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The classical languages and grammatical typology

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Abstract

The paper discusses a number of typological characteristics of the classical languages at the morphological and syntactic levels, to wit:
- the parts of speech system
- the categorization of lexemes at the stem level
- the lack of auxiliary verbs
- the interplay of verbal valency and voice and the base transitivity of verbal lexemes
- the lack of complex verb constructions
- the lack of alienability grammar in possessive constructions

and tries to motivate their co-occurrence in their language systems.[1]

1   Introductory remarks

It is not possible to present a comprehensive typological characterization of two languages, in contrast with other languages, in a few pages. The purpose of the present discussion is to highlight some areas of Latin and Greek syntax in which they jointly differ from other languages. Sometimes it is a difference even within the set of Indo-European languages. Sometimes these two languages constitute a model of a European or SAE type (Haspelmath 2001) whose counterparts are found outside Europe.

The grammatical domains to be reviewed include word classes, syntactic relations, verbal valency and voice and possessive constructions. The typological properties involved will be illustrated by representative examples to ensure understanding. These will obviously not be sufficient to demonstrate the postulated diverse functioning of grammar in the languages in question. Here reference is made to the relevant literature.

2   The classical languages in linguistic typology

The beginnings of linguistic typology were shaped by those languages whose grammatical description was furthest advanced at the time, which are the classical languages. These languages shared the high reputation enjoyed by their cultures. Their type was therefore the goal of evolutionary typologies and, consequently, the highest valued type in evaluative

typologies. It took a whole century (the 19th cent.) in the history of linguistics to correct this prejudice; Christol (1998:753) speaks of a "désacralisation de ces langues".

Praising the richness of the classical languages in morphological categories was a ritual ingredient of 19th cent. typology. It is therefore expedient at the outset to list some categories known from other languages which are not grammaticalized – i.e. operations in the respective functional domains are not done by morphological means – in Latin and Greek. Indications of quantitative distribution of features are based on Haspelmath et al. (eds.) 2008.

1. Numeral classification: Just as all of the ancient Indo-European languages, both Greek and Latin lack the category of numeral classifier, which is present in roughly one third of the languages of the world.

2. Possessive morphology: Both languages are exceedingly poor in morphological contrasts concerning possessive relationships. Where other languages distinguish between alienable and inalienable or past and present possession or use possessive classifiers to distinguish kinds of possessive relations, Latin and Greek have nothing but the genitive and the possessive pronoun in adnominal possession. More on this in §4.3.

3. Evidentiality: More than half of the world's languages mark – generally in the conjugation – the source of evidence on which some statement is based; and this category may coexist with mood. Latin and Greek lack such a category altogether.

4. Switch-reference: In complex sentences, many languages mark on the verb whether its subject is identical with or distinct from the subject of the following clause. The closest that Latin and Greek can muster in this domain is the opposition between the conjunct participle and the absolute construction.

5. Obviation: Since in a text there may be more than one different third person, several languages distinguish them grammatically, for instance by a proximate-obviative contrast. This is similar to the reflexive pronoun, which those languages, however, may have in addition. Latin and Greek only have the latter.

6. Inclusive vs. exclusive plural: Just as all the languages of Europe, both classical languages lack this distinction, which is otherwise characteristic of one third of the world's languages.

7. Verb serialization: In order to code complex events, many languages put two or more verbs in a series, equipping only one of them with conjugation categories. The classical languages have nothing of the kind.

8. Noun incorporation: This is a form of verb compounding where a noun that could bear an actant function vis-à-vis a verb is instead incorporated into the verb stem. Neither Latin nor Greek have a trace of it.²

9. Valency-changing derivation: Most languages in the world have derivational operations to augment, decrease or convert the valency of a verb. Greek and Latin are exceedingly poor in this respect. This point will be taken up in §4.6.3.

10. Polysynthesis: Complexity of the verb in terms of the number of categories marked in its morphological structure may reach chains of ten or more morphs in a verb form. In Greek and Latin, a verb may bear one derivational and up to three inflection suffixes.

So much should suffice to dispel the myth – obviously founded on exclusive comparison with modern IE languages – of the particularly rich morphology of the classical languages. However, little may be inferred from the lack of some category in a language. In the following, the two classical languages will be characterized in more positive terms. I will concentrate on the syntax,

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² Greek reaches something similar by a derivational detour which first forms a compound noun from a noun and a verb root and then derives a verb from this compound base, as in λογοποιέω 'invent stories'.

just touching upon some aspects of morphology. More often than not, a diachronic perspective will be taken, since a purely synchronic approach would have to limit itself to the "classical" phases of the two languages and would be relatively sterile, while just these two languages offer a long documented history which renders the diachronic perspective particularly fruitful, because it allows us to perceive them as a phase of a dynamism. Finally, emphasis will be more on the properties shared by the two classical languages and setting them off against the majority of the world's languages, rather than on differences between them.

3 Parts of speech and related categories

More than probably any other grammatical category, the part-of-speech system of the classical languages has been taken for granted in the description of many other languages, perhaps because it has figured so prominently in grammar lessons since Dionysius Thrax and Donatus. Consequently, it has proved difficult to this day to recognize the typological peculiarity of this system. It may be characterized in the following terms:

3.1 Major and minor classes

Given a polar opposition between items with lexical meaning and grammatical formatives, these contrast most clearly in structural terms if the former are free forms and the latter bound forms. Now many other languages, in particular the modern Germanic and Romance languages, possess semi-grammaticalized words, grammatical formatives that are words and that are positioned between the poles of a grammaticalization scale. Among them are different kinds of free and clitic pronouns, the definite and indefinite articles, grammatical prepositions like *of* and *to*, auxiliaries like *be* and *have*, modal verbs like *will* and *may*, comparison operators like *more* and *most* and maybe some others. Languages making extensive use of such words have been said to possess analytic morphology. In contradistinction, Latin and Greek have synthetic morphology (although to no great extent, as we shall see in §3.3). They do possess some of these categories, among them different kinds of pronouns, which they share with many typologically unrelated languages. However, they do not have grammatical prepositions and no modal verbs; and Latin lacks an article, while Greek lacks auxiliaries. Latin has only one auxiliary, *esse*, with very restricted use. Moreover, with some exceptions, the Latin pronouns have the same distribution as nouns, so that they have rightly been subsumed under the category of noun since ancient times. For Greek, this would only be true for the stressed pronouns. Now the aforementioned grammatical words (minor parts of speech according to Lehmann 2013) start developing at some point in the history of the languages, and certainly the Romance languages and Modern Greek do possess them. But the classical languages are essentially characterized by a rather small inventory of grammatical words and, consequently, a rather clear-cut structural distinction between lexemes and grammatical morphemes, the latter mostly taking the form of inflectional morphology.

3.2 Categoriality

The distinction between a nominal, a verbal, an adjectival, an adverbial etc. category may be made at different levels of grammar. Such categorial distinctions must be available at the highest level of syntactic complexity because they are presupposed by the propositional operations of

reference and predication (Lehmann 2013). Consequently, in the construction of sentences, many languages defer the categorization of expressions to the level of phrase formation. They are then said to lack clear word-class distinctions and, in particular, a clear noun-verb contrast. Other languages mark such categories at lower levels of syntactic complexity. Word classes are an implementation of syntactic categories at the level of the word stem. For instance and with some simplification, the adjective is the word-level instantiation of the adnominal modifier. The classical languages have little phrasal syntax; they lack such things as a noun phrase and a verb phrase. Consequently, for them, the locus of syntactic categories is in word classes.

Lehmann 2008 is a typological comparison of six languages, Latin, Spanish, Yucatec Maya, Mandarin Chinese, English and German. A sample of over 100 translation-equivalent lexemes is morphologically analyzed. The question is to which extent the root and the stem are determined as to their categoriality. Categoriality of an item is measured in terms of the number of categories that the item may belong to. Values range from 0 for acategoriality to 1 for unique categoriality. An example from Greek may illustrate the approach: The concept 'health' is lexicalized in the Greek root *hugi-*. This is neither a nominal nor a verbal nor an adjectival root; it is acategorial. Once it has been converted into a stem, e.g. *hugi-és-*, then it can only be inflected as an adjective ('healthy'), so the stem is assigned the value 1 for categoriality. The results of the comparative investigation which are presently of interest are reproduced in Table 1.

Table 1 Root and stem categoriality

level language	root	stem	difference
Latin	0.30	0.99	0.69
Spanish	0.59	0.98	0.29
Yucatec	0.76	0.96	0.20
Mandarin	0.64	0.84	0.20
English	0.62	0.77	0.15
German	0.78	0.86	0.08
average	0.62	0.90	0.28

On the basis of Table 1, the following observations may be made:
- In each language, stems have higher categoriality than roots. In other words, categoriality increases with the grammatical level.
- Latin roots have an average categorialiy of 0.3, being, thus, closest to the acategorial pole in the sample, while German roots have an average categoriality of 0.78, which is the peak in this sample.
- On the other hand, Latin stems have a categoriality index of almost 1. In other words, there is hardly a Latin stem exhibiting categorial indeterminacy; once there is a stem, its part of speech is fixed. In German, on the other hand, categoriality increases relatively little by stem formation, but it increases almost to the same level as in Latin. Contrast this with English, where even stems are not yet categorially determinate. Thus, English would be closer to those languages which fix the syntactic category only at the phrase level.

