latin texts are adapted from the LOEB Classical Library.

(1) a. (Sall. *Catil.* 53, 1)
***alii alios*** *increpantes timidos vocant*
'With mutual reproaches, they accused one another of timidity.'
b. (Plaut. *Capt.* 420)
*videas corde amare* ***inter se***
'You can see that they love each other from the heart.'
c. (Sen. *Epist.* 68, 5)
*licet ergo haec* ***invicem*** *scribere*
'We are allowed to write such things to one another.'

Lexical reciprocals, or *allelic predicates* in Haspelmath's (2007) proposed terminology, can broadly be defined as verbs that indicate "events that either necessarily (e.g., 'meet') or very frequently (e.g., 'fight', 'kiss') are semantically reciprocal" (Kemmer 1993: 102), that is, verbs that inherently feature a mutual/symmetric meaning component (Nedjalkov 2007: 14; note that I use mutual and symmetric as roughly synonymous here, but see Haspelmath 2007: 2087) and that cannot be synchronically derived from a non-reciprocal base. Cross-linguistically, lexical reciprocals have been shown to fall within a specific set of verb classes, including verbs of competition, joint action, connecting and dividing, predicates of identity and relationship nouns. I return in more detail to the semantics of lexical reciprocals in Section 5.5. In Latin, lexical reciprocals may appear as either unmarked active verbs, e.g., *pugno* 'fight', or as deponents, e.g., *luctor* 'fight' (Fanelli 2009: 91–94; Gianollo 2010: 41). In this respect, Latin complies with a cross-linguistic tendency for middle marking to apply to lexical reciprocals (Inglese 2022: 515; Kemmer 1993: 102–108). In addition, several prefixed verbs also belong to this class, e.g., *disputo* 'argue' and *colloquor* 'converse'.

## 3 Constructional alternation with lexical reciprocals in Latin

Besides their association with the non-active voice, another peculiarity of lexical reciprocals is that, despite being semantically bivalent verbs, they seldom occur in the prototypical transitive construction (defined as per Croft 2022: 183–186). For example, data in the BivalTyp database (Say 2020) shows that in a sample of 79 languages the verb 'fight' never occurs in a transitive construction, but rather occurs in argument structure constructions in which the second reciprocant is expressed as either a comitative or an instrumental (also Haspelmath 2007: 2092). In fact, lexical reciprocals appear to rank halfway on the transitivity hierarchy

(Malchukov 2005), and, based on their semantics, they tend to follow the argument marking pattern of either INTERACTION or MOTION verbs (see Croft 2022: 213–224).

In discussing the syntax of (lexical) reciprocals, Nedjalkov (2007: 27–32) shows that these verbs occur in two constructions, depending on whether the two reciprocants (henceforth, R1 and R2) are assigned the same grammatical relation or not. Let us exemplify these constructions by looking at the Latin verb *pugno* 'fight'. In the first construction, which Nedjalkov labels *simple construction*, R1 and R2 are encoded by a coordinated subject NP (or by a single plural/collective noun or pronoun), as in (2).[3]

(2) (Curt. 6, 7–8)
*duarum nobilissimarum bello gentium* ***exercitus***$_{R1\&R2}$ *pari Marte* ***pugnabant*** SIMPLE
'The armies of the two nations most famed in war were fighting on even terms.'

In the second one, the *discontinuous construction* (thus already Maslova 2000: 168), R1 is encoded as the subject (as shown by agreement with the verb) whereas R2 is expressed by an oblique phrase, typically a comitative, as in (3) (on the realization of R2 see Section 6.1).

(3) (Catull. 62, 59)
*et tu*$_{R1}$ *ne* ***pugna cum tali coniuge***$_{R2}$*, virgo* DISCONTINUOUS
'And you maid, do not fight with such a partner'

To these, one can add a third construction, for which I propose the label *absolute*. These are cases such as (4), in which R2 does not appear at all.

(4) (Cic. *Quinct*. 22, 72)
*pro me* ***pugnabit*** *L. Philippus*$_{R1}$ ABSOLUTE
'Lucius Philippus will fight for me.'

Note that, whereas the constructions in (2) and (3) are semantically similar, in that they both encode symmetric situations (though with some minor differences in that for example simple constructions always express unary simultaneous events, whereas discontinuous ones need not, see Gleitman et al. 1996; Winter 2018), the construction in (4) is intuitively difficult to reconcile with the symmetric semantics of the event, as it only features one participant. I nevertheless believe that such usages need to be accounted for when discussing the syntax of lexical reciprocals, as in these

**3** Here and in the rest of the paper I focus on *subject-oriented* reciprocals, that is, those reciprocals in which a mutual relation is established between participants in subject position, and exclude *object-oriented reciprocals* of the type 'A joins B with C'.

cases R2 is omitted typically because generic or indefinite, but is arguably retained in the semantic structure of the event, parallel to the omission of generic objects with transitive verbs, as in *Mark reads every day* (see Goldberg 2005). I return to this point in Section 5.2.

The three constructions constitute different ways to conceptualize and talk about symmetric relations. In the simple construction, by virtue of their being syntactically symmetrical, R1 and R2 are necessarily construed as co-participating in a symmetric and mutual relation, in which both are given equal prominence. By contrast, by selecting the discontinuous or the absolute construction, speakers may construe the same event with a different degree of symmetry and the two participants as having different degrees of prominence, for reasons that I explore in detail in Sections 5 and 6.

As already remarked upon by Revuelta (2017: 116), the examples in (2) to (4) can rightfully be regarded as a case of argument structure alternation, if we broadly define the latter as the possibility of a verb to occur in more than one coding frame (e.g., Malchukov 2015; Pijpops 2020). Argument structure alternations have been extensively studied, both within and across languages, especially from a Construction Grammar perspective (Goldberg 1995; Levin 1993; Perek 2015; Pijpops et al. 2024; see also Malchukov and Comrie [2015] for a cross-linguistic perspective), and dedicated studies have also appeared on Latin (see Giuliani and Zanchi [forthcoming] for an overview). Nevertheless, exhaustive studies of constructional alternation with lexical reciprocals remain few (see Dimitriadis [2004] for a cross-linguistic overview; dedicated studies include Mocciaro [2011] on Italian; Plank [2006] on German), and the topic has not yet fully been explored in Latin.

Before moving on to the analysis of the Latin data, an important caveat is in order. As is well known, Latin allows null referential objects, that is, zero anaphora, in several contexts (Luraghi 1997), and this tendency also affects the realization of R2 in discontinuous reciprocal constructions. This means that in some cases it is not always easy to tell whether a given occurrence is to be taken as instantiating the discontinuous construction with zero anaphora of a definite referential R2 or the absolute construction with omission of a generic R2. In these cases, only a careful analysis of the contexts can disambiguate the appropriate reading.[4] Compare (5), in which the verb *colloqui* is used in a generic sense without R2, thus as an instance of the absolute construction, with (6), which features the zero anaphora of a definite R2, coreferent with the anaphoric pronoun *eum* 'him' in the immediately preceding context and with the likewise omitted referential object of the following verb *interrogares*.

**4** For simplicity's sake, I use the term *zero anaphora* when the omitted argument is referential and *omission* for generic arguments.

