From Proto-Hungarian SOV to Old Hungarian Top Foc V X*

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Abstract: This paper claims that Hungarian underwent a word order change from SOV to Top Foc V X* prior to its documented history beginning at the end of the 12th century. Proto-Hungarian SOV is reconstructed primarily on the basis of shared constructions of archaic Old Hungarian, and Khanty and Mansy, the sister languages of Hungarian. It is argued that the most likely scenario of the change from head-final to head-initial was the spreading of right dislocation, and the reanalysis of right dislocated elements by new generations of speakers as arguments in situ. In Hungarian – as opposed to Khanty and Mansy – right dislocation was facilitated by the extension of differential object marking to all direct objects. The change of basic word order initiated the restructuring of other parts of Hungarian grammar, as well, which is a still ongoing process.

1. Introduction

The question whether syntactic reconstruction is possible at all, and, in case it is attempted, what methodology it should employ, has been much discussed recently. Lightfoot (2002) claimed that in lack of a theory of linguistic change, we have no reliable means of reconstructing a proto-language with no written records. Campbell and Harris (2002), and several authors of Ferraresi & Goldbach's (2008) *Principles of Syntactic Reconstruction*, on the contrary, argued for the possibility of syntactic reconstruction. Campbell and Harris (2002), as well as Pires and Thomason (2008) claimed that the methodology of comparative linguistics, based on correspondence sets, can be extended to syntax, and directionality generalizations represent reliable constraints on possible linguistic changes. Von Mengden (2008) proposed to base syntactic reconstruction on typological generalizations, specifically, on implicational universals. Another possibility raised by him is to establish cross-linguistic regularities of grammaticalization, and then to reconstruct proto-syntax by 'undoing' grammaticalization processes.

This paper argues that we have sufficient evidence to reconstruct the basic word order of Proto-Hungarian, the predecessor of present-day Hungarian in the period between 1192, the time when the first surviving coherent Hungarian text was written (or copied), and 500 BC,

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the time when Hungarian split off the Ugric branch of the Uralic language family.[2] What makes reconstruction possible is the fact that certain archaic constructions of early Old Hungarian documents, quickly disappearing from the language, seem to have preserved Proto-Hungarian patterns, and what is more, these patterns converge with the corresponding constructions of present-day Khanty and Mansy (Ostyak and Vogul), the Ugric sister languages of Hungarian. The shared constructions of archaic Old Hungarian, Khanty and Mansy are likely to have originated in the period of Ugric unity, and to have characterized Hungarian also in the Proto-Hungarian period. The SOV sentence structure hypothesized for Proto-Hungarian will be shown to be supported by typological (directionality) generalizations, as well.

In a somewhat more speculative vein, the paper also attempts to reconstruct the Proto-Hungarian construction that was generated by an SOV grammar but came to be analyzed as the output of a VO grammar by new generations of speakers. In this case, the method of reconstruction is what von Mengden (2008) calls ʼtravelling backwards on the pathway of grammaticalizationʼ. It is claimed that two apparently inexplicable properties of present-day Hungarian (its free postverbal argument order, and the impossibility of non-referential, predicative nominals in postverbal position) get a natural explanation if these features are fossilized properties of a construction derived from SOV by right dislocation/rightward topicalization.

The paper is organized as follows: Section 2 discusses the evidence of Proto-Hungarian being SOV. Section 3 attempts to reconstruct how the Proto-Hungarian SOV sentence structure came to be reanalyzed as underlyingly V-initial. Section 4 argues that the first surviving Old Hungarian text, Funeral Speech and Prayer from 1192-95, already displays the same Top Foc V X* basic word order as Modern Hungarian. Section 5 demonstrates that the change of basic SOV to Top Foc V X* has been followed by a drift from head-final to head-initial in other areas of grammar, as well.

2. Evidence for Proto-Hungarian SOV

Proto-Hungarian, the language that split off the Ugric branch of the Uralic family at about 500 BC, representing the predecessor of Old Hungarian, a language documented from the end of

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[2] This notion of Proto-Hungarian, meaning ʼHungarian in its pre-documented periodʼ, does not exactly correspond to the term *ősmagyar* ʼAncient Hungarianʼ of Hungarian linguistic tradition. In Hungarian historical linguistics, the Ancient Hungarian period ends in 896, the year when Hungarian tribes settled down in the Carpathian Basin. The Hungarian language of the first three hundred years of the subsequent Old Hungarian period is only documented by fragments (mostly person names and place names) embedded in Latin and Greek texts, hence it is also Proto-Hungarian for me.

the 12th century, has no written relics; nevertheless, we can form plausible hypotheses about its syntax. Our sources of evidence are the properties of the other two daughter languages of Proto-Ugric, and converging properties of the most archaic constructions of the first Old Hungarian texts. The SOV reconstructed for Proto-Hungarian by their comparison will also be supported by typological generalizations.

2.1. The sister languages of Hungarian are SOV

The languages most closely related to Hungarian, the Ob-Ugric Khanty (Ostyak) and Mansy (Vogul) are strict SOV languages, similar to the other Siberian members of the Uralic family. The original basic order of major constituents in the Uralic family is generally assumed to have been SOV (cf. Vilkuna 1998, 178), i.e., Khanty and Mansy may well have preserved the basic word order of the proto-language. (The SVO orders of several European Uralic languages are generally believed to be innovations, which may have arisen under the influence of Indo-European languages, primarily Scandinavian and Russian. In the case of Mordvin and Komi, the decrease of SOV and the spreading of SVO can be documented by folklore texts collected in the 19th century or preserved orally – see Vilkuna (1998: 181) citing Saarinen (1991) about Mordvin, and Rédei (1978) about Komi.) If Khanty and Mansy have preserved the basic word order of Proto-Uralic, then the change from SOV to Top Foc V X* must have taken place in the separate life of Hungarian.

   The S(X)OV order in Khanty and Mansy is so strict that a D-structure object can only undergo topic movement via the passivization of the sentence – see the discussion of (18) below. The obligatoriness of S(X)OV is obviously related to the fact that Khanty does not morphologically mark objects other than personal pronouns, and Mansy does not morphologically mark indefinite objects. Compare the Khanty (1a) and (1b), where the subject versus object function of *juwan* is only indicated by its position:

(1) a. ***juwan***   *jik-ə-l*   *pilna*   *xo:p*   *we:r-s-ə-ŋən.*

     Ivan   son-3SG with   boat   make-PAST-EP-3DU   (EP=epenthetic vowel)

     "Ivan made a boat with his son."

   b. *(luw)* ***juwan***   *re:sk-ə-s*

     he   Ivan   hit-EP-PAST.3SG

     "He hit Ivan."   (Nikolaeva 1999, 58, 64)

The differential object marking attested in Mansy dialects is generally claimed to encode the definiteness of the object, as shown by the glossing of the following example of Collinder (1960)[3]:

(2) *kwal*: "house.NOM/house.ACC";

   kwal-me: "the house-ACC" (Collinder 1960, cited by Marcantio 1985: 285)

According to Marcantonio (1985), however, the morpheme often appearing on definite objects in Mansy serves to mark the topic role of the object. Nikolaeva's (1999, 2001) analysis of Khanty differential verb-object agreement, illustrated in (3a,b) below, leads to a similar – but more explicit – conclusion: she presents a large amount of convincing evidence indicating that Khanty differential object agreement, elicited seemingly optionally by definite objects, in fact encodes the secondary topic function of the object in SOV sentences. (She defines the secondary topic as a contextually given referent such that the utterance is construed to be about the relationship between it and the referent of the primary topic.)[4] Compare:

(3) a. *ku   rit   tus-Ø*
      man-NOM boat-NOM carried-INDEF.3SG[5]
      "The man carried a boat."

   b. *ku   rit   tus-t*
      man-NOM boat-NOM carried-DEF.3SG
      "The man carried the boat. [The boat, the man was carrying.]"

