Slavic languages are Type 3 languages: Replies

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We are very grateful to our commentators for their substantive reactions to our target paper and we appreciate the opportunity of responding in detail and clarifying several intricacies. The six comments will be addressed one by one in the following six sections.

1. Paola Merlo & Giuseppe Samo – "Calculemus!"

To emphasize that we are extremely grateful to Paola Merlo and Giuseppe Samo (M&S) for having devised and run computational experimental tests of two central predictions of our theoretical claim is an understatement. What they did is unique. Their experimental tests have been carried out so promptly that they are jointly published with the paper. This was Wundt's (1888) aim when he laid the scientific foundations of psychology. Here is his trendsetting advice for downgrading and replacing introspection as a valid data source.

"*It is totally in the hands of psychologists to take care that these defects disappear more and more. The only thing they have to do is to seize the experimental method.*"[1] And he adds: "*Presently, there are two circumstances that stand in its way. One is arrogance. There are still people who consider experimenting a philistine art which one must not deal with, if one doesn't want to risk losing the privilege of residing in the pure ether of thought.*" Wundt (1888: 308), translated[H&S].

In Wundt's time, linguistics was a model of methodological rigor[2], whereas psychology had just been founded as an academic discipline. Today, the introspectionism criticized by Wundt, which in psychology has been completely abandoned and replaced by objective data assessment, is still commonplace in linguistics, although it is of heuristic value at best.

M&S "*seize the experimental method*" and demonstrate how to apply it in discerning a theoretical issue. If Slavic languages are T3 rather than [S[VO]], this must show in a measurable global distance between Slavic sentence structures and the structures of uncontroversial [S[VO]] languages. Second, if T3 is the diachronic predecessor of Romance [S[VO]], the diachronic course from T3 Latin to modern Romance languages must be accompanied by a significantly decreasing entropy score. Hypothesis 1 predicts that the structural distance between Slavic and T3 is smaller than between [S[VO]] languages and Slavic. Hypothesis 2 predicts that due to its T3 qualities, Old French is structurally halfway between Vulgar Latin (T3) and modern French [S[VO]]. The hypotheses are confirmed and *"as predicted by the target paper, the entropy of Old French is comparable to the entropy for Czech […] and Slovenian"*. This also re-confirms the findings of Kuboň (et al. 2016), who report that in all measures calculated by them (viz. max-min, Euclidian distance, cosine similarity, and entropy), Czech, Slovak, and Slovenian go together with Latin and Ancient Greek in their highly positive scores on word order freedom.

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[1] „*Es ist ganz in die Hand der Psychologen gegeben, dafür zu sorgen, dass diese Fehler mehr und mehr ganz verschwinden. Es ist dazu nur das eine nötig […] sich der experimentellen Methode selber* [zu] *bemächtigen.*"

[2] See for instance the Neogrammarian maxim of *exceptionless sound laws*, posited by Karl Brugmann and Hermann Osthoff in 1878, with Verner's law from 1875 as a showcase.

The starting point of the development of Romance languages are varieties of Latin known as "Vulgar Latin", that is, varieties of spoken vernacular. Arguably, these were varieties of a T3 language. Suffice it to mention that word order variation of the verb relative to objects and the subject seems to have been common, also in the classical period of Latin; see Danckaert (2015). According to Ledgeway (2012: 228-229, Table 5.3), within three centuries, the predominant OV order gives way to VO, with 71% VO patterns in the texts of Claudius Terentianus (ca. 120 AD). We cannot go into details of the syntax of vulgar Latin here and the problem of the notorious shortage of text sources. Adams (1977: 68-69) notes that OV and VO orders are well documented in the texts[3] analyzed by him. Although SVO is frequent, SOV and VOS orders occur. OVS and OSV are rarely attested (Adams 1977: 74).

The grammars of the transition periods, such as Old French, still contain many T3 structures which get gradually sieved out and replaced during the ongoing evolution[4] of these grammars in the following half millennium, both in the Romance as well as in the Germanic family. Therefore, it is only consequent for us to predict that the outcome of the very same studies devoted to Old Germanic languages in comparison to middle and modern varieties of Germanic languages will be similar to the outcomes for Romance, modulo the VO/OV split in the Germanic family.[5]

2. Matthew Dryer –Inclusion versus exclusion

We greatly appreciate Matthew Dryer's (MD) contribution to the debate of type assignment concerning (his) criteria of *inclusion* and (ours of) *exclusion*. Typologists standardly ground their decisions on inclusion, that is, shared properties. In the target paper, we intentionally employ only criteria of exclusion, that is, properties that languages of a particular type *do not* display. At first glance, such an alternative appears to be but different perspectives on the same issue. Upon second thought however, it turns out that the alternative perspectives demonstrably lead to contradicting results. It is this apparent inconsistency that deserves attention and needs to be resolved. MD argues that Russian qualifies as SVO because it *shares* what seems to be SVO core properties. We, on the other hand, argue that Russian must not be classified as an [S[VO]] language because quite a few grammatical properties are inconsistent with other core properties of this very type. Let us therefore start with the inclusion relation (1).

Let L_i be a natural language, P_{1-n} a conjunction of n grammatical properties, and W_j a word order type. An inclusion-based type assignment rests on the implication (1a) or its equivalent form (1b).