(5) (Curt. 10, 8, 9)
*non adire propius, non* ***colloqui*** *audebant*
'They did not dare to approach nor to talk (with anyone).'

(6) (Cyc. *Vatin*. 26, 6)
***eum*** *repente revocares,* ***conloquerere*** *populo Romano videnti, deinde interrogares*
'To call him back suddenly, converse (with him) in the sight of the Roman People, and then ask (him)…'

# 4 Data and methodology

In this section, I discuss how the data for this work has been extracted and annotated (Section 4.1), and I illustrate the random forest model and how it has been fitted (Section 4.2).

## 4.1 Data and annotation

For the purpose of this study, I have selected a sample of Latin verbs intended to cover the three general semantic classes of lexical reciprocals proposed by Knjazev (2007: 122): (i) verbs of spatial relationship of proximity/remoteness, e.g., *congrego* 'assemble', (ii) general relations of identity/difference, e.g., *congruo* 'coincide', (iii) and human relationship of rivalry/collaboration, e.g., *pugno* 'fight' (see also Fanelli 2009: 86–89). To select the verbs, I have looked for translational equivalents of the meaning 'fight, argue', 'agree', 'be equal', 'discuss, converse', 'join, gather', 'separate' in the Lewis and Short dictionary. I have only selected prefixed verbs in those cases in which the base verb has no symmetric meaning (this means that I have included *iungo* 'join' and *contendo* 'contend' but not *coniungo* 'join').[5] Occurrences of these verbs have been retrieved from the LASLA corpus.[6] Only predicative subject-oriented (see fn. 3) forms of the verbs have been included (this means that for verbs such as *iungo* 'join' only mediopassive intransitive forms with anticausative/passive function have been selected). Verbs with less than ten occurrences have been

**5** As is well-known, for some of the meanings under analysis, such as 'fight', Latin also employs a wide range of support verb constructions, e.g., *bellum gerere/suscipere* (Baños Baños 2013; Fanelli 2009: 88–89). It would be interesting to compare how these constructions behave in terms of argument structure constructions with respect to the base verbs that I analyze in this paper. This is an issue that I leave for future study.

**6** The choice of the LASLA corpus is a practical one: the coverage of the corpus is admittedly somewhat limited, but it is an entirely lemmatized and morphologically annotated corpus, which makes the retrieval of the appropriate verb forms to investigate a reliable and replicable task.

excluded (e.g., *rixor* 'fight' $n = 4$, *socio* 'agree' $n = 5$), whereas for verbs with more than 100 occurrences, only a random sample of 100 tokens has been selected. Following this procedure, I have collected 17 verbs for a total of 985 tokens.

The verbs that I have selected can be arranged into four classes based on two parameters. The first parameter, proposed already by Nedjalkov (2007: 13), concerns the distinction between spatial versus proper reciprocals. As the labels suggest, the former refer to symmetric spatial relationships, while the latter to more abstract situations (these roughly correspond to groups [ii] and [iii] in Knjazev's classification). The second parameter is *polarity*. This parameter concerns the nature of the symmetric relationship between R1 and R2, and reflects the distinction in the proper reciprocal domain between verbs of rivalry versus collaboration, and, likewise, the spatial distinction between verbs of separation versus union. The list of the verbs selected for this study, together with their semantic classification and their token frequency, is given in Table 1.[7]

All tokens have been manually annotated for a number of parameters. The list of parameters as well as their values is given in Table 2. In addition (see Section 6), only for discontinuous constructions have I annotated the following information concerning R1 and R2: morphological realization (noun, pronoun, zero), encoding of R2, animacy (animate/inanimate), and relative linear order (R1 > R2, R2 > R1).

## 4.2 Modeling the alternation: random forest model

In order to explore which of the parameters in Table 2 constitutes a better predictor for the choice of the argument structure construction, I have created a random forest model. Random forest models are particularly suitable when one deals, as in our

**Table 1:** The sample of Latin lexical reciprocal verbs.

| | **Negative (hostility/separation)** | **Positive (cooperation/unity)** |
|---|---|---|
| Proper reciprocal | *bello* (43), *certo* (100), *confligo* (75), *contendo* (100), *dimico* (100), *luctor* (30), *proelior* (24), *pugno* (100) 'fight' | *colloquor* (54), *discepto* 'discuss' (16), *consentio* (91), *paciscor* 'agree' (19), *congruo* 'coincide' (24) |
| Spatial reciprocal | *separo* 'separate' (27) | *congredior* 'meet' (57), *congrego* (23) 'gather', *iungo* 'join' (100) |

7 The classification is admittedly not always straightforward. For example, both *discepto* and *congredior* may also have a negative connotation 'argue verbally' and 'meet the enemy in battle'. However, since the negative connotation with these verbs is only contextual, I have classified them as positive in Table 1.

**Table 2:** Parameters of annotation.

| Parameter | Value |
|---|---|
| Lemma | |
| Construction | simple, discontinuous, absolute |
| Morphological features | (i) tense/aspect (*perfectum/infectum*)<br>(ii) prefixation (no/*com-*/*dis-*)<br>(iii) finiteness (yes/no) |
| Verb semantics | (i) spatial vs. proper<br>(ii) positive vs. negative |
| Reciprocal marking | yes/no: this refers to the occurrence of additional reciprocal marking, e.g., *inter se* or *invicem*, in the sentence |
| Impersonal | yes/no: impersonal (e.g., *pugnatur* 'one fights') form of the verb |
| Purpose/topic | no/purpose/topic: co-occurrence with purpose or topic adjuncts, e.g., *pro* or *de* + ablative |
| Genre | prose vs. poetry |

case, with a small dataset with many variables, and allow one to rank variables, or predictors, based on their explanatory power (see discussion in Gries 2020, 2021; Levshina 2015: chap. 14, 2020; Tagliamonte and Baayen 2012). The model has been fitted with the package `randomForest`(Liaw and Wiener 2002), setting Construction as our response variable (with three values `simp` = simple, `abs` = absolute, and `disc` = discontinuous) and the rest of the parameters in Table 2, with the exception of Lemma (see Section 5.5), as predictors. Overall, the model has an accuracy of 63 % (the best model is obtained by setting `ntree` = 3,000 and `mtry` = 5), which means that it predicts the correct construction with almost twice the accuracy of a completely random model (which would have an accuracy of 1/3 given that we are dealing with a trinomial response variable).