If Greek were included in the sample, the results would be very similar to those for Latin, as the example given before was meant to show. Latin and Greek belong, thus, to a well-represented

linguistic type which has largely acategorial roots.[3] Together with German, they also come under the type of language which categorizes its stems. This means that these languages categorize expressions at a lower syntactic level than strictly necessary. In Latin and Greek, there is some flexibility at the stem level. For instance, if the concept of 'health' is needed in the verb category, then a different stem formation is applied, yielding the verb stem *hugi-ain-* ʿbe healthy'. Similarly in Latin, if the root *sān-* 'health' is needed in the adjective class, the stem *sān-o-* is formed, while if a verb is needed, the stem *sān-a-* 'cure' is formed. German has less rich possibilities of stem formation and must therefore apply recategorization operations at the syntactic level if need be. In any case, the typological strategy of stem categorization carries with it the advantage that the category once fixed remains available at the higher syntactic levels. So no categorization of phrases and, in fact, no phrases are necessary there, with the consequence that words may be combined much more freely. Greek and Latin can take advantage of this to a much greater extent than German, because their thematic suffixes mark the category, while in German it remains implicit.

3.3   Verbal categories

The conformation of the verbal lexicon in the two classical languages is typologically unusual, too. Two parameters determining the shape of the verbal lexicon are its sheer size and the existence of light verbs. On the first parameter, the poles are occupied by a closed class of verbs with less than 30 members in some languages, on the one hand, and an open class of verbs with hundreds of roots and maybe thousands of stems, on the other. Although we are talking about dead languages of ancient times, which understandably have a much smaller lexicon than languages of modern civilizations, the size of the Greek and Latin verbal lexica is remarkable. And the inventory is constantly enhanced by the lexicalization of *verba composita*. For instance, from the beginning of Latin history, compound verbs such as *aspicio* 'look at' and *consulo* ʿcounsel' have no contemporary *verbum simplex*, and they are lexicalized and made the basis of further derivations, witness Italian *aspettare* 'wait' and *consultare* ʿcounsel'. The same goes for Greek *apothnḗskō* ʿdie' and several others.

Concerning the second parameter, even languages with an extensive verbal lexicon may possess a set of generic verbs which are deployed to form certain syntactic constructions and are the source for the grammaticalization of light verbs and auxiliaries. Both the Germanic and, even more so, the Romance languages possess such verbs. Relevant examples include Spanish *estar* 'be', *quedar(se)* 'stay', *ir* 'go', *venir* 'come' and a couple of others which are widely used in periphrastic constructions and to which we will return in §4.5. In contrast, the verbal lexicon of the two classical languages is remarkably homogeneous, which means that such a subcategory of semi-grammaticalized verbs is almost non-existent. The formation of verba composita just mentioned is in consonance with this; it is as if the languages avoided the emergence of generic verbs by constant renewal of verbs which might move in that direction. This is one manifestation of the more general observation of the so-called synthetic morphology of these two languages made in §3.

The age-old aversion against light verbs has, in the long run, yet another important consequence: From late Proto-Indo-European down to classical Latin and Greek – thus, for roughly 2,000 years – verbal morphology remains only mildly synthetic. New conjugation

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[3] Acategoriality of roots has been postulated as a universal (see the discussion in Lehmann 2008), but without scientific foundation.

categories could only accrue in the form of suffixes, which in turn would have to come from grammaticalized auxiliaries; and this is exactly what does not happen. In §4.5, we will turn to a syntactic consequence of this state of affairs.

3.4 Nominal categories

The last feature of the Greek and Latin part-of-speech system to be mentioned here is the formation of a supercategory 'noun', which comprises the substantive, adjective, numeral and pronoun. The similarity of the substantive and the adjective, in particular, is such that the ancient grammarians did not even see a difference, comprising both under the supercategory mentioned. And, in fact, a nominal group such as E1.a and #b is syntactically ambiguous.

E1 a. phílos Athenaîos
      'Athenian friend' or 'friendly Athenian'

    b. amicus Romanus
      'Roman friend' or 'friendly Roman'

This bifunctionality of the noun pervades the language system. It is reflected in the pronominal system. For instance, Greek *tís* 'who', *ekeînos* 'that' etc., Lat. *quis* 'who, which', *is* 'that', *hic* 'this' and many others have both substantival and adjectival/determinative use. The same goes, again, for deverbal nouns, especially participles and gerunds. Likewise in the syntax, relative clauses are used as attributes or as noun phrases without any special marking. The same nominal character appears, finally, in the numerals. They are attributed like adjectives and may be freely used to represent a noun phrase. The latter use is shown by the #b versions of E2 - E4, the latter by the #a versions. A language like Yucatec Maya uses a numeral classifier in both constructions of E4, since numerals are not in a nominal category.

E2 a. hèn dià duoîn
      'one by two'

    b. héna lógon dià duoîn lógōn
      'one notion by two words'

E3 a. unum per duo

    b. unam cognitionem per duo verba

E4 a. hun-p'éel   yéetel   ka'-p'éel
Yucatec one-CL.INAN with   two-CL.INAN
      'one by two'

    b. hun-p'éel   tukul   yéetel ka'-p'éel   t'aan
      one-CL.INAN thought with   two-CL.INAN word
      'one thought by two words'

4 Syntax

Regarding nominal predicates, both of the classical languages enter history with copula clauses as a dominant and nominal clauses as a recessive strategy; and the latter disappears during their history, save for a set of phraseologisms like *omnia praeclara rara* 'all great things are rare'. The verb 'be' in question, *es-*, is an erstwhile verb of existence which gets grammaticalized to a

copula and, on its way into Romance, to most of the other functions that 'be' may fulfill. Given the overall scarcity of light verbs at the dawn of history, this verb paves the way to their gradual development down to modern times.

4.1 Dependency relations

The technique employed with priority in the coding of dependency relations is dependent marking. Head marking is only used for the subject relation; there is no further external agreement in the syntax. In this, both languages display the cross-linguistically most frequent combination of the two marking strategies in the verbal sphere, viz. head marking for the subject relation and dependent marking for the oblique syntactic functions. The exclusive use of dependent marking in the nominal sphere, too, leads to a preponderance of this strategy in the grammar.

In both languages, the agreement of the verb provides a reference to a subject which need not be represented in the form of a noun phrase or pronoun; the suffixes in question function both in anaphora and deixis and in syntactic agreement. This is a diachronically very stable feature of both languages which is preserved to this day in Modern Greek and several Romance languages.

The system of case relators is heterogeneous and complex. There is a more archaic layer of case suffixes, which gets reduced even before the two languages enter history and is further reduced throughout their history. This is superseded by a more modern layer of prepositions, which arise out of PIE adverbs. This development may be observed at the beginnings of Greek history and, thus, predates the beginnings of Latin history. The two layers of case relators combine syntagmatically in complex ways which will be taken up in §4.6.4.

The assignment of cases to verbal actants obeys a hierarchy (hinted at in Pinkster 1990, ch. 5.1.2) which is essentially based on markedness. It takes the form of Diagram 1 for both Latin and Greek, with the corollary that Greek lacks the ablative.

Diagram 1   Case hierarchy

| nominative |
| accusative |
| dative |
| ablative |
| genitive |

This hierarchy underlies the formation of valency patterns, to be discussed in §4.6.2.

The PIE adverbs just mentioned are inherited by both languages in the form of spatial adpositions with an optional complement, i.e. adpositions that can be used as adverbs. And both languages combine these as preverbs with the verb and lexicalize the product as a compound verb stem. Examples may be seen in E29f and E43 below.

The preponderance of dependent marking together with the categories of nominal gender and number makes for a relatively heavy nominal morphology in comparison with verbal morphology. In typological comparison, most languages accumulate more grammatical information on the verb, leaving the noun almost naked in terms of morphological marking (Capell 1965).

4.2 The nominal group

Dependent marking also applies to adnominal dependents. The genitive attribute shares with the adjective attribute the feature of marking the attributive relation on the attribute. The adjective attribute may not only characterize its head with respect to some quality, but may also distinguish it by some relational feature, just as the genitive attribute does (s. §4.3). Because of this parallelism, there are doublets between attributive adjective and possessive attribute (as in the Slavic languages), illustrated in E5 and E6.

E5   a. domus regis   'the king's house'

       b. domus regia   (id.)

E6   a. oîkos basiléōs   (id.)

       b. oîkos basilikós   (id.)