(1) **Inclusion**: a. If $P_{1-n}(L_i)$ then $L_i \in W_j$ b. If $L_i \notin W_j$, then $\neg P_{1-n}(L_i)$

If (1) is to serve as the premise of a valid inference (by modus ponens), the premise first of all must be empirically true. This, however, is not guaranteed in the context we are dealing with.

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[3] Letters of Claudius Terentianus to his father from the time of the middle of the 2nd century A.D.

[4] Evolution of grammar is a case of Darwinian evolution in the domain of cognitive evolution; see Haider (2021).

[5] In the ranking of a sample of 23 languages in Kuboň (et al. 2016), from freely to strictly ordered, Latin is top, modern German is in the midfield and Dutch in the lower third. North-Germanic languages are not part of their sample.

Languages of a given type may happen to partially share properties of other types. This invalidates inferences based on the inclusion condition. Here is an example.

Afrikaans, Amharic, Dutch, Frisian, German, Kurdish, or Persian, to name but a few languages, are head-final for verbal heads of phrases (SOV), but noun phrases and PPs are head-initial. Genitives follow the noun. Relative clauses follow the noun in most of these languages. Thanks to Dryer & Haspelmath (2013), these facts can be retrieved from the WALS database. What these languages illustrate is a so-called disharmonic phrase structure organization. In Dutch, moreover, the most frequent and in many cases the only grammatical relative order of auxiliaries ('dominant') is a relative order as in English. So, according to an inclusion criterion based on the four properties adduced by MD, Dutch would qualify as an SVO language. Descriptive grammarians however insist that it is an SOV language with a superimposed V2-property of the finite verb in main clauses. Why would grammarians insist on Dutch being SOV? They factorize the web of properties, subtract the interfering irrelevant ones (e.g. the V2 property) and identify the bare SOV structure.[6] It surfaces most clearly in non-finite structures. No unquestionable [S[VO]] language *obligatorily* places nominal objects in front of the non-finite main verb, and no unquestionable SOV language places them after the base position of the verb.

(2)   a. iemand de oplossing (te) vertellen   [compare: (*to*) tell someone the solution]
           someone_{IO} the solution (to) tell
        b. iemand de oplossing verteld   [compare: (*has*) *told someone the solution*]
           someone_{IO} the solution told_{past-participle}

In sum, an inclusion criterion is fully reliable only if the adduced criteria are necessary *and* sufficient for the given type, or in other words, if no other type is compatible with the selected criteria. This is not the case for the set of four properties[7] adduced by MD. Such indeterminacies reduce the discriminatory as well as the predictive power of typological classifications.

"Dominant word order" is a case in point. The way SVO is defined in typological surveys is not selective enough:[8] „*Where a language is shown* […] *as having a particular order as the dominant order in the language, this means that it is either the only order possible or the order that is more frequently used*." (Dryer 2013b). An *either-or* condition ties together two mutually exclusive properties, namely languages with word order variation and languages with strict word order. So, only because of such a definition, English ends up as a member of the same type as Russian, although most of the word order variants of Russian are ungrammatical in English, and although the English word order pattern is just one of the many grammatical patterns of Russian. The two grammars are obviously disjoint but the languages allegedly belong to the same word order type.

T3 languages are wholly compatible with MD's four properties and this is what we claim for Slavic languages, too. We base our type assignment of Slavic languages exclusively on

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[6] WALS (Dryer 2013a) adopted the opposite strategy: "*Where languages differ in their order between main clauses and subordinate clauses, the order in main clauses is used to classify them.*"

[7] If zoologists classified fish by exactly four criteria, namely aquatic vertebrate, living wholly in water, with streamlined body, and with fins, this would include mammals such as whales and dolphins. The exclusion criterion "*not endothermic*" would eliminate them, however.

[8] For this reason, Hawkins (1983:16) dismisses the S-V-O order pattern as a type indicator altogether.

exclusion criteria. The set of properties we adduce is not shared by the crucial type, that is [S[VO]]. Hence the exclusion condition (3) is factually valid and an inference is logically sound. According to the set of criteria we adduced, Russian cannot be assigned to the [S[VO]] type since each property is a property that disqualifies a language for this type.

(3) **Exclusion** a. If P_{1-n} (L_i), then $L_i \notin W_j$ b. If $L_i \in W_j$, then non $\neg P_{1-n}$ (L_i)

In the final paragraph, MD concludes that "*there is a way to explain why Russian exhibits the VO characteristics noted without saying that the language is syntactically SVO.*" We totally agree since we think that this is exactly what we have tried to achieve. T3 languages subsume grammatical properties shared by VO languages as a subset of their properties. This is also the reason why T3 languages have hitherto not been generally acknowledged as a type of its own.

3. Jacek Witkoś – On binding & scope, and an invitation for testing a prediction

"*It is a pleasure to comment on*" the comment of Jacek Witkoś (JW). His discussion of binding and scoping effects associated with fronting of binders or bindees not only shows that Polish and German behave alike in this respect and unlike the showcase for SVO, namely English. This is what Frey (1993) has studied and theoretically modelled in detail by contrasting German with English.[9] It is summarized in Haider (2010: 150-152). In a well-formed binding relation, a displaced binder is always the chain head viz. the highest element of a movement chain. Scoping, on the other hand, can operate on every chain link (Frey 1993). A quantifier Q can attain a wide scope reading with respect to an expression E, if Q c-commands at least one link of the chain of E; see also Aoun & Li's (1993) scope principle. This is what JW confirms for Polish too, with his examples (27) and (28), repeated here as (4) and (5), respectively.