Figure 1 reports the *variable importance score* for each of the predictors taken into consideration. This score gives us an indication of "how much (if at all) […] a certain predictor contribute[s] to predicting the response" (Gries 2021: 465). As can be seen, three factors seem to be highly predictive: the impersonality of the verb, prefixation, and the occurrence of reciprocal marking. I discuss these and other factors in detail in the following sections. Other parameters seem to have a lesser explanatory power. Crucially, there does not seem to be a strong effect of literary genre in term of prose versus poetry, nor a particular effect of aspectual morpho-syntax.[8] Concerning the latter, this counters Mocciaro's (2011: 334) observation that

**8** In the remainder of this paper, I focus mostly on those parameters that are singled out as important by the random forest model. Clearly, as pointed out by one of the anonymous reviewers, the results of

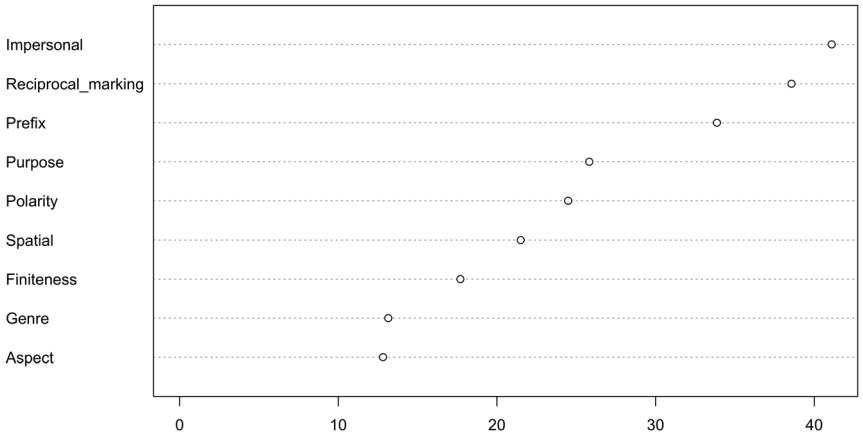


**Figure 1:** Random forest model: variable importance score.

the absolute construction (at least in the variety of Italian spoken in Sicily) often triggers a habitual reading of the sentence, as in Latin one fails to observe a significant correlation between the absolute construction and the *infectum* (on the aspectual properties of Latin verb stems, see Haverling 2010).

# 5 Interpretation of the model

As discussed by Gries (2021: chap. 7), the variable importance score only illustrates the weight of specific predictors, but it does not give an indication as to the direction of such influence. To explore the latter, one can resort to *partial dependence scores*, which indicate "how […] values/levels of a certain predictor help predict the response" (Gries 2021: 465). In the reminder of this section, I discuss in more detail how individual predictors predict the response variable by resorting to partial dependence scores extracted thanks to the pdp package (Greenwell 2017).

## 5.1 Impersonal verb forms

Impersonal passives in Latin can be defined as those mediopassive forms of either transitive or intransitive verbs that lack a referential subject and take the default

the model are biased by the input data, so that a different dataset might in principle have yielded different results.

third person singular ending, of the type *eo* 'go' > *itur* 'one goes' (Pinkster 2015: 267–272 with references). As impersonal passives lack a syntactic subject, which is the position typically occupied by at least R1, a clarification is in order on the syntax of impersonal lexical reciprocals. A closer look at the occurrences reveals that lexical reciprocals in the impersonal passive forms showcase the same variety of constructions as their personal forms. The main difference lies in the coding of R1 and R2. In the simple impersonal construction, R1 and R2 are syntactically treated in the same way in the sense that both are omitted, so that only the verb remains, as in (7a). In the discontinuous impersonal construction, R2 is expressed via an oblique, as in (7b). Finally, the absolute impersonal construction features R1 expressed as the oblique Agent of the impersonal passive via an *a(b)* + ablative phrase, as in (7c) (Napoli 2010, 2013).

(7) a. (Liv. 3, 23, 4)
*aliquot menses Tusculi* ***bellatum***
'For some months there was fighting at Tuscoli.'

b. (Liv. 6, 42, 5)
***bellatum cum Gallis*** *eo anno circa Anienem flumen*
'(Claudius relates that) the battle with the Gauls took place that year near the river Anio.'

c. (*Afr*. 18, 4)
*cum* ***ab hostibus*** *eodem modo* ***pugnaretur***
'As there was fighting by the enemy in the same way.'

As already remarked upon by Napoli (2013: 390) and Pinkster (2015: 267), the impersonal construction is particularly frequent with fighting verbs, especially among historians. My data fully confirms this claim: 110 out of 116 impersonal constructions occur with fighting verbs.

As Figure 2 shows, the impersonal construction is a good predictor for construction selection in the sense that it greatly favors the simple construction, while it disfavors both the absolute and the discontinuous ones.

The correlation in Figure 2 can be explained by keeping in mind the nature of impersonal passives, which typically consist in "filling an argument position of a predicate […] without establishing a referential link to any entity from the universe of discourse" (Van der Auwera et al. 2012: 123). In fact, the Latin impersonal passive is typically used in contexts in which either the agent is generic/indefinite, or, if it is definite and overtly expressed, as in (7c), it is discursively backgrounded. As Pinkster puts it, "the impersonal passive is a perfect means to concentrate the action" (Pinkster 1992: 174), that is, to foreground the event denoted by the verb without the need to profile its participants (see Sansò 2006). It is therefore fitting that the simple construction, in which both R1 and R2 are likewise defocused, is mostly used in

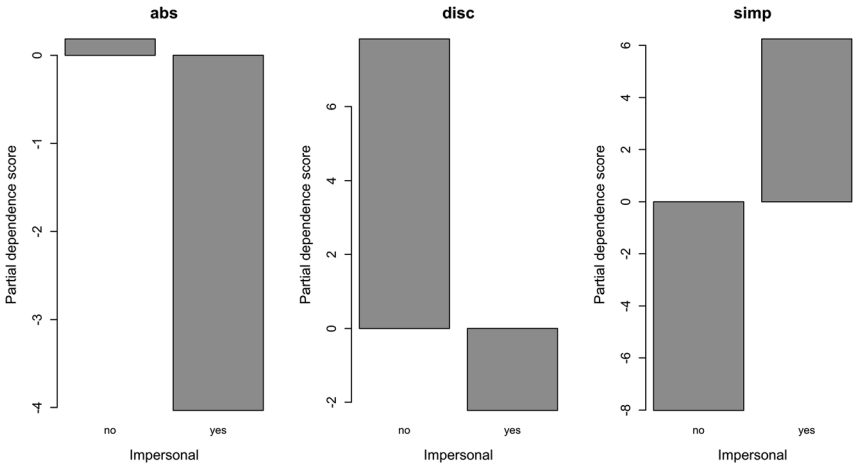


**Figure 2:** Partial dependence score for impersonal. Note: The plots for partial dependence score are to be read as follows: a positive score means that a given value of the predictor favors the choice of a specific construction, while a negative score means that it disfavors it. The length of the bar visually indicates the magnitude of the effect.

impersonal contexts. This is also in line with the finding that, whereas R1 and R2 can be occasionally expressed via oblique phrases as in (7b) and (7c), in my corpus there are no occurrences in which both are expressed simultaneously.

## 5.2 Reciprocal marking

The second-best predictor is the occurrence of additional analytic reciprocal marking in the sentence. Specifically, as the data in Figure 3 shows, reciprocal marking strongly predicts the simple construction and, conversely, it substantially disfavors the absolute construction.

As an example, consider the sentence in (8), in which the verb *contendebant* is used in a simple construction and co-occurs with the reciprocal phrase *inter se*.

(8) (Caes. *Gall.* 5, 3, 2)
*in ea civitate* ***duo*** *de principatu* *inter se* ***contendebant, Indutiomarus et Cingetorix***
'Two men, I. and C., were fighting among themselves in that city concerning the right to rule.'