E7   a. u   nah-il   le   yúun-tsil=o'
YUCATEC POSS.3   house-REL DEM master-ABS=R2
       'the house of the master'

       b. xa'n-il   nah
           palm-ADJR house
           'palm-roof house'

Where such conditions do not obtain, adjectival and possessive attribution have nothing in common. In Yucatec Maya, the possessive attribute, as in E7a, shows head-marking syntax, with the head agreeing with its attribute in person and number and the latter following the head. On the other hand, there are denominal adjectives like the one appearing in E7b. However, firstly they are not derived from person nouns like the ones in E5a/E6a, but typically from nouns designating objects. The suffix *-il* in E7b does not signal the attributive relation and instead derives an adjective from the noun *xa'n* 'palm'. Such denominal adjectives are not possessive adjectives and instead characterize their head with respect to some quality. Second, the adjectival attribute precedes its head, with no marking on either side. It should be added that this is a language whose adjectives are more noun-like than verb-like (Wetzer 1996); one may thus appreciate the extent to which the Greek and Latin adjective is actually "nouny".

   In consonance with this, the nominal group is only loosely integrated at the beginning of the history of the classical languages (Lehmann 1991). For instance, attributes and appositions can be iterated. In Ancient Greek, postnominal attributes are connected by the definite article. If it is more than one, each is introduced by the article (Plank 2003:342f). Moreover, in both languages, most adnominal dependents may go on either side of the head (E1) and may even be distantiated from the rest of the nominal group, esp. by anteposition under focus, as in E8 and E9 (s. Perrot 1998, §5):

E8   ad reliqua transeamus animalia (Plin. *nat*. 8, 1)
          'let's pass on to the other animals'

E9   magna dis immortalibus habenda est atque huic ipso Iovi Statori antiquissimo custodi
          huius urbis gratia, quod …
          'one has to feel an extraordinary gratitude to the immortal gods and in particular to
          Iuppiter Stator himself, the most ancient protector of our city, for ...' (Cic. *Cat*. 1, 11)

This may be taken to be a feature of the overall free word order in these languages. However, Latin and Greek share the variable position of the adjectival attribute with many European languages: half of them have flexibility of adjective attribute order (Bakker 1998:388). Moreover, in all of these languages, order flexibility in adpositional phrases (adposition - NP) is lower than in attributive constructions (Adj - Nom). This is remarkable, as it goes against the Penthouse Principle (Ross 1973), by which order freedom in a lower level construction should be lower than in a higher level construction such as the adpositional phrase is. Apparently, what counts here is not the constituent structure level but the syntactic relation: a modifying relation is looser than a governing relation.

The loose integration of the nominal group in terms of cohesion is rendered possible by the highly developed internal agreement. Diachronically, it stems from the appositive or anaphoric combination of nominal expressions which referred to each other by appended pronominal elements. Grammaticalization of these constructions began already in Proto-Indo-European, but is not completed in the historical languages. In other words, the relation of the attributive adjective still bears some resemblance to apposition. Synchronically, reliance on case marking and internal agreement results in relatively flat syntactic structure, where many dependents may be accumulated on one head.

4.3   Possession

The functional domain of possession is heterogeneous, since very different semantic relations may be subsumed under the common denominator of a possessive relation. Some of the distinctions made by other languages in nominal possessive constructions include an alienability contrast, as in E10f, a contrast according to the level of empathy and control of the possessor, as in E12, and a distinction between present and past possession (e.g. in Tupi languages). The bare stem of the inalienable noun illustrated by E10 only occurs in a possessive construction (#b), while its use outside such a construction (#a) requires a derelationalizing suffix. By contrast, the alienable noun illustrated by E11 occurs unadorned outside possessive constructions (#a), while its use with a possessive attribute or determiner (#b) requires a relational suffix (cf. E7).

E10 a. le   tatah-tsil=o'
YUCATEC DEM father-ABS=R2   'the father'

   b. in   tàatah
       POSS.1.SG father   'my father'

E11 a. le   nah=o'
YUCATEC DEM house=R2   'the house'

   b. in   nah-il
       POSS.1.SG house-REL 'my house'

E12 features possessors of different levels of empathy with the same possessed noun. The default possessor, being high in empathy, requires no mark on the possessed noun (#a), while a possessor low on the hierarchy requires a relational suffix (E12b and E19b).

E12 a. Tu'x   yàan   {in   x=ba'y/ u   x=ba'y Hwàan}?
YUCATEC where   EXIST POSS.1.SG F=bag   POSS.3 F=bag   John
         'Where is my/John's bag?'

b. Tu'x yàan   u   x=ba'y-il   in   nook' ?
   where EXIST   POSS.3 F=bag-REL POSS.1.SG dress
   'Where is the bag of my clothes?'

In this domain, the classical languages side with those language which do not grammaticalize any such distinction (Baldi & Nuti 2010). Every noun is freely used with and without a possessive determiner or attribute. The semantic relationality of body-part and kin nouns is not reflected by an obligatory possessive pronoun or index. Instead, the semantic relationality evokes a possessor to be sought in the context or in the speech situation. In E13, for instance, the speaker is the possessor, and no possessive determiner or attribute is used. In E14, the possessor of the same noun is coded, but the unmarked coding is as a possessive dative. Only in E15, where there is emphasis on the possessor, a possessive pronoun appears.

E13   Leonida, curre obsecro, patrem huc orato ut ueniat
      'Leonidas, please run, ask my father to come here' (Pl. *As*. 740)

E14   patrem atque matrem uiuerent uellem tibi
      'I would wish that your father and mother were alive' (Pl. *Poen*. 1066)

E15   immo suom patrem illic perdidit
      'quite on the contrary, he himself ruined his own father' (Pl. *Most*. 979)

The facts of Homeric Greek are exactly analogous. In E16, the uncoded possessor of the referent of the direct object is the subject referent (cf. E34 below). E17 shows minimal coding of the possessor – here of an immaterial body part – as a possessive dative. In E18 finally, the possessor is contrasted with other persons, and here it is coded by a possessive pronoun.

E16   lilaioménē pósin eînai
      'wishing him to be her husband' (Hom. *Od*. 1, 15)

E17   thalerḕ dé hoi éskheto phōnḗ
      'his fresh voice got blocked' (Hom. *Il*. 17, 696)

E18   arnúmenos hḗn   te psukhḕn kaì nóston hetaírōn
      'saving his own life and the return for his comrades' (Hom. *Od*. 1, 5)

Implicit possession, as in E13 and E16, and external possession, as in E14 and E17, are favored by the same conditions, viz. in prototypical possessive relationships, including a possessor high on the empathy hierarchy; but external possession may even extend to inanimate possessors (Baldi & Nuti 2010: 354f and §3.3.3, König & Haspelmath 1998, §§5.1.1 and 8).

The last semantic class of semantically relational nouns which are commonly treated as grammatically inalienable is constituted by nouns denoting spatial regions, like 'top', 'bottom', 'inside' etc. These notions are not even primarily coded as nouns in the Classical languages. Latin evinces lack of nominal government in the *summus mons* construction (Lehmann 1998), as the relational concept figures as an adjective attribute instead of a nominal head. All in all, government is no more developed in the nominal than in the verbal sphere.

The failure to code a possessor is not even limited to relational nouns. In E19, the possessive determiner refers back to the ceremony mentioned in the preceding sentence, thus rendering an associative reference explicit. The contextual situation is analogous in E20 from Latin, and here the relation between the priest and his afore-mentioned domain remains entirely implicit. Latin here provides even less grammatical information than modern Indo-European languages such as English, which use the definite article in associative reference.

E19 a. Bix k=u   meet-a'l   le   ch'a'chaak   k=a   wa'l-ik=o' ?
YUCATEC how IPFV=SBJ.3 do-PASS.INCMPL DEM rain.ceremony IPFV=SBJ.2   say-INCMPL=R2
       "How is the rain ceremony you mentioned done?"

     b. Pos   yan a   t'an-ik   u   h=meen-il.
        well   DEB SBJ.2 call-INCMPL POSS.3 M=shaman-REL
        "Well, you have to call the shaman." (SANTO_003f)

E20   Qui ... totum illum locum fanumque vendideris, sacerdotem ab ipsis aris
         pulvinaribusque detraxeris ...
LATIN   "You sold the entire place and the sanctuary, you dragged the priest from the very altar
         and cushion [of the goddess] ..." (Cic. *har.resp*. 28, 1-6)

Regarding possessive predications, it is noteworthy that in the course of Latin history, *habeo* gradually becomes the default verb of possession, ousting *sum*. Like other Indo-European languages, Latin develops from a 'be' to a 'have' language (Baldi & Nuti 2010, §4.1). At the same time, the impersonal Latin verbs mentioned in §4.6.2 are replaced by personal verbs in the Romance languages. The findings of §4.3 are interpretable as a shift from an "object-prominent" impersonal to an "agent-oriented" personal construction (o.c. 376).

4.4   Subordination – nominalization

In many languages, subordination is essentially based on nominalization: complement clauses are nominalized, adverbial clauses are like case-marked nominalized clauses, and all of them are non-finite. Turkish is such a language. In such a system, a subordinate clause shares at least as many commonalities with a deverbal noun or adverb as with an independent clause. In E21 - E23, the subordinate clauses have been bracketed.