                              (Gulya (1970: 81), cited by Marcantonio (1985: 274))

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[3] For a recent overview of object marking in the Ugric languages, see Kulonen (1997).
[4] Nikolaeva's (2001) investigation of the discourse function of agreeing objects in Khanty is based on her own fieldwork and on the careful analysis of more than a thousand sentences from folklore texts in Pápay (1906-1908). What she shows is that agreeing objects are contextually given. A contextually new object - whether definite or indefinite - does not agree with the verb, thus sentences answering questions like *What happened? What is new?* never contain an agreeing object. For a detailed discussion of this issue, see É. Kiss (2011b).
[5] INDEF means 'indefinite' conjugation, a verbal paradigm involving no V-object agreement. The verbal paradigm agreeing with a definite object is called 'definite' (DEF) conjugation. I indicate whether the verbal suffix is from the definite or indefinite conjugation only when it is relevant for the discussion.

What is crucial for the present discussion is that the object in these languages is often – or in Khanty, nearly always – unmarked morphologically, and grammatical functions are encoded by the invariant positions of the subject and the object in a strictly S(X)OV structure.

2.2. SOV relics in Old Hungarian

2.2.1. SOV order with a morphologically unmarked object in participial clauses

The SOV order attested in the sister languages of Hungarian is also detectable in certain archaisms of Old Hungarian documents, including an SOV clause type with a morphologically unmarked object, which confirms the hypothesis that the SOV order was a Proto-Ugric feature, preserved (for a while, at least) in Proto-Hungarian, as well.

   Whereas Old Hungarian already had a general accusative case ending (the morpheme *-t*), the first surviving Hungarian codices, among them Jókai Codex, written around 1370 and copied around 1448, and the Vienna and Munich Codices, including books of the Bible translated in 1416-1435 and copied in 1450 and 1466, respectively, sporadically still contain a non-finite SOV construction whose object bears no accusative case. As the examples below indicate, the caseless object of this clause type is not an incorporated argument, as it can be definite (4a), syntactically complex (4b,c), and referential (4a-c) or quantificational (the 2nd clause of 4c).

(4) a. [*ǫ̀ è* **gondoluan**] *yme vrnac angala ièlenec nèki*
he this-Ø thinking lo Lord's angel appeared he.DAT
"while he thought on these, behold, the angel of the Lord appeared unto him"
(Munich Codex, St Matthew 1,20)

b. [*ǫ̀ kenček* **meġńituan**][6] *aianlanac neki aiandokocat*
they treasure-3PL-Ø unlocking offer-PAST-INDEF.3PL he.DAT presents-ACC
"when they had opened their treasures, they presented unto him gifts"
(Munich C., St Matthew 2,11)

c. *Dè* [*fèiec* **lehaituan**] [***mēdènèc èlhaguā***] *èrǫ̀kǫnc uala*

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[6] *ǫ̀* (now spelled as *ő̗*), nondistinct from a singular 3rd person nominative pronoun, stands for *ő̗k* 'they'. In posessive constructions its *-k* plural suffix is always absent. Its plurality is shown by the plural agreement marker on the possessum. In the Hungarian possessive construction, the possessor is either caseless/nominative, or bears a dative suffix, whereas the possessum bears an agreement suffix marking the person and number of the possessor.

but   head-3PL-Ø   down-turning everyone-PL-Ø leaving   struggle-3PL be-PAST

az   eberecţl   èlzaladnioc

the people-from   off-run-INF-3PL[7]

"But turning down their heads, leaving everyone, they were struggling to run off

from the people"   (Vienna C., Judith 43,2)

    Crucially, whereas Old Hungarian word order is, in general, fairly flexible, the occurrence

of a caseless object is always accompanied by a head-final, OV order. The correlation

between the lack of structural case and OV order is evident in parallel sentences of subsequent

translations of the Bible. (5a) contains a caseless object immediately preceding the non-finite

verb (a participle derived by the adverbial suffix -*uan/uen* (Modern Hungarian -*ván/vén*)). In

(5b) the object already bears the -*t* accusative suffix, and the word order is VO.

St Matthew 4,20:

(5) a. *És azok* [*legottan   **hálójok   meghagyván***] *követék   őtet*

    and they immediately net-3PL-Ø PRT-leaving   follow-PAST-3PL him

    "And they straightway left their nets, and followed him"   (Munich C. (1416/1466))

    b. *Azok kedyg   [legottan   **el hagywan haloyok-at***], kóweteek hewtet*

    they COORD immediately PRT-leaving   net-3PL-ACC followed him

    "And they straightway left their nets, and followed him"   (Jordánszky C. (1516-19))

    The hypothesis that the sporadic occurrence of caseless referential objects in SOV -*uan/uen*

clauses of 14th-15th century codices is an archaism preserved from Proto-Hungarian is also

supported by the fact that -*uan/uen* clauses represent the most conservative clause-type of Old

Hungarian in other respects, as well. Their conservative nature is also evident in the case of

negation. Hungarian negative pronouns such as *semmi* ' nothing', *senki* 'nobody', *semmikor*

'never' involve an incorporated negative particle, which more or less lost its negative force in

the Old Hungarian period, and came to require the presence of an additional negative particle.

This newly added negative particle assumed the function of the negative operator, and the

negative pronouns came to be interpreted as indefinite pronouns subjected to negative

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[7] In Old Hungarian, non-finite verb forms were very often inflected. The infinival complements of impersonal verbs are inflected in Modern Hungarian, as well. The inflection that infinitives and participles bear is not the verbal inflection but the agreement paradigm found on the possessum in possessive constructions.

concord (cf. É. Kiss 2011a, Gugán 2011). The negative construction without a separate negative particle already represents a minority pattern in 14th-15th century codices, and it completely disappears by the 16th century. Nevertheless, the *-uan/uen* clauses of Jókai codex (1370/1448) only contain the rare, archaic pattern (É. Kiss 2011a). That is, whereas the majority of the finite negative clauses of Jókai codex show the innovative negative concord structure illustrated in (6a), all of its negative *-uan/uen* clauses are of the type illustrated in (6b), containing no negative particle:

(6) a. *vgÿ hogÿ mendenestewlfoguan* **semmÿ** *meg* **nem** *ÿelennek*
      so   that   altogether   nothing PRT not appear-COND-3SG
      "so that nothing at all would appear"   (Jókai C., p. 66)

   b. *mendenestewlfoguan maganac* **semÿtt** *meg tarttuan*
      altogether   himself-DAT nothing-ACC PRT keeping
      "keeping nothing at all for himself"   (Jókai C., p. 8)

2.2.2. 'Verb–Auxiliary' order

Old Hungarian had complex tenses, marking both tense and aspect. The lexical verb bore the aspect morpheme and the agreement morpheme, and an auxiliary (cognate with the copula) bore the tense marker. The auxiliary always immediately followed the V; many scribes, e.g. that of example (7b), did not even leave a space between the V and the auxiliary. The strictly adjacent ˹V Aux˼ complex appears to be the relic of a head-final VP preceding the temporal auxiliary in a head-final TP ($[_{TP} [_{VP}…V]$ Aux]).