(4) my_1 pokazaliśmy [dwóm $kolegom_3$][każdy plik listów od siebie $nawzajem_{1/?3/}]_2$
        we showed two $friends_{DAT}$ every $folder_{ACC}$ of letters from each other
        'We showed two friends every folder of letters from each other. (two > every, *every > two)

(5) my_1 pokazaliśmy [dwa listy od siebie $nawzajem_{1/*3/}]_2$ [każdej grupie $kolegów]_3 t_2$.
        we showed two $letters_{ACC}$ from each other every $batch_{DAT}$ of friends
        'We showed two letters from each other to every batch of friends. (two > every, every > two)

In (5), scrambling produces alternative scope domains. On the one hand, the numerical quantifier may be assigned wide scope since the scrambled direct object c-commands the dative DP with the universal quantifier. On the other hand, the universal quantifier may be assigned wide scope because the dative object c-commands *the trace* of the scrambled accusative. In other words, the *base position* (= trace position) of the scrambled object is in the c-command domain of the dative object and therefore, the numerical quantifier is in the scope domain of the universal quantifier.

It is this set of circumstances that offers a possibility of directly testing the T3 *V-positioning* hypothesis against the *DP-fronting* ('scrambling') hypothesis of the standard Generative framework because the predictions for scopal ambiguities differ in a crucial case, namely (6a). In the SVO & scrambling analysis of preverbal objects in Slavic languages (6b), the preverbal objects

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[9] He deserves being credited for it, but the international recognition of priority suffers from the language barrier.

are in derived positions. So, each DP in (6b) c-commands the trace of the other DP. Consequently, two readings are possible. Each quantifier alternatively qualifies for wide-scope.

In the T3 analysis (6c), however, the two objects are in base order and in base positions, with the verb in the foot position of the VP. So, the predicted scope relation for (6a) is the same as for (4), namely *unambiguous*. For scope-taking, it is irrelevant that the verb in (4b) is in a higher position in the T3 V-chain than in (6c).

(6)   a. …. Dat … Acc … V …
      b. …. [Dat$_j$ … [Acc$_i$ … [V [t$_j$ ... [t$_i$ …]]]]]$_{FP}$ (DP-fronting: objects 'scrambled' across V)
      c. …. [Dat … [Acc … [V …]]]$_{VP}$ (T3 structure: objects in base positions)

In sum, if the SVO-based 'scrambling' analysis (6b) is correct, (6a) will be just as scope ambiguous as (4), which we doubt, however. We trust in our theory and predict that adequately chosen instances of (6a) – ceteris paribus[10] – will turn out as not scope ambiguous.

4. Artemis Alexiadou – On the role & significance of subject expletives

We are thankful to Artemis Alexiadou (AA) for highlighting one of the syntactic core diagnostics for separating [S[VO]] clause structures from other types, namely the *VP-external, obligatory structural subject position* of [S[VO]] clauses. Since this structural position must not end up as vacant and syntactically unemployed, the insertion of an expletive is the last resort measure for saving grammaticality in otherwise subjectless [S[VO]] sentences. The obligatory expletive is just the superficial indicator of a crucial difference between the sentence architecture of [S[VO]] and of other types.

In our paper, the focus is narrowed to what we take to be the limiting case. A limiting case is a constellation with as little as possible interference. In our case, the limiting case is the passive of a verb with a single argument, i.e. its subject. When such a verb is passivized, the subject argument gets syntactically neutralized. The result is a clause without any syntactically available argument. This is the limiting case, but of course and by far not the only context for identifying obligatory expletive subjects. Here is once more a selection of data illustrating the predicted contrasts between SVO and SOV, with a null-subject property (7c,d) and without (7e,f). The author of (7f) is Jean de La Fontaine (Contes I.i, 518).

(7) a. dass gelacht wurde   German
       that laughed was   (SOV: no expletive)
    b. Waar *niet wordt gelachen*, wordt niet geleerd'[11] Dutch
       where not is laughed, is not taught   (SOV: no expletive)
    c.*Qui è stato lavorato troppo poco   Italian
       here is worked too little   (SVO, no expletive available)
    d.*that (it)/(there) was laughed   (SVO, no expletive available)
    e. at der blev danset og festet   Danish
       that there was danced and partied   (SVO: obligatory expletive)

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[10] The test items should be free of scope-biasing factors such as specific information structure conditions like focus on one of the two objects, and the situational content should not bias a reading with a particular scope.

[11] https://ikwerkaanwerkplezier.nl/professional/blog/stress-burnout-en-overspanning/drie-tips-om-leren-leuker-te-maken-voor-jezelf

    f. *Il* fut dansé, sauté, ballé.   French
       it was danced, jumped, danced.   (SVO: obligatory expletive)

German and Dutch are OV. The SOV clause structure neither needs nor admits a VP-external subject position since all arguments find their place within the verb projection in the same directionality domain, namely in preverbal positions. Consequently, there is no room for an expletive that takes care of an otherwise empty obligatory subject position (Haider 2014, 2019). Swedish and French are testimonies for SVO languages with an obligatory subject expletive. In both cases the expletive is homonymous with a third person singular pronoun. Such a pronoun would be turned into a null pronoun in pro-drop languages. But Romance pro-drop languages, represented by Italian (7c), supply evidence[12] sufficient for debunking the oxymoronic idea of an *"empty expletive"* as a theoretical fiction that does not materialize in languages. Overt *expletive* subjects, however, must not be confounded with *semantically empty* subject arguments (for details see Haider 2019) and their null versions, as in the Italian example (8a).