E21   tavşan hedef-e   dört adım-da var-acağ-ın-ı   zanned-iyor-du.
TURK   hare   [goal-ALL four step-LOC reach-NR.FUT-POSS.3.SG]-ACC   believe-IPFV-PST(3.SG)
         ʻThe hare believed he would reach the goal in four steps.ʼ

E22   On-un için kaplumbağa yol-a   çık-tığ-ı   halde
TURK   that-GEN for [turtle   way-ALL make-NR.NONFUT-POSS.3.SG]   while

         tavşan   eğlences-in-e dal-dı.
         hare   fun-POSS.3-ALL indulge-PST(3.SG)
         ʻTherefore, while the turtle was making its way, the hare had his fun.ʼ

E23   Ama kararlaştırılan   yer-e   var-dığ-ın-da,
TURK   but [agree:PTPL.PASS place-ALL   reach-NR.NONFUT-POSS.3.SG]-LOC

         kaplumbağa çoktan   iddiayı kazan-mış-tı
         turtle   long.ago bet:ACC win-PRF-PST
         ʻHowever, when he reached the place agreed upon, the turtle had long won the bet.ʼ
          (Wendt 1972:181)

As may be seen, all of them are nominalized by suffixes (*-acağ* and *-dığ*). These complex nominals accept case suffixes. In E21, the object clause bears an accusative suffix, while in E23, the locative case expresses the temporal relation. In E22, the nominalized clause is, literally, an

attribute to the noun *hal* ʿstate', whose locative (in *-de*) is here lexicalized, and the cased form is grammaticalized into a conjunction. The non-finiteness of these constructions appears, among other things, in the possessive suffix referring to the subject of the subordinate clause.

Latin and Greek inherited non-finite constructions like the conjunct and absolute constructions, the gerund and the supine. At the beginning of their history, complex verb constructions involving a dependent non-finite verb with its own dependents are well established. However, owing to the low degree of integration of the clause and of the verbal group, nominalization and adverbialization of these categories is underdeveloped. Consequently, there is nothing to feed and, thus, maintain the complex verb constructions with non-finite dependent verbs. Thus, if E21 - E23 were translated into Latin, only the translation of E21 would typically involve a non-finite construction, viz. the *accusativus cum infinitivo*, while the other two would be rendered by a finite adverbial clause. The non-finite constructions become a characteristic of the written style, and only a blend of the gerund and the conjunct participle survives into the Romance languages. At the same time, productive formation of such complex verb constructions would be a condition for the grammaticalization of the superordinate verb and, thus, for the genesis of generic verbs, light verbs, auxiliaries and, in general, periphrastic constructions. The increasing lack of such productive formations is, thus, co-responsible for the lack of generic and light verbs in the archaic and classical phases of Latin and Greek.

Another Indo-European strategy of complex sentence formation, the correlative diptych (Haudry 1973), proves more productive. It is based on the anaphoric relation between the relative pronoun and the correlative demonstrative or resumptive pronoun, as illustrated by E24.

E24   quae mihi antea signa misisti, ea nondum vidi.
        The statues you sent me the other day, I have not seen yet. (Cic. *Att*. 1, 4, 3)

Here main and subordinate clause are almost on the same level, the subordinate clause is only weakly desententialized and shows no symptoms of nominalization. The correlative diptych itself is conserved as a productive construction in the archaic stages of both classical languages. Then it gradually declines. However, most of the Greek and Latin subordinate clauses derive diachronically from the correlative diptych. It suffices here to mention the Latin relative clause and the subordinate clauses introduced by *cum, ut, ubi, quod, quia, quam*. As a result, most subordinate clauses have essentially the same syntactic potential as independent clauses. They gradually take the stead of the earlier non-finite constructions. Here is a minimal pair from Hellenistic Greek (cf. Joseph 1987:433):

E25   all' idoù érkhetai met' emè hoû ouk eimì áksios tò hupódēma tôn podôn lûsai.
        ʿBut behold, one comes after me the sandals of whose feet I am not worthy to loosen.'
        (NT, *act.* 13, 25)

E26   ho opísō mou erkhómenos, hoû ouk eimì egṑ áksios hína lúsō autoû tòn himánta toû
        hupodḗmatos.
        ʿ[He is] the one who comes after me, whose sandal strap I'm not worthy to untie.' (NT,
        Ioh. 1, 27)

E25 represents the inherited construction, the only one that would be admissible in Classical Greek. E26 shows the more recent construction, which is going to oust the earlier one.

4.5 Complex verb constructions and light verbs

As remarked in §3, the classical languages are poor in light verbs. For Latin, *sum* 'be', *habeō* 'have' and *faciō* 'do' can be mentioned. Of these, the first is the only auxiliary, the second is becoming an auxiliary in the later part of the language history, and the third forms causative verbs like *calefaciō* 'heat'. Greek does not even have so much. In other languages (Sioux, Mayan and Chibchan languages, among many others), verbs of body position (positionals) like 'stand', 'lie', 'sit' etc. form a basic class of verbs or verboids which are the source for the grammaticalization of a paradigm of auxiliaries. This has happened only in the development of the Ibero-Romance languages, with the descendants of Latin *stō* 'stand' making a faint beginning.

Another group of fundamental importance in many languages are the verbs of oriented motion, like 'go to', 'leave', 'enter', 'go out', 'go up', 'go down', which embody dynamic local relations. In Latin, all of them are *verba composita* like *intrō* 'enter', *exeō* 'go out', *subeō* 'climb', *descendō* 'go down' etc. Again, it is in Ibero-Romance languages where we find these notions coded by basic and generic verbs, such as Spanish *entrar, salir, subir, bajar*. In Latin and Greek, since these verbs are not base verbs, let alone light verbs, they have a low profile both in the grammar and in texts. They do not meet the conditions for grammaticalization.

In other languages, light verbs of position and oriented motion are converted into derivational and inflectional suffixes to produce regular derivation of verbs and a rich paradigm of modal and aspectual categories, respectively. In the classical languages, these categories and constructions had been absent from PIE times. This implies that a whole bunch of grammatical operations that play an important role in other languages is barred for these two languages. It is in Modern Greek and in Romance that we see the beginnings of such grammaticalization processes.

Let us look at a particular construction in which such verbs would be needed. There is a variety of semantic constellations that involve a predicate whose argument is a predication and which, therefore, may be coded by two verbs arranged hierarchically. One of these is the construction of a movement which is both oriented in space and characterized by manner of motion. To render such a configuration, typically two lexemes are needed, each coding one of these semantic components (cf. Talmy 1985). These may belong to two classes of verbs, one being verbs of oriented motion, the other verbs of manner of motion, as in Spanish and Yucatec. These may then be combined syntagmatically by making the verb of oriented motion the main verb and degrading the other verb to a non-finite adjunct, as shown in E27 and E28.

E27   los Naxianos salieron de la ciudad corriendo
SPANISH   'the Naxians ran out of town'

E28	h	hóok'	yáalkab	t=u		kah	le	Naks-il-o'b=o'
YUCATEC	PFV	leave(CMPL)	run	LOC=POSS.3		town	DEM	Nax-ian-PL=R2

        'the Naxians ran out of their town'

The opposite strategy consists in making the verb of manner of motion the main verb and coding the oriented motion as a local relator. In the classical languages, the latter may be a preverb or a preposition or both, as in E29 and E30, where *dramóntes* and *currentes* are the manner of motion verbs in question:

E29   Náksioi … ekdramóntes áphnō ek tês póleōs prospíptousi toîs Messēníois ...
        'the Naxians ... suddenly sallied out from the town and attacked the Messinese' (Thuk. 4, 25, 9)

E30 Naxii statim excurrentes ex oppido Messinos aggrediuntur (id.)

This strategy is preferred in the classical languages; semantic modification of verbs generally takes the form of adverb(ial)s. This is in consonance with the general preponderance of dependent marking, which allows the accumulation of adjuncts on a single verb.

However, Greek differs notably from Latin in having at least a few verbs that are employed as main verbs in constructions like the Spanish and Yucatec ones. These are the verbs *lanthánō* 'hide, escape somebody's notice [in acting]' (E31), *phthánō* 'come beforehand, [act] before somebody' (E32), *diatelô* 'keep, go on [acting]' (E33) and *tugkhánō* 'happen [to act]' (E34).