(7) a. *es* **odu-tt-a** **vol-a** *neki paradisumut hazoa*
      and give-PERF-3SG be-PAST he.DAT Paradise-ACC   house-for
      "and had given him Paradise for a house"   (Funeral Speech and Prayer (1192-95))

   b. *Kiknç*   *ėggic* **hiua-ttat-ic-ual-a** *Orphanac & masic Rvtnac*
      who-PL-DAT one   call-PASS-3SG-be-PAST Orpha-DAT & other   Ruth-DAT
      "one of whom was called Orpha, and the other, Ruth"   (Vienna C., Ruth 1,4)

2.2.3. The variable position of the interrogative complementizer *e*

In the strictly SOV sister languages of Hungarian, not only the VP but also the CP is head-final, thus the interrogative complementizer appears clause-finally, cliticized to the V:

(8) a. *tit   χujew-ä*
    here sleep.1PL-Q
    "Do we sleep here?" (Mansy)

  b. *nèŋem   tŏttε   ù.tot-á*
    wife-1SG there was-Q
    "Was my wife there?" (Khanty)   (Juhász 1991, 501)

In present-day Hungarian, the interrogative particle of *yes-no* questions, which is cognate with the Khanty and Mansy interrogative complementizer, is cliticized to the verb. In the first Old Hungarian codices, however, it still often appears clause-finally, and sometimes is spelled out both at the end of the clause and right-adjacent to the verb. This variation in the position of the interrogative particle suggests that it is the descendant of a clause-final complementizer cliticized to the V. When the VP came to be reanalyzed as head-initial, some speakers interpreted it as a clause-final clitic, others analyzed it as a verbal clitic, yet others resolved this uncertainty by duplicating the particle. That is:

(9) [s …V]-*e*
    a. [s …V…]-**e**
    b. [s …V-**e**…]
    c. [s …V-**e**…]-**e**

(10) a. *Nemdè kèt vèrèbec   adatnac   **eǵfel   penzen è?***
      not   two sparrows give-PASS-3PL one-half coin-on Q
      "Are not two sparrows sold for a farthing?"
                       (Munich C., St Matthew 10,29)

  b. *Il'l'es **vag è** tè?*
    Elias are Q you
    "Are you Elias?"   (Munich C., St John 1,21)

  c. *Minemde   **elfeledheti-e**   az anya   **ő   kis   gyermekét-e?***
    whether.or.not forget-POSSIB-3SG-Q the mother the   small child-3SG-ACC-Q

"Can the mother forget her small child?"

(Nádor C. (1508), cited by Simonyi (1882: 189))

In sum: Old Hungarian displayed relics of a head-final VP, a head-final TP, and a head-final CP.

2.3. SOV typological features of Hungarian

Although the VP and the functional projections subsuming it have been head-initial throughout the documented history of Modern Hungarian, the language shares many typological features of SOV languages. The lexical layer of the NP is strictly head-final. (The DP layer, which developed in the Old Hungarian period parallel with the evolution of articles, on the other hand, is already head-initial – see Egedi (2011)). The complement of the noun precedes the head – albeit in an adjectivalized form, supplied with an adjectival participle derived from the copula:

(11) a. *fyamhoz   ualo   menesomet*

      son-1SG-to being journey-1SG-ACC

      "my journey- ACC to my son"   (Kazinczy C. (1526-41), p. 6)

    b. [DP *a* [NP [AdjP *szintaktikai rekonstrukcióról   való* [N *vita*]]]

      the   syntactic   reconstruction-about being   debate

      "the debate about syntactic reconstruction"   (Modern Hungarian)

In Modern Hungarian, PP complements can also be adjectivalized by the suffix *-i*:

(12) *a*   [PP *diszkrimináció ellen*] *-i*   *küzdelem*

    the   discrimination against -ADJ struggle

    "the struggle against discrimination"

The possessor also precedes the possessum:

(13) a. *ig   fa   gimilcetvl*

      one tree fruit-3SG-from

      "from the fruit of one tree" (Funeral Speech and Prayer)

b. [$_{DP}$ *a   könyv* [$_{NP}$ *borítója*]]

    the book   cover-3SG

    "the cover of the book"   (Modern Hungarian)

In strictly head-final languages, relative clauses – often derived by the gap relativization strategy – also tend to precede the nominal that they modify. We find prenominal non-finite relative clauses in present-day Khanty:

(14) [(*mä*) *tini-m-äm*]   *loγ*

    I   sell-PASTPART-1SG horse

    "the horse I sold"   (Nikolaeva 1999: 79)

This pattern was also general in Old Hungarian (15a), and occurs in Modern Hungarian, as well (15b):

(15) a. *es   ueǵed*   *az*   [*nekoḍ*   *zoɽzoɟtem*]   *Coronat*

        and take-IMP-2SG the   you-DAT obtain-PASTPART-1SG crown-ACC

        "and take the crown I obtained for you"   (Kazinczy C. (1526-41), p. 34)

    b. *A* [*Kassai Viktor   vezette*]   *mérkőzést   a   spanyol csapat*

       the Viktor Kassai   officiate-PASTPART-3SG match-ACC the Spanish team-NOM

       nyerte meg.

       won   PRT

       "The Spanish team won the match which Viktor Kassai officiated."

The PP is also head-final in Hungarian, i.e., Hungarian has postpositions, not prepositions:

(16) a. *ív   uimadsaguc-mia*[8]

       they prayer-3PL-because.of

       "because of their prayer"   (Funeral Speech and Prayer)

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[8] *ív* (now spelled as *ő*), nondistinct from a singular 3rd person nominative pronoun, stands for *ők* 'they'. In posessive constructions its -*k* plural suffix is always absent – see footnote 5.

b. [$_{PP}$ [$_{DP}$ *a   ház   ablaka*]   *alatt*]

      the   house   window-3SG   below

    "below the window of the house"   (Modern Hungarian)

The ʿmanner adverb–Vʾ, ʿpredicative nominal–copulaʾ, ʿ(telicizing) verbal particle–Vʾ orders, attested in Old and Modern Hungarian alike, are also generally regarded as typical of head-final languages.[9]

(17) a. *keseruen   kynzathul*

      bitterly   torture-PASS-2SG

      "you are being tortured bitterly"   (Old Hungarian Mary's Lament (1300))

   b. *pur es   chomuv uogmuc*

      dust and ash   be-1PL

      "we are dust and ashes"   (Funeral Speech and Prayer)

   c. *turchucat   mige zocoztia   vola*

      throat-3PL-ACC PRT   rive-3SG   be-PAST

      "it was riving their throat"

These head-final structures in themselves do not prove that Proto-Hungarian was SOV. The generalization that stable periods of languages are characterized by directional harmony has well-known exceptions (e.g. Persian), hence the existence of projections contradicting the basic directionality of a language does not necessarily mean that the language is in the process of changing from one harmonious stage to another. The head-final structures of Hungarian, nevertheless, provide supportive evidence; they confirm the SOV reconstructed for Proto-Hungarian on the basis of the comparison of Khanty, Mansy, and archaic Old-Hungarian constructions. Section 5 will show that some of these head-final structures are gradually being supplanted by head-initial variants, which further strengthens the assumption that they are slowly disappearing remnants of an SOV syntax.

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[9] These orders are reversed in the presence of a focus and/or negation, which elicit verb movement.

