WORD ORDER IN SUBORDINATE CLAUSES:
INNOVATIVE OR CONSERVATIVE?
A TYPOLOGY OF WORD ORDER CHANGE

Iker Salaberri Izko

Grado en Filología (Alemán)

2016/17

Iván Igartua Ugarte

Departamento de Estudios Clásicos

eman ta zabal zazu

Universidad del País Vasco   Euskal Herriko Unibertsitatea

WORD ORDER IN SUBORDINATE CLAUSES:
INNOVATIVE OR CONSERVATIVE?
A TYPOLOGY OF WORD ORDER CHANGE

Abstract

A recurrent claim in the literature on word order change is that subordinate clauses tend to preserve older patterns. However, even though individual cases of unrelated and typologically distinct languages have been discussed, no quantitative data has been used to support this claim. In addition, arguments have been presented that contradict the view that subordinate clauses are conservative. This work is meant to contribute to the discussion by providing a far-reaching typology of word order change. The results suggest that subordinate clauses are indeed conservative, but with nuances.

Index

1. INTRODUCTION[1]

1.1. State of the art: two contrary positions in the literature

1.1.1. Subordinate clauses are conservative

In a considerable part of the literature on language change it has been pointed out that subordinate clauses are conservative, i.e. more resilient to change, not only with respect to word order (Givón 1979a: 259-261, Hock 1986: 332, Matsuda 1998: 2-3, Bybee 2002: 4-5), but to other linguistic phenomena as well, such as grammaticization (Bybee et al. 1994: 230-236, Bybee 2002: 6-14) or morphosyntactic change (Matsuda 1995: 214, 216-217). Relevant analyses of individual languages regarding the conservatism of subordinate clauses in processes of language change include, among others, the Old and Modern Germanic languages (Givón 1979a: 259-261, Hock 1986: 330-336), Armenian (Dum-Tragut 2009: 525, 558-560), Kru (Hyman 1975: 124-125, Givón 1979a: 124-126), Biblical Hebrew (Givón 1977: 181-254), Japanese (Matsuda 1993: 1-34) or Ute (Givón 2011: 182-189). The following quotation illustrates the view that subordinate clauses are more conservative regarding word order change:

> As a result of various types of natural diachronic change, the synchronic syntax of main clauses — normally more innovative — may grow out of whack with the syntax of subordinate clauses which is normally more conservative (Givón 1979a: 259).

This view is motivated by the fact that subordinate clauses are cross-linguistically observed to preserve older word order patterns in cases of word order change, or in cases where word order change has not been directly observed but is believed to have taken place. The following are examples of conservative word order preserved in subordinate clauses in Biblical Hebrew (1a-b) (Givón 1977: 192) and Old English (1c-d) (Koopman 1992: 321):

(1)   a.   *ve-ha-ʔadam yada' ʔet-ḥava   ʔišto*

                and-the-man knew Eve   wife-his

---

[1] This bachelor thesis exceeds the maximum number of characters (60.000) allowed for UPV/EHU bachelor theses by 22.000, amounting to a total of 82.000. This is due to the project's essence: because a large number of languages is drawn upon for comparison, the number of references is unavoidably high.

"And Adam knew his wife Eve" (*Genesis*, 4.1)

b.   *ki*   *šat*   *li*   *ʔadonay*

      because   listened   to-me   lord-my

      "Because the Lord has listened to me" (*Genesis*, 4.25)

c.   *her*   *Uespassianus onfeng*   *rice*

      here   Vespasian   received   kingdom

      "Here Vespasian received the kingdom" (*Anglo-Saxon Chronicle A*, 70)

d.   *gif*   *he*   *ðonne ðæt*   *wif*   *wille forsacan*

      if   he   then   the   woman   wants to-refuse

      "If he then wants to refuse the woman"

      (Alfred's *Consolation of Philosophy*, 43.15)

Example (1a) is one in which the subject of the clause, *ha-ʔadam* "the man", has been fronted to preverbal position as a result of topicalization (Givón 1977: 192). Thus the result is that one gets a main clause in Biblical Hebrew where word order is Subject-Verb instead of the dominant Verb-Subject. Such an operation cannot take place in subordinate clauses, where the original Verb-Subject order is preserved (1b). Topicalization to preverbal position eventually becomes so frequent in main clauses that the resulting order, Topic-Verb (where the topic often coincides with the subject) is reanalyzed as the "unmarked" order (Holmstedt 2013: 19-20). This leads to a change VS > SV in main clauses that does not take place in subordinate clauses (Givón 1977: 192). A situation similar to Biblical Hebrew can be observed in Old English: whereas already in a text from the 9th century CE like the *Anglo-Saxon Chronicles* the innovative verb-second order[2] seems to be the basic order of main clauses (1c), in the language of the same period subordinate clauses preserve Object-Verb order, which is believed to have been inherited from Proto-Germanic (Ramat 1998: 525).

A number of reasons have been adduced for the presumed conservatism of subordinate clauses. One of the main reasons is that main clauses are more prone than subordinate clauses to pragmatic operations (Bybee 2002: 1-2). That is why pragmatically marked word order is more likely to occur in main clauses. If such marked orders become frequent enough, they can be "re-evaluated" as the unmarked or dominant order (Givón 1978: 83), leading to a change that takes place in main clauses

---

[2] There are numerous theories that account for the emergence of verb-second order in Germanic, which do not concern us here. For an overview, see (Axel 2007: 237-292).

and may or may not be extended later to subordinate clauses. The cross-linguistic lower likelihood of subordinate clauses to undergo pragmatic word order modification becomes evident in their impossibility (at least in English) of allowing operations such as VP-preposing (2a), preposing around the verb "to be" (2b), topicalization (2c), right dislocation (2d), exclamatory inversion (2e), use of tag questions (2f) or truncation (2g), among others (Green 1976: 383-384, Matsuda 1998: 5):

(2) a. *Mary plans for John to marry her, and <u>marry</u> <u>her</u> he will*

  a'. **She said that marry her he will*

  b. *<u>More</u> <u>significant</u> is the development of a semantic theory*

  b'. **She said that more significant is the development of a semantic theory*

  c. *<u>This</u> <u>book</u> you should read*

  c'. **She said that this book you should read*

  d. *You should go see it, <u>that</u> <u>movie</u>*

  d'. **She said that you should go see it, that movie*

  e. *Boy, <u>are</u> <u>we</u> in for it! <u>Was</u> <u>it</u> ever loud!*

  e'. **She said that boy, are we in it for it, that was it ever loud!*

  f. *John eats pork, <u>doesn't</u> <u>he</u>?*

  f'. **She asked whether John eats pork, doesn't he?*

  g. *<u>Gotta</u> go now. <u>Time</u> for dinner. <u>See</u> you later.*

  g'. **She said that gotta go now, time for dinner, see you later*.

Another reason that has been adduced for the resistance of subordinate clauses to change is processing ease. Bybee (2002: 2) argues that subordinate clauses, unlike main clauses, are processed as "chunks", i.e. as undividable units. This makes subordinate clauses easier to process, on the one hand, and less independent and less likely to change on the other. Finally, one further reason proposed in order to account for the conservatism of subordinate clauses is related to speech style: embedded clauses are more likely to be used in careful speech. Since speakers tend to use more conservative forms in careful speech than in more casual registers, subordinate clauses are less likely to be modified and more likely to co-occur with conservative speech forms (Matsuda 1998: 7-8).

1.1.2. Subordinate clauses are innovative

A directly opposed view to the one just explained has also been put forth in the literature. This view proposes that not main clauses, but subordinate clauses can be more innovative. Such a view is mostly based on the analysis of the emergence of SVO order in Old and Middle English. Apparently, in Middle English innovative SVO order generalized in subordinate clauses, which had been verb-final before, by the early 13th century. On the other hand, SVO became established in main clauses, which had been verb-second before, by the early 15th century, with remnants of the verb-second order still visible in the 16th century (Bean 1983: 137, Stockwell & Minkova 1991: 399-400). This view can be summarized as follows:

> The influence must have been in the direction from subordinate to main (from embedded to root clauses) if we are to account for the considerable lag-time between the establishment of SV order in subordinate clauses, on the one hand, and in main clauses, on the other (Stockwell & Minkova 1991: 394).

The coexistence of innovative (SVO) subordinate clauses (3a) and conservative (verb-second) main clauses (3b) in Middle English can be seen in the following examples:

(3)   a.   *þat   I   wythoute   vylanye   myȝt voyde þis   table*
           that   I   without   discourtesy   might leave this   table
           "That I may leave this table without discourtesy"
           (*Sir Gawain and the Green Knight* I, 345)

      b.   *full   sweetely   heard he   confessïon*
           full   sweetly   heard he   confession
           "He heard his confession very sweetly" (*The Canterbury Tales*, 221)

In the subordinate clause in (3a), which is extracted from the late 14th-century *Sir Gawain and the Green Knight*, the subject *I* "I" comes first, followed by the verb *myȝt voyde* "may leave" and the object *þis table* "this table". In the main clause (3b), which is extracted from the contemporary *The Canterbury Tales*, the phrase *full sweetely* "very sweetly" is followed by the verb *heard* "heard", forming a verb-second pattern that would be ungrammatical in present-day English. Therefore, in late 14th-century English subordinate clauses follow SVO order, whereas main clauses are verb-second.

The reason adduced for the innovativeness of subordinate clauses in Middle English is the occurrence of verb-raising, which could take place in subordinate clauses but not in main clauses (Stockwell & Minkova 1991: 400). "Verb-raising" is defined as a syntactic operation whereby in a language with "underlying" Verb-Auxiliary order the finite verb moves to the right of the auxiliary, thus creating "surface" Auxiliary-Verb order[3]. This operation is, according to these authors, a precondition for extraposition to occur, i.e. for constituents to be moved to postverbal position in verb-final languages. Therefore, "verb-raising" would have allowed postverbal constituents to exist in the previously verb-final Middle English subordinate clauses. Eventually, postposed constituents would have become so frequent[4] that they were reanalyzed as the unmarked order, leading to a change XV > VX (and consequently SOV > SVO) in subordinate clauses. Only later would main clauses have adopted the SVO order of subordinate clauses by analogy (Bean 1983: 137).

In view of the two contrary positions sketched above, namely the "subordinate clauses are conservative" and the "subordinate clauses are innovative" positions, a wide, cross-linguistic study is necessary that will attempt to elucidate the behavior of subordinate clauses with respect to word order change. As far as is known to the author, no far-reaching comparative study has been undertaken yet to clarify this question, with the possible exception of Bybee (2002). This will be the central aim of this paper.

1.2. Theoretical concepts

[3] Notice that "verb-raising" is a syntactic operation proposed to occur by the literature that assumes two levels of representation (underlying and surface) in syntax, i.e. by the generativist literature, in order to account for a number of word order issues in Germanic. See Bies (1996: 40-44) and the literature therein for a detailed account of "verb-raising" and its theoretical implications.