E31   pántas elánthane dákrua leîbōn
        'he shed tears unnoticed by all of them' (Hom. *Od*. 8, 93)

E32   all' ára min phthê Tēlémakhos katópisthe balṓn
        'However, Telemachus struck him first from behind' (Hom. *Od*. 22, 91f)

E33   eîta tòn loipòn bíon katheúdontes diateloîte án,
        'then you would pass the rest of your lives in slumber' (Pl. *Apol*. 31a)

E34   kaì gàr etúgkhanon prṓiēn eis ástu oíkothen aniṑn Phalēróthen: tôn oûn gnōrímōn tis
        ópisthen katidṓn me ...
        'I happened to be going up to town from my house in Phalerum early in the morning,
        when one of my acquaintance caught sight of me from behind ...' (Pl. *Symp*. 172a)

These four verbs, in turn, fall in two subsets. The first two are just lexical verbs which code a specific aspect of some situation. The latter two, however, have a more general meaning and therefore a broader application. They have close counterparts in English *keep* and *happen*. There are even early examples of the use of *eimí* 'be' as a progressive auxiliary, combining with the present participle of the full verb just like in E31 – E34, as in E35:

E35   ên gàr katà tḕn kapnodókēn es tòn oîkon esékhōn ho hḗlios
        'for down the smoke vent the sunlight was just entering the house' (Hdt. 8, 137, 4)

As said before, the evolution of light verbs and auxiliaries in a language presupposes the existence of a syntactic construction involving two verbs such that the higher verb is used as an operator on the more specific non-finite verb depending on it. The examples given show the thin basis for such an evolution in Ancient Greek. However, in the further course of time, Greek gave up the infinitive, so that the most important non-finite verb form for this kind of construction was no longer available. The constructions E31 - E35, which involved the next most important non-finite verb form, got isolated and could not provide a fruitful source of grammaticalization.

4.6   Valency and voice

4.6.1   Subject and direct object

Both classical languages, like all ancient IE languages, have accusative alignment of fundamental relations. The subject is highly "formalized" (Kurzová 1981), i.e. desemanticized, in Greek even more than in Latin (Bossong 1998, §2.1), although not to the extent of the English subject. For active verbs, what probably correlates highest with the subject function is empathy; less so control (Christol 1998:760); and even less topic function (pace Christol l.c.). The subject referent does not necessarily have high control of the situation. But given its generally high degree of empathy, it is assumed that the subject referent has more control than the other

participants. This implicature is explicitly canceled by the passive (s. §4.6.3.1). Given that the nominative is the case for all subjects, including subjects of passive sentences, its meaning is practically empty. In consonance with this, its allomorphs in many of the declension classes are zero.

The direct object is defined as that actant which becomes the subject on passivization. By this criterion, the Latin direct object is marked by the accusative; complements in other cases retain their case under passivization, as illustrated by E36 for the indirect object.

E36 a. sed nec Tiberio parcit (Suet. *Aug*. 86)
       ʻbut he does not even spare Tiberiusʼ

     b. arma habemus non aduersus eam aetatem cui etiam captis urbibus parcitur, sed aduersus armatos (Liv. 5, 27, 7))
        ʻwe have weapons not against that age which is spared even when towns are conquered, but against armed soldiersʼ

This is different in Greek. Complements in the dative and genitive can become subjects of a passive version, as shown for the dative by E37 (cf. Luraghi 2003:53).

E37 a. thēría dʼ autôi boētheî kaì prokḗdetai parʼ aksíān práttontos (Plut. *Cic*. 47, 6)
       ʻwild beasts came to his help and cared for him in his undeserved misfortuneʼ

     b. huómenos dè prò toû thérous ho sîtos boētheîtai pròs tà thermà kaì nótia pneúmata: (Plutarch quaest.nat. ch. 14)
        ʻBut when before harvest it rains upon corn, this is a help to it against the hot south windsʼ

Thus, the two languages differ in that the Latin direct object is bound up with the accusative case, while in Greek the syntactic component that may become the subject of a passive construction may be marked by any oblique case in the active construction.

4.6.2 Valency patterns

We will briefly review the main Latin valency patterns just in order to abstract the underlying principles (cf. Pinkster 1990, ch. 5.1.2 and Schøsler 2008, §2.3 for Latin and Christol 1998 for both languages). We will only look at actants, leaving out of consideration predicate nominals. The patterns will be ordered by quantitative valency. Little need by said on monovalent verbs: their only actant is a subject, marked by the nominative. All of the plurivalent patterns involve a subject as first actant, which is therefore not shown in Table 2f. The patterns available for bivalent verbs are shown in Table 2.

Table 2 Latin bivalent verbs

pattern slot	with direct object	with indirect object	with genitive complement	with ablative complement
2nd	accusative	dative	genitive	ablative
examples	*uro* ʻburnʼ, *transeo* ʻcrossʼ	*fido* ʻtrustʼ, *parco* ʻspareʼ, *placeo* ʻpleaseʼ, *invideo* ʻenvyʼ ...	*memini* ʻrememberʼ	*utor* ʻuseʼ, *fungor* ʻserveʼ, *abstineo* ʻabstainʼ

Thus, any of the oblique cases may characterize the second actant of a bivalent verb. In particular, Latin and, even more so, Greek differ from most languages in using the genitive in adverbal function. The patterns of trivalent verbs are shown in Table 3.

Table 3 Latin trivalent patterns

pattern		with indirect object	with accusative complement	with genitive complement	with ablative complement
slot	function				
2nd	direct object	accusative	accusative	accusative	accusative
3rd	complement	dative	accusative	genitive	ablative
examples		*dico* 'say', *trado* 'hand over'	*doceo* 'teach'	*admoneo* 'remind'	*privo* 'deprive'

Two generalizations are possible on trivalent verbs: First, they are all transitive; only the first column of Table 2 is used for trivalent verbs. If anything other than a direct object is chosen as second actant, then there can be no third actant.[4] Second, for the third actant, the logical possibilities are exhausted by the languages. In other words, patterns of trivalency are composed by exactly the same principle that is responsible for patterns of bivalent verbs. This principle may be stated as follows (cf. Pinkster 1990, ch. 5.1.2):

1. Whichever the quantitative valency, assignment of cases to actants starts from the top of the case hierarchy Diagram 1 and, for each further valency slot, gradually moves down the hierarchy.
2. In plurivalent verbs, the last actant is peripheral, the preceding ones are central.
3. Assign the hierarchically highest cases of Diagram 1 to the central actants and then assign any of the remaining cases to the peripheral actant. In this latter step, Diagram 1 determines quantitative preferences.[5]

It follows from the principle of case assignment that the first valency slot cannot be occupied by anything else than a subject. It can, however, remain unoccupied, viz. in impersonal verbs, as shown in Table 4.

Table 4 Latin impersonal verbs

pattern	impersonal avalent	impersonal monovalent	impersonal bivalent
slot			
1st	-	-	-
2nd		[any case]	accusative
3rd			genitive
examples	*pluit* 'rain'	-	*pudet* 'be ashamed'

Obviously, the patterns of Table 4 are not based on any of the preceding patterns. First of all, there appears to be no monovalent impersonal verb. This is all the more remarkable as there is a more complex valency pattern, having both an accusative and a genitive object, which one would

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[4] Pinkster (1990, ch. 5.1.2) notes one and a half exceptions to this generalization, *interdico* 'forbid' and *invideo* 'envy'.

[5] The trivalent verb with accusative complement is an exception to rule 3.

expect to presuppose the missing pattern. The missing pattern is instantiated in the typologically similar German language with a few verbs like *mich friert/schauert* 'I freeze/shiver'.[6] Second, if there were a systematic relationship of Table 4 to Table 3, one would expect that the third valency slot could be occupied by a dative or ablative instead of the genitive. Third, the syntactic function of direct object is constituted on the basis of the transitive patterns of Table 2 and Table 3. This means that although the accusative case may appear in other valency patterns, the syntactic function that it marks in those tables is not present in Table 4. The impersonal bivalent verb is, thus, an erratic pattern. In fact, Latin only has a closed class of impersonal verbs of sentiment (*taedet* 'disgust', *piget* 'vex', *pudet* 'feel ashamed', *paenitet* 'repent', *miseret* ʿcommiserate') to instantiate this pattern. It is, thus, unproductive. Its Greek counterparts are personal verbs.

Taking the Latin valency patterns together, one has to recognize relatively wide variation in the case marking of verbal actants. There are only a few semantically homogeneous groups:

- Avalent verbs designate meteorological processes.
- Impersonal bivalent verbs designate negative sentiments.
- Trivalent verbs with genitive complement (*accuso* ʿaccuse', *condemno* ʿcondemn', *absolvo* ʿabsolve') designate acts of jurisdiction (Schøsler 2008, §2.3).

Apart from these, the semantic unity of each valency class is rather faint if at all existent (Pinkster 1990:49-53). Instead, case assignment essentially follows the principle stated in §4.6.2, which is totally asemantic. The function of cases in Latin valency is thus not semantic, but discriminatory (Comrie 1981, ch. 6.1).

4.6.3 Valency alternations

4.6.3.1 Voice system

The voice system comprises two inflectional voices in addition to the active:

1. The passive conveys that the subject does not represent the participant that controls the situation.
2. The middle conveys that another participant of the situation is coreferential with the subject-participant (Christol 1998:763).

In addition, there are two reflexive constructions:

3. The simple reflexive conveys that the participant so marked is coreferential with the topical participant (cf. Christol 1998:763f).
4. The emphatic reflexive conveys that the participant so coded is coreferential with the topical participant, in contrast with other referents that could come into question (Strunk 1980:328f).