Summarizing section 1: The claim that Proto-Hungarian was an SOV language is based on evidence of three kinds. The majority of present-day Uralic languages, among them the two sister languages of Hungarian, are SOV. Old Hungarian still displayed relics of a former SOV period. It had a strictly SOV non-finite clause type with a morphologically unmarked object (parallel to the pattern of finite clauses in Khanty and Mansy). The temporal auxiliary in Old Hungarian immediately followed the V, which must have grammaticalized in a period when the head-final VP was subsumed by a head-final TP. The interrogative particle had two alternative positions (V-adjacent and clause-final), which presumably derived from a complementizer position that was simultaneously both V-adjacent and clause-final in the SOV proto-language. Many typological features of Hungarian also appear to be remnants of a former head-final grammar.

3. The reanalysis of SOV as Top Foc V X*

In the SOV sentence structure that many Uralic languages seem to have preserved, the S and O constituents not only bear grammatical functions, but simultaneously also fulfil discourse roles: the subject also functions as the (primary) topic, and the object functions as the focus, or as a secondary topic. In Khanty and Mansy, the languages most closely related to Hungarian, the coincidence of the subject and topic roles is an absolute requirement; if the thematically most prominent complement is to be assigned the focus role, and some other complement is to act as the primary topic, the sentence must be passivized (Nikolaeva 1999). (In the Khanty passive construction, not only the D-structure object but also any adverbial complement can undergo NP-movement.) Observe the Khanty minimal pair in (18). The subject of (18a) is substituted in (18b) by an interrogative pronoun, which is obligatorily focussed. Hence the sentence must be passivized, with the D-structure object raised into the position of the subject-topic:

(18) a. (*luw*) *juwan re:sk-ə-s*
        he   Ivan   hit
        "He hit Ivan."

   b. *juwan   xoj-na   re:sk-ə-s-a*
       Ivan   who-OBL   hit-PASS-PAST-3SG
       "Who hit Ivan?"   (Nikolaeva 1999: 58)

If the object of the SOV clause is not a focus but a contextually given secondary topic, its topic role is marked by a nominal suffix in Mansy dialects, and by an agreement morpheme on the verb in Khanty dialects – see Marcantonio (1985: 285) and Nikolaeva (1999, 2001). In the (a) sentence of the set of Khanty examples in (19), where the verb only agrees with the subject, the object is a focus, whereas in the (b) and (c) examples, where the V also agrees with the object, the object is a secondary topic; it is the verb that represents the new information. Notice that the object is definite in both cases, i.e., object–verb agreement is not elicited by its [+definite] feature.

(19) a. *ma tam kalaŋ we:l-s-ə-m*

    I   this   reindeer kill-PAST-EP-1SG   (EP=epenthetic vowel)

    "I killed THIS REINDEER."

   b. *ma tam kalaŋ wel-s-0-e:m*

    I   this   reindeer kill-PAST-SG-1SG

    "I KILLED this reindeer."

   c. *ma tam kalaŋ we:l-s-ə-l-am*

    I   these   reindeer kill-PAST-EP-PL-1SG

    "I KILLED these reindeer."   (Nikolaeva 1999: 64)

The fusion of grammatical functions and discourse roles attested in Khanty and Mansy has also been hypothesized for the Proto-Hungarian period (or at least for a part of it) – cf. Marcantonio (1985) and É. Kiss (2011b). The hypothesis is based on the same type of comparative evidence that was evoked in the reconstruction of Proto-Hungarian SOV: the type of differential object agreement that has been preserved in Khanty, encoding the topic versus focus function of the object, still occurs sporadically in Old Hungarian, as well, which suggests that it is Proto-Ugric heritage surviving (for a while, at least) in the daughter languages.

By the Old Hungarian period, the general pattern of verbal agreement had already changed from that preserved in Khanty; subject–verb agreement and object–verb agreement did not encode the topic roles of the subject and the object any longer. In Old Hungarian – like in Modern Hungarian – subject–verb agreement is obligatory whether the subject is topical or not, and object–verb agreement (the so-called definite conjugation) is elicited by definite

objects (cf. Bartos 2000, É. Kiss 2000). Indefinite objects trigger the same indefinite verbal paradigm that is also used with intransitive verbs.[10] However, as Bárczi (1958) demonstrates, Old Hungarian and early Middle Hungarian usage sometimes deviates from this pattern, and in the deviating cases, verb–object agreement occasionally appears to be determined by the topic versus focus role of the object. That is, we find sporadic topicalized indefinite objects with the verb in the definite conjugation (20a), and also sporadic non-topicalized definite objects with the verb in the indefinite conjugation (20b):

(20) a. *mikor ember ęs ill iatekot nezi*
      when man also such game-ACC watch-DEF.3SG
      "when man, too, is watching such a play"

                                   (Bornemisza (1588), cited by Bárczi (1958))

    b. *Isten tamazt erős óltalmazoit az igassagnac*
      God raise-INDEF.3SG strong protectors-3sg-ACC the truth-DAT
      "God raises strong protectors of the truth"

                                   (Bornemisza (1588), cited by Bárczi (1958))

    The assumption that Hungarian object – verb agreement originally served to mark the topic role of objects is also supported by crosslinguistic parallels. Givón (1976) argued on the basis of the analysis of related Bantu languages that definite object – verb agreement, in general, derives from topical object – verb agreement, with the topicality requirement reinterpreted as a definiteness requirement.

    Proto-Hungarian presumably employed verbal agreement to encode discourse functions because it had no topic and focus movement, i.e., the preverbal in situ constituents of the SOV sentence expressed both grammatical and discourse functions, as is attested in present-day Khanty and Mansy. Unlike Khanty and Mansy, however, Proto-Hungarian evolved a property that had important consequences for the further course of events in the language: it developed a generalized accusative marker. (According to Marcantonio (1985), this suffix originally marked only topicalized objects in Proto-Hungarian. It was its extension to all direct objects

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[10] A reviewer mentions that the choice of conjugation is also partly lexically conditioned (the pronoun for *all/everything* as object is indefinite), and is connected with person (1st and 2nd person objects always trigger the indefinite conjugation). I argue elsewhere that the determiner *minden* 'every', and the pronouns *minden* 'everything', and *mindenki* 'everybody' are specific indefinites (É. Kiss 2000), and in the case of 1st and 2nd person pronoun objects agreement is blocked by the Inverse Agreement Constraint (É. Kiss 2005, 2011b). On the history of Hungarian definite and indefinite conjugations, see Hajdú (1966), Mikola (1966), Honti (1995), Kulonen (1999), Havas (2004), Honti (2009), É. Kiss (2010) etc.

that gave rise to the marking of object topicality by verbal agreement.) The generalized accusative marker licensed a more flexible word order, and, in the long run, the separation of grammatical functions and discourse roles.

As is well-known, in the present-day Hungarian sentence the preverbal positions only convey discourse functions; arguments with no special discourse roles follow the verb. The change from Proto-Hungarian Top/S Foc/O V to Top Foc V X* could, in principle, have taken place in two ways: (i) by V-movement to the left, and the evolvement of preverbal functional positions, or (ii) by the spreading of right dislocation, and the reanalysis of postverbal constituents as arguments in situ. If Hungarian had taken route (i), i.e., if it had developed new functional projections in front of the original structure, then the original SO order, presumably obligatory in the proto-language, would have been preserved. However, there is no evidence of a fixed (or at least preferred) SO postverbal order either in Old Hungarian or in Modern Hungarian; the postverbal section of the Hungarian sentence has been free since the time of the first written documents. If, however, Hungarian took route (ii), we get an explanation of the freedom of postverbal order. The present-day VX* may be the grammaticalization, or fossilization, of the output of iterated right dislocation, performed in an arbitrary order.