[4] Numerous explanations have been provided in the literature to account for changes in word order frequency correlations, especially regarding the preverbal/postverbal opposition. Bies's (1996: 40-44) explanation of verb-raising, for example, describes a potential precondition, but not a reason, for postverbal constituents to become more frequent. A frequently adduced reason for postverbal constituents to become more frequent in verb-medial and verb-final languages is "extraposition" (Behaghel 1909: 110-142, 1932, Hawkins 1983: 90), also called "exbraciation" (Stockwell 1977, Burridge 1993) or (in the case of noun phrases) "heavy noun phrase shift" (Ross 1967, Walkden 2014), which is a clause-bound syntactic operation whereby a constitutent is moved to the right of its original position (Baltin 2005: 241). Extraposition is usually caused by the phonological weight and/or informational salience of the constituent, as first described by Otto Behaghel's "law of increasing constituents" (Behaghel 1909). Later literature has also identified syntactic complexity (i.e. number of nodes/phrases and levels of hierarchy in the constituent) as a cause for extraposition (Hawkins 1983: 90). "Right-dislocation" or "afterthought", i.e. the addition of post-utterance elements to the right of and outside the clause has also been argued to produce large numbers of postverbal constituents, eventually triggering reanalysis and change (Hyman 1975: 119-121, 124-132). In the case of verb-initial languages, phonologically light and informationally old topics are known to be frequently moved to preverbal position, eventually leading to reanalysis and shift to verb-medial order (Holmstedt 2013: 19-20). These are all language-internal motives for changes in frequency correlations. In addition, strong language contact situations are believed to cause borrowing of "foreign" word order patterns, which if frequent enough may lead to a shift (van Gelderen 2011: 356).

1.2.1. Word order

Before going on with a discussion of the (lack of) conservatism of subordinate clauses, a number of basic concepts require a careful and falsifiable definition. First and foremost the term "word order" demands for clarification, especially in its relationship to the concept of "markedness" or "dominance". In line with a large part of the typological literature (Greenberg 1963, Lehmann 1974, Givón 1979a, Hawkins 1983, Stassen 1985, Dryer 1992, Croft 2003 to mention just a few), the "dominant", "unmarked" or "basic" word order of a language will be determined here on the basis of the linear ordering of the major constituents of the clause (subject, direct object, and verb) when occurring in their full nominal and verbal forms in main, positive, declarative clauses. In contrast to the view of a number of grammatical theories (cf. the reference to Bies 1996 in the previous section), no assumption will be made as to the existence of more than one level of syntactic representation. In addition, in the lines of Dryer (1992: 81-127), the view will be adopted that languages tend to conform to one of two harmonic word order types: (a) "right-branching", where the branching constituent - a constituent that can be subdivided into smaller syntactic units, such as a relative clause - usually follows the non-branching constituent - a constituent that cannot be subdivided into smaller syntactic units, such as a noun or a verb -, or (b) "left-branching", where the branching constituent usually precedes the non-branching constituent. In both types, a series of word order traits such as Preposition-Noun, Verb-Adposition Phrase, Standard of comparison-Adjective etc. are observed to conform to an ideal type (hence the label "harmonic"), whereas others such as the order of affixes or of compound members do not conform to any ideal (ibid.).

This approach is, however, problematic for several reasons. First of all, some of the linguistic categories assumed by much of the typological literature to be cross-linguistically applicable, such as "subject", "verb" or "adjective" are in fact far from being universal (Haspelmath 2012). Nevertheless, comparing languages on a wide scale unavoidably requires some sort of generalization at the cost of descriptive accuracy. Assuming that subjects, verbs and adjectives exist in all languages, while admittedly inaccurate, is necessary if languages are to be compared in equal terms (Hawkins 1983: 12). A second problem with the harmonic approach to word order is that some basic descriptive concepts, such as "markedness", have neither a single definition nor

universally accepted diagnostics (Haspelmath 2006). Third, many languages either have more than one "basic" word order, or lack any basic word order altogether (Dryer & Haspelmath 2013), which makes it impossible to classify them in terms of branching direction. Finally, many of the world's languages are "disharmonic"[5]. These issues considerably weaken the explanatory and predictory power of word order typology, which has led some authors to stop considering word order a relevant parameter: "Even if every language did have a fixed or preferred order of clausal constituents (which is not the case), a typology based on this would be of only marginal interest for basic linguistic theory" (Dixon 2010: 74-75). Despite its weaknesses, in the absence of a more appropriate framework to cross-linguistically analyze and compare word order change on a wide scale the harmonic view will be adopted here.

1.2.2. Clause

A definition of the concept "clause" is, like that of word order, highly problematic, since there exist numerous criteria to define this notion and because its definition depends on which of these criteria, if any, are accepted (see Engelen 1986: 1-16 for an overview). From a very general point of view, Crystal (2008: 78) defines a clause as "a term used in some models of grammar to refer to a unit of grammatical organization smaller than the sentence, but larger than phrases, words or morphemes". According to this definition, then, the level of clause operates between the sentence and the phrase. In addition, qualities that are usually assumed to characterize clauses are (i) the presence of one finite verb and (ii) a certain degree of autonomy (Engel 2004: 82-83). These three characteristics (size, presence of one finite verb, autonomy) therefore provide the linguist with falsifiable criteria that can be used to establish what is and what is not a clause. Once the term "clause" has been provided with a falsifiable definition, then, the next step is to define the concepts of "main" and "subordinate" clause. According to Dürscheid (2000: 56), only in the presence of a subordinate clause does it make sense to speak of a "main" clause, i.e. all criteria applying to the definition of a clause are applicable, all things being equal, to a main clause. The next logical question is, then, what exactly a "subordinate" clause, i.e. what "subordination" is.

---

[5] A recurrent explanation to account for the high number of "disharmonic" languages is that these are changing from one type to another (Lehmann 1974: 24, Hawkins 1983: 78). This does not, however, clarify why some languages, such as English, remain unchanged in their disharmonic condition for centuries, whereas others, such as the Celtic languages, quite rapidly change.

1.2.3. Subordination

Subordination, next to coordination, is one of the cross-linguistically most widespread clause linkage strategies[6]. A subordinate clause is a clause that is linked to another clause and is defined by a number of properties. The traditional definition of subordinate clause implies criteria such as dependency, i.e. a subordinate clause depends on another (Hengeveld 1998: 335) and therefore cannot occur in isolation (Cristofaro 2003: 15). In addition, a subordinate clause does not have illocutionary force, i.e. a subordinate clause cannot be interrogated, commanded or asserted. Also, a subordinate clause implies a cognitive asymmetry between two linked events, such that the profile of one of the events (that predicated by the main clause) overrides the profile of the other (that predicated by the subordinate clause) (Cristofaro 2003: 33). These two criteria distinguish subordinate clauses from main clauses, which do have illocutionary force and where events do not override each other. Haspelmath (1995: 8) defines subordinate clauses as being embedded or incorporated to the main clause as a constituent, where the two are related by a whole-part relationship. This definition distinguishes subordinate clauses from coordinate clauses, which are not embedded to a main clause. Finally, what distinguishes subordinate clauses from nominalizations i.e. nominalized clauses is the fact that the latter are derived constructions. This means that nominalizations can always be traced back to verbal forms, whereas subordinate clauses cannot. This difference between nominalization and subordination can be seen in the fact that nominalized verbs often inherit the argument structure of the original verb, whereas no such inheritance relationship exists in the case of subordinate clauses (Crystal 2008: 246, 328).

To summarize, a subordinate clause is characterized by pragmatic (lack of illocutionary force), cognitive (asymmetry between events), syntactic (constituency, dependence) and semantic (subordination) criteria. Such a definition of subordinate clause excludes main clauses, coordinate clauses and nominalizations. On the basis of

---

[6] This is, of course, if a third fairly common clause linkage strategy is not taken into account. Davison (1979: 108-115) observes that Japanese and many languages of India have a clause linkage strategy that involves both coordination and subordination or, in other words, which involves dependency, but not embedding. Constructions linked thus usually translate as "and then" or "having X-ed", where "X" corresponds to the action denoted by the verb. Role and Reference Grammar has come to label this strategy as "cosubordination", indentifying it in a further number of languages, such as Mandarin Chinese, Turkish or Chechen (Van Valin 2015: 728-729).

such a definition of "subordination", this notion is understood here as having near-universal cross-linguistic applicability. Therefore, two important assumptions are made here: (a) that subordinate clauses exist in the majority of the world's languages and (b) that these can be compared to each other. These assumptions are not uncommon in the literature (Cristofaro 2003: 5).

Of course, there are exceptions to the assumption that subordination is of universal cross-linguistic applicability. For example, languages that lack writing systems tend much less (or not at all) to make use of subordination (Mithun 1984: 493-509). In addition, in languages where a change from widespread orality to widespread literacy has taken place a clear tendency toward an increased use of subordinators and subordinate clauses can be observed[7] (Szczepaniak 2015: 110). Languages may have had subordinate clauses at some point in time but have ceased to have them due to processes of reanalysis (Shlonsky 1997: 101, Gildea 2000: 65-66, 74, van Gijn 2014: 287-289). Some languages may lack recursion, i.e. they may not allow to incorporate a clause into another clause or phrase and may therefore not have the ability to form potentially infinite strings of words (Everett 2005: 628-631, though see Nevins et al. 2009: 376-380). Finally, languages may also not make a clear distinction between subordination and coordination, i.e. they may make use of "cosubordination" (Davison 1979: 108-115, cf. footnote 6).

In view of these exceptions, no cross-linguistic study on the behavior of subordinate clauses with respect to word order can claim to study a universal phenomenon. In addition, cross-linguistic studies on the alleged conservatism of subordinate clauses have tended to consider not only subordinate clauses, but also all non-declarative, active, positive main clauses, i.e. such studies have held a "broad view" of the concept of subordination. This broad view encompasses passive constructions (Eyþórsson et al. 2012: 219-249), negated clauses (Givón 1979a: 125), clauses containing an auxiliary verb, infinitives and cleft sentences (Matsuda 1998: 2). Since these syntactic environments do not fit the definition of subordination in 1.2.3 - which one could define

---

[7] Even though both Mithun (1984: 508-509) and Szczepaniak (2015: 109-110) attribute a higher frequency of subordinate clauses to the use of the written medium, it should be borne in mind that the languages considered by these authors (Mohawk, Gunwinggu and Kathlamet), unlike English, are all polysynthetic. Therefore, it cannot be excluded that in the case of these three languages the low occurrence of subordination is due to their morphological type, rather than (or in addition to) their lack of writing. The evolution of subordination in the history of German does, however, seem to support Mithun's and Szczepaniak's conclusions.

as a "narrow view" of subordination -, they will accordingly be left out of the discussion.

1.3. Data and methodology

In order to attain a balance between genetic and areal influence, on the one hand, and independence of analysis, on the other, the classification made by Dryer (1992: 133-135) is used here as a database. This author divides languages into "genera", which is a category comprising genetic, areal and typological criteria[8]. Such a classification is based on estimates of the time depth and genetic distance of the different languages[9] (Nichols 1990: 477-509, see Dryer 1992: 84, f. 2). Of the six linguistic macro-areas Dryer divides languages into (Africa, Eurasia, Australia & New Guinea, North America, South America and Southeast Asia & Oceania), only the first two will be considered and discussed here due to limitations of space. These macro-areas are not arbitrary, but have been established on evidence that suggests that they affect word order at a continental level (Dryer 1989: 257-292, Yamamoto 1999: 64-77). In addition to avoiding the problems of genetic and areal biasing, Dryer's classification has the advantage that it is suitable for quantification.

2. DISCUSSION: A TYPOLOGY OF WORD ORDER CHANGE

2.1. A discussion of the individual cases

2.1.1. Africa

One of the first and most important linguistic families to be discussed within the African macro-area is Niger-Congo. Since Niger-Congo is the largest linguistic family of the world in number of languages, its separation into genera is accordingly complex. In addition, the reconstruction of Proto-Niger-Congo word order is controversial, with advocates of SOV (Hyman 1975: 117, Givón 1979b: 221, van Gelderen 2011: 358), of

---

[8] As much as the author makes an effort to keep the classification as objective as possible, an unavoidable degree of arbitrariness is admitted: "My decisions on the whole remain rather impressionistic and perhaps in some cases somewhat arbitrary" (Dryer 1992: 84).