(8)a. Non se ne parla affatto   Italian (*si* passivante)
      not REFL of speak in-fact
      'In fact, one does not speak about it'
   b. Om det pratas *det* mycket.   Swedish (*s*-passive)
      about it speak$_{Passive}$ EXPL much
   c. Darüber spricht *es* sich leichter.   German (middle)
      about-it speaks *it* REFL easier
   d. Darüber wird (*es) gerne gesprochen.   German (passive)
      about-it is (it) talked gladly talked

The examples in (8a-c) are grammatically closely related. Both, the Italian impersonal *si*-construction (8a) and the Swedish *s*-passive (8b) are diachronic successors of a middle construction illustrated by German (8c). The *semantically empty subject* "es" ('it') is obligatory in German intransitive middles (8c) but "*es*" is ungrammatical as an expletive in subjectless passives (8d). In Italian, the semantically empty subject is a null subject due to the null-subject property (*pro-drop*). This is the key for understanding the contrast between the passive (9a) and the *si*-construction (9b) in a Romance pro-drop language.

(9)   a. * È stato parlato di te.   Italian
        has been talked about you
   b.   Si e parlato di te.

If the standard passive (viz. *be*-auxiliary plus perfect participle) is applied to an intransitive verb in a pro-drop language, as in (9a), a pronominal expletive would be phonetically null, because of the pro-drop property. However, *null expletives* would be unidentifiable. A semantically empty subject as in (9b), on the other hand, can be identified by virtue of being related to an argument slot of the verb. Arguments are specified in the lexical entry of the verbal head. So in (9b), the counterpart of the German 'es' ('it') in (8c) is the null-subject of middle constructions and its successor construction in Italian.

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[12] This generalization is established in Haider (1987) and discussed, for instance, by Grewendorf (1990: 310); see also Haider (2020: 395). AA re-confirms that "*pro-drop languages lack null expletives, as argued for in detail in Alexiadou & Anagnostopoulou (1998)*".

It is crucial to distinguish between expletives and semantically empty subject in Slavic languages, too. Perlmutter & Moore (2002) as well as AA, who follows them, do not seem to honour this difference. The subject of impersonals such as (10a) is a null pronoun representing the semantically empty subject argument. This must not be confused with a syntactically argumentless intransitive passive, as illustrated in the target paper by example (10b).

(10) a. Souseda ranilo.   Czech

neighbor$_{acc}$ injured$_{neut}$

'The neighbor was injured.'

  b. czy było rano sprzątane   Polish[13]

whether was cleaned in-the-morning

'whether cleaning took place in the morning'

  c. Die Boote hat *es* in Stücke gerissen

the boats$_{Acc}$ has$_{sg}$. it$_{Nom}$ in pieces ripped

'The boats broke in pieces'

  d. Bátana hefur broti í spón.

boats$_{Def.-Acc}$ has$_{sg}$. broken in pieces

(10a) involves a *null subject*, but (10b) is *subjectless*. The accusative on the object in (10a) is the indicator of the presence of a null subject.[14] In undisputed SVO languages, the subject position of (10b) would have to be filled with an expletive or the sentence would be ungrammatical. The null subject in (10a) is the null variant of the semantically empty subject "es" ('it') in the impersonal variant of many transitive verbs in German (10c). (10d), from Zaenen & Maling (1990:145), is the Icelandic counterpart of (10c), with a null pronoun for the semantically empty subject, as with weather verbs. Both in Czech as well as in other Slavic languages, and in Icelandic, too, weather verbs are the simplest instance of verbs with a *semantically empty null subject* in these languages. AA's own examples (8) are not representative of null *expletives* but of the semantically empty subject *argument* of meteorological verbs in a null-subject option.[15]

Having explicated this often neglected but indispensable distinction once more – viz. overt expletive subject vs. overt semantically empty subject argument, which, in pro-drop languages, is a null subject (see Haider 2019), we are ready to delve into the debate proper.

AA cites Pitteroff & Schäfer as authorities for the ungrammaticality of "*strict*" intransitive passives in French. According to them, a bare intransitive passive such as (7f) is ungrammatical, which, by the bye, implies an imperfect command of French by La Fontaine. Anyway, we do not feel compelled to accept their rating. Instead, we prefer the evidence of grammars and large corpora. As for grammars, Rowlett (2009: 46) explicitly states "*This conclusion is further*

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[13] Example from the Polish National corpus, provided by an anonymous reviewer: IPIPAN_1301920030513.

[14] In nominative-accusative case systems, accusative assignment presupposes nominative assignment. In the absence of a nominative, the object is assigned nominative, but not accusative; see Haider (2000b), and Szucsich (2006) for a discussion of Russian adversity impersonals.