Right dislocation is a common construction in SOV languages; it also exists in present-day Khanty. Nikolaeva (1999) describes it as an afterthought construction: "Ostyak [Khanty] exhibits afterthought constructions where afterthought is represented by an element added after the completion of the sentece to clarify either another word or the content of the whole sentence. The afterthought element is extraposed after the verb, and is arguably clause-external" (Nikolaeva 1999, p. 57). In the following example of Nikolaeva, the two postverbal arguments specify the implicit goal, and the pro subject, respectively:

(21) *pa   su:sm-ə-s   joxəśxo:t-ə-l   u:l-ə-m   taxa pela itta maxim*
  again walk-EP-PAST-3SG back   house-EP-3SG be-EP-PASTPART place to   that Maxim
  "Again he walked back to the place where his house was, this Maxim."

                   (Nikolaeva 1999: 57)

In Proto-Hungarian, the appearance of a general accusative marker, i.e., the morphological distinction of the subject and object must have facilitated the use of right dislocation. I assume that when the proportion of right dislocated elements achieved a certain threshold, new generations of speakers analyzed them as base-generated, and interpreted the preverbal

constituents as preposed into left-peripheral functional positions associated with discourse functions. That is, for these new generations of speakers, the fusion of discourse roles and grammatial functions, typical of the Uralic languages, ceased to exist; the verb divided the sentence into separate discourse-functional and thematic domains. The clause-initial subject/topic position was reanalyzed as a topic slot, and the preverbal object/focus position was reanalyzed as a focus slot.[11] The postverbal arguments of Proto-Hungarian, representing right-dislocated elements, came to be reanalyzed as arguments in situ. That is:

(22) **Proto-Hungarian** → **Old Hungarian**

     subject/topic   → topic

     object/focus   → focus

     right-dislocated elements → in situ arguments

            ↓↓↓   ↓↓↓

        SOV   → topic focus V X*

   The hypothesis that the postverbal domain of the Old Hungarian sentence originated via the reanalysis of right dislocated arguments as arguments in situ is supported by various considerations. (i) As mentioned above, the free postverbal argument order of Old and Modern Hungarian can be explained if the Hungarian VP is the grammaticalization of the output of iterated right dislocation. (ii) This hypothesis also explains another strange property of Hungarian, the prohibition against predicative nominals, including arguments represented by bare nominals, in the postverbal domain (cf. Alberti 1997).[12] A non-specific complement, e.g., an object represented by a bare noun or a secondary predicate, must occupy the immediately preverbal position:

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[11] In fact, the object/focus may have two descendants in Modern Hungarian: a referential preverbal element is interpreted as an exhaustive focus, whereas a non-referential preverbal element, e.g., a bare nominal object, acts as a so-called verb-modifier, semanticaly incorporated into the verb. It is debated whether the focus and the verb-modifier occupy the same Spec,FocP slot, with their interpretational differences deriving from their different referential properties (É. Kiss 1994), or they occupy two different positions (Brody 1990, É. Kiss 2008). If they do, i.e., if the verb modifier is located in Spec,VP, or Spec,TP, then the immediately preverbal position of the focus in Spec,FocP is due to V-movement across the verb-modifier.

[12] Bare nominal arguments are, in fact, interpreted as predicates predicated about an implicit internal argument. E.g.:

(i) János egész   délután   levelet   írt.

    John whole   afternoon letter-ACC   write-PAST.3SG

    'John was letter-writing the whole afternoon. [John was writing the whole afternoon; what he was writing is of the type 'letter'.]'

(23) a. ***Földet***   *ért*   *a*   *repülőgép.*

      ground-ACC   touch-PAST.SG the airplane

      "The airplane touched ground."

  b. *Ért ***földet*** *a repülőgép.*

(24) a. ***Vendégek*** *érkeztek.*

      guest- PL arrive-PAST-3PL

      "Guests arrived."

  b.%*Érkeztek* ***vendégek***.

((24b) is ungrammatical as a neutral sentence, but it can be acceptable as verum focus, meaning ʹGuests DID arrive'. The verb is presumably preposed into a functional head across the bare nominal in such cases.[13]) The prohibition against predicative nominals in the postverbal domain must have grammaticalized/fossilized when postverbal elements were still derived from an SOV structure by right dislocation. Recall that right-dislocated arguments in Khanty express "afterthoughts", i.e., they typically serve to explicate implicit arguments with known referents, hence their referentiality/specificity is predicted. (iii) The reanalysis of right-dislocated arguments as arguments in situ, resulting in a change from SOV to SVO has also been attested – or at least hypothesized – in the case of other languages (cf. Lightfoot 1979, p. 385). Hyman (1975), for example, invokes it to explain word order differences between related languages of the Niger-Kongo family. He claims that in Kru, the "afterthought" origin of postverbal elements is still manifest in the intonational break before them.[14] Polo (2005) raises the possibility that rightward extraposition played a role in the change from Latin SOV to Neo-Latin SVO. She demonstrates that in *Cena Trimalchionis* by Petronius about 25% of transitive clauses contain a right dislocated object or subject, and 16% of oblique

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[13] As a reviewer remarks, in present-day Hungarian a sentence can somewhat marginally have two predicative bare nominals. In such cases, one of them remains in the postverbal section of the sentence, e.g.:
(i) János képeket   festett vörösre
   John pictures-ACC painted red-onto
   'John painted (some) pictures red.'

[14] In Hungarian, no obligatory pause before postverbal arguments has grammaticalized. The preverbal focus and the verb form a single prosodic word. The 'focus plus verb' complex can be followed by a pause, i.e., a prosodic phrase boundary, if it is followed by stressed constituents conveying contextually new information. Observe the prosodic phrasing of the following example:
(i) (KI ment el?) [JÁNOS ment el az] [ISKOLÁBA].
   who left PRT John   left PRT the school-to
   'Who left' 'JOHN left for SCHOOL.'

complements also stand postverbally. Right dislocated elements mostly have the same discourse functions as left dislocated constituents: 90% of them are either familiarity topics, or contrastive foci, but the remaining, pragmatically unmarked 10% may already "relate to an innovating grammar VO", where postverbal arguments are generated in situ.

4. Evidence for Old Hungarian Top Foc V X*

The hypothetical change described in section 2 must have taken place towards the end of the Proto-Hungarian period, perhaps after the settlement of Hungarian tribes in the Carpathian Basin in 896.[15] It may have been facilitated by the presumably SVO language of the Slav population that Hungarians found here. The first surviving coherent Old Hungarian document, Funeral Speech and Prayer, an 1192-95 copy of a possibly earlier text, is already clearly Top Foc V X*, displaying the same sentence structure that is also attested in Modern Hungarian – except that it employs topicalization and focusing much less frequently than modern Hungarian does.

In the 50 clauses of Funeral Speech and Prayer, only 11 clauses have an overt subject. The subject appears postverbally in three sentences, e.g.:

(25) *Horoguvec* **isten**

     raged   God

     "God was raging."

The claim that the base position of the subject is in the postverbal domain is most clearly supported by the clause cited in (26), where the possessor of the subject is separated from the possessum; the possessor is clause-initial, and the possessum is postverbal. The possessor functions as an aboutness topic, but the possessum has no special discourse role; hence the movement of the possessor from a postverbal position can be analyzed as topicalization, the postposing of the possessum from a preverbal position, on the other hand, would be an ad hoc move with no reason.