As is evident, voice #3 has the same function as #2 whenever subject and topic coincide, which is often the case. Moreover, a semantic similarity between voices #1 and #2 stems from the fact that the subject of #1 is generally the patient, while the subject of #2 is often coreferential with the patient. Given these functional similarities, neither language has the complete system:

In prehistorical times, voices #1 and #2 syncretize to different degrees. In Pre-Latin, the middle merges morphologically completely into the passive. The result is a two-voice system of active and passive, where the passive partly fulfills functions earlier fulfilled by the middle, as

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[6] Verbs like *me decet* do not count here, as they do have a (sentential) subject; s. Kühner & Stegmann 1972, I:5.

shown by E38a and E39a. During the historical period, this function of the passive is gradually replaced by construction #3 (E38b and E39b). In addition, Latin has construction #4.

E38 a. quae … semper ornantur, lavantur, tergentur, poliuntur. (Pl. *Poen*. 228f)
ʿ[women] who … constantly get adorned, washed, wiped and spruced up'

b. age nunciam orna te, Epidice (Pl. *Epid*. 194)
ʿcome on, adorn yourself now, Epidicus''

E39 a. misera excrucior ..., male mihi est, male maceror. (Pl. *Cist*. 59)
ʿWretched me! I am agonizing …, I am doing badly, I am macerating myself.'

b. Sed quid ego? cur me excrucio? cur me macero? (Ter. *Andr*. 5,3, 15)
ʿBut what am I doing? Why am I agonizing? Why am I macerating myself?'

At the beginning of the history and to the extent that cases born by verbal dependents conserve some semantic value and, thus, their original modifying function, the transitivity schema plays a relatively weak role (§4.6.1). There are, therefore, no regular valency-changing derivations, esp. no promotion to direct object (applicative) and no causative. Instead, there are mildly regular valency alternations and conversions, which will be reviewed in the following subsections.

4.6.3.2 Alternation in the direct object

Greek has a large number of bivalent verbs which may take their oblique actant not only in any of the oblique cases, but also via a preposition. We will at first look at the alternation between the accusative and the genitive, as illustrated by E40:

E40 a. pîné te oînon hḗmenos (Hom. *Od.* 15, 391f)
'and drink (your) wine sitting'

b. óphra píoi oínoio (Hom. *Od.* 22, 11)
'in order to drink some wine'

In such constructions, both cases retain some of their basic meaning: the accusative conveys total, the genitive partial affectedness of the object, more precisely, a non-specific quantity (Christol 1998:755, Luraghi 2003:60f).

In E41a – c, *orégō* ʿreach' consecutively takes an object in the accusative, genitive and dative (cf. Luraghi 2003:54f).

E41 a. oreksámenos prumnòn skélos (Hom. *Il.* 16, 314)
ʿhitting his upper thigh'

b. hoû paidòs oréksato phaídimos Héktōr (Hom. *Il.* 6, 466)
ʿglorious Hektor reached out at his boy'

c. katésthie keklēgôtas kheîras emoì orégontas (Hom. *Od.* 12, 256f)
ʿshe devoured them shrieking and stretching out their hands towards me'

Although no partitive relation is intended here, the opposition between total and partial affectedness is again present, since in E41a, the thigh is, in fact, pierced, while in #b, the goal is just touched, and in #c, is not even touched, by the agent. This distinction appears to correlate with the empathy of the referent in question, a thing in #a, but a human being in #b and #c. Examples such as these relativize the analysis of case government in Homeric Greek.

Finally, the direct object is also the neutralization point for some peripheral semantic roles. For verbs combining with a local role, there is a valency alternation for the second actant, either as direct object or as a prepositional dependent (cf. Christol 1998:464):

E42 a. pheúgō tón pólemon / ek toû polémou
        ʻI flee the battle / from the battleʼ

      b. oikéō tḗn pólin / en têi pólei
        ʻI inhabit / live in the townʼ

Latin essentially lacks this kind of alternation for the direct object, with the partial exception of *verba composita*. These may either govern their complement directly (E43a) or by the same preposition which also serves as preverb (#b; Christol 1998:471):

E43 a. sed ita peragrat per animos (Cic. *de Or.* 1, 222)
        ʻbut he so wanders through the mindsʼ

      b. cum Asellus omnis se provincias stipendia merentem peragrasse gloriaretur (Cic. *de Or.* 2, 258)
        ʻwhen Asellus boasted having wandered through all the provinces on his campaignsʼ

This is the closest to an applicative derivation that the two classical languages can muster. In other languages (e.g. German), the promotion of a local participant to direct object would be marked by an applicative derivation.

4.6.3.3 Locative alternation

Two further valency changes are of interest here which do not consist in an exchange of the case for a given actant, but instead in a conversion of the case marking of two actants. The first of these is the locative alternation (cf. Christol 1998:497f, 762). It presupposes a situation involving three participants: an agent X, a thing manipulated Y and another participant Z that Y is somehow applied to and that is conceived as a location for Y. Locative alternation is then a paradigmatic relationship between a construction #a (illustrated by E44a) where Y is the direct object and Z is in some peripheral, local role, and a construction #b where Z is the direct object and Y is construed as an instrument (E44b). In Greek, Z is always in the dative in version #a.

E44 a. autàr épeitʼ autoîsi bélos ekhepeukès ephieìs báll[e] (Hom. *Il.* 1, 51f)
        ʻbut then on the men themselves he threw his stinging shafts, and struckʼ

      b. tòn mèn egṑ prosiónta bálon khalkḗreï dourí (Hom. *Il.* 11, 742)
        ʻas he was coming towards me, I hit him with my bronze-pointed lanceʼ

As before, the accusative of the #b version implies that the patient-goal (Z) is totally affected, while it is only aimed at in the #a version.

Latin, too, has locative alternation for at least a dozen trivalent verbs (Bolkestein 1985). While the valency frame of the #b version is as in Greek, with the ablative coding the instrumental role, there is some variation concerning the coding of Z in the #a version. In E45b, Z is an indirect object.

E45 a. amatorque noster, mihi libros eos quos Ser. Claudius reliquit donavit. (Cic. *Att.* 1, 20)
        ʻand a great friend of mine donated those books that Ser. Claudius left behind to meʼ

b. me saucium recreavit, me praeda donavit (Cic. *Mur*. 18)
ˈme did he heal when I was wounded, me did he endow with the bootyˈ

In E46, the #a version has Z in a prepositional phrase.

E46 a. et aspersus est sanguis eorum super vestimenta mea (Hier. *Is*. 63, 3)
ˈand their blood was sprinkled over my clothesˈ

b. aspersusque est sanguine paries (Hier. *2 rg*. 9, 33)
ˈand the wall was sprinkled with [her] bloodˈ

Although Latin has one case more than Homeric Greek, its cases are more desemanticized than those of Homeric Greek. Apart from the specific contribution of local prepositions, as in E46a, the referential meaning of the two constructions is the same. The accusative is assigned to that participant which has some topical or focal function, be it that it is a primary or secondary topic, be it that it contrasts with an established topic or focus, as is quite visible in E45b.

In other languages (e.g. German), the promotion of the local participant Z to direct object (as in E44b) would be marked by an applicative derivation. It is in consonance with the dependent-marking type of the classical languages to alternate just between two different case frames with the same verbal lexeme.

4.6.4 Tightening of valency

In general, verbal government is weakly developed in Greek and Latin; no actants are obligatory in a clause. Neither is the boundary between government and adjunction clear-cut. The modifying function of the cases is a remnant from prehistorical times where there was still productive formation of case suffixes. There is little if any prepositional government, i.e. government of verbal dependents through a preposition.

In both languages, cased nominal groups as dependents are gradually replaced by prepositional phrases. E47 shows that the recipient of *scribo* ˈI writeˈ is first an indirect object, later a prepositional complement marked by *ad* ˈtoˈ. E48 shows that the indirect object of a verb like *dídōmi* ˈI giveˈ is later marked by the preposition *s* ˈwith, toˈ (cf. Christol 1998:482-484).

E47 *scribo* + dat. -> *scribo ad*

E48 Greek dídōmi autôi → dṓsō s tón

The role of case suffixes and prepositions in syntax is best understood in a dynamic representation as attempted in Diagram 2.

Diagram 2 Case relators between adjunction and government

involvement	peripheral ◄————————————► central		
syntactic function	adjuncts	outer complements	inner complements
archaic layer: case	locative - ablative	- genitive - dative	accusative - nominative
modern layer: preposition	secondary prepositions	primary prepositions	

Diachronically, the following processes happen in parallel:
• The case paradigm is reduced. The markers of the most grammatical cases become zero.
• Prepositions are grammaticalized. The primary prepositions start being substituted for concrete case suffixes (as in E47f).

- Cases loose their modifying function, and instead verbal government grows both in strength and in scope (i.e. it comprises even outer complements).

It should be noted that cases are increasingly subjected to government not only by the verb, but also by prepositions. Thus, prepositions oust cases in two ways: paradigmatically, they replace them; syntagmatically, they govern them and therefore deprive them of any meaning of their own. A difference between the two classical languages may be noted here (cf. Christol 1998:755f): In Greek, all three oblique cases may be associated with prepositions, and there are, in fact, some prepositions that combine with any of the three cases. This is similar to a verb that combines with any of the three cases; s. §4.6.3.2. In Latin, with the exception of two prepositions that combine with two cases, all the rest governs just one case. In a dynamic view, Latin is further advanced in the common development. However, it must be recalled (s. §2) that the literary periods that we are mostly looking at when comparing the two languages are out of phase. If we compared imperial Latin with contemporary Greek, then the Greek system would be more similar to the Latin one.