[15] Perlmutter & Moore's (2002) ungrammatical examples of Russian non-raising contexts with phasal verbs (*begin, stop, continue*), cited by AA as (7b,c), do not demonstrate obligatoriness of raising. They are ungrammatical for independent reasons. There is neither a licit context for the dative nor the nominative. However, if the raising/phasal verb agrees with the nominative in AA's (7c), the outcome is grammatical, without obligatory raising:

(i): Načal Boris rabotat' na ètom zavode. (Russian)

began Boris work at this factory

'Boris began to work at this factory.'

supported by the existence of impersonal passives based on intransitives, as in (87)." His example #87 is AA's starred example, viz. "*Il a été dansé*". Boer (1954: 55, §68)[16] and Heriaut (1989: 164) are earlier testimonies for the very same example, and Miclosich (1883: 81) is an even earlier one. They all refer to the very specimen as grammatically well-formed French. Corpus searches readily produce tokens of this expression, too. Here (11) are two more examples of the same structure as La Fontaine's (7f).

(11) a. Il a été dansé et chanté.[17]

     Expl was danced and sung

     'There was dancing and singing'

  b. Il a été marché, piétiné, martelé par une foultitude de clients.[18]

     Expl was walked, trampled, hammered by a multitude of customers

Helland (2000: 88) states "*Au contraire, les verbes intransitifs (ou inergatifs) comme courir, marcher, nager, tousser, etc., qui possèdent un argument externe, se prêtent à la passivation.*" His examples contain cases of a bare or "strict" (see above) passive of intransitives.

AA endorses Pitteroff & Schäfer's conjecture "*that the overt element in Spec,TP in French or its covert counterpart in Russian is not a real expletive and needs to associate with an argument*". This is contrary to the facts. *First*, there is no compelling evidence but counterevidence for the assumption that "il" associates with something in (11) and (7f). Syntactically, "il", unlike English "there", does not behave like an element that needs an associate, as the agreement contrast between the parallel constructions in English and French in (12a,c) documents. "*There*" needs an associate from which to copy agreement features (12a,b). "*Il*" does not associate with a DP (Haider 2019: 28). In (12c) and in contrast with (12a,b), the finite verb agrees with the pronominal expletive and not with the postverbal argument, as number agreement reveals.

(12)   a. There *have$_{pl.}$* emerged some profound questions$_{pl.}$

      b. There *has$_{sg.}$* emerged a profound question$_{sg.}$

      c. Il est/*sont apparu/*s des disparités   French

        it is$_{sg.}$/*have$_{pl.}$* appeared/$_{pl.-agr.}$ some disparities

      d. Des disparités *sont*/*est apparues

        some problems have$_{Pl.}$/is$_{sg.}$ appeared

The fact that '*there*' is associated with a post-verbal argument disqualifies it, by the way, as an expletive in the English intransitive passive (Haider 2019: 35-36). However, if we look more closely, it is not the item "*there*" but the structural subject position that is associated with the donor of agreement features, and "*there*" cannot provide such features by itself. This is evident PP-inversion data that can easily be retrieved from corpora.[19] In French, the expletive is a pronoun, and pronouns provide agreement features, namely 3rd sg. in the case of 'il'. *Second*, if "*a covert counterpart*" of a lexical expletive were a grammatically available option, this would

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[16] His example is differently tensed (passé simple): *Il fut dansé* ('It was danced')

[17] http://www.decotidien.com/sciences/Sur-des-Bequilles-au-Kilimandjaro-Il-est-encore-une-Jambe-et-cela-peut-vraiment-beaucoup-h6232.html

[18] *Le Soleil* , Dec.15th 2001, p. E2: https://numerique.banq.qc.ca/patrimoine/details/52327/2900749, 22.2.2022.

[19] i. In its place *has* emerged a multipolar global society.

  ii. Against the British and Dutch rights-orientated approach *have* emerged two other alternative models.
      https://pubmed.ncbi.nlm.nih.gov/11080990/

entail that Romance null-subject languages passivize intransitive verbs, which is contrary to the facts, as AA admits (see fn. 12 above). The same considerations that apply to French apply to Russian. An "empty expletive" is a fictitious concept.

Let us turn now to Icelandic as the oddball among North Germanic languages with respect to subject expletives. As for Icelandic impersonal passive, there is a clear contrast and it supports our theory. In embedded clauses, Icelandic employs an expletive, see (13a) from Thráinsson (2007: 355), (13b) from Maling & Zaenen (1978: 491), and (13c),[20] while German forbids it, as the direct counterpart (13d) illustrates.

(13) a. Þeir segja [að *það* verði dansað í brúðkaupinu].
    they say that EXPL will-be danced at wedding-the
   b. Hún sagði [að *það* hefði verið dansað í gær].
    he said that EXPL has been danced yesterday
   c. En ég man [að *það* var dansað].
    but I remember EXPL was danced
   d. Er sagte dass (*es) getanzt wurde auf der Hochzeit
    they say that (EXPL) danced was at the wedding

Second, there is an essential difference between Icelandic and other SVO languages, such as English or Romance languages which accounts for the apparent absence of a subject expletive in V2 clauses. The difference concerns the syntactic properties associated with the structural subject position. In Icelandic, the subject argument is not bound to end up in the VP-external structural subject position. Nominative may be assigned VP-internally and the subject may remain in-situ, while a non-subject argument is placed into the structural subject position. This is the renowned and well-studied "quirky subject" property of Icelandic. What this shows is that in Icelandic, the structural subject position is not *obligatorily* involved in case-management. It is a *structurally* obligatory, VP-external position that is open for the subject, or, alternatively, in case the subject is a lower ranked argument, for the higher ranked argument, as in (14a), Thráinsson (2007: 292). In (14b), Thráinsson (2007: 276), the object is not fronted and an expletive serves as the dummy subject for the subject position and has been raised to Spec-C.