(26) *Es*   [*oz gimilsnek*]$_i$ *vvl keseruv*   *uola* t$_i$ *vize*

     and the fruit-DAT   so bitter   was   juice-3SG

---

[15] Recall that the three centuries between 896 and the time of the first surviving Hungarian document are part of the Old Hungarian period for Hungarian linguistic tradition, but since its language is undocumented except for fragments, mainly proper names in Latin and Greek documents, I regard it as Proto-Hungarian.

"and of the fruit, so bitter was the juice"

The preverbal subjects have all been A-bar moved. They are either aboutness topics (27), or foci (28).

(27) *hug* [TopP ***isten*** [TopP *iv uimadsagucmia* [*bulsassa w bunet*]]]

     that   god   their prayer-3PL-because.of forgive-SUBJUNC.3SG he sin-3SG-ACC

     "that God should forgive his sin because of their prayer"

(28) a. [FocP ***kic*** [*ozvc*]]

           who   those

       "Who are those?'

     b. [FocP ***miv*** [*vogmuc*]]

             we   are

       "It is us."

In principle, the wh-phrase in (28a) could also be in Spec,CP. Examples also including a topic, such as (29), however, clearly show that the wh-phrase occupies the post-topic Spec,FocP slot. (28b) is an answer to (28a); its structure is parallel to that of (28a). The focus role of the pronominal subject in (28b) is also indicated by the lack of pro-drop.

(29) [TopP *En kèdig* [FocP ***mit*** [*sègelhètlèc tǔtǫket*]]]

       I on.the.other.hand   what-ACC help-POSSIB-1SG you-PL-ACC

     "What can I help you?"   (Vienna C., Baruch 4,17)

  The negative indefinite cited from Funeral Speech and Prayer in (30) may occupy the specifier of a NegP in the left periphery:

(30) *isa es **num igg ember** mulchotia ez vermut*

     surely even not one man   miss-POSSIB-3SG this pit-ACC

     "Surely, not even one man can miss this pit"

Of the 50 clauses of Funeral Speech and Prayer, 20 contain an object. The object appears postverbally in 14 cases. Preverbal objects include those represented by a relative pronoun, presumably moved to Spec,CP (31), as well as topicalized objects (32).

(31) **kit**   *vr   ez   nopun ez   homus   vilag timnucebelevl   mente*
     whom God this day   this treacherous world prison-3SG-from save-PAST.3SG
     "Whom God saved from the prison of this treacherous world this day"

(32) *hug* **turchucat**   *mige zocoztia vola*
     that throat-3PL-ACC PRT   rive-3SG be-PAST
     "that it was riving their throat"

The immediately preverbal object in (33) could either be focus or topic:

(33) *kinec*   *ez   nopun* **testet**   *tumetivc*
     who-DAT this day   body-3SG-ACC bury-1PL
     "of whom we bury the body this day"

Like in Modern Hungarian, the left pheriphery of the clause provided a landing site for overt quantifier raising, as well. (34), where the quantifier raised in front of the matrix verb is a complement of the embedded infinitive, is a particularly clear case of overt quantifier movement:

(34) *Es* [**mend paradisumben uolov gimilcictul**]$_i$ *munda*   *neki*   *elnie* t_i
     and all   Paradise-in   being fruits-from tell-PAST-3SG he.DAT live-INF.3SG
     "and he told him to live on all fruits in Paradise"

These facts indicate that the Hungarian clause at the end of the 12th century was structured in the same way as the Modern Hungarian sentence: the V-initial thematic domain was preceded by a left periphery involving a NegP, a FocP, an iterable TopP, and a CP. The left periphery provided a landing site for overt quantifier raising, as well. At the same time, the preverbal functional projections were occupied much less frequently than in Modern Hungarian; half of the 50 clauses are V-initial. (By way of comparison, I examined the clausal left periphery in current funeral speeches (http://reftokaj.fw.hu/predikaciok.html;

). I have found that in present-day funeral speeches of comparable length, the average number of V-initial clauses is 3.)

In the postverbal domain of the Old Hungarian sentence, arguments and adjuncts were lined up in a free order, with light elements, e.g., pronouns, preceding heavy ones, for example:

(35) a. *Horoguvec isten es veteve* **wt** *ez muncas vilagbele.*
          raged   God   and   throw-PAST-3SG   him   this   laborious   world-into
          "God raged, and threw him into this laborious world."

    b. *es odu-tt-a vol-a* **neki** *paradisumut hazoa*
          and   gave-PERF-3SG be-PAST   he.DAT   Paradise-ACC   house-for
          "and had given him Paradise for a house"

These facts suggest that the postverbal section of the sentence was linearized in the phonological component of the derivation (and this property of Hungarian, too, has remained unchanged in the past 800 years).

In sum: the change from SOV to Top Foc V X* sentence structure must have taken place before the end of the 12th century, the time since when Hungarian syntax has been documented in coherent written texts. The first surviving Hungarian text from the late 12th century displays the same basic structure as Modern Hungarian. The verb divides the sentence into a functional and a thematic domain. The functional domain begins with a complementizer position, and it provides landing sites for iterated topicalization, for overt quantifier raising, and for focus movement. It also contains a NegP. The order of postverbal arguments is free except that light, unstressed constituents tend to precede heavier ones.

5. The slow restructuring of grammar from head-final to head-initial

According to the evidence presented in Section 3, the basic SOV structure of Proto-Hungarian, inherited from Proto-Ugric and Proto-Uralic, had changed to a head-initial VP subsumed by head-initial functional projections before the documented history of Hungarian. This change apparently initiated the restructuring of other parts of Hungarian grammar, as well. The drift from head-final to head-initial is a still ongoing process. It is evident in the disappearance of SOV properties, and in the evolvement of constructions typical of head-initial languages.

5.1. The disappearance of the SOV relics of Old Hungarian

The SOV relics of Old Hungarian discussed in Section 1.2, preserving Proto-Hungarian and even Proto-Ugric constructions, had either disappeared by the Middle Hungarian period, or had lost their flexibility and productivity, and had turned into linguistic fossils.

The SOV participial clause with a morphologically unmarked object had become obsolate by 1500.

The obligatory V–Aux order disappeared with the obsolescence of complex tenses in the Middle Hungarian period. The *-t* perfectivity morpheme on the verb came to be reinterpreted as a general marker of all tenses referring to a time preceding the speech time, which made the auxiliary bearing the past tense morpheme superfluous (cf. É. Kiss 2006). Actually, the temporal auxiliary has survived in the so-called past conditional (in fact: perfect conditional) paradigm, which has also preserved the obligatory ˈV Auxˈ order. Although the auxiliary is identical with the copula supplied with the conditional morpheme, the V+auxiliary string is a fossilized complex head for present-day intuition; its two elements are inseparable also in constructions involving V-movement:

(36) a. *Össze **tépte** **volna** az iratot.*
       up   tear-PAST-3SG be-COND the document-ACC
       "He would have torn up the document."

cf. b. [***Tépte volna***]$_i$ *össze* t$_i$ *az iratot!*
       "Had he only torn up the document!"

    c.*_**Tépte** össze **volna** az iratot!_*

The temporal, aspectual and modal verbs which have remained in use all precede their infinitival complement in the unmarked case – as illustrated by the Old Hungarian example in (37) below. Whether they are to be analyzed as auxiliaries or lexical verbs, they clearly project a head-initial phrase.[16]

(37) *hogy ehsegtewl   sok   emberek **fognak meg halny***
     that hunger-from many persons   will-3PL PRT die

---

[16] Kenesei (2000) identifies four auxiliaries among them; he analyzes the rest as lexical verbs.