[9] Whereas large groups of closely related languages, such as Bantoid, form single genera, language isolates, such as Sumerian, and isolates within language families, such as Albanian, also form single genera on their own (Dryer 1992: 133-135).

SVO (Heine 1980: 95-112, Claudi 1994: 191-231) and of both (Güldemann 2011: 125). Deciding on one or the other reconstruction has crucial consequences for the present discussion. Even though this is still largely an open question, the author agrees that "the entire family shows traces of an OV order" (van Gelderen 2011: 358), such as SOV(X) order in the Ijo, Dogon and Mande branches, in Tunen and Bandem (Bantu), in a number of Gur languages and in Aghem, Ejagham and Tikar (Bantoid), as well as preverbal object clitics in Kru (ibid.) and Object-Verb order in some verbal object NPs in nominalized verb phrases in Ewe (Gbe) (Heine 1980: 104) and Nupe (Kwa) (Givón 1979b: 254-255). On the basis of this important assumption, any Niger-Congo language diverging from the reconstructed word order pattern and showing differences between main and subordinate clauses is relevant to the present discussion. Regarding, first of all, the Bantoid branch Güldemann (2011: 125) observes that "the object is placed before the verb if there is a preverbal clause operator", i.e. in subordinate clauses, whereas this is not the case in main clauses not containing a clause operator or an auxiliary. Accordingly, subordinate clauses in Bantoid can be claimed to have remained conservative, whereas main clauses have innovated. Something similar can be claimed of Gur (Aboh 2004: 35-37, 73) and Kru (Givón 1979b: 124-126). Not the same can be claimed of Wolof (Northern Atlantic), where nearly all clause types share SVO order (Torrence 2013: 29-39). The same applies to Yoruba (Defoid), Obolo (Cross River), Jukun (Platoid), Engenni (Edoid), Igbo (Igboid) and Duka (Kainji) (Thomas 1978: 65-67, Tomlin 1986: 178, Nwachukwu 1987: 4-5, Nurse et al. 2016: 177, 224-225, 265-266). Since the evidence adduced for earlier OV order in Kwa is based on nominalizations (Givón 1979b: 254), which are excluded here from the definition of subordination, the same claim cannot be made of this genus either. Mande languages display SOV order and no variation depending on clause type (Creissels 2006: 39), just like Ijo (Ijoid) (Nurse et al. 2016: 164-165). Even though in Zande (Adamawa-Ubangi) subordinate clauses may follow VSO order and main clauses may not, this is not the unmarked order, but rather SVO, as in other Adamawa-Ubangi languages (Nurse et al. 2016: 276). On the other hand, some languages of the same genus follow SOV order in both main and subordinate clauses (Nurse et al. 2016: 19). Something similar occurs in the Kordofanian genus (ibid.).

Another case concerns the Afro-Asiatic macro-family. The reconstruction of Proto-Afro-Asiatic word order is likewise controversial. On the one hand, Givón (1979b: 275, f. 8) argues that the proto-language should be reconstructed as SOV. This claim seems

to be supported by the fact that two of the oldest attested Afro-Asiatic languages, Akkadian and Eblaite, follow unmarked verb-final order (Ungnad 1993: 109). However, it is a quite widely accepted view that these two languages changed their order to SOV under the influence of Sumerian[10] (Deutscher 2000: 70, f. 25, Huehnergard 2006: 4). On the other hand, the rest of oldest attested Afro-Asiatic languages follow unmarked VSO order, such as Biblical Hebrew (Givón 1977: 181-254), Ge'ez (Greenberg 1980: 233-241, cf. Croft 2003: 249) or Old Egyptian (Loprieno & Müller 2012: 132). In view of these facts, the assumption will be made here that Proto-Afro-Asiatic should be reconstructed as verb-initial, all other orders being regarded as innovations. Consequently, the fact that subordinate clauses preserve VS order longer than main clauses in the shift VS > SV in Biblical Hebrew (Givón 1977: 239) and Phoenician (Krahmalkov 2001: 42-43) suggests that subordinate clauses are more conservative in West Semitic. On the other hand, other languages from the same genus, such as Tigre, Harari (Croft 2003: 249) or Amharic (Leslau 1967: 68) present verb-final order, without any difference between main and subordinate clauses, since the first written records. Late Egyptian does not seem to have displayed any difference between main and subordinate clauses in the shift VS > SV (Loprieno & Müller 2012: 137-141, Haspelmath 2015: 123-126). Tamazight (Berber) does not seem to have changed its basic verb-initial word order at all, even though preverbal topics are very frequent (Choe 1987: 121-157). The same occurs in other Berber languages, such as Awjila Berber (van Putten 2013: 145-148, 168-171) or Shilha (Applegate 1955: 48). A picture similar to Tigre, Harari and Amharic can be observed in Omotic, where in languages such as Dime (Fleming 1990: 572-574) or Gimira (Breeze 1990: 46-48) verb-final order is basic, without a difference between main and subordinate clauses. The same is valid for Beja (Beja) (Hudson 1964: 315), Konso (East Cushitic) (Orkaydo 2013: 196-199, 231-243) and Kemant (Central Cushitic) (Leyew 2002: 28-32). In Buwal (Biu-Mandara), word order is neither verb-initial nor verb-final, but rather quite rigidly verb-medial, both in main and subordinate clauses (Viljoen 2013: 415-420, 521-523). In Iraqw (Southern Cushitic), direct objects, adverbs and other kinds of phrases precede the verb according to the basic pattern, but relative clauses follow the noun, attributive nouns follow the verb and predicates follow the copula (Mous 1992: 229-233, 235-249).

---

[10] Dryer (1992: 133-135) does not take all recorded no longer spoken languages into account when classifying languages into genera. Accordingly, Akkadian and Eblaite will be classified here as "East Semitic", the rest of Semitic languages as "West Semitic". The same goes for Old Egyptian and Coptic, which will be classified as "Egyptian". In the Indo-European group Hittite will be classified as "Anatolian" and Tocharian as "Tocharian". Etruscan will be classified as "Etruscan".

These features conform to the Proto-Afro-Asiatic pattern, which means that in Iraqw some word order traits must have innovated, whereas some others have remained unchanged, without a main-subordinate clause distinction (Mous 1992: 275-276). Finally, in Miya (West Chadic), independent clauses may follow either SVO or verb-initial order without a markedness distinction, whereas adverbial subordinate clauses are required to follow verb-initial order (Schuh 1998: 280-292). This suggests that in this language subordinate clauses have preserved the inherited verb-initial pattern, whereas independent clauses have become more flexible in allowing for clause-initial subjects.

A third case concerns the Nilo-Saharan group. Even though the existence of this language family is not doubted on, its internal structure, i.e. subgrouping and inclusion of specific language groups is still an open debate (Bender 1997: 7-19). That is why not all languages considered here can uncontroversially be classified as belonging to the Nilo-Saharan family. Such is the case of Katcha, which used to be included in the Kordofanian branch of Niger-Congo but nowadays is classified as Kadugli, within the Nilo-Saharan group (Schadeberg 1981: 291-293). The uncertainty around the internal structuring of Nilo-Saharan has brought a series of problems for the reconstruction of the proto-language. Accordingly few are the attempts to reconstruct Proto-Nilo-Saharan word order. Bender (1997: 55-56) proposes to reconstruct the word order of the proto-language as SOV and consistently left-branching. This claim seems to be supported, on the one hand, by the fact that the core Nilo-Saharan languages present mostly verb-medial order whereas the peripheral ones present verb-final order (ibid.). On the other hand, the oldest attested Nilo-Saharan language, Old Nubian (8th-15th centuries CE) likewise presents a consistent SOV order pattern, except for relative clauses which follow the noun[11] (Oei 2015: 47). Therefore, all languages deviating from this pattern should be considered as innovative. This is the case of Timbuktu (Western Songhay) and Tadaksahak (Northern Songhay), where verb-medial is the basic order (Bender 1997: 38, Christiansen-Bolli 2010: 185-187), but not of Zarma and Gao Songhay

---

[11] Despite Dryer's (1992: 81-127) observation of a tendency of languages to conform to either consistently left-branching or right-branching word order, it must be pointed out that the "disharmonic" order of Old Nubian (all traits being left-branching except for Noun-Relative order), as briefly mentioned in 1.2.1, is typologically fairly widespread: whereas N-Rel order very frequently co-occurs with verb-initial and verb-medial order (375/388 languages, 96'7%), it also frequently co-occurs with verb-final order (93/274 languages, 34%) (Dryer & Haspelmath 2013). While the statistical correlation between branching direction and the position of the relative clause is significant at $p < 0.0001$, $\chi^2 = 301.8$, 34% of exceptions cannot be due to chance. Rather, this situation points toward the existence of a cross-linguistic tendency to place relative clauses after the noun, regardless of typological harmony (Dryer 2011: 341-342). This tendency might be related to the fact that relative clauses are nearly always phonologically heavy and syntactically complex, and thus more likely to be extraposed (Hawkins 1983: 90-91).

(Eastern Songhay), which allow for verb-medial order only as a marked alternative (Creissels 2006: 43-44). Equally verb-medial without any main-subordinate clause distinction are Kadugli (Kadugli) (Kutoado 1973: 52-57), Berta (Berta) (Triulzi et al. 1976: 526), Gumuz (Gumuz) (Ahland 2012: 254, 406), Aka (Kresh) (Duke 2001: 51), Mamvu (Mangbutu-Efe) (Blackings & Flabb 2003: 15), Sara-Ngambay (Bongo-Bagirmi) (Thayer 1978: 61), Ronge and Doni-Dese (Temein) and Lendu (Balendru) (Bender 1997: 39). Didinga and Majang (Surma) are also innovative in that they follow verb-initial order (Lohitare et al. 2012: 33, Joswig 2015: 169-176). The original Proto-Nilo-Saharan verb-final word order seems to have been preserved in Dazaga (Saharan) (Walters 2015: 6-7, 117, 144-146), Maba and Masalit (Maban) (Bender 1997: 39), Fur (Fur) (Jakobi 1989: 128-129), Kunuz Nubian (Nubian) (Abdel-Hafiz 1988: 200-202, 242-244), Barya (Nera) (Thompson 1976: 492), Kunama (Kunama) (Böhm 1984: 91), Sila (Daju) (Boyeldieu 2009: 25, f. 32), Nyimang and Dinik (Nyimang), Tama, Erenga, Sungor and Mararit (Tama) (Bender 1997: 39). The case of Ik (Kuliak) is special, since subordinate clauses and main clauses containing an auxiliary verb display SVO order, whereas main clauses seem to have innovated to VSO under the influence of Eastern Nilotic languages (Schrock 2014: 479-482). Bearing in mind Matsuda's (1998: 2) claim that constructions containing an auxiliary verb may be more conservative than those not containing it, this state of affairs suggests that Ik underwent two instances of word order change: a first one in which the language shifted to SVO from the original Proto-Nilo-Saharan SOV, and a second one in which only main clauses changed to VSO, subordinate clauses preserving the older order. Another complex case concerns Nilotic. In Nuer, word order can be verb-final or verb-medial in main clauses depending on the aspect of the verb and the presence or absence of an auxiliary, whereas in most subordinate clauses word order is verb-medial (Faust & Grossman 2015: 21-24, 34-38). On the other hand, no word order distinction seems to exist in Turkana, both main and subordinate clauses being verb-initial (Dimmendaal 1983: 54). In Dinka, main clauses are verb-medial, subordinate clauses not containing an auxiliary are verb-initial, and subordinate clauses with an auxiliary are verb-final (Nebel 1948: 25, 75). Therefore, a great deal of variation seems to be taking place in the Nilotic branch.