(14) a. Hafa honum fyrirgefist *allir glæpirnir*?
    have$_{pl.}$ him$_D$ been-forgiven$_{pl.}$ *all crimes$_{Def}$*-Nom.pl.
   b. Það var barið barn.
    there was hit$_{(n.sg.)}$ child$_{(N/Asg.n.)}$

The remarkable property of Icelandic in this respect is the fact that even a *trace* of virtually anything that can be fronted to Spec-C can also serve as a filler for the spec-T position.[21] This is a peculiarity, but Icelandic is not the alleged exception to the structural subject requirement of SVO languages. It is because other items and especially the trace of fronted items can serve as fillers as well that Icelandic does not always present an expletive in the otherwise empty structural subject position. The overall outcome seems to be clear cut: Subject expletives are an

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[20] https://timarit.is/page/6840071#page/n1/mode/2up [24.4.2022]
[21] Thráinsson (2007: 330) notes "*similarities between Stylistic Fronting (SF) and the overt expletive*" and "*All this may seem to suggest that the elements fronted by SF and the overt expletive have a similar role.*" (p. 331). One instance remains unaccounted for, namely the absence of an expletive in the position following the finite verb in subjectless V1 questions; see Thráinsson (2007: 312).

[S[VO]] property. They are *principally* absent in OV and T3 languages, and this is what the data show.

Finally, an aside on modern Greek. We learn from a native source, viz. Tzanidaki (2016: 10, 47) that all six permutation variants of subject, object and verb in a declarative clause such as (15) are truth-conditionally equivalent and grammatically well-formed.

(15)   Latrévi [ton iperealismó] [i Antigóni]
        adore$_{3s}$ [the surrealism]$_{acc}$ [the Antigoni]$_{nom}$
        'Antigone adores hyperrealism'

Given this fact, we wonder how sustainable the final message in AA's comments will be, which states that "*it is uncontroversial that Greek is a VO language*". T3 seems to be at least a plausible alternative.

5. Eric Fuß – Early Germanic is not Slavic.

Readers should not be perplexed finding themselves confronted with a treatise on Old High German in a volume devoted to Slavic languages. The subject is well-chosen. Arguably, T3 is the clause type of early stages of Germanic languages, too. So, we are grateful to Eric Fuß for contributing his viewpoint. Since readers are not assisted by background information in the target paper, a few remarks may be of help.

Let us do away with a potential misunderstanding first of all. The presupposition of the title question – "*Early German = Slavic*" – is not what we claim. Early German and modern Slavic languages aren't grammatical twins, but as proposed in Haider (2013, ch. 5.4) and (2014), Slavic languages and the Old Germanic languages, too, are T3 languages. Such languages can be as diverse as the class of languages with an [S[VO]] clause structure, but they share the core properties of the respective type. Relevant is the following. If a given type assignment is empirically adequate, languages of a given type are expected and predicted to share core properties of that type unless independently ascertained factors interfere, not more and not less.

Let us start with an easily accessible feature, namely word order variation. It is commonplace that classical languages, viz. Ancient Greek, Latin, and Sanskrit, display this property beyond doubt. Furthermore, it is handbook wisdom that Old Germanic languages display ample word order freedom. Faarlund (1994: 54, 63) reports that "*Old Scandinavian generally has a rather free word order. This is true also at the phrasal level*" and "*The sentence in Old Scandinavian is characterized by […] a relatively free word order, in the sense that the relative order of phrases in terms of grammatical function is variable. The order of elements in terms of discourse function, on the other hand, is rather fixed.*"

According to Van der Wal & Quak (1994:105) "*Word order in Old High German and Old Saxon was rather free. The modern SVO or verb-second order in unmarked declarative sentences is by no means obligatory in the earliest texts.*" The period of word order freedom extends well into the so-called 'middle' periods of each Germanic language. In these periods, the directionality of the verbal heads became fixed. This can be studied best in the Germanic family, with their split into an OV and a VO group of languages (Haider 2014).

As for the theoretical coverage, it seems I have not been successful in expounding the sharp difference between competing accounts in section 3 of Haider (2014), otherwise EF could not have misunderstood it when writing that my "*approach in terms of Variable Head Positioning (VHP) seems to be very similar in spirit to the Double Base Hypothesis (DBH) proposed by Susan Pintzuk*" and "*moreover, the approach by Pintzuk is embedded under a general theory of language change in terms of Grammar Competition (Kroch 1989), which captures quantitative and variationist aspects of word order change.*"

In fact, the claim presented in Haider's paper is the very opposite. First, grammar competition[22] between VO and OV in a stage of English is implausible since it is not restricted to English. The very same patterns that motivated the grammar-competition conjecture for Middle English are found in any other Germanic language from the Old to Middle Germanic periods. So each and every speaker of a Germanic language would have had to be bi-grammatical, constantly switching between two grammars. Whoever is happy with such a theory is free to endorse it. We don't, since it is too far from plausible; see the discussion in Haider (2014).