"that many people will die from hunger"   (Jókai C., p. 63)

The V–Aux order illustrated in (38), representing a less common option, has been claimed to be a derived order, which serves to prevent the auxiliary from bearing the main stress, assigned to the left edge of the comment (Szendrői 2003).

(38) [$_{TopP}$ *János* [$_{TP}$ *énekelni$_i$ fog* […t$_i$]]]
       John   sing-INF   will-3SG
   "John will sing."

The clause-final position of the interrogative particle ceased to be used in the Old Hungarian period. In standard Modern Hungarian, the interrogative particle of *yes-no* questions, obligatory in embedded clauses, optional in matrix questions, cliticizes to the verb. Assuming that the verb occupies a pre-VP T head, the interrogative particle has been relocated from the right edge of the clause to the left periphery. In some dialects, its position is even farther to the left; it cliticizes to the leftmost phonological word of the comment, the carrier of main stress (which can be the verb in T, the specifier of TP, the negative particle, or the focus). Compare:

(39) a. **Nem-e** *Illés*   *vagy*   *te?*   (dialectal)
      not-**Q**   Elias be-2SG you
      "Aren't you Elias?"

   b. *Nem Illés* **vagy-e** *te?* (standard)

The prenominal participial relative, still productive in Old Hungarian, has mostly lost its flexibility and productivity; it has been replaced by postnominal finite relative clauses. The remaining participial relative construction has practically been fossilized; it can be used only with a subset of transitive verbs and only with a 3rd person lexical subject. Of examples (40a-c), which all would have been grammatical in Old Hungarian (cf. example (15)), only (40a) is possible in Modern Hungarian:

(40) a. *az*   *anyám*   *sütötte*   *kenyér*
        the   mother-1SG   bake-PASTPART-3SG bread

"the bread which my mother baked"

but: b.*az   én   sütöttem   kenyér
        the   I   bake-PASTPART-1SG   bread
        "the bread which I baked"

    c. * az   anyám   szerette   kenyér
         the   mother-1SG   like-PASTPART-3SG   bread
         "the bread which my mother liked"

5.2. A left-peripheral NegP supplanting V-adjoined negation

A change in the distribution of the negative constructions also shows the gradual spreading of head-initial grammar. In Old-Hungarian texts we attest two negative constructions: a declining pattern, and an innovative construction, which is gradually supplanting the former alternative. The archaic pattern, which represents the majority in the first Old-Hungarian documents but soon loses ground to the innovative variant, contains the negative particle between the verbal particle and the verb. The elements of the ˈverbal particle–negative particle–V' string are always adjacent:

(41) *hogy   zent attÿanak   frater Rufinus* **megnem   mondottauala**
      that   holy father-3SG-DAT frater Rufinus PRT-not   say-PERF-3SG-be-PAST
      "that frater Rufinus had not said it to his holy father"   (Jókai C. (1370/1448) p. 51)

Jäger (2008, p. 92) analyzes a similar pattern in Old High German as the result of rightward V movement from a head-final VP to the head of a head-final NegP, resulting in a V right-adjoined to the negative particle ([$_{NegP}$ [$_{VP}$…Prt t$_i$] Neg+V$_i$]). In Old Hungarian, however, the negated verb precedes the auxiliary, and the ˈverbal particle–negative particle–V–Aux' order cannot be derived by head movement in a straightforward way. A more plausible analysis is to treat the negative particle as a modifier adjoined to the verb.

   In the innovative pattern of negation, the negative particle+verb complex is to be found in the left periphery. The verb precedes not only the verbal particle but also the VP adjuncts – see (42), which suggests verb movement to a left-peripheral NegP:

(42)   [$_{NegP}$ [**nem fyzettel**]$_i$ [$_{VP}$ *telyesseguel*   [$_{VP}$ **meg** **t**$_i$]]]

<div align="center">

not   paid   completely   up

</div>

"…you have not paid up completely"   (Jókai C. (1370/1448) p. 7)

The ˈverbal prt–negative prt–V' order illustrated in (41) has gradually been replaced by the 'negative prt –V–(X)–verbal prt' order illustrated in (42), but the S-curve of this change still has not completely straightened; the old pattern survives in Modern Hungarian *until* and *unless* clauses, and can optionally be used in *if* clauses and imperatives, as well:

(43) *Vártam, amíg   **meg nem érkezett.***

    waited-I until   PRT not   arive-PAST.3SG

    "I was waiting until he arrived."

5.3. Finite clauses replacing non-finite subordinate clauses

In the course of the Old and Middle Hungarian periods, we attest the slow disappearance of various non-finite clause types, and their replacement with finite subordinate clauses. The productive equivalent of the prenominal participial relative illustrated in (40a) is a postnominal finite relative clause introduced by a relative pronoun. These are the grammatical equivalents of the obsolate (40b) and (40c) constructions in Modern Hungarian:

(44) a. *az   a   kenyér, **melyet én sütöttem***

    that the   bread   which   I   bake-PAST-1SG

    "that bread which I baked"

    b. *az   a   kenyér, **melyet anyám   szeretett***

    that the   bread   which   mother-1SG like-PAST.3SG

    "that bread which my mother liked"

Adverbial participial clauses have also been mostly replaced by finite clauses introduced by a relative pronominal expression or a complementizer, as illustrated by subsequent translations of one and the same sentences of the Bible.

St John 1,29:

(45) a. *Masod napō kedig   lata   Janos Jezust   **ọ hozia iọvette***

    second day   COORD see-PAST.3SG John   Jesus-ACC   he to   come-ADVPART

"On the second day, John saw Jesus coming to him"   (Munich C. (1416/1466))

b. *Masod   napon lata   Janos Iesust   **hogy ew hozza iewne***

second day   see-PAST.3SG John Jesus-ACC that   he to   come-SUBJ.3SG

"On the second day, John saw Jesus that he would be coming to him"

(Gábor Pesthi, Novum Testamentum (1536))

St Matthew 13,6:

(46) a. **Nap kedig felkèluē** *meg hèuọlènc*

sun COORD rising   PRT burned-PAST-3SG

"The sun having risen, they burned." (Munich C. (1416/1466))

b. ***mykoron az   nap fel tamadot   wolna***,   *meg swte   ewket*

when   the sun up rise-PERF-3SG be-PAST PRT burn-PAST.3SG them

"When the sun had risen, it burned them."

(Gábor Pesthi, Novum Testamentum (1536))

The adverbial participle heading the embedded clause in (45a) had become completely obsolete by the Middle Hungarian period. The *-ván/vén* participle in (46a) has lost its flexibility and productivity; it is only used with a controlled PRO subject in Modern Hungarian, and it has an archaic flavor.

    As shown by Tóth (2010), infinitival object clauses have also lost ground to finite *that* clauses since the Old Hungarian period. The set of subject control verbs has become smaller; many verbs allowing an infinitival complement in Old Hungarian can only be used with a finite complement clause in Modern Hungarian. Compare a sentence of the 1416 Bible translation with its modern equivalents, first the corresponding sentence of the 1997 edition of the Bible (47b), then its literal modern translation (47c). (47d) illustrates that keeping the structure of the Old Hungarian sentence would be ungrammatical.