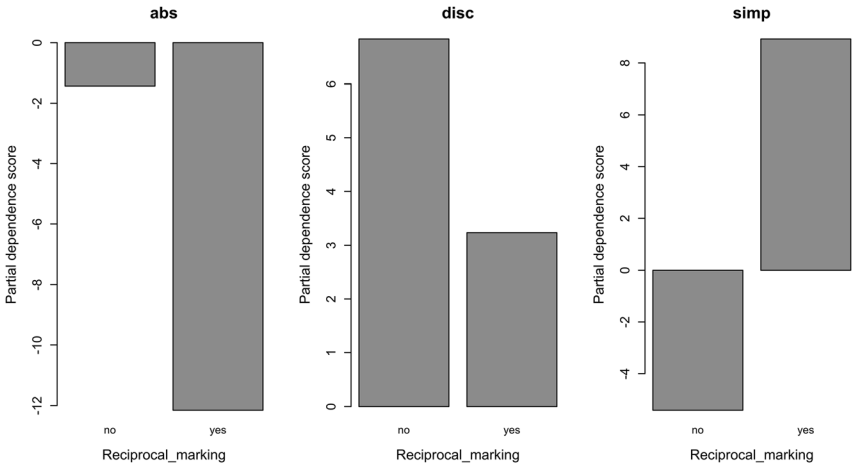


**Figure 3:** Partial dependence score for reciprocal marking.

The observed scores fit the universal proposed by Haspelmath (2007: 2093) whereby languages only allow discontinuous constructions when reciprocal marking occurs on the verb, whereas these are incompatible with analytic marking of the type instantiated by Latin *inter se*.[9] Notably, one also detects a small positive correlation between the discontinuous construction and reciprocal marking. A closer look at that data reveals that one only finds three such occurrences, which do not offer serious counterevidence. In fact, these occurrences feature other markers of reciprocity, which are arguably less conventionalized than *inter se*, such as the adverb *invicem* 'mutually' in (9).

(9) (Tac. *Hist.* 4, 37, 16)
*magnisque* ***invicem*** *cladibus cum Germanis* ***certabant***
'They fought against the Germans with great losses on both sides.'

Overall, *inter se*, which necessarily expresses a symmetric relation among multiple participants, appears to be both incompatible with the asymmetric conceptualization imposed by the discontinuous construction, as well as with the lack of R2 in the absolute construction. The question remains why *inter se* is used with simple constructions at

**9** A number of authors, such as Siloni (2008: 474, 2012: 300) argue that the discontinous construction is unavailable to syntactic reciprocal verbs (that is, grammatical reciprocal verbs). For example, according to Siloni, grammatical reciprocal verbs formed in Italian with *si* should be incompatible with the discontinous construction. As demonstrated by Mocciaro (2011: 343–344), this is clearly not the case, as in regional varieties of spoken Italian, sentences such as *Anna si guarda con Pietro* 'Anna and Pietro look at each other' are fully acceptable (see also Fanelli 2009: 32).

all. In fact, as the verbs already lexicalize a symmetric relation, the addition of *inter se* may be redundant. A possible answer is that *inter se* is used to disambiguate the reciprocal reading in those contexts in which the latter might be less clear (thus Revuelta 2017). In support of this idea, note that with the verbs *congruo*, *consentio*, and *iungo*, *inter se* is only used with inanimate reciprocants, which are possibly less likely to be understood as also playing the role of Agent and thereby require the use of *inter se* to strengthen the reciprocal interpretation of the verb, as in (10).

(10) (Sen. *Epist*. 34, 4)
*ut omnia facta dictaque tua* ***inter se congruant***
'(And see to it) that all your actions and words harmonize with each other.'

## 5.3 Verbal morphology: prefixation

The third predictor in order of importance concerns the occurrence of verbal prefixation. As discussed in Section 4.1, the sample includes a number of prefixed verbs: seven *con*-verbs (*confligo*, *congredior*, *congrego, congruo, colloquor*, *contendo*, *consentio*) and two *dis*-verbs (*dimico*, *discepto*). Before we move on to evaluate the role of prefixation, a note is in order on the nature of these verbs. For the purpose of this paper, I have considered verbs such as *colloquor* as lexical reciprocals, but this choice is admittedly problematic, because one could also argue that verbs such as *colloquor* 'converse' and *congredior* 'meet' are better understood as grammatical reciprocals formed via *com*-prefixation from non-reciprocal verb bases, in this case *loquor* 'talk' and *gradior* 'go', respectively. Nevertheless, these are the only verbs that in Latin lexicalize symmetric situations such as 'discuss' and 'meet'. In addition, in other cases *com*-verbs cannot simply be regarded as grammatical reciprocal counterparts of a non-reciprocal base, because either the base is synchronically missing (e.g., *congruo*, which synchronically lacks a base verb, and *confligo* from *fligo*, which is barely attested in pre-classical authors), or the verb has developed a lexicalized meaning unpredictable from the base verb, e.g., *tendo* 'stretch, bend' > *con-tendo* 'fight, dispute'. More generally, as preverbs tend to have a wide range of meanings (on the polysemy of *com*-specifically, see Brucale and Mocciaro forthcoming; Moussy 2005; Rosén 1992), it is disputable whether preverbation in ancient Indo-European languages serves as a dedicated means of creating grammatical reciprocals or rather as a way to derive new lexical ones (see discussion in Inglese and Zanchi 2020: 141–151). For these reasons, while acknowledging their problematic nature, I treat all *com-* (and *dis-*) verbs on par with the other lexical reciprocal verbs.

The partial dependence scores for prefixation are reported in Figure 4. As Figure 4 shows, the general trend is for prefixed verbs to positively predict the

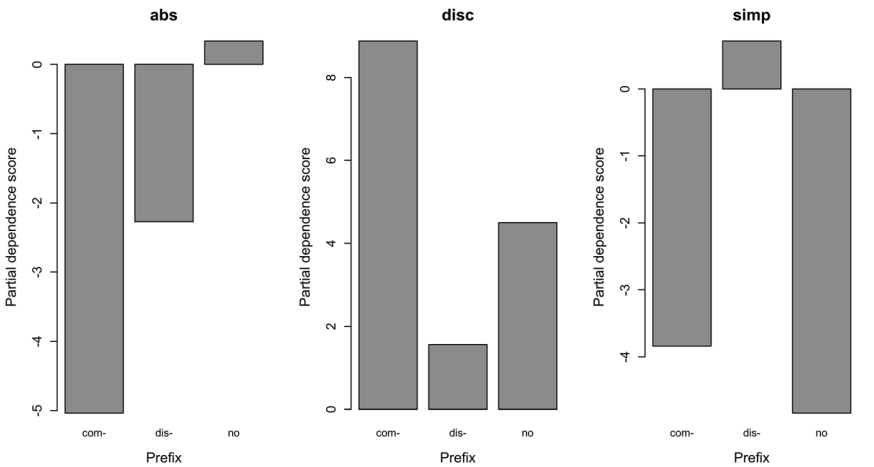


**Figure 4:** Partial dependence score for Prefix.

discontinuous construction, while disfavoring the absolute and partly also the simple one.