Second, even the Old-to-Middle English data fail to fit Kroch's and Pintzuk's double-base hypothesis. If they fitted, we would be able to neatly factorize the data into two complementing subsets, namely SVO and SOV structures. But, this is not the linguistic reality. What we see is the complete array of T3 structures (16). The proponents tend to overlook the attested word order patterns that are ungrammatical both in SOV and in SVO, but licit in T3, viz. (16a,b). This is the crucial piece of evidence, and it is discussed at some length in Haider (2013 ch.5) and (2014). For ease of reference, a minimally contrasting set is repeated here:[23]

(16) a. Se mæssepreost sceal [mannum [*bodian* þone soþan geleafan]]
      the priest must [people [*preach* the true faith]]

   b. þæt hi [urum godum [*geoffrian magon* ðancwurðe onsægednysse]]
      that they our god *offer may* thankful offering

   c. Ac he sceal [þa sacfullan *gesibbian*]
      but he must the contenders *reconcile*

   d. Se wolde [*gelytlian* þone lyfigendan hælend]
      he wanted *humiliate* the living saviour

(16a) and (16b) illustrate the *object-V-object* order variant that is familiar from T3 languages (see Slavic). In (1a,b), the indirect object precedes, the direct object follows the verb. This order is ungrammatical in SOV as well as in SVO languages, such as late Middle English and modern English. (16c) and (16d) illustrate the head-final and the head-initial option for the VP of a T3 language, respectively. (16) represents a set of serialization variations for the main verb in a T3 grammar. Only (16c) and (16d) are covered by the "competing grammars" conjecture. The crucial orders (16a,b) remain unaccounted for. They do not fit since they are neither SOV nor SVO orders.

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[22] The "double base hypothesis" assumes that speakers dispose of two independent grammars and switch back and forth between them in a kind of grammatical code switching, while permanently engaged in a duel of grammars, as Myers-Scotton (1993) entitles it.

[23] The respective sources of (16a-d) are Ælet 2 (Wulfstan1) 175, ÆC Hom I, 38.592.31, Ælet 2 (Wulfstan1) 188.256, and Ælet 2 (Wulfstan1) 55.98.

The "general theory" of grammar change that, according to EF, is missing, is the theory presented in Haider (2014), which characterizes Germanic SOV and SVO as successors of T3, with a single change, namely the fixing of the directionality of the verbal head. There are only two possible options for instantiating a directionality value, namely either V→O or O←V. In the Germanic family, each option has found its implementation, with VO in the North-Germanic group and OV in the continental West-Germanic group.

The "general theory of change" rests on a "general theory of structure" which has been developed in the past three decades, starting with Haider (1992). For a commented research bibliography please consult the preface of Haider (2013: ix-x). A succinct exposition is given in Haider (2015). The bare fundamentals are presented in the target paper in section 3.2, in Haider (2014), and once more here. The central axioms are the following two:

(A1) The projecting node of lexical projections is universally a right node as in (2), (viz. 'right branching', determined by the BBC = *Basic Branching Condition*), and

(A2) Phrases are endocentric, viz. projections contain a head category in their foot position.

What we observe in the majority of languages are lexical heads with fixed directionality. This property is parametric, with two alternative values. Let us refer to them as "left" or "right". In an OV-language, the verb licenses its arguments to the left (17a). In a VO language, it licenses to the right (17b). In this case, the universal condition (A1), viz. universal right branching, cannot be instantiated in complex projections unless the verb is re-instantiated.[24] The result is the so-called shell structure of complex head-initial VPs. For details, see Haider (2015).

(17) a. $[XP_{Sub.} \leftarrow [YP_{IO} \leftarrow [ZP_{DO} \leftarrow V°]$ head-final (the subset of T3 congruent with OV)

    b. $[XP \leftarrow [V_i° \rightarrow [YP_{IO} \leftarrow [e_i \rightarrow ZP_{DO}]]]]$ head-initial (the subset of T3 congruent with VO)

    c. $[XP \leftarrow [YP_{IO} \leftarrow [V° \rightarrow ZP_{DO}]]]$ intermediate position (subset of T3 only)

    d. $[V [XP V [YP_{IO} [V ZP_{DO} V]]]]_{VP}$ possible *alternative* V positions in T3-VPs

T3 is the option with an *un(der)specified* value for the directionality parameter. This means that the directionality of licensing is directionally unconstrained. In diachronic terms this often turns out as the precursor of *not yet* constrained. In T3 structures, the verb may occupy any of the structurally available positions, that is, in the foot-position, as in SOV (17a), and in any higher position, as in SVO (17b) or VSO (17d). In other words, the T3 languages display the cumulative serialization patterns of SOV (17a) and SVO (17b), and in addition (17c). It is this pattern that immediately betrays a T3 structure. The other patterns, especially the frequent pattern (17b), have led to confounds. It is due to this pattern that T3 languages have been misclassified as SVO, which is a main topic of the target paper.

The theory of grammar change based on the tripartite typing invites the prediction that diachronically, a period with fixed directionality is typically preceded by a T3 period. The Indo-European languages are testimonies for this claim. On the other hand, languages with fixed directionality are unlikely to drop directionality again but they may re-value it occasionally. We are especially grateful to Merlo & Samo for having tested the prediction for the development of Romance languages. It is an example of a diachronic development, starting with a T3 language (Vulgar Latin) and resulting in a family of SVO languages as offspring.