Judith 5,26:

(47) a. *ġondollakuala   oʄèt megoɟniec*

think-3PL-be-PAST him PRT-kill-INF-3PL

"they thought to kill him"   (Vienna C. (1416/1450))

b. *azt   mondták,   **hogy darabokra tépik.***

   it-ACC say-PAST-3PL that   pieces-into tear-DEF.3PL

   "they said that they would tear him into pieces" (Káldi-Neovulgata (1997))

c. *Azt   gondolták,   **hogy megölik***.

   it-ACC think-PAST-3PL that   PRT-kill-DEF.3PL

   "They thought that they would kill him."

cf.

d.* *Gondolták **őt   megölniük***.

   think-3PL   him PRT-kill-INF-3PL

   "They thought to kill him."

   Object control has almost disappeared; in Modern Hungarian it is only allowed by the verbs *lát* ˈseeˈ and *hall* ˈhearˈ. Compare the 15th and 16th century translations St Matthew 14,22:

(48) a. *Kènzèreite   iᶜ [Jézus] o̦ taneituanit   **a   aioc'kaba felmènnièc***

   force-PAST.3SG Jesus   he disciples-3SG-ACC the   boat-into   up-go-INF-3PL

   "Jesus forced his disciples to go up into the boat"   (Munich C. (1416/1466))

   b. *Ees mynd iarast   meg hagya   Iesus az ew tanytwanynak,   **hogy***

   and at.once   PRT say-PAST.3SG Jesus the he   disciples-3SG-DAT that

   hayora zallananak

   boat-on get-SUBJUNC-3PL

   "and Jesus told his disciples at once that they should get on the boat"

                                        (Gábor Pesthi, Novum Testamentum (1536))

The use of infinitival purpose clauses has also become more constrained. Compare subsequent translations of St Mark 5,14:

(49) a. *Ki   menenec   kedig   **latnioc***

   out go-PAST-3PL COORD   see-INF-3PL

   "they went out to see"   (Munich C. (1416/1466))

   b. *honnet   ky   iewenek   **hogy   meg latnak   a my***

where-from out   come-PAST-3PL   that   PRT   see-SUBJUNC-3PL what

tewrtynt   ***wala***.

happen-PERF.3SG be-PAST

"from where they came out so that they could see what had happened"

(Gábor Pesthi, Novum Testamentum (1536))

If we compare map 81 with maps 94 and 96 of the *Word Atlas of Language Structures* (Haspelmath et al. 2005), we find a strong correlation between SOV structure and the preponderance of non-finite adverbial and relative clauses, and SVO structure and the preponderance of finite adverbial and relative clauses. Hawkins's (2001) performance theory of word order provides an explanation for this correlation. The basic notion of Hawkins's theory is ʽConstituent Recognition Domain'. The CRD for a phrasal mother node M consists of the set of terminal and non-terminal nodes that must be parsed in order to recognize M and all immediate constituents (ICs) of M. In other words, the constituent recognition domain for a mother node includes the set of nodes that are minimally needed to recognize the category of the mother node, and to identify its major constituents. Hawkins claims that the human parser prefers linear orders that maximize the IC-to-nonIC (or IC-to-word) ratios of CRDs, hence the basic orders assigned to the immediate constituents of phrasal categories by grammatical rules will be those that have the most optimal ratios for immediate constituents. The shortest domain for the recognition of the matrix VP containing a clausal argument or adjunct must contain the matrix verb and the subordinator of the embedded clause. In an SOV sentence, this domain is shortest if the subordinator is a participial suffix on the embedded verb, adjacent to the matrix verb. In an SVO sentence, on the other hand, this domain is shortest if the subordinator is a complementizer at the left edge of the embedded clause, adjacent to the main verb.

5.4. Postpositions reinterpreted as bound morphemes

In early Old Hungarian, practically all local relations were expressed by head-final PPs. By the Middle Hungarian period, about a dozen of those postpositions have become bound morphemes, i.e., the PPs have turned into adverbial KasePs. Bound morphemes, however, fall within the scope of the Mirror Principle, that is, the ʽcomplement – bound morpheme' order is the morphological mapping of a syntactic ʽhead – complement' order. Compare some local adverbial PPs from an 1055 Hungarian fragment and from *Funeral Speech and Prayer* with their present-day equivalents:

(50) a. *feheruuaru **rea***   *meneh*   *hodo*   *utu **rea***   (Tihany Foundation Charter (1055))

       Fehérvár-onto   going   military road-onto

       *Fehérvár-**ra***   *menő*   *hadi*   *út-**ra***   (Modern Hungarian)

       Fehérvár-SUBLATIVE going   military road-SUBLATIVE

       "onto the road going onto Fehérvár"

   b. *ez*   *muncas*   *vilag-**bele***   (Funeral Speech and Prayer (1192-95))

       this   laborious   world   into

       e   *munkás*   *világ-**ba***   (Modern Hungarian)

       this   laborious   world-ILLATIVE

       "into this laborious world'"

   c. *ez*   *homus*   *vilag*   *timnuce-**belevl***   (Funeral Speech and Prayer (1192-95))

       this   treacherous   world   prison-3SG-from

       e   *hamis*   *világ*   *tömlöcé-**ből***   (Modern Hungarian)

       this   treacherous   world   prison-3SG- ELATIVE

       "from the prison of this treacherous world"

   d. *ez*   *scegin*   *ember*   *lilki*   ***ert***   (Funeral Speech and Prayer (1192-95))

       this   poor   man   soul-3SG for

       e   *szegény* *ember* *lelké-**ért***   (Modern Hungarian)

       this   poor   man   soul-3SG-CAUSALIS/FINALIS

       "for the soul of this poor man"

Although *bele, belevl* and their nominal complements are spelled as one word in (50b) and (50c), their postposition status is shown by the fact that – unlike case endings – they are two-syllable long, and they still have not developed their back-vowel allomorphs required by Hungarian vowel harmony. These postpositions derived from the noun *bél* ʿinternal partʾ supplied with different archaic case suffixes, and their internal structure could still be recognizable around 1200.

   In sum: As was argued in section 3, the basic change from SOV to Top Foc V X* must have taken place in Hungarian before the end of the 12th century, the beginning of the documented history of the language. This change appears to have initiated the restructuring of other parts

of grammar, as well, from head-final to head-initial. The V–auxiliary order indicative of a head-final TP was replaced by the auxiliary–V order. The head-final position of the interrogative complementizer disappeared. The interrogative complementizer, obligatory in embedded *yes-no* questions, has survived as an interrogative particle attached to the V preposed into T in the left periphery. The negative particle, originally acting as a negative modifier attached to the V, has assumed an operator position in the left periphery. Prenominal participial relatives have been replaced by postnominal relative clauses. Non-finite clauses, in general, have lost ground to finite embedded sentences. Interestingly, some of the obsolescent head-final constructions have only lost their flexibility and productivity, and still survive as linguistic fossils. Many postpositions have turned into morphological case endings, which resulted in the reanalysis of head-final PPs as head-initial syntactic structures subjected to the Mirror Principle..

6. Conclusion

The paper has claimed on the basis of evidence of various kinds that Hungarian underwent a word order change from SOV to Top Foc V X* prior to its documented history beginning at the end of the 12th century. It has been argued that the most likely scenario of this change was the spreading of right dislocation, and the reanalysis of right dislocated elements by new generations of speakers as arguments in situ (a possible route of change from SOV to SVO also according to Lightfoot 1979, p. 385). In Hungarian – as opposed to Khanty and Mansy, its sister languages – right dislocation was facilitated by the extension of differential object marking to all direct objects, i.e., the systematic morphological encoding of grammatical functions. In the Uralic family, only some of the European branches, surrounded by Indo-European languages for more than a millenium, have changed from head-final to head-initial. This raises the possibility that their change was supported by areal pressure.

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