A fourth case concerns the Khoisan group. Unlike the previously discussed groups, Khoisan has not been found to form a linguistic family, but rather a group of smaller families that share many areal features: Central Khoisan, Northern Khoisan and Southern Khoisan (Dimmendaal 2011: 324-325), of which Dryer (1992: 133) only

considers the former two. In the absence of written records and attempts at linguistic reconstruction, as well as a progressive extinction of most languages belonging to this group, the only choice left is to assume that these languages, to the extent that a linguist can tell, have not changed word order, either in main or in subordinate clauses. This seems to be the case of Sandawe and Richtersveld Nama (Central Khoisan), which follow left-branching order (Witzlack-Makarevich 2006: 24-30, Steeman 2012: 75), as well of !Xun (Northern Khoisan), which invariably follows verb-medial order (Heine 2009: 29).

To conclude the African macro-area, language isolates[12] deserve some comment. As is the case of Khoisan and many other languages, the language isolates of Africa are not well understood and lack any written records. In the case of Bangi Me, this language is surrounded by verb-final Dogon languages. Even though at the clausal level word order may be verb-medial or verb-final depending on aspectual distinctions, at the noun phrase level word order is, unlike in the surrounding languages, right-branching (Blench to appear: 7-8). This suggests that the unmarked verb-final order in Bangi Me is a relatively recent innovation derived from contact. The same claim cannot, however, be made of the other isolates: Hadza/Hatsa, which is consistently verb-initial, and Laal, which is verb-medial (ibid.).

2.1.2. Eurasia

Indo-European is probably the largest linguistic family of Eurasia in number of languages. Even though the reconstruction of Proto-Indo-European word order is controversial due to the time depth and word order freedom of the earliest attested languages, with advocates of SOV (Brugmann & Delbrück 1900: 83, Lehmann 1974: 49-71) and SVO (Friedrich 1975: 9, 15, 17, 20-24), verb-final and left-branching order is generally assumed, next to a number of marked alternatives, to be the order of the proto-language (Gamkrelidze & Ivanov 1995: 277-283, Clackson 2007: 166, Fortson 2010: 152-158). Accordingly any divergence is regarded here as an innovation. The state of affairs just described seems to be found in Hittite (Anatolian) (Hoffner & Melchert 2008: 406-429) and Tocharian (Adams 2012: 8). In Modern Armenian (Armenian), even though word order changes depending on the presence of an auxiliary

---

[12] Only language isolates have been considered here whose isolate condition is least disputed (see Blench to appear: 5-18 for more on African language isolates).

or a negative particle, the order of both main and subordinate clauses tends to be verb-final (Dum-Tragut 2009: 558-560, 603-605). This is, however, a relatively recent change, since Classical Armenian is rather verb-medial both in main and subordinate clauses (Friedrich 1975: 40-42). Regarding Indic, despite the fact that Old Indic shows a slight tendency toward shifting to verb-medial order (Scharf et al. 2015: 316), this language can quite safely be assumed to be verb-final (Renou 1952: 333). The same claim can be made of Middle Indic (Hock 1991: 19-30) as well as the modern Indic languages, such as Pali (Duroiselle 1997: 152), Urdu (Schmidt 1999: 187-192), Punjabi (Gill 1962: 178-188) and Nepali (Acharya 1990: 158-162, 171-176). Regarding Iranian, in Avestan the unmarked order is SOV, without any main-subordinate clause distinction (West 2011: 116-117). Much the same situation is found in Pashto (Tegey & Robson 1996: 178-181, 205-223), Ossetic (Abaev 1952: 121, 127-133) and Tajik (Perry 2005: 283-285). In Albanian the word order is verb-medial, without any main-subordinate clause distinction (Camaj 1984: 233-234, 245-257). Regarding Greek, despite the fact that Ancient Greek has been described as "basically a subject-object-verb" language (Devine & Stephens 1994: 382) coupled with a large degree of freedom of word order (Dik 1995: 5-7, 256-257), it must also be pointed out that Modern Greek shows a clear preference for verb-medial order, without a main-subordinate clause distinction (Deligianni 2011: 163-164, 168). This change from verb-final to verb-medial order is apparently completed by the Hellenistic period (Horrocks 1997: 59-60). The same claim can be made of Italic: whereas in Latin word order is quite free and basically left-branching, especially at its earliest stages (Magni 2009: 225-251), that of the modern Romance languages is largely verb-medial (Bauer 2006: 280-282). However, unlike in Greek, in the evolution from Latin into the early Romance languages subordinate clauses tend to preserve verb-final order for considerably longer than main clauses. Even though there are differences between the individual languages, in Old French, for example, verb-final order is only preserved in subordinate clauses after its loss (except for clitic objects) in main clauses (Bauer 1995: 110-111). Therefore, in Italic subordinate clauses can be claimed to be more conservative than main clauses. Something similar can be asserted of Germanic, where the Proto-Indo-European-inherited verb-final order is preserved longer in subordinate clauses not only in Old English, as sketched in 1.1.1, but also in Old Icelandic (Hróarsdóttir 2009: 75-76) as well as in modern German, Dutch and Frisian (Hock 1986: 330-336). The claim by Stockwell & Minkova (1991: 394) that in Late Middle English main clauses seem to be

more conservative than subordinate clauses should, however, also be borne in mind. Regarding Celtic, it is generally assumed that the strictly right-branching order found in most modern Insular Celtic languages is an innovation that can be traced back to an early stage of the language family (Watkins 1963: 38). The exceptions in the family are Gaulish, which follows verb-medial order but allows verb-final order as a marked variant, and Celtiberian, which has been proposed to follow verb-final order (Hickey 2002: 271). Regarding Baltic, in Latvian (Mathiassen 1996a: 221-225), Lithuanian (Mathiassen 1996b: 236-242) and Latgalian (Nau 2011: 77, 93-101) the basic word order is, despite a considerable degree of freedom, verb-medial in both main and subordinate clauses. Much the same can be said of Slavic, where verb-medial is likewise the unmarked order in both main and subordinate clauses in, for example, Polish (Siewierska 1993: 234-238), Russian (Timberlake 2004: 450-451), Bulgarian (Leafgren 2011: 72-74) and Serbo-Croatian (Browne 1993: 343-347). This state of affairs can probably be reconstructed for late Proto-Slavic, or at least for the earliest dialects (Jakobson 1971: 118). That is why the only exception in the Slavic group to verb-medial order, that of Upper Sorbian, where unmarked word order is verb-final in both main and subordinate clauses (Stone 1993: 652-654), should rather be regarded as a later innovation[13].

A second case concerns the Uralic family. Like all previously discussed linguistic families, the reconstruction of the word order of the proto-language is controversial, with advocates of verb-medial (Décsy 1990: 79-83) and verb-final (Abondolo 1998a: 32-34). The fact that some present-day Uralic languages are verb-medial speaks for the former view. However, if one tends to Dryer's (1992: 82-128) correlation pairs, most of the word order traits present in the Uralic languages (postpositions, Genitive-Noun, etc.) are found to strongly correlate with left-branching and thus verb-final order. This suggests Proto-Uralic to have been left-branching. Therefore, any deviation from a strict left-branching configuration is regarded here as an innovation. The same word order reconstructed for Proto-Uralic is found in Nenets (Salminen 1998: 543), Selkup (Helimski 1998b: 576), Nganasan (Helimski 1998a: 511-512) and Enets (Künnap 1999: 31-33), all of which belong to the Samoyedic genus. Not the same can be claimed for

---

[13] Despite the fact that one might believe contact between Sorbian and German to be responsible for this divergence, it is unclear how this can be the case (Stone 1993: 654), considering that only Upper Sorbian presents verb-final order. Lower Sorbian, which is also in contact with German, is more like the rest of Slavic languages (Stone 1993: 655-656). In addition, German only presents verb-final order in subordinate clauses and only since Early New High German (1350-1650 CE) in a consistent manner (Axel 2007).

Hungarian (Ugric), where word order can be either verb-medial or verb-final in both main and subordinate clauses, depending on focus and the definiteness of the object (Kenesei et al. 1998: 73-74). As opposed to this, the two other Ugric languages, Khanty and Mansi, present the same state of affairs as in Samoyedic (Abondolo 1998c: 380, Keresztes 1998: 420). On the other hand, whereas the situation in Finnish (Finnic) is practically identical to that of Hungarian (Abondolo 1998b: 176-177), in Udmurt (Finnic) the same state of affairs is found as in Samoyedic, Khanty and Mansi (Csúcs 1998: 299). Yet in Estonian (Finnic), dominant word order is verb-second in main clauses, whereas subordinate clauses follow dominant verb-final order (Ehala 2006: 58-64). In view of these facts and the reconstructed Proto-Uralic order, subordinate clauses seem to be more conservative than main clauses in Estonian[14].

With respect to the Mongolian, Tungus and Turkic families Givón (1979a: 275) claims that there is no evidence to suggest that these languages ever had a different word order than the one they display today, which is consistently left-branching without a main-subordinate clause distinction. This seems, indeed, to be the case in Mongolian (Janhunen 2012: 224-226, 264-266), Tu (Fried 2010: 3-4, 173) and Dagur (Martin 1961: 2-3), within the Mongolian family, in Evenki (Nedjalkov 1997: 1-12, 23-28), Kilen (Zhang 2013: 150-156, 208-209) and Solon (Tsumagari 2009: 12), within the Tungusic family, and in Turkish (Erguvanlı 1984: 5-6, 72-74), Uyghur (Hahn 1998: 393-394) and Bashkir (Poppe 1964: 94-95, 98-99) within the Turkic family. This is also the situation found in the oldest attested Turkic language, Old Uyghur (9th-14th centuries CE) (Erdal 1998: 151-155). The only exception in Turkic to the consistent left-branching pattern are languages found in strong contact situations, such as Karaimic, which has only relatively recently shifted to verb-medial order under pressure from Slavic languages (Johanson 2001: 1737).

Givón (1979a: 275) makes the same claim, i.e. that there is no evidence for a change ever occurring on the basis of the present-day muster, regarding the Caucasian families and Dravidian. With respect to the former group of families, however, this cannot be said to be true of Georgian (Kartvelian). In fact, Old Georgian (5th-11th centuries CE) does not follow verb-final order, as claimed by Givón, but rather shows a tendency for verb-medial order, as well as a mixed picture regarding the rest of word order traits (Harris 2000: 135, 141, 146, Tuite 2004: 967). On the other hand, Modern Georgian

---

[14] Ehala (2006: 73) also points out, however, that the state of affairs in Estonian could be due to influence from German, and thus an innovation.

mostly follows verb-final and left-branching order in main and subordinate clauses (Vogt 1971: 220-224), although a considerable degree of freedom is allowed for. A similar picture is found in Megrelian (Harris 1991: 360-366) and Laz (Lacroix 2009: 733-735). This suggests that a change in word order must have taken place in Kartvelian, without a difference between main and subordinate clauses. Givón's claims do, however, seem to be in accordance with the data in Abkhaz and Kabardian (Northwest Caucasian) (Chirikba 2003: 60-66, Matasović 2010: 100-106), Avar (Avaro-Andi-Dido) (Alekseev & Ataev 1997: 100-101), Archi and Kryts (Lezgian) (Kibrik 1991: 351-352, 355-356, Authier 2009: 6, 185-186) and Chechen (Nax) (Nichols 1991: 53-54, 58-65). In Ingush (Nax), however, main clauses seem to be verb-second, whereas subordinate clauses are verb-final and the rest of word order traits are left-branching (Nichols 2011: 11, 669-672). This, which is a parallel situation to that of German, Old French and Estonian, seems to suggest that in Ingush, unlike in Chechen, main clauses have innovated, whereas subordinate clauses have preserved the older verb-final order. Something similar must have occurred in Dargwa (Lak-Dargwa), where all word order traits are left-branching but the neutral word order of the clause is verb-medial (Sumbatova & Mutalov 2003: 160). The difference between Ingush and Dargwa is, in any case, that no word order distinction exists in the latter between main and subordinate clauses. The abovementioned claim by Givón also applies to Dravidian. This is supported by the fact that not only modern Dravidian languages, such as Brahui (Northwest Dravidian), Modern Tamil and Malayalam (Dravidian Proper) follow verb-final and left-branching word order (Annamalai & Steever 1998: 117-123, Elfenbein 1998: 409-412, Jiang 2010: 36-37), but also the oldest attested Dravidian languages, namely Old Tamil (2nd century BCE-6th century CE) (Herring 2000: 209-218) and Old Telugu (2nd century BCE-10th century CE) (Sastri 1969: 266), without a main-subordinate clause distinction.