The negative association between prefixation and the absolute construction can be explained in a similar way as the incompatibility of the absolute construction with analytic reciprocal marking: as preverbs, in particular *com-*, highlight co-participation, they are less compatible with the construal imposed by the absolute construction. An example of a *com*-verb used in an absolute construction is *congrego* 'assemble' in (11), in which R2 is omitted because it is generic, similarly to (7c) above.

(11) (Sen. *Dial.* 5, 2)
*hic* ***congregari*** *vult illa discedere*
'(Man is born for mutual help; anger for mutual destruction). The one desires to join, the other to separate.'

The association between prefixed verbs and the discontinuous construction is less straightforwardly explained. Things become clearer if one looks at the distribution of individual prefixes. As the data in Figure 4 shows, it is *com*-verbs that are particularly more drawn to the discontinuous constructions, even when compared to the simple construction (with the latter, in fact, a small positive effect of *dis*-can be detected). Specifically, leaving *dis*-verbs aside, if one zooms in on the distribution of *com*-verbs in the discontinuous constructions with the coding of R2, as shown in Table 3, a striking pattern emerges, whereby *com*-verbs significantly correlate with the coding of R2 via the comitative phrases with *cum* (Fisher's Exact Test for Count Data,

**Table 3:** Prefixation and coding of R2.

| | Coding of R2 | |
|---|---|---|
| **Prefix** | ***cum*** **+ abl** | **other** |
| **no** | 64 (20 %) | 103 (74 %) |
| ***com-*** | 156 (80 %) | 39 (27 %) |

*p*-value < 0.01). In other words, there appears to be a remarkable solidarity pattern whereby *com*-verbs tend to be used in a discontinuous construction with R2 expressed by the cognate preposition *cum* (I return more extensively on the realization of R2 in Section 6.1).[10] This pattern is illustrated in (12), where both *confligo* and *colloquor* co-occur with *cum* prepositional phrases.

(12) a. (Nep. *Hann*. 4, 1)
***conflixerat*** *apud Rhodanum* ***cum P. Cornelio Scipione*** *consule*
'He had already fought at the Rhone with Publius Cornelius Scipio, the consul.'

b. (Tac. *Ann*. 15, 55, 4)
*Antonium Natalem multa* ***cum Scaevino*** *ac secreta* ***collocutum***
'Antonius Natalis had had a long and secret interview with Scaevinus.'

Notably, the same pattern is also found with other pairs of cognate preverb/preposition, as in the case of *inter-/inter* in (13), so that it remains unclear to what extent the pattern involving lexical reciprocal *com*-verbs and *cum*-adverbials instantiates a more general behavior of preverbs in combination with cognate prepositions.

(13) (Plin. *Nat*. 4, 12, 20)
***interiacet*** *haec* ***inter eam et Rhodum***
'This (island) lies between that (island) and Rhode.'

Finally, concerning the interaction between prefixed reciprocal verbs and analytic reciprocal marking, Revuelta (2017) observes that *inter se* frequently occurs with *dis*-prefixed reciprocals as a disambiguator (especially in those contexts in which, given the polysemy of the prefix, other readings could be available). Unfortunately, data from my corpus does not lend empirical support to this claim, as *inter se* equally occurs with prefixed and unprefixed verbs, as shown in Table 4 (Fisher's Exact Test for Count Data, *p*-value = 0.6519).

**10** It would also be interesting to compare the behavior of pairs of base versus *com*-verbs with similar meaning, e.g., *misceo* and *commisceo* 'mix', to check whether the *com*-variant attracts *cum*-phrases more frequently. This is an issue that I leave for a future study.

**Table 4:** Prefixed verbs and *inter se.*

| | ***inter se*** | |
|---|---|---|
| **Prefix** | **no** | **yes** |
| **no** | 417 | 19 |
| **yes** | 510 | 27 |

## 5.4 Adverbial phrases: Purpose and Topic

The fourth parameter for importance is the co-occurrence with adverbial phrases that indicate the semantic roles of Purpose and Topic. The former is broadly understood as the goal that participants want to achieve when undertaking a given action, whereas the latter typically consists in the object of discussion or contention with verbs of fighting, discussing, and agreeing. From a purely semantic perspective, Purpose and Topic are not always easily distinguishable (and they are also closely connected with the role of Cause). In order to operationalize this distinction in my dataset, I have systematically annotated a given adverbial phrase as expressing either Purpose or Topic based on its coding. As extensively discussed by Luraghi (2010), Purpose and Topic can variously be encoded in Latin. Based on the data from the corpus, realizations of Purpose include prepositional phrases introduced by *pro*, *ob*, *ad* (typically with the gerundive) or adverbial clauses introduced by *ut* plus subjunctive. An example is *pro patria* in (14):

(14) (Tac. *Hist.* 3, 72, 9)
***pro patria*** *bellavimus*
'We fought for our country.'

Topic expressions include the bare ablative, prepositional phrases headed by *de*, *in* (with either ablative or accusative), as well as a variety of interrogative or complement clauses. An example is the phrase *de potentatu* 'over power' in (15).

(15) (Caes. *Gall.* 1, 31, 4)
*hi cum tantopere* ***de potentatu*** *inter se multos annos contenderent*
'As these two vehemently fought over power among themselves for many years.'

Partial dependence scores, reported in Figure 5, support the need to keep Purpose and Topic adverbials distinct. To put it simply, Purpose adverbials positively predict the absolute construction and less so the discontinuous and the simple ones, which instead display a small positive dependence on Topic adverbials. This asymmetry can possibly be explained as follows. Topic and Cause conceptualize a shared

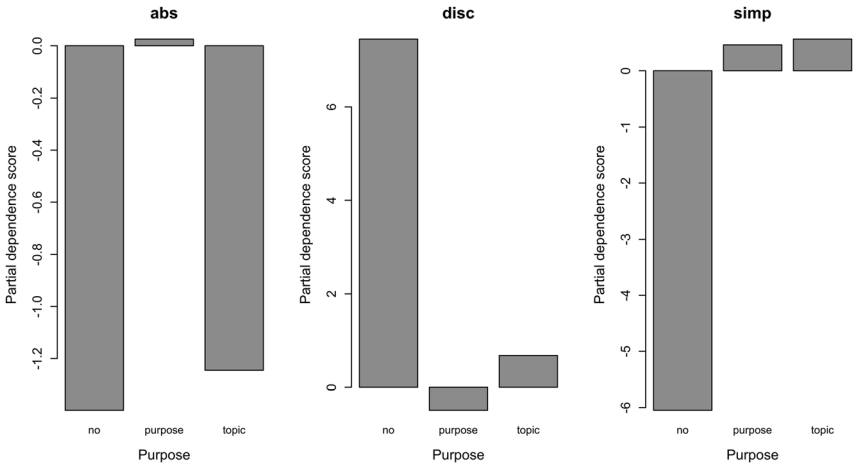


**Figure 5:** Partial dependence score for Purpose.

interest between the two reciprocants and are therefore preferred when both reciprocants are expressed (in the simple and discontinuous construction). By contrast, Purpose highlights the higher involvement of either party (in the sense that, even though we might be fighting over the same object, our individual goals may differ): this implies Purpose is more compatible with constructions in which only one participant is expressed (absolute construction).