Summarizing, we can oppose the following extreme stages in diachrony:

- initial stage (Homeric Greek, Proto-Italic): weak government; complements are marked by the most abstract cases; prepositions are never governed.
- final stage (beginning of Byzantine Greek, Proto-Romance): strong government; inner complements are caseless, outer complements are marked by grammatical prepositions. I.o.w., the strengthened government now deploys prepositions in prepositional government.

4.6.5   Base transitivity

The concept of base transitivity is relevant to a class of dynamic relational concepts which are alternatively conceived as processes or as action-processes (Chafe 1970, ch. 11). These are situations like 'U burns', 'U breaks', whose central participant is an undergoer and which are easily compatible with an actor, to yield 'A burns U, 'A breaks U'. There are two opposite options in coding the distinction between presence vs. absence of an actor by regular derivation (cf. Haspelmath 1993, Nichols et al. 2004): The notion may be coded basically as an intransitive verb, which may be causativized if an actor is involved; or alternatively, it may be coded basically as a transitive verb, which may be anticausativized if no actor is involved. These two strategies reveal opposite base transitivity. Apart from these, there are other solutions to the problem. One is to leave the distinction uncoded, i.e. to operate with labile verbs. Another is to shift the problem into the lexical sphere: thus, there may be equally elementary or equally derived lexemes for both the intransitive and the transitive version, so that none is based on the other.

Anyway, some languages adhere rather consistently to one or the other of the two opposite principled solutions. Base intransitivity is found, among many others, in Amerindian languages such as Bororo and Coast Salish and in Japanese. Such languages categorize the dynamic relational concepts in question preferably as intransitive verbs. If an actor is needed, the base is causativized. Table 5 illustrates the Japanese strategy of base intransitivity by a few representative verbs:

Table 5 Basic intransitivity in Japanese

intransitive	meaning	transitive	meaning
ugok-u	move	ugok-ase-ru	move
odorok-u	be scared	odorok-as(e-r)u	scare
okor-u	get angry	okor-ase-ru	annoy

As may be seen, transitive verbs coding such action-processes are formed by a regular derivation that appends a causative suffix to the stem. The opposite strategy of base intransitivity consists in categorizing such action-processes primarily as transitive roots and applying anticausativization if no actor is present. Russian is among the languages preferring this strategy; it anticausativizes its roots by a reflexive construction.

We will now check base transitivity for Greek and Latin. A sample of 23 dynamic relational concepts will be used which represent the cognitive domains of position, motion, physical change, cognition/emotion and phase. They are arranged in Table 6 in the following way: The leftmost column names the concept by English mnemonic verbs. The next bundle of columns shows their coding in Greek, first as a transitive, then as an intransitive verb. The meanings of the first of these columns are in a causative relationship to the meanings of the second column. The last column of this bundle contains a 't' if the base is transitive, implying that the intransitive verb is derived from it by some anticausativizing operation; it contains an 'i' if the base is intransitive, implying that the transitive verb is derived from the base by some causativizing operation; it contains a dash if there is no such oriented morphological relation between the two. The last bundle of columns shows the same for Latin. In several cases, the concept is coded by more than one verb in the language; these have been reproduced and enhance the sample per language to more than 23.

Table 6 Base transitivity in Greek and Latin

concept	Greek transitive	intransitive	base	Latin transitive	intransitive	base
position						
stand	hístēmi	héstēka	-	sistō	stō	i
lie	títhēmi	keĩmai	-	pōnō	iaceō	i
hang	anartáō	anērtẽmai	t	suspendo	pendeō	-
	kremánnumi	kremánnumai	t			
hide	krúptō	krúptomai	t	condō	lateō	-
	kalúptō	lanthánō	-			
motion						
move	órnumi	órnumai	t	moveō	moveor	t
lift/get up	haírō	haíromai	t	tollō	surgō	-
turn	trépō	trépomai	t	vertō	vertor	t
	stréphō	stréphomai	t		mē vertō	t
roll	kulíndō	kulíndomai	t	volvō	volvor	t
plunge	dúō	dúomai	t	mergō	mergor	t
	báptō	báptomai	t		mē mergō	t
physical change						
change	alloióō	alloioũmai	t	mutō	mē mutō	t
					mutor	t
boil	hépsō	dzéō	-	fervēfacio	ferveō	i
burn	káō	káomai	t	urō	ardeō	-
	phlégō	phlégomai	t		uror	t
	aíthō	aíthō	-			
		aíthomai	t			
fill	pímplēmi	plésthomai	t	compleō	compleor	t
		plḗthō ~ pléthomai	-			
break	rḗgnumi	rḗgnumai	t	frangō	frangor	t
	ágnumi	ágnumai	t	rumpō	rumpor	t
dry	ksēraínō	ksēraínomai	t	siccō	siccor	t
	auaínō	auaínomai	t			
open	anoígō	anoígomai	t	patēfacio	pateō	i
emotion/cognition						
learn/teach	didáskō	manthánō	-	doceō	discō	-
remind/remember	mimnḗskō	mimnḗskomai	t	moneō	memini	-
wake up	egeírō	egeíromai	t	expergefaciō	expergiscor	-
scare	phobéō	phobéomai	t	terreō	terreor	t
annoy / be angry	aniáō	aniáomai	t	stomachum faciō	stomachor	-
				iratum faciō	irascor	i
make furious / rage	maíno	maínomai	t	-	furō	i
phase						
begin	árkhō	árkhomai	t	incipiō	incipio	-
end	lḗgō	lḗgō	-	finiō	finior	t
	teleutáō	teleutáō	-			

The following generalizations may be read off Table 6:

1. In none of the five cognitive domains do we find an exceptionless pattern for either of the languages. Since we are talking about lexical relationships, no complete regularity is to be expected, anyway.
2. Of the 36 Greek pairs (counting some verbs more than once), 26 exhibit base transitivity. In the other 10 pairs, the intransitive is not morphologically based on the transitive; these pairs are equipollent. In fact, all of the concepts are lexicalized as transitive verbs. There is not a single case of a transitive verb that would be based on an intransitive verb.
3. Of the 29 Latin pairs, 15 show base transitivity, 10 are equipollent, and 4 have an intransitive base. In 3 of this latter group, the transitive verb is derived from the intransitive base by a causativization process (compounding with *faciō*).
4. Overall, there is, thus, a clear predominance of transitive bases. The detransitivization process associated with base transitivity is the inflectional passive, which in both languages may be used for deagentivization (alias anticausativization), i.e. to convey the inexistence of an actor. In addition, Latin sometimes uses a reflexive construction for the same purpose (cf. §4.6.3.1). Both are clearly based on and marked against the transitive base.
5. The most homogeneous picture is presented by the motion concepts: All of them are lexicalized as transitive base verbs in both languages. The far majority is coupled by a marked intransitive version. The only exception is the Latin lexical pair *tollō – surgō*.
6. Intransitive bases are most prominent in position concepts. Here Latin renounces to base transitivity, and Greek only keeps it in half of the cases.

If one seeks a motivation for such a state of affairs, one systematic correlate immediately springs to mind: Greek does not have a morphological causative. Latin does have one, viz. the compound with *faciō* just mentioned. However, compounding in general is disfavored in Latin, so this causativization strategy does not play any important role in the system.[7]

Now lack of a causativization process does not yet entail base transitivity. Another option are lexical pairs such as Lat. *tollō – surgō*, and yet another one are labile verbs such as Greek *aíthō* 'burn'. The former strategy is widely used in both languages. It may just count as one of the typological characteristics of a language that deflects into the lexicon a considerable portion of the tasks generally solved by light verbs and verbal derivation, simply by relying on a large inventory of verb roots and stems. The latter strategy is disfavored in both languages, examples like *aíthō* and *incipio* being a distinct minority. Stems in these languages are principally categorized; and transitivity vs. intransitivity is one of the categories taken care of.

In preferring base transitivity to intransitivity, the classical languages belong to a minority of languages all of which are accusative languages with relatively complex morphology and preferably dependent-marking syntax (Nichols et al. 2004, §4.3). The strategy itself is not particularly economic, as it requires one to mark one's expression if one is n o t giving some particular piece of information – the actor, in this case –, while base intransitivity allows the speaker to mark this information just in case he chooses to add it.

It should also be observed that many languages, including English, German and Yucatec Maya, distinguish clearly between the categories of passive and deagentive. For instance, the passive of German *öffnen* 'open', *geöffnet werden*, implies the presence of an agent, while the deagentive *sich öffnen* blocks the agent. By using their passive in both situations, Greek and Latin blur this distinction.

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[7] The relatively low profile of synthetic-derivational causativization is, incidentally, an areal feature in Europe (Christol 1998:505).