Another case concerns the Chukotko-Kamchatkan, Yeniseian, Hurro-Urartian and Munda groups. In the absence of any historical written records, no word order change can be claimed to have taken place in the former, especially considering that word order in languages such as Chukchee (Dunn 1999: 79-84) and Alutor (Kibrik et al. 2004: 123-125) is completely free. Much the same can be claimed of Ket (Ket), where word order is verb-final (Vajda 2004: 83-39), and Hurrian (Hurro-Urartian), where basic word order seems to be verb-medial, with a marked verb-final counterpart (Speiser 1941: 205-211). Not the same is valid for Munda, at least if Donegan & Stampe's (1983: 339-

343, 2004: 3-10) reconstruction of Proto-Austroasiatic as consistently right-branching is accepted. According to this view, the Munda languages changed their order from the original due to a shift in accent from rising to falling (Donegan & Stampe 1983: 341-342). Even though some syntactic traces of the original right-branching order are still found in the Munda languages (Donegan & Stampe 2004: 9-10), these are not related to subordination, and are therefore not relevant to the present discussion.

One final case concerns the isolate languages of the Eurasian macro-area. Regarding Basque, this language in its present form has consistently left-branching word order (Trask 1998: 313, Hualde & Ortiz de Urbina 2003: 448-458). For Proto-Basque, on the other hand, the opposite pattern, i.e. right-branching and verb-medial or verb-initial word order has been proposed on the basis of numerous criteria (Trask 1977: 206-213, Gómez 1994: 104-110, Gómez & Sainz 1995: 265-268, Lakarra 2005: 416-424, 446-454, 2006: 587-591, 599-616, Areta 2011: 343-375). Unfortunately, with regard to the present discussion few word order differences between main and subordinate clauses are visible in Basque since the first written records. One such difference may be the occurrence of Noun-Relative order in the earliest texts (Lakarra 2005: 421-422), an order that is secondary[15] in present-day Basque. On the other hand, an order that does change visibly in the history of Basque is that of the negative particle with respect to the verb. In present-day Basque, the basic word order of negation is Neg-(Aux)-V in main clauses and V-Neg-(Aux) in subordinate clauses. In early recorded Basque, on the other hand, both orders seem to be possible in both main and subordinate clauses, with a preference for Neg-(Aux)-V (Reguero-Ugarte 2013: 434-435). The fact that subordinate clauses have preserved the dominant order of earlier Basque, as opposed to main clauses, which have adopted the marked one, suggests that subordinate clauses are more conservative in this language. The same cannot be claimed of Ainu (Shibatani 1990: 22-25), Burushaski (Munshi & Piar 2008: 11-16), Elamite (Khačikjan 1998: 57), Japanese (Bentley 2001: 8, Kamermans 2013: 36-38), Korean (Sohn 1999: 15-16, 37-56, 293, 302-304), Nivkh (Gruzdeva 1998: 40-45), Sumerian (Jagersma 2010: 299-301) and Yukaghir (Maslova 2003: 6-10), where word order has not changed, as far as one can tell. In Etruscan, even though the word order of nominal elements shifts from left-

---

[15] There is more than one source for Noun-Relative order in Basque: (a) relative clauses may be extraposed to the end of the sentence, especially if they are heavy; (b) relative clauses may be introduced by a relative pronoun, especially in older written Basque, in which case they obligatorily (except for correlative constructions) follow the noun; (c) relative clauses may be introduced by the complementizer *bait-*, especially in eastern dialects (Hualde & Ortiz de Urbina 2003: 806-818). All of these strategies are derived, dialectal or archaic.

branching to right-branching in the transition from Archaic Etruscan to Late Etruscan, it is unclear how this affects the position of the verb (Rix 2008: 160).

2.2. Results

The cases discussed in 2.1 are classified here into a typology that encompasses five logical possibilities:

A = No word order change takes place (that we can tell)

B = Word order changes in both main and subordinate clauses at the same time

C = Subordinate clauses are conservative

D = Main clauses are conservative

E = Any combination between B, C and D

Table #1 summarizes the results:

Genus & linguistic area Africa	A	B	C	D	E	Genus & linguistic area Eurasia	A	B	C	D	E
Adamawa-Ubangi	-	-	-	-	x	Ainu	x	-	-	-	-
Bantoid	-	-	x	-	-	Albanian	-	x	-	-	-
Bangi Me	-	x	-	-	-	Anatolian	x	-	-	-	-
Balendru	-	x	-	-	-	Armenian	-	x	-	-	-
Beja	-	x	-	-	-	Avaro-Andi-Dido	x	-	-	-	-
Berber	x	-	-	-	-	Baltic	-	x	-	-	-
Berta	-	x	-	-	-	Basque	-	-	x	-	-
Biu-Mandara	-	x	-	-	-	Burushaski	x	-	-	-	-
Bongo-Bagirmi	-	x	-	-	-	Celtic	-	x	-	-	-
Central Khoisan	x	-	-	-	-	Chukotko-Kamchatkan	x	-	-	-	-
Cross River	-	x	-	-	-	Dravidian Proper	x	-	-	-	-
Daju	x	-	-	-	-	Elamite	x	-	-	-	-
Defoid	-	x	-	-	-	Etruscan	-	x	-	-	-
East Cushitic	-	x	-	-	-	Finnic	-	-	-	-	x
East Semitic	-	x	-	-	-	Germanic	-	-	-	-	x
Edoid	-	x	-	-	-	Greek	-	x	-	-	-
Egyptian	-	x	-	-	-	Hurro-Urartian	x	-	-	-	-
Fur	x	-	-	-	-	Indic	x	-	-	-	-
Gumuz	-	x	-	-	-	Italic	-	-	x	-	-
Gur	-	-	x	-	-	Iranian	x	-	-	-	-
Hadza	x	-	-	-	-	Japanese	x	-	-	-	-
Igboid	-	x	-	-	-	Kartvelian	-	x	-	-	-
Ijoid	x	-	-	-	-	Ket	x	-	-	-	-
Jukun	-	x	-	-	-	Korean	x	-	-	-	-
Kainji	-	x	-	-	-	Lak-Dargwa	-	x	-	-	-
Kadugli	-	x	-	-	-	Lezgian	x	-	-	-	-
Kordofanian	-	-	-	-	x	Mongolian	x	-	-	-	-
Kresh	-	x	-	-	-	Munda	-	x	-	-	-
Kru	-	-	x	-	-	Nax	-	-	x	-	-
Kuliak	-	-	x	-	-	Nivkh	x	-	-	-	-
Kunama	x	-	-	-	-	Northwest Caucasian	x	-	-	-	-
Kwa	-	x	-	-	-	Northwest Dravidian	x	-	-	-	-

Genus	A	B	C	D	E		Genus	A	B	C	D	E
Laal	x	-	-	-	-		Samoyedic	x	-	-	-	-
Maban	x	-	-	-	-		Slavic	-	x	-	-	-
Mande	x	-	-	-	-		Sumerian	x	-	-	-	-
Mangbutu-Efe	-	x	-	-	-		Tocharian	x	-	-	-	-
Nera	x	-	-	-	-		Tungus	x	-	-	-	-
Nilotic	-	-	-	-	x		Turkic	x	-	-	-	-
Northern Atlantic	-	x	-	-	-		Ugric	-	x	-	-	-
Northern Khoisan	x	-	-	-	-		Yukaghir	x	-	-	-	-
Nubian	x	-	-	-	-							
Omotic	-	x	-	-	-							
Platoid	-	x	-	-	-							
Saharan	x	-	-	-	-							
Songhay	-	x	-	-	-							
South Cushitic	-	x	-	-	-							
Surma	-	x	-	-	-							
Temein	-	x	-	-	-							
West Chadic	-	-	x	-	-							
West Semitic	-	-	-	-	x							

Table #1: *Word order change across the genera.*

These results are schematically depicted in the following diagram (Figure #1):

A (n = 38) B (n = 38)   C (n = 8)   D (n = 0)   E (n = 6)

Figure #1: *A typology of word order change.*

Two main generalizations can be made in view of the results. On the one hand, it is important to point out that, even though subordinate clauses *can* be conservative with respect to word order change, they do not *have* to be conservative. The fact that, out of 52 cases of genera in which word order changes, only in 8 (15'4%) subordinate clauses can be claimed to be conservative, suggests this. On the other hand, it must be pointed out that there is not one single case in which main clauses in the same language or genus are conservative and subordinate clauses are not. This finding contradicts Stockwell & Minkova's (1991: 394) claims, which leads to the conclusion that the change in Late Middle English discussed by these authors should rather be regarded in a wider diachronic view: word order changes first in Old English, and only then does it change in Late Middle English. To conclude, what these facts suggest is an

implicational hierarchy: if word order changes in subordinate clauses, then it must change in main clauses as well; but if it changes in main clauses, it does not necessarily have to change in subordinate clauses.

3. CONCLUSIONS AND FUTURE RESEARCH

This contribution has provided a typology of word order change with regard to the conservatism of subordinate clauses, a claim that is widespread in the literature but which has not been supported by quantitative data so far. The findings provide support for the claims by Givón (1977: 192, 1979a: 259), Matsuda (1998: 2-3) and Bybee (2002: 6-14), among others, that subordinate clauses are indeed more conservative than main clauses with respect to word order change. The results also suggest that, despite this conservatism, subordinate clauses do not always preserve older word order patterns. These data and their interpretation are based on the limited knowledge of the history of many linguistic families; as more cases of change are observed, the results presented here may vary. In addition, future research should take more data into account, focusing, if possible, on word order change on a world-wide scale.

References

Abaev, Vasilij I. 1952. *A grammatical sketch of Ossetic*. English translation by Gabor Horvath. Bloomington: Indiana University Press.

Abdel-Hafiz, Ahmed S. 1988. *A reference grammar of Kunuz Nubian*. PhD dissertation, State University of New York.

Aboh, Enoch O. 2004. *The morphosyntax of complement-head sequences. Clause structure and word order patterns in Kwa*. Oxford: Oxford University Press.

Abondolo, Daniel. 1998a. "Introduction". In Daniel Abondolo (ed.), *The Uralic languages*, 1-42. London/New York: Routledge.

Abondolo, Daniel. 1998b. "Finnish". In Daniel Abondolo (ed.), *The Uralic languages*, 149-183. London/New York: Routledge.

Abondolo, Daniel. 1998c. "Khanty". In Daniel Abondolo (ed.), *The Uralic languages*, 358-386. London/New York: Routledge.

Acharya, Jayaraj. 1990. *A descriptive grammar of Nepali and an analyzed corpus*. PhD dissertation, Georgetown University.

Adams, Douglas Q. 2012. "Another look at three Kuci-Prākrit-Tocharian B bilinguals". *Tocharian and Indo-European Studies* 13, 7-20.

Ahland, Colleen A. 2012. *A grammar of northern and southern Gumuz*. PhD dissertation, University of Oregon.