## 5.5 Verb semantics, symmetry, and lexical restrictions

As anticipated in Section 3, lexical reciprocal verbs can be classified along two main semantic dimensions, that is, the proper versus spatial and the polarity (negative vs. positive) distinctions. When one looks at the distribution of the three constructions under investigation with respect to these semantic dimensions, an interesting picture emerges.

Overall, as shown in Figures 6 and 7, these semantic distinctions appear be useful for predicting the absolute and the simple constructions, while the discontinuous construction seems to be unaffected (see the high positive scores for both values of the two predictors). There are two interesting effects to single out. First, as shown in Figure 6, negative polarity verbs strongly favor the absolute construction, while positive polarity is only marginally connected with the simple one. By contrast, as per Figure 7, spatial verbs robustly reject the absolute construction and instead show positive scores with the simple one.

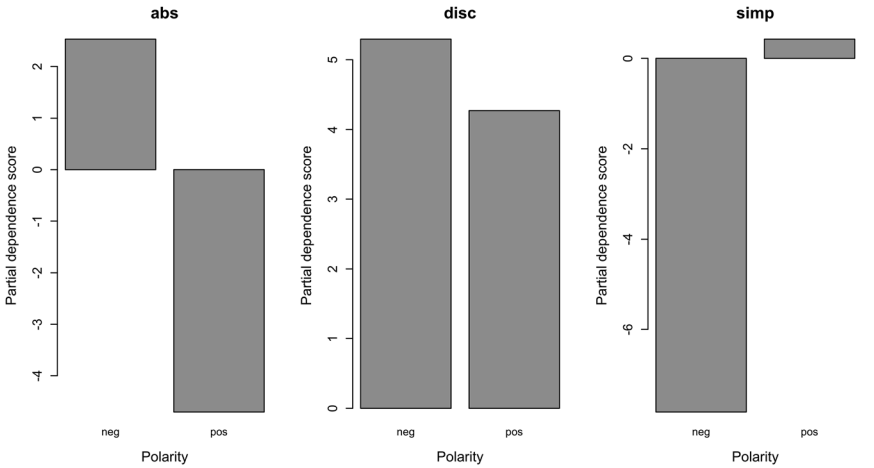


**Figure 6:** Partial dependence score for Polarity.

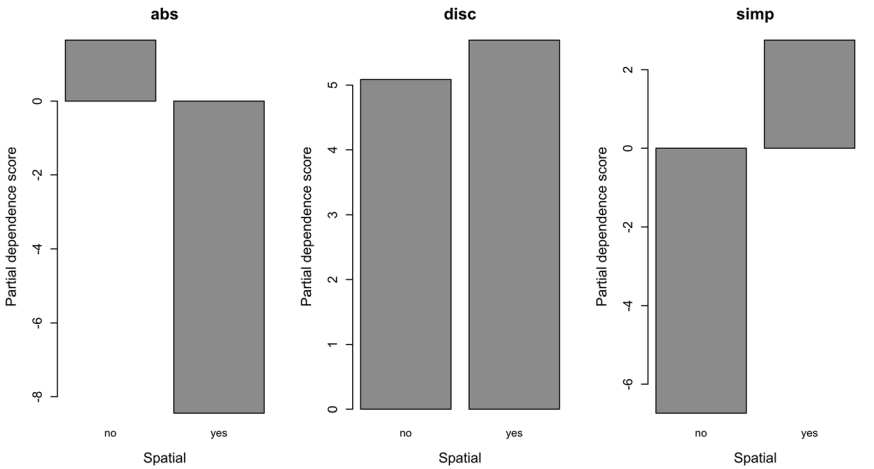


**Figure 7:** Partial dependence score for Spatial.

The observed dependence scores can be explained as follows. Let us begin with the association between negative polarity and the absolute construction. If we focus on proper verbs, it turns out that the absolute construction occurs 209 times with negative polarity verbs, as in example (4) above, and only 34 with positive ones. To explain this distribution, a more careful consideration of the semantics of these verbs is in order.

As mentioned in Section 2, lexical reciprocals are generally connected with the notion of symmetry. A finer-grained distinction can be drawn between those verbs that necessarily express symmetric and simultaneous (or unary) events, that is, *meet*-verbs, and those which do so to a lesser extent, that is, *fight*-verbs (Kemmer 1993: 102; for a detailed discussion, see Dimitriadis 2008a, 2008b; Gleitman et al. 1996; Siloni 2012; Winter 2018). *Meet*-verbs have also been defined as *irreducibly symmetric predicates*, because "[they] can only describe individual events that are themselves symmetric for the two participants involved […]. There can be no event of John meeting Bill without that same event also being an event of Bill meeting John" (Dimitriadis 2008a: 376, 378). Conversely, even though "you can't fight with no one to fight with or against" (Plank 2006: 248), *fight*-verbs have been described as *partially symmetric events*, because "at least a subset of them licences an interpretation in which only one of the arguments is a volitional participant" (Rákosi 2008: 423). In other words, *fighting*-verbs are more easily construed as asymmetrical than *meet*-verbs. This distinction is borne out by the Latin data: the higher frequency of the absolute construction with fighting verbs (which constitute the core of proper negative polarity verbs) is due to their nature as partially symmetric events.[11]

It should be noted that, in the classification proposed by Dimitriadis (2008a), Rákosi (2008), and Siloni (2012), irreducibly symmetric predicates should also be incompatible with absolute constructions, because they should not license the omission of generic R2 (though they may admit zero anaphora). I believe that this incompatibility should better be understood in terms of a strong tendency, and not as a strict rule. As a matter of fact, empirical data from the corpus shows that generic R2 may occasionally be omitted even with verbs that are necessarily symmetric. An example is the absolute use of *congrego* 'assemble' in (11), and of *congredior* 'meet' and *iungo* 'join' in (16a) and (16b):

(16) a. (Nep. *Hann*. 6, 2)
*quo ualentior postea* ***congrederetur***
'(He wished to arrange a truce for a time), in order to carry on the war (lit. meet) later with renewed strength.'

b. (Sen. *Phaedr*. 128)
*nulla Minois levi defuncta amore est,* ***iungitur*** *semper nefas*
'No daughter of Minos has got through a love affair lightly; always it is linked to infamy (lit. she always joins contrary to law).'

**11** According to Dimitriadis (2008a: 390), the discontinuous construction should only be available with irreducibly symmetric verbs. This statement needs to be rephrased so as to also include partially symmetric verbs, as shown by the frequent use of discontinuous constructions with *fight*-verbs in the Latin corpus.

Even though they are admittedly marginal, cases such as those in (16) demonstrate that, in specific contexts, individual verbs can be coerced into constructions that may impose their own semantic profile and override the verbs' lexical semantics (this is an instance of the more general mechanism of *coercion* or *accommodation*, see Goldberg 1995: 159). Note however that, in (16a) and (16b), the verbs *congredior* and *iungo* have undergone a semantic shift: the former means 'meet an enemy in battle' and the latter 'have intercourse with' (the tendency of lexical reciprocals to develop idiomatic meanings is also discussed by Siloni 2012).