5 Conclusion

The following picture emerges of the grammatical type of the classical languages: Owing to the low degree of integration of the clause and the verbal group, nominalization and adverbialization of these categories is underdeveloped. Consequently, while complex verb constructions involving a dependent non-finite verb with its dependents were well established at the beginning of the history of the classical languages, there was nothing to feed and, thus, maintain them. Productive formation of such complex verb constructions would, however, be a condition for the grammaticalization of the superordinate verb and, thus, for the genesis of generic verbs, light verbs, auxiliaries and, in general, periphrastic constructions. Instead, subordinate clauses have essentially the same syntactic potential as independent clauses.

The same picture repeats itself in verbal and nominal syntax. Verbal dependents are relatively autonomous, and the same goes for nominal dependents, especially attributes. Thus, syntactic groups in general are not integrated, neither at the sentence level nor at the clause level nor even at the noun phrase level. These constructions are more like mobiles than like trees. This contrasts sharply with the tight integration of the word form.

Despite its considerable size, the verbal lexicon is very homogeneous and self-sustained. Since there are no tightly integrated complex verb constructions, the syntactic conditions for periphrastic and light-verb constructions are not fulfilled. As a result, those lexical groups from which generally light verbs are recruited – verbs of body position, oriented motion and transport – remain sterile for the grammar.

Classical Greek and Latin each represent a phase in a development leading from the flat, word-centered syntax of Proto-Indo-European to the more rigid, phrasal syntax of the modern Greek and Romance languages. This phase was frozen by the writers of the classical period, which makes it appear stable and establishes it as a point of reference for other language states. If one drops this perspective, it rather appears that the classical languages are typologically heterogeneous, representing situations between the typologically more consistent poles at which Proto-Indo-European and the modern languages are found.

Abbreviations in glosses

1, 2, 3	1st, 2nd, 3rd person	IPFV	imperfective
ABS	absolutive	LOC	locative
ACC	accusative	M	masculine
ADJR	adjectivizer	NONFUT	non-future
ALL	allative	NR	nominalizer
CL	class	PASS	passive
CMPL	completive	PFV	perfective
DEB	debitive	PL	plural
DEM	demonstrative	POSS	possessive
EXIST	existence	PRF	perfect
F	feminine	PST	past
FUT	future	PTPL	participle
GEN	genitive	R1, R2	referential clitic of 1st, 2nd ps. deixis
INAN	inanimate	R3	non-deictic referential clitic
INCMPL	incompletive	REL	relational

SBJ   subject   SG   singular

References

Bakker, Dik 1998, "Flexibility and consistency in word order patterns in the languages of Europe." Siewierska, Anna (ed.), *Constituent order in the languages of Europe*. Berlin & New York: Mouton de Gruyter (Empirical Approaches to Language Typology, EUROTYP, 20-1); 383-419.

Baldi, Philip & Nuti, Andrea 2010, "Possession." Baldi, Philip & Cuzzolin, Pierluigi (eds.), *New perspectives on historical Latin syntax 3. Constituent syntax: quantification, numerals, possession, anaphora*. Berlin & New York: De Gruyter Mouton; 239-387.

Bolkestein, A. Machtelt 1985, „Discourse and case-marking: three-place predicates in Latin." Touratier, Christian (ed.), *Syntaxe et latin. Actes du IIme Congrès International de Linguistique Latine, Aix-en-Provence, 28-31 mars 1983.* Aix-en-Provence: Université de Provence; 191-221.

Bossong, Georg 1998, "Le marquage de l'expérient dans les langues d'Europe." Feuillet (ed.) 1998: 259-294.

Capell, Arthur 1965, "A typology of concept domination." *Lingua* 15:451-462.

Chafe, Wallace L. 1970, *Meaning and the structure of language*. Chicago & London: Chicago University Press.

Christol, Alain 1998, "Typologie des langues classiques (latin, grec)." Feuillet (ed.) 1998: 753-767.

Comrie, Bernard 1981, *Language universals and linguistic typology. Syntax and morphology*. Oxford: B. Blackwell.

Feuillet, Jack (ed.), *Actance et valence dans les langues de l'Europe*. Berlin & New York: Mouton de Gruyter (Empirical Approaches to Language Typology, EUROTYP, 20-2).

Haspelmath, Martin 1993, "More on the typology of inchoative/causative verb alternations." Comrie, Bernard & Polinsky, Maria (eds.), *Causatives and transitivity*. Amsterdam & Philadelphia: J. Benjamins (Studies in Language Companion Series, 23); 87-120.

Haspelmath, Martin 2001, "The European linguistic area: Standard Average European." Haspelmath, Martin & König, Ekkehard & Oesterreicher, Wulf & Raible, Wolfgang (eds.), *Language typology and language universals. An international handbook*. 2 volumes. Berlin: W. de Gruyter (Handbücher zur Sprach- und Kommunikationswissenschaft, 20); 1492-1510.

Haspelmath, Martin et al. (eds.) 2008, *WALS online*. München: Max Planck Digital Library.

Haudry, Jean 1973, "Parataxe, hypotaxe et correlation dans la phrase latine." *Bulletin de la Société de Linguistique de Paris* 68(1):147-186.

Joseph, Brian D. 1987, "Greek". Comrie, Bernard (ed.), *The world's major languages*. London: Routledge; 410-439.

König, Ekkehard & Haspelmath, Martin 1998, „Les constructions à possesseur externe dans les langues de l'Europe." Feuillet (ed.) 1998: 525-606.

Kühner, Raphael & Stegmann, Carl 1962, *Ausführliche Grammatik der lateinischen Sprache. Teil 2: Satzlehre*. 2 Bde. Leverkusen: Gottschalk (4. Aufl.)

Kurzová, Helena 1981, „Syntaktische Typologie und die Entwicklung der indoeuropäischen Sprachen." *Listy Filologické* 104: 201-207.

Lehmann, Christian 1991, „The Latin nominal group in typological perspective." Coleman, Robert G.G. (ed.), *New studies in Latin linguistics. Selected papers from the 4th International Colloquium on Latin Linguistics, Cambridge, April 1987.* Amsterdam & Philadelphia: J. Benjamins (Studies in Language Companion Series, 21); 203-233.

Lehmann, Christian 1998, "Regiones espaciales en perspectiva tipológica." García-Hernández, Benjamín et al. (eds.), *Estudios de lingüística latina. Actas del IX Coloquio Internacional de Lingüística Latina, Universidad Autónoma de Madrid, 14-18 de abril de 1997*. Madrid: Ediciones Clásicas; 455-465.

Lehmann, Christian 2008, "Roots, stems and word classes". *Studies in Language* (Special Issue) 32:546-567.

Lehmann, Christian 2013, "The nature of parts of speech". *Sprachtypologie und Universalienforschung* 66/2:141-177.

Luraghi, Silvia 2003, *On the meaning of prepositions and cases. The expression of semantic roles in Ancient Greek.* Amsterdam & Philadelphia: J. Benjamins (Studies in Language Companion Series, 67).

Nichols, Johanna et al. 2004, „Transitivizing and detransitivizing languages." *Linguistic Typology* 8: 149-211.

Perrot, Jean 1998, "Visée communicative." Feuillet (ed.) 1998: 607-662.

Pinkster, Harm 1990, *Latin syntax and semantics*. London & New York: Routledge.

Plank, Frans 2003, "Double articulation." Plank, Frans (ed.), *Noun phrase structure in the languages of Europe*. Berlin & New York: Mouton de Gruyter (Empirical Approaches to Language Typology, EUROTYP, 20-7); 337-395.

Ross, John R. 1973, "The penthouse principle and the order of constituents." Corum, Claudia et al. (eds.), *You take the high node and I'll take the low node. Papers from the Comparative Syntax Festival. The difference between main and subordinate clauses. 12 April 1973. A paravolume to Papers from the Ninth Regional Meeting*. Chicago: Chicago Linguistic Society; 397-422.

Schøsler, Lene 2008, "Argument marking from Latin to modern Romance languages. An illustration of ˙combined grammaticalisation processes". Eythórsson, Thórhallur (ed.) 2008, *Grammatical change and linguistic theory. The Rosendal papers.* Amsterdam & Philadelphia: J. Benjamins (Linguistik Aktuell, 113); 411-438.

Strunk, Klaus 1980, „Zum indogermanischen Medium und konkurrierenden Kategorien." Brettschneider, Gunter & Lehmann, Christian (eds.), *Wege zur Universalienforschung. Sprachwissenschaftliche Beiträge zum 60. Geburtstag von Hansjakob Seiler.* Tübingen: G. Narr (Tübinger Beiträge zur Linguistik, 145); 321-337.

Talmy, Leonard 1985, "Lexicalization patterns: semantic structure in lexical forms." Shopen, Timothy (ed.), *Language typology and syntactic description.* Cambridge etc.: Cambridge University Press; III: 57-149.

Wendt, Heinz F. 1961, *Sprachen*. Frankfurt/M: Fischer Bücherei (Fischer Lexikon, 25).

Wetzer, Harrie 1996, *The typology of adjectival predication*. Berlin & New York: Mouton de Gruyter (Empirical Approaches to Language Typology, 17).