Alekseev, Mikhail & Boris Ataev. 1997. *Avarskij jazyk* [Avarian language]. Moscow: Academia.

Annamalai, E. & Sanford B. Steever. 1998. "Modern Tamil". In Sanford B. Steever (ed.), *The Dravidian Languages*, 100-128. London/New York: Routledge.

Applegate, Joseph R. 1955. *Shilha: a descriptive grammar with vocabulary and texts*. PhD dissertation, University of Pennsylvania.

Areta, Mikel M. 2011. "Euskararen hitz hurrenkeraren garaiketa baterako materialak". *Oihenart* 26, 343-379.

Authier, Gilles. 2009. *Grammaire kryz: langue caucasique d'Azerbaïdjan, dialecte d'Alik*. Paris: Peeters.

Axel, Katrin. 2007. *Studies on Old High German syntax. Left sentence periphery, verb placement and verb-second*. Amsterdam/Philadelphia: John Benjamins.

Baltin, Mark R. 2005. "Extraposition, the right roof constraint, result clauses, relative clause extraposition, and PP extraposition". In Martin Everaert & Henk van Riemsdijk (eds.), *The Blackwell syntax companion* 1, 237-271. Oxford: Wiley & Blackwell Publishing Company.

Bauer, Brigitte L. M. 1995. *The emergence and development of SVO patterning in Latin and French: diachronic and psycholinguistic perspectives*. Oxford: Oxford University Press.

Bauer, Brigitte L. M. 2006. "Word order". In Philip Baldi & Pierluigi Cuzzolin (eds.), *New perspectives on Latin syntax. Syntax of the sentence* 1, 241-316. Berlin/New York: Mouton de Gruyter.

Bean, Marian C. 1983. *The development of word order patterns in Old English*. London: Croom Helm.

Behaghel, Otto. 1909. "Beziehungen zwischen Umfang und Reihenfolge von Satzgliedern". *Indogermanische Forschungen* 25, 110-142.

Behaghel, Otto. 1932. *Deutsche Syntax. Eine geschichtliche Darstellung.* Volume IV: *Wortstellung, Periodenbau*. Heidelberg: Winter.

Bender, Lionel M. 1997. *The Nilo-Saharan languages. A comparative essay*. 2nd edition. München/Newcastle: Lincom Europa.

Bentley, John R. 2001. *A descriptive grammar of early Old Japanese*. Leiden/Boston/Köln: Brill.

Bies, Ann E. 1996. *Syntax and discourse factors in Early New High German: evidence for verb-final word order*. Master thesis, University of Pennsylvania.

Blackings, Mairi & Nigel Flabb. 2003. *A grammar of Ma'di*. Berlin/New York: Mouton de Gruyter.

Blench, Roger. To appear. "African language isolates". In Lyle Campbell, Alex Smith & Thomas Dougherty (eds.), *Language isolates*. London: Routledge.

Böhm, Gerhard. 1984. *Grammatik der Kunama-Sprache*. Wien: Universität Wien.

Boyeldieu, Pascal. 2009. "The modified form of Shatt Damam nouns and its Daju cognates". *Afrika und Übersee* 90, 9-84.

Breeze, Mary J. 1990. "A sketch of the phonology and grammar of Gimira (Benchnon)". In Richard J. Hayward (ed.), *Omotic Language Studies*, 1-67. London: School of Oriental and African Studies.

Browne, Wayles. 1993. "Serbo-Croat". In Bernard Comrie & Greville G. Corbett (eds.), *The Slavonic languages*, 306-387. London/New York: Routledge.

Brugmann, Karl & Berthold Delbrück. 1900. *Grundriss der vergleichenden Grammatik der indogermanischen Sprachen*. Volume V: *Vergleichende Syntax der indogermanischen Sprachen*. Straßburg: Karl J. Trübner.

Burridge, Kate. 1993. *Syntactic change in Germanic. Aspects of language change in Germanic with particular reference to Middle Dutch*. Amsterdam/Philadelphia: John Benjamins.

Bybee, Joan. 2002. "Main clauses are innovative, subordinate clauses are conservative. Consequences for the nature of constructions". In Joan L. Bybee & Michael Noonan (eds.) *Complex sentences in grammar and discourse: essays in honor of Sandra A. Thompson*, 1-17. Amsterdam: John Benjamins.

Bybee, Joan, Revere Perkins & William Pagliuca. 1994. *The evolution of grammar: tense, aspect and modality in the languages of the world*. Chicago/London: University of Chicago Press.

Camaj, Martin. 1984. *Albanian grammar with exercises, chrestomathy and glossaries*. Translated into English by Leonard Fox. Wiesbaden: Otto Harassowitz.

Chirikba, Viacheslav A. 2003. *Abkhaz*. München: Lincom Europa.

Choe, Hyon-Sook. 1987. "An SVO analysis of VSO languages and parametrization: a study of Berber". In Mohammed Guerssel & Kenneth Hale (eds.), *Studies in Berber syntax*, 121-158. Cambridge: Massachussets Intitute of Technology.

Christiansen-Bolli, Regula. 2010. *A grammar of Tadaksahak. A berberised Songhay language (Mali)*. Köln: Rüdiger Köppe Verlag.

Clackson, James. 2007. *Indo-European linguistics. An introduction.* Cambridge: Cambridge University Press.

Claudi, Ulrike. 1994. "Word order change as category change". In William Pagliuca (ed.), *Perspectives on grammaticalization*, 191-231. Amsterdam/Philadelphia: John Benjamins.

Creissels, Denis. 2006. "S-O-V-X constituent order and constituent order alternations in West African languages". In Rebecca T. Cover & Yuni Kim (eds.), *Proceedings of the thirty-first annual meeting of the Berkeley Linguistics Society*, 37-52. Berkeley: Berkeley Linguistics Society.

Cristofaro, Sonia. 2003. *Subordination*. Oxford: Oxford University Press.

Croft, William. 2003. *Typology and universals*. Second edition. Cambridge: Cambridge University Press.

Crystal, David. 2008. *A dictionary of linguistics and phonetics*. 6th edition. London: Blackwell.

Csúcs, Sándor. 1998. "Udmurt". In Daniel Abondolo (ed.), *The Uralic languages*, 276-304. London/New York: Routledge.

Davison, Alice. 1979. "Some mysteries of subordination". *Studies in the Linguistic Sciences* 9, 1, 105-128.

Décsy, Gyula. 1990. *The Uralic protolanguage: a comprehensive reconstruction*. Bllomington: Eurolingua.

Deligianni, Efrosini. 2011. "Pragmatic factors that determine main clause constitutent order variation in Greek: a diachronic perspective". In Eliza Kitis, Nikolaos Lavidas, Nina Topintzi & Tasos Tsangalidis (eds.), *Selected papers from the 19th international symposium on theoretical and applied linguistics*, 163-173. Thessaloniki: Monochromia.

Deutscher, Guy. 2000. *Syntactic change in Akkadian. The evolution of sentential complementation*. Oxford: Oxford University Press.

Devine, Andrew M. & Lawrence D. Stephens. 1994. *The prosody of Greek speech*. Oxford: Oxford University Press.

Dik, Helma J. M. 1995. *Word order in Ancient Greek. A pragmatic account of word order variation in Herodotus*. Amsterdam: J. C. Gieben.

Dimmendaal, Gerrit J. 1983. *The Turkana language*. Dordrecht: Foris Publications.

Dimmendaal, Gerrit J. 2011. *Historical linguistics and the comparative study of African languages*. Amsterdam/Philadelphia: John Benjamins.

Dixon, Robert M. W. 2010. *Basic linguistic theory*. Volume 1: *Methodology*. Oxford: Oxford University Press.

Donegan, Patricia J. & David Stampe. 1983. "Rhythm and the holistic organization of language structure". In John F. Richardson, Mithcell Marks & Amy Chukerman (eds.), *Papers from the parasession on the interplay of phonology, morphology, and syntax*, 337-353. Chicago: Chicago Linguistic Society.

Donegan, Patricia J. & David Stampe. 2004. "Rhythm and the synthetic drift of Munda". Rajendra Singh (ed.), *Yearbook of South Asian languages and linguistics 2004*, 3-36. Berlin/New York: Mouton de Gruyter.

Dryer, Matthew S. 1989. "Large linguistic areas and language sampling". *Studies in Language* 13, 257-292.

Dryer, Matthew S. 1992. "The Greenbergian word order correlations". *Language* 68, 1, 81-138.

Dryer, Matthew S. 2011. "The evidence for word order correlations: a response to Dunn, Greenhill, Levinson and Gray's paper in *Nature*". *Linguistic Typology* 15, 335-380.

Dryer, Matthew S. & Martin Haspelmath. 2013. *The world atlas of language structures online*. Leipzig: Max Plack Institute for Evolutionary Anthropology.

Duke, Daniel J. 2001. *Aka as a contact language: sociolinguistic and grammatical evidence*. Master thesis, University of Texas at Arlington.

Dum-Tragut, Jasmine. 2009. *Armenian. Modern eastern Armenian*. Amsterdam/Philadelphia: John Benjamins.

Dunn, Michael J. 1999. *A grammar of Chukchi*. PhD dissertation, Australian National University.

Duroiselle, Charles. 1997. *Practical grammar of the Pali language*. 3rd edition. Rangoon: Buddha Dharma Education Association.

Dürscheid, Christa. 2000. *Syntax: Grundlagen und Theorien*. Wiesbaden: Verlag für Sozialwissenschaften.

Ehala, Martin. 2006. "The word order of Estonian: implications to universal language". *Journal of Universal Language* 7, 49-89.

Elfenbein, Josef. 1998. "Brahui". In Sanford B. Steever (ed.), *The Dravidian languages*, 388-414. London/New York: Routledge.

Engel, Ulrich. 2004. *Deutsche Grammatik*. München: Iudicium.

Engelen, Bernhard. 1986. *Einführung in die Syntax der deutschen Sprache*. Volume 2. Baltmannsweiler: Schneider.

Erdal, Marcel. 1998. "Old Turkic". In Lars Johanson & Éva Ágnes Csató (eds.), *The Turkic languages*, 138-157. London/New York: Routledge.

Erguvanlı, Eser E. 1984. *The function of word order in Turkish grammar*. Berkeley/Los Angeles/London: University of California Press.

Everett, Daniel L. 2005. "Cultural constraints on grammar and cognition in Pirahã. Another look at the design features of human language". *Current Anthropology* 76, 4, 621-646.

Eyþórsson, Þórhallur, Janne B. Johannessen, Signe Laake & Tor A. Åfarli. 2012. "Dative case in Norwegian, Icelandic and Faroese: preservation and non-preservation". *Nordic Journal of Linguistics* 35, 219-249.

Faust, Noam & Eitan Grossman. 2015. "Nuer (Western Nilotic): a preliminary survey". Paper published on-line at: https://www.academia.edu/13645692/Nuer_Western_Nilotic_a_preliminary_survey.

Fleming, Harold. 1990. "A grammatical sketch of Dime (Dim-Af)". In Richard J. Hayward (ed.), *Omotic language studies*, 494-583. London: School of Oriental and African Studies.

Fortson, Benjamin W. 2010. *Indo-European language and culture*. 2nd edition. Oxford: Wiley-Blackwell.

Fried, Robert W. 2010. *A grammar of Bao'an Tu, a Mongolic language of northwest China*. PhD dissertation, University of Buffalo.

Friedrich, Paul. 1975. *Proto-Indo-European syntax: the order of meaningful elements*. Wahington: Institute for the Study of Man.