Moving to spatial verbs, these negatively predict the absolute construction and prefer the simple and the discontinuous ones (even though with the latter the effect is more difficult to interpret). This distribution may find an explanation in the more general cognitive organization of spatial relations. As extensively discussed in the field of Cognitive Grammar (Langacker 1987: chap. 6; Talmy 1978), human beings tend to conceptualize spatial relations asymmetrically, by locating an entity (the *figure* or *trajectory*) with respect to another one (the *ground* or *landmark*). This means that spatial relations tend to be established within at least two entities, thus explaining the negative score with the absolute construction, and one is often more prominent than the other. This tendency also affects spatial lexical reciprocals, such as *congredior* and *separo* in (17a) and (17b). Even though these verbs express relations that are in fact symmetric, speakers prefer to profile them from the vantage point of one of the participants involved because this is the way in which they typically construe spatial relations (the same applies also to some abstract relations such as those of similarity, see Gleitman et al. 1996).

(17) a. (*Hisp*. 20,4)
*equites nostri* ***cum adversariorum equitibus congressi sunt***
'Our cavalry came into conflict (lit. met) with the enemy cavalry.'
b. (Sen. *Dial.* 7, 12,3)
*audit enim voluptatem* ***separari a virtute*** *non posse*
'For he hears first that pleasure cannot be separated from virtue.'

So far, I have discussed the role played by verbal semantics as a determining factor in predicting constructional alternation. Nevertheless, as the random forest model in Figure 1 shows, these parameters do not overall constitute good predictors when the entirety of the data and the variables are taken into account. In the random forest model, I have excluded the verbal lemma as predictor, because the model is not particularly suitable to handle predictors with more than a few levels (Levshina 2020: 622). Nevertheless, the role of lexical preferences cannot be ignored. As shown in Figure 8, with the exception of *proelior*, all the verbs in my dataset can occur in all three constructions, but do so to varying extent, with some verbs preferably selecting one construction over the other. Surprisingly, even verbs with a comparable semantics

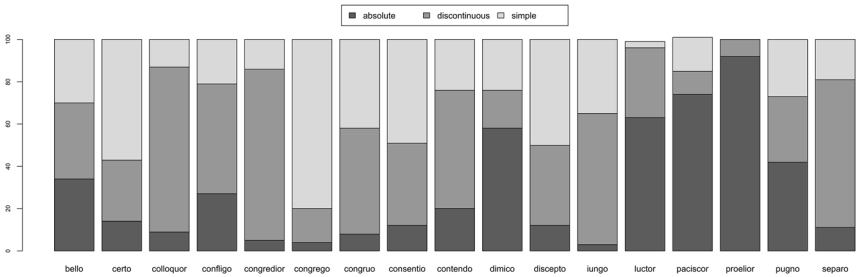


**Figure 8:** Constructional alternation and lemma.

(e.g., *bello*, *certo*, *luctor*, *proelior*) do not show a consistent distribution across the three constructions. This behavior is not isolated, as it mirrors findings by Inglese and Zanchi (2020: 141) on the distribution of the three constructions with fighting verbs in Homeric Greek. We can better understand the distribution in Figure 8 as an instance of the more general and pervasive phenomenon of *lexical restriction*. As Van Lier and Messerschmidt (2022) point out "many verbs show statistical preferences for certain constructions […] lexically-specified preferences can override pragmatic factors in determining a speaker's choice for one or the other construction" (Van Lier and Messerschmidt 2022: 4, 6). From a usage-based perspective (e.g., Bybee 2007), the crucial point is that such preferences are partly driven by the higher frequency with which speakers employ a given verb in a given construction, which in turn may lead to a greater entrenchment of that construction with that specific verb and its subsequent generalization even to contexts in which it is less immediately motivated by semantic/pragmatic factors.

## 6 A focus on the discontinuous construction: pragmatic factors

A number of possible explanations have been proposed in the literature for constructional alternation with lexical reciprocals, which are ultimately due to the way in which speakers conceptualize events and to related discourse factors. For example, Knjazev (2007) observes that "the selection of one or the other type of construction depends on discourse" (Knjazev 2007: 120). In particular, scholars agree that the choice of the discontinuous construction over the simple one reflects "a different conceptualization of the event" (Allan 2003: 52–53), depending on whether the event is presented from the perspective of both reciprocants or "from the point of

view of one reciprocant only which is foregrounded and encoded as the unique subject" (Mocciaro 2011: 342) while the second participant is backgrounded (Maslova 2000: 175). While overall plausible, these explanations remain somewhat vague and difficult to test on empirical grounds. In the reminder of this section, I search for empirical support to such claims, by looking at the realization of R2 and at a number of properties that may hint at the discourse status of the two reciprocants in the discontinuous construction.

## 6.1 The construal of R2

As Haspelmath (2007) observes "in discontinuous reciprocals, one of the arguments is always an oblique (most commonly a comitative) argument" (Haspelmath 2007: 2092). The encoding of R2 as a comitative argument reflects a somewhat neutral construal of its role as co-participating in the reciprocal event. While Haspelmath's claim is undeniably true, I believe that a closer look at how R2 is actually realized in empirical data can shed interesting light on the function of the discontinuous construction. Table 5 reports data on the coding of R2 in the corpus (leaving aside those cases in which R2 is omitted, as discussed for example [6] above). As can be seen, in the vast majority of cases (239/384), R2 is encoded via a prepositional phrase with *cum* 'with' plus ablative.[12] This is far from surprising, as *cum* is the default way to express the Comitative (and related) roles in Latin (Brucale and Mocciaro forthcoming; Luraghi 2010: 79–84). The reason why prototypical Comitative arguments (as in *walk with the girl*) are extended to encode R2 with reciprocal verbs (as in *fight with the enemy*) is to be sought in the general diachronic processes that link sociative, comitative, and reciprocal markers (Heine and Miyashita 2008: 182; Nedjalkov 2007: 32–41).

Nevertheless, as Table 5 shows, there are several other, albeit marginal, ways in which R2 can be expressed. The reasons why R2 may be expressed by an oblique non-Comitative phrase should be discussed within the much wider domain of the use of preposition and cases to express semantic roles in Latin (see Luraghi 2010; Pinkster 2015: esp. chap. 12). A finer-grained treatment of this issue is clearly beyond the scope of this paper, so that I limit myself here to some preliminary observations. First, a non-Comitative realization of R2 may be the default one with some verbs for semantic reasons. For example, R2 with *separo* is always expressed by

**12** This pattern is also extensively discussed by Fanelli (2009: 122–130, 137–144), who attributes a reciprocal-meaning semantic component to *cum* itself. I believe that this view is slightly misleading: *cum* simply marks the comitative R2 in discontinuous reciprocal constructions in which the mutual semantics is inherent to the verb base.

**Table 5:** The coding of R2 in discontinuous constructions.

| Coding of R2 | Frequency | Example |
|---|---|---|
| *cum* + ABL | 239 | ***cum Senonibus*** *pugnavimus* 'we fought with the Senones' (Tac. *Ann*. 11, 24, 5) |
| DAT | 82 | *iunctum erat* ***flumini*** *nemus* 'close to the river was a shady grove' (Curt. 9, 1, 13) |
| *a(b)* + ABL | 19 | *separor* ***a domina*** 'I am separated from the lady' (Ov. *Am*. 1, 4, 60) |
| *contra* + ACC | 15 | ***contra eruptionem oppidanorum*** *pugnarent* 'they fight the sortie of the townsfolk' (Liv. 5, 8, 9) |
| *adversus* + ACC | 10 | ***aduersus eruptiones hostium*** *pugnatum* 'fought against the sortie of the enemies' (Liv. 9, 42, 9) |
| *in* + ACC | 9 | ***in hostem*** *pugnasset* 'fight against the enemy' (Liv. 7, 12,1 2) |
| ACC | 7 | ***hanc*** *congrediar* 'I shall meet her' (Plaut. *Epid.* 545) |
| *ad* + ACC | 1 | *tempus (…) ad* ***id ipsum*** *congruere* 'time coincided with that same event' (Liv. 1, 5, 5) |

*a(b)* + ABL, because R2 with verbs of separation is expressed as a Source, whereas dative R2s are typical with the verbs *iungo* and *congruo*, as with these verbs R2 is construed as a Direction (which also accounts for the isolated use of *ad* + ACC with *congruo* in Table 5). Stylistic factors also play a role: for example, one finds fighting verbs with R2 in the dative only in poetic texts, owing to a more general tendency to avoid prepositions in poetry (Pinkster 2015: 1182–1183).

More interesting are those cases in which the same verb shows alternative realizations of R2: for example, as shown in Table 5, *pugno* may occur in at least four distinct constructions (a behavior generally shared by other fighting verbs). Specifically, besides cases of Comitative R2, one also finds contexts in which R2 is expressed with either *contra*/*adversus* + ACC or *in* + ACC. Both realizations reflect a diminished participation of R2, either by simply construing it as a Direction (*in* + ACC), or by also highlighting its affectedness, by construing it as Adversative Patient (*contra*/*adversus* + ACC). Such cases show how the non-Comitative construal of R2 may stretch the semantics of the discontinuous constructions so as to include contexts in which R2 is portrayed as non-agentive, thus essentially construing an inherently symmetric event similarly to an asymmetric transitive situation. This extension is maximally visible in those few cases in which R2 is encoded by an accusative NP, which is the typical case of the Patient of transitive verbs (notably, these cases only appear to involve pronouns). From the perspective of constructional alternation, one may speculate that the discontinuous construction, by virtue of expressing R1 and R2 independently, is particularly suitable in those cases in which speakers not only need to assign major prominence to R1 (see Section 6.2) but also wish to construe R2 not merely as a co-participant in a symmetric event.

## 6.2 The discourse status of R1 and R2

Besides allowing for different conceptualizations of R2, the discontinuous construction has also been claimed to be favored in contexts in which R1 has a more prominent discourse status, typically as discourse topic (thus Allan 2003; Mocciaro 2011). Unfortunately, assessing the topicality status of referents is not always an easy task, especially in a corpus language for which no speaker intuition is available. I have therefore decided to rely on three parameters that are more objectively observable in out textual sources and that, combined, may be used as reliable proxies for topic status. The first parameter is animacy, as human participants tend to be more topical than inanimate ones. The second parameter concerns the realization of R1 and R2, that is, whether they are expressed by a full noun phrase, a pronoun or are omitted (Latin being a pro-drop language). This parameter is relevant inasmuch as topical referents are already accessible in discourse and therefore typically require lighter (or zero) anaphoric material to be reprised (Givón 2001: 419–420). Finally, another parameter is word order: specifically, I consider the linearization of R1 and R2, based on the assumption that topical elements come first, especially in a language such as Latin in which word order is largely dependent on pragmatic factors (see, e.g., Pinkster 2021: chap. 24; Spevak 2010). Quantitative data on these three parameters is given in Tables 6–8 (note that, in order to minimize stylistic factors, data for word order comes from prose text exclusively).

Data from the corpus fully confirms the hypothesis that discontinuous constructions seem to be favored in contexts in which there is an asymmetry in topicality between R1 and R2, whereby the former displays a higher topicality status. This is confirmed by the fact that R1 is more frequently expressed by pronouns or omitted, is more frequently animate (the difference is significant, Fisher's Exact Test for Count Data, $p$-value < 0.01), and, when both are expressed, R1 typically precedes R2. In particular, the discontinuous construction is needed in those cases in which R1 is encoded by a pronoun and R2 by a full noun phrase, as such asymmetries appear to be incompatible with the simple construction, in which the two coordinated R1 and R2 must share the same part of speech. An example of a discontinuous construction with pronominal R1 and nominal R2 is (18):

(18) (Nep. *Ages.* 1, 4)
***is*** *de honore regni* ***cum Agesilao*** *patruo suo contendit*
'He it was that disputed the title of king with his uncle Agesilaus.'

**Table 6:** Realization of R1 and R2.

| | Noun | Pronoun | Zero |
|---|---|---|---|
| R1 | 115 (29 %) | 79 (43 %) | 208 (83 %) |
| R2 | 279 (71 %) | 103 (56 %) | 42 (17 %) |

**Table 7:** Animacy of R1 and R2.

| | Animate | Inanimate |
|---|---|---|
| R1 | 314 (78 %) | 88 (22 %) |
| R2 | 286 (68 %) | 137 (32 %) |

**Table 8:** Linearization of R1 and R2.

| Order R1 > R2 | Token frequency | Order R2 > R1 | Token frequency |
|---|---|---|---|
| R1 R2 V | 97 | R2 R1 V | 16 |
| R1 V R2 | 15 | R2 V R1 | 2 |
| V R1 R2 | 6 | V R2 R1 | 4 |
| **Total** | **118 (84 %)** | **Total** | **22 (16 %)** |

# 7 Discussion and conclusions

In this paper, I have undertaken a systematic study of the syntax of lexical reciprocal verbs, with the goal to explore alternations in the argument structure of these verbs and possible motivations thereof. As such, the findings of this study should be framed in the broader picture regarding argument structure alternation both cross-linguistically and within Latin. In particular, I have focused on the alternation between three constructions: (i) the simple, (ii) the discontinuous, and (iii) the absolute constructions. Data from the corpus reveals that the alternation is not amenable to a single underlying motivation, but rather that lexical reciprocal verbs enter a complex constructional network (in the sense of Diessel 2019), as the three syntactic constructions in which they occur also interact with other constructions (for example, the impersonal passive construction and its variants with or without oblique Agent, the coordinated subject construction, etc.). Overall, the choice of the three main constructions, and of variants thereof, depends on a number of intertwined linguistic factors, including the information status and referential properties of the participant involved and their construal in discourse, the type of reciprocal situation, as well as morphological factors (e.g., prefixation). This data suggests that constructional alternation is a key means whereby speakers (or in our case, writers) can manipulate the construal of seemingly identical situations to achieve specific discourse goals. In addition, I have discussed how idiosyncratic lexical factors play a crucial role. In this respect, these findings confirm the idea, recently advanced

in a number of Construction Grammar studies with a usage-based underpinning (e.g., Perek 2015), that argument structure constructions may show different degrees of entrenchment with individual (classes of) verbs.

More generally, the data discussed in this study, besides enhancing our understanding of the morphosyntax of lexical reciprocals across languages, also points to the benefit of integrating fine-grained corpus analyses with typological generalizations to better understand argument marking patterns and constructional alternations.

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