Gamkrelidze, Thomas V. & Vjačeslav V. Ivanov. 1995. *Indo-European and the Indo-Europeans. A reconstruction and historical analysis of a proto-language and a proto-culture*. Part I: *The text*. Berlin/New York: Mouton de Gruyter.

van Gelderen, Elly. 2011. *The linguistic cycle. Language change and the language faculty*. Oxford: Oxford University Press.

van Gijn, Rik. 2014. "Subordination strategies in South America: nominalization". In Loretta O'Connor & Peter Muysken (eds.), *The native languages of South America. Origins, development, typology*, 274-296. Cambridge: Cambridge University Press.

Gildea, Spike. 2000. "On the genesis of the verb phrase in Cariban languages: diversity through reanalysis". In Spike Gildea (ed.), *Reconstructing grammar: comparative linguistics and grammaticalization*, 65-105. Amsterdam: John Benjamins.

Gill, Harjeet S. 1962. *A descriptive grammar of Panjabi*. PhD dissertation, Hartford Seminary Foundation.

Givón, Talmy. 1977. "The drift from VSO to SVO in Biblical Hebrew: the pragmatics of tense-aspect". In Charles N. Li (ed.), *Mechanisms of syntactic change*, 181-254. Austin/London: University of Texas Press.

Givón, Talmy. 1978. "Negation in language: pragmatics, function, ontology". In Peter Cole (ed.), *Pragmatics*, 69-112. New York/San Francisco/London: Academic Press.

Givón, Talmy. 1979a. *On understanding grammar*. New York: Academic Press.

Givón, Talmy. 1979b. "Language typology in Africa: a critical review". *Journal of African Languages and Linguistics* 1, 199-224.

Givón, Talmy. 2011. *Ute reference grammar*. Amsterdam/Philadelphia: John Benjamins.

Gómez, Ricardo. 1994. "Euskal aditz morfologia eta hitzordena: VSO-tik SOV-ra?". In Jean-Baptiste Orpustan (ed.), *Actes du colloque international de l'URA 1055 du C.N.R.S.*, 93-114.

Gómez, Ricardo & Koldo Sainz. 1995. "On the origin of the finite forms of the Basque verb". *Current Issues in Linguistic Theory* 131, 235-274.

Green, Georgia M. 1976. "Main clause phenomena in subordinate clauses". *Language* 52, 2, 382-397.

Greenberg, Joseph H. 1963. "Some universals of grammar with particular reference to the order of meaningful elements". In Joseph H. Greenberg (ed.), *Universals of human language*, 73-113. Cambridge, Mass: MIT Press.

Gruzdeva, Ekaterina. 1998. *Nivkh*. München: Lincom Europa.

Güldemann, Tom. 2011. "Proto-Bantu and Proto-Niger-Congo: macro-areal typology and linguistic reconstruction". In Osamu Hieda, Christa König & Hirosi Nakagawa (eds.), *Geographical typology and linguistic areas*, 109-142. Amsterdam/Philadelphia: John Benjamins.

Hahn, Renhard F. 1998. "Uyghur". In Lars Johanson & Éva Ágnes Csató (eds.), *The Turkic languages*, 379-396. London/New York: Routledge.

Harris, Alice C. 1991. "Mingrelian". In Alice C. Harris (ed.), *The indigenous languages of the Caucasus*. Volume I: *The Kartvelian languages*, 313-394. Delmar: Caravan.

Harris, Alice C. 2000. "Word order harmonies and word order change in Georgian". In Rosanna Sornicola, Erich Poppe & Ariel Shisha-Halevy (eds.), *Stability, variation and change of word-order patterns over time*, 133-163. Amsterdam/Philadelphia: John Benjamins.

Haspelmath, Martin. 1995. "The converb as a cross-linguistically valid category". In Martin Haspelmath & Ekkehard König (eds.), *Converbs in cross-linguistic perspective*, 415-440. Berlin: Mouton de Gruyter.

Haspelmath, Martin. 2006. "Against markedness (and what to replace it with)". *Journal of Linguistics* 42, 25-70. Cambridge: Cambridge University Press.

Haspelmath, Martin. 2012. "How to compare major word-classes across the world's languages". In Thomas Graf, Denis Paperno, Anna Szabolcsi & Jos Tellings (eds.), *Theories of everything: in honor of Edward Keenan*, 109-130. Los Angeles: University of Los Angeles California.

Haspelmath, Martin. 2015. "A grammatical overview of Egyptian and Coptic". In Eitan Grossman, Martin Haspelmath & Tonio S. Richter (eds.), *Egyptian-Coptic linguistics in typological perspective*, 103-144. Berlin: Mouton de Gruyter.

Hawkins, John. A. 1983. *Word order universals*. New York: Academic Press.

Heine, Bernd. 1980. "Language typology and linguistic reconstruction: The Niger-Congo case". *Journal of African Languages and Linguistics*, 2, 2, 95-112.

Heine, Bernd. 2009. "From nominal to clausal morphosyntax: complexity via expansion". In Talmy Givón & Masayoshi Shibatani (eds.), *Syntactic complexity*, 23-52. Amsterdam/Philadelphia: John Benjamins.

Helimski, Eugene. 1998a. "Nganasan". In Daniel Abondolo (ed.), *The Uralic languages*, 480-515. London/New York: Routledge.

Helimski, Eugene. 1998b. "Selkup". In Daniel Abondolo (ed.), *The Uralic languages*, 548-579. London/New York: Routledge.

Hengeveld, Kees. 1998. "Adverbial clauses in the languages of Europe". In Johan van der Auwera (ed.), *Adverbial constructions in the languages of Europe*, 335-420. Berlin/New York: Mouton de Gruyter.

Herring, Susan C. 2000. "Poeticality and word order in Tamil". In Susan C. Herring, Pieter van Reenen & Lene Schøsler (eds.), *Textual parameters in older languages*, 197-236. Amsterdam: John Benjamins.

Hickey, Raymond. 2002. "Internal and external forces again: changes in word order in Old English and Old Irish". *Language Sciences* 24, 261-283.

Hock, Hans H. 1986. *Principles of historical linguistics*. Berlin/New York: Mouton de Gruyter.

Hock, Hans H. 1991. *Studies in Sanskrit syntax*. New Delhi: Shri Jainendra Press.

Hoffner, Harry A. & Craig H. Melchert. 2008. *A grammar of the Hittite language*. Part 1: *Reference grammar*. Winona Lake: Eisenbrauns.

Holmstedt, Robert D. 2013. "Investigating the possible verb-subject to subject-verb shift in Ancient Hebrew: methodological first steps". In Reinhard G. Lehmann & Anna E. Zernecke (eds.), *Schrift und Sprache. Papers read at the 10th Mainz international colloquium on Ancient Hebrew (MICAH)*, 3-31. Kamen: Hartmut Spenner.

Horrocks, Geoffrey. 1997. *Greek: a history of the language and its speakers*. London/New York: Longman.

Hróarsdóttir, Þorbjörg. 2009. "OV languages: expression of cues". In Roland Hinterhölzl & Svetlana Petrova (eds.), *Information structure and language change. New approaches to word order variation and change in Germanic*, 67-90. Berlin/New York: Mouton de Gruyter.

Hualde, José Ignacio & Jon Ortiz de Urbina. 2003. *A grammar of Basque*. Berlin/New York: Mouton de Gruyter.

Hudson, Richard A. 1964. *A grammatical study of Beja*. PhD dissertation, University of London.

Huehnergard, John. 2006. "Proto-Semitic and Proto-Akkadian". In Guy Deutscher & Norbertus J. C. Kouwenberg (eds.), *The Akkadian language in its semitic context. Studies in the Akkadian of the third and second millennium BC*, 1-23. Leiden: Nederlands Instituut voor het Nabije Oosten.

Hyman, Larry N. 1975. "On the change from SOV to SVO: evidence from Niger-Congo". In Charles N. Li (ed.), *Word order and word order change*, 113-137. Austin: University of Texas Press.

Jagersma, Abraham H. 2010. *A descriptive grammar of Sumerian*. PhD dissertation, Universiteit Leiden.

Jakobi, Angelika. 1989. *A Fur grammar: phonology, morphophonology, and morphology*. Hamburg: Buske Verlag.

Jakobson, Roman. 1971. *Selected writings*. Volume II: *Word and language*. The Hague/Paris: Mouton de Gruyter.

Janhunen, Juha A. 2012. *Mongolian*. Amsterdam/Philadelphia: John Benjamins.

Jiang, Haowen. 2010. *Malayalam: a grammatical sketch and text*. Houston: Rice University.

Johanson, Lars. 2001. "Vom Alttürkischen zu den modernen Türksprachen". In Martin Haspelmath, Ekkehard König, Wulf Oesterreicher & Wolfgang Raible (eds.) *Language typology and language universals*. Volume 2, 1719-1742. Berlin: Walter de Gruyter.

Joswig, Andreas. 2015. "Syntactic sensitivity and preferred clause structure in Majang". In Angelika Mietzner & Anne Stroch (eds.), *Nilo-Saharan: models and descriptions*, 169-176. Köln: Rüdiger Köppe Verlag.

Kamermans, Michiel. 2013. *An introduction to Japanese - syntax, grammar & language*. Wolfheze: SJGR Publishing.

Kenesei, István, Robert M. Vago & Anna Fenyvesi. 1998. *Hungarian*. London/New York: Routledge.

Khačikjan, Margaret. 1998. *The Elamite language*. Rome: Consiglio nazionale delle ricerche.

Kibrik, Aleksandr E. 1991. "Archi". In Alice C. Harris (ed.), *The indigenous languages of the Caucasus*. Volume IV: *The North East Caucasian languages*, 297-366. Delmar: Caravan.

Kibrik, Aleksandr E., Sandro V. Kodzasov & Irina A. Muravyova. 2004. *Language and folklore of the Alutor people*. Part II: *Alutor grammar*. Suita: Osaka Gakuin University.

Koopman, Willem F. 1992. "The distribution of verb forms in Old English subordinate clauses". In Matti Rissanen, Ossi Ihalainen, Terttu Nevalainen & Irma Taavitsainen (eds.), *History of Englishes: new methods and interpretations in historical linguistics*, 319-335. Berlin/New York: Mouton de Gruyter.

Krahmalkov, Charles R. 2001. *A Phoenician-Punic grammar*. Leiden/Boston/Köln: Brill.

Künnap, Ago. 1999. *Enets*. München: Lincom Europa.

Kutoado, Abdalla I. A. 1973. *Kadugli language and language usage*. Khartoum: University of Khartoum.

Lacroix, René. 2009. *Description du dialecte laze d'Arhavi (caucasique du sud, Turquie)*. PhD dissertation, Université Lumière Lyon 2.

Lakarra, Joseba A. 2005. "Prolegómenos a la reconstrucción de segundo grado y al análisis del cambio tipológico en (proto)vasco". *Acta Palaeohispanica IX*, *Palaeohispanica* 5, 407-470.

Lakarra, Joseba A. 2006. "Notas sobre iniciales, cambio tipológico y prehistoria del verbo vasco". *Anuario del seminario de filología vasca «Julio Urquijo»* 15, 1, 561-622.

Lehmann, Winfred P. 1974. *Proto-Indo-European syntax*. Austin: University of Texas Press.

Leafgren, John. 2011. *A concise Bulgarian grammar*. Durham: Duke University.

Leslau, Wolf. 1967. *Amharic textbook*. Wiesbaden: Otto Harrassowitz.

Leyew, Zelealem. 2002. *Sociolinguistic survey report of the Kemant (Qimant) language of Ethiopia*. Dallas: Summer Institute of Linguistics.

Lohitare, Loki D., Darius L. B. Lohammarimoi, Dominic T. Peter & Peter L. Joseph. 2012. *Didinga grammar book*. Dallas: Summer Institute of Linguistics.

Loprieno, Antonio & Matthias Müller. 2012. "Ancient Egyptian and Coptic". In Zygmunt Frajzyngier & Erin Shay (eds.), *The Afro-Asiatic languages*, 102-143. Cambridge: Cambridge University Press.

Magni, Elisabetta. 2009. "The evolution of Latin word (dis)order". In Sergio Scalise, Elisabetta Magni & Antonietta Bisetto (eds.), *Universals of language today*, 225-251. Berlin: Springer.

Martin, Samuel E. 1961. *Dagur Mongolian: grammar, texts, and lexicon*. Bllomington/The Hague: Mouton de Gruyter.

Maslova, Elena. 2003. *Tundra Yukaghir*. München: Lincom Europa.

Matasović, Ranko. 2010. *A short grammar of East Circassian (Kabardian)*. MS.

Mathiassen, Terje. 1996a. *A short grammar of Latvian*. Columbus: Slavica Publishers.

Mathiassen, Terje. 1996b. *A short grammar of Lithuanian*. Columbus: Slavica Publishers.

Matsuda, Kenjirô. 1993. "Dissecting analogical leveling quantitatively: the case of the innovative potential suffix in Tokyo Japanese*". Language Variation and Change* 5, 1, 1-34.

Matsuda, Kenjirô. 1995. *Variable zero-marking of (o) in Tokyo Japanese*. PhD dissertation, University of Pennsylvania.

Matsuda, Kenjirô. 1998. "On the conservatism of embedded clauses". *Theoretical and applied linguistics at Kobe Shoin* 1, 1-13.

Mithun, Marianne. 1984. "How to avoid subordination". In Claudia Brugman & Monica Macaulay (eds.*), Proceedings of the tenth annual meeting of the Berkeley Linguistics Society*, 493-509. Berkeley: Berkeley Linguistics Society.

Mous, Martinus P. G. M. 1992. *A grammar of Iraqw*. PhD dissertation, Universiteit Leiden.

Munshi, Sadaf & Karim Piar. 2008. *A grammatical sketch of Hunza Burushaski*. Denton: University of North Texas.

Nau, Nicole. 2011. *A short grammar of Latgalian*. München: Lincom Europa.

Nebel, Arturo. 1948. *Dinka grammar (Rek-Malual dialect) with texts and vocabulary*. Verona: Missioni Africane.

Nedjalkov, Igor. 1997. *Evenki*. London/New York: Routledge.

Nevins, Andrew, David Pesetsky & Cilene Rodrigues. 2009. "Pirahã exceptionality: a reassessment". *Language* 85, 2, 355-404.

Nichols, Johanna. 1990. "Linguistic diversity and the first settlement of the New World". *Language* 66, 3, 475-521.

Nichols, Johanna. 1991. "Chechen". In Alice C. Harris (ed.), *The indigenous languages of the Caucasus*. Volume IV: *The North East Caucasian languages*, 1-78. Delmar: Caravan.

Nichols, Johanna. 2011. *Ingush grammar*. Berkeley/Los Angeles/London: University of California Press.

Nurse, Derek, Sarah Rose & John Hewson. 2016. *Tense and aspect in Niger-Congo*. Tervuren: Royal Museum for Central Africa.

Nwachukwu, P. Akụjụọobi. 1987. "The argument structure of Igbo verbs". *MIT Working Papers in Linguistics* 18, 1-142.

van Putten, Marijn. 2013. *A grammar of Awjila Berber (Libya)*. PhD dissertation, Universiteit Leiden.

Oei, Vincent v. G. 2015. "Old Nubian relative clauses". *Dotawo: A Journal of Nubian Studies* 2, 9-58.

Orkaydo, Ongaye O. 2013. *A grammar of Konso*. PhD dissertation, Universiteit Leiden.

Perry, John R. 2005. *A Tajik reference grammar*. Leiden/Boston: Brill.

Poppe, Nicholas. 1964. *Bashkir manual. Descriptive grammar and texts with a Bashkir-English glossary*. Bloomington/The Hague: Mouton de Gruyter.

Ramat, Paolo. 1998. "The Germanic languages". In Anna Giacalone Ramat & Paolo Ramat (eds.), *The Indo-European languages*, 380-414. London: Routledge.

Reguero-Ugarte, Urtzi. 2013. "Word order". In Mikel Martínez Areta (ed.), *Basque and Proto-Basque. Language-internal and typological approaches to linguistic reconstruction*, 429-485. Frankfurt am Main: Peter Lang.

Renou, Louis. 1952. *Grammaire de la langue védique*. Lyon: IAC.

Rix, Helmut. 2008. "Etruscan". In Roger D. Woodward (ed.), *The ancient languages of Asia Minor*, 141-164. Cambridge: Cambridge University Press.

Ross, John R. 1967. *Constraints on variables in syntax*. PhD dissertation, Massachussets Institute of Technology.

Salminen, Tapani. 1998. "Nenets". In Daniel Abondolo (ed.), *The Uralic languages*, 516-547. London/New York: Routledge.

Sastri, Korada M. 1969. *Historical gramar of Telugu, with special reference to Old Telugu, c. 200 B.C.-1000 A.D.* Anantapur: Sri Venkateswara University.

Schadeberg, Thilo C. 1981. "The classification of the Kadugli language group". In Thilo C. Schadeberg & Lionel M. Bender (eds.), *Nilo-Saharan*, 291-305. Dordrecht: Foris.

Scharf, Peter, Anuja Ajotikar, Sampada Savardekar & Pawan Goyal. 2015. "Distinctive features of poetic syntax: preliminary results". In Peter M. Scharf (ed.), *Sanskrit syntax: selected papers presented at the seminar on Sanskrit syntax and discourse structures, 13-15 June 2013, Université Paris Diderot*, 305-324. Providence: The Sanskrit Library.

Schmidt, Ruth L. 1999. *Urdu: an essential grammar*. London: Routledge.

Schrock, Terrill B. 2014. *A grammar of Ik (Icé-tód). Northeast Uganda's last thriving Kuliak language*. PhD dissertation, Universiteit Leiden.

Shibatani, Masayoshi. 1990. *The languages of Japan*. Cambridge: Cambridge University Press.

Shlonsky, Ur. 1997. *Clause structure and word order in Hebrew and Arabic: an essay in comparative semitic syntax*. Oxford: Oxford University Press.

Siewierska, Anna. 1993. "Syntactic weight vs information structure and word order variation in Polish". *Journal of Linguistics* 29, 2, 233-265.

Sohn, Ho-Min. 1999. *The Korean language*. Cambridge: Cambridge University Press.

Speiser, Ephraim A. 1941. *Introduction to Hurrian*. New Haven: American School of Oriental Research.

Stassen, Leon. 1985. *Comparison and universal grammar*. Oxford: Blackwell.

Steeman, Sander. 2012. *A grammar of Sandawe. A Khoisan language of Tanzania*. PhD dissertation, Universiteit Leiden.

Stockwell, Robert P. 1977. "Motivations for exbraciation in Old English". In Charles Li (ed.), *Mechanisms of syntactic change*, 394-421. Austin: University of Texas Press.

Stockwell, Robert P. & Donka Minkova. 1991. "Subordination and word order change in the history of English". In Dieter Kastovsky (ed.), *Historical English syntax*, 367-408. Berlin/New York: Mouton de Gruyter.

Stone, Gerald. 1993. "Sorbian". In Bernard Comrie & Greville G. Corbett (eds.), *The Slavonic languages*, 593-685. London/New York: Routledge.

Sumbatova, Nina R. & Rasul O. Mutalov. 2003. *A grammar of Icari Dargwa*. München: Lincom Europa.

Szczepaniak, Renata. 2015. "Syntaktische Einheitenbildung - typologisch und diachron betrachtet". In Christa Dürscheid & Jan Georg Schneider (eds.), *Handbuch Satz, Äußerung, Schema*, 104-124. Berlin/Boston: Walter de Gruyter.

Tegey, Habibullah & Barbara Robson. 1996. *A reference grammar of Pashto*. Washington, D. C.: Center for Applied Linguistics.

Thayer, James E. 1978. *The deep structure of the sentence in Sara-Ngambay dialogues*. Dallas: Summer Institute of Linguistics.

Thomas, Elaine. 1978. *A grammatical description of the Engenni language*. Dallas: Summer Institute of Linguistics.

Thompson, David. 1976. "Nera". In Lionel M. Bender (ed.), *The non-Semitic languages of Ethiopia*, 484-494. East Lansing: Michigan State University.

Timberlake, Alan. 2004. *A reference grammar of Russian*. Cambridge: Cambridge University Press.

Tomlin, Russell S. 1986. *Basic word order. Functional principles*. London: Croom Helm.

Torrence, Harold. 2013. *The clause structure of Wolof*. Amsterdam/Philadelphia: John Benjamins.

Trask, Robert L. 1977. "Historical syntax and Basque verbal morphology: two hypotheses". In William A. Douglass, Richard W. Etulain & William H. Jacobsen

(eds.), *Anglo-American contributions to Basque studies: essays in honor of Jon Bilbao*, 203-217. Reno: Desert Research Institute Publications on the Social Sciences.

Trask, Robert L. 1998. "The typological position of Basque: then and now". *Language Sciences* 20, 3, 313-324.

Triulzi, Alessandro, Atieb A. Dafallah & Lionel M. Bender. 1976. "Berta". In Lionel M. Bender (ed.), *The non-Semitic languages of Ethiopia*, 513-532. East Lansing: Michigan State University.

Tsumagari, Toshiro. 2009. "A sketch of Solon grammar". *Journal of the Center for Northern Humanities* 2, 1-21.

Tuite, Kevin. 2004. "Early Georgian". In Roger D. Woodward (ed.), *Cambridge encyclopedia of the world's ancient languages*, 949-969. Cambridge: Cambridge University Press.

Ungnad, Arthur. 1993. *Akkadian grammar*. Fifth edition, translated by Harry A. Hoffner, Jr. Atlanta: Scholars Press.

Vajda, Edward J. 2004. *Ket*. München: Lincom Europa.

Van Valin, Robert D. Jr. 2015. "Role and Reference Grammar as a framework for linguistic analysis". In Bernd Heine & Heiko Narrog (eds.), *The Oxford handbook of linguistic analysis*. 2nd edition, 707-742. Oxford: Oxford University Press.

Viljoen, Melanie H. 2013. *A grammatical description of the Buwal language*. PhD dissertation, La Trobe University.

Vogt, Hans. 1971. *Grammaire de la langue géorgienne*. Limoges: Bontemps.

Walkden, George. 2014b. "Object position and heavy noun phrase shift in Old Saxon and beyond". In Kristin Bech & Kristine M. Eide (eds.), *Information structure and word order change in Germanic and Romance languages*, 313-340. Amsterdam: John Benjamins.

Walters, Josiah K. 2015. *A grammar sketch of Dazaga*. Master Thesis, Graduate Institute of Applied Linguistics.

Watkins, Calvert. 1963. "Preliminaries to a historical and comparative analysis of the syntax of the Old Irish verb". *Celtica* 6, 1-49.

West, Martin L. 2011. *Old Avestan syntax and stylistics*. Berlin/Boston: Walter de Gruyter.

Witzlack-Makarevich, Alena. 2006. *Aspects of information structure in Richtersveld Nama*. Master thesis, Universität Leipzig.

Yamamoto, Hideki. 1999. "A survey of areal distribution of word order around the world". *Sprachtypologie und Universalienforschung* 52, 1, 64-77.

Zhang, Paiyu. 2013. *The Kilen language of Manchuria: grammar of a moribund Tungusic language*. PhD dissertation, University of Hong Kong.