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[24] In VSO languages, the verb is re-instantiated once more, in front of XP.

In present day versions Generative Grammar, the SVO sentence structure of English is the prototype of the universal clause structure. SOV is a 'distortion' of it, derived by the obligatory fronting of noun phrases.[25] This is bluntly contradicted by what is known about grammar changes. SVO languages are a point of no return, as Gell-Mann & Ruhlen (2011: 17291) summarize it in their Figure 1. An SOV language may change by drift or natural selection into SVO, but not vice versa (see Haider 2021). So, how would SOV languages come into being if the centre of grammatical gravitation is SVO? Why engage in all kinds of movements that distort an SVO base structure if a grammar *without* such movements is a simple and more perfect system? This is the question.[26]

EF mainly adduces data from Old High German. These texts, however, are notorious for an inescapable drawback. They primarily teach us how monks translated Latin texts into local idioms. The only text that is likely to come close to a spoken variety is a 4 page fragment of a travel guide, viz. the "*Parisian conversations*" (aka "Pariser Gespräche"). EF excerpts "Isidor", which is a collection of translated texts of Isidor of Sevilla, and "Notker", a collection of translations[27] by a Benedictine monk of this name.

Braune (2004: §la) emphasizes that the "*Old High German language is accessible only in a very small opening. As monks and clerics, the writers of OHG glosses and texts were members of the social upper class. What they wrote belongs to highly specialized text types. Everyday language is not at our disposal, except for the Paris conversations.*" (translation_HH).

Nevertheless, the academic opinion and EF, too, favor SOV, apparently as the least inappropriate type for OHG. Frequent VO orders are explained away either by invoking extraposition, although extraposition of noun phrases is ungrammatical in any modern Germanic OV language,[28] or by assuming that VO "*simply mimics the ordering found in the corresponding Latin clause.*" On the other hand, a small percentage of divergences between the Latin text and its OHG translation (7% in the Tatian corpus, according to EF's Table 1), where the Latin order is VO and the translation is OV, is adduced as evidence for SOV. Evidently, this is flawed reasoning. It is by no means excluded that the *parallel* orders show that in OHG and in Latin, the very same order is acceptable while in a minority of cases, the translator prefers fronting some items, for whatever reasons. Who could tell exactly when the translating monk 'mimics' and when he abides by the grammar? All we see is that there are about fifty-fifty OV and VO orders,[29] just as one would expect to see in a T3 language. This hypothesis straightforwardly accounts for them, without invoking unmotivated extraposition (partly of unextraposable elements) or alleged grammatically deviant "mimicking".

Finally, we are short of any clue as to why EF reopens a discussion on ungrammatical V-Obj-Aux orders in section 2.2. The universal ungrammaticality of V-Object-Aux orders is a subcase of the universal restriction (A1), viz. the "Basic Branching Condition" (Haider 1992; 2010:

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[25] Haegeman (2001) discusses various attempts of implementing this assumption in the respective version.

[26] The various approaches in main stream Generative framework that presume a universal SVO base order are unable to answer it satisfactorily since diachronically, these theories put the cart before the horse.

[27] For the use in convent schools, he translated classical literature and Bible texts; notably the Psalter.

[28] See Schallert (2007:71) for cases of allegedly extraposed non-extraposable items in OHG.

[29] In addition, OVO-orders occur, just like in OE, as Schallert (2006:139, 172) documents with Notker (NB 64,13):
   i. tánne sie [búrg-réht [*scûofen* demo líute]]
       that they civil-right granted the people

339; 2013: 3). This condition subsumes the FOFC[30] cases he refers to, since it rules out any left-branching (extended) projections. FOFC is just a descriptive generalization and it immediately follows from (A1). This explanation has been published more than a decade before FOFC has been conceived of, as has been laid bare in Haider (2013: 132-135). It is a principle-based explanation and it is stronger than FOFC[31] because it is more restrictive.

6. Radek Šimík & Katja Jasinskaja – Let's double-czech!

In their comment, Šimík & Jasinskaja (Š&J) put a most welcome focus on Czech. They subscribe to the widely entertained view according to which Czech is a language with a basic clause structure like English, as they explicate in Jasinskaja & Šimík (in press). We are grateful for their thought-provoking attempts of challenging our theory thoroughly by confronting it with properties of a Slavic language we have considered only in passing in our paper. After all, THE essential quality test for a theory is resolute and thorough falsification trials. Gladly we grasp the opportunity of demonstrating that our theory stands the test successfully. For ease of reference, we juxtapose their summary and the version we shall defend in Table 1.

ambidir.	Russian	Czech
yes	yes	yes
no	yes	yes
no	no	no
no	no	no
no	yes	yes
yes	yes	no
no	no	no
no	no	yes
yes?	yes	no

	Syntactic properties	[S[VO]]	ambidirect.	RUSSIAN	CZECH
i.	S-V-O as an acceptable order	yes	yes	yes	yes
ii.	obligatory preverbal subject	yes	no	no	no
iii.	subject wh-in-situ restriction	yes	no	no	no
iv.	adverbial wh-in-situ restriction	yes	no	no	no
v.	LLC for left-adjoined adjuncts	yes	no	no	no
vi.	fillers for left branch gaps	no	yes	yes	yes
vii.	rigid word order	yes	no	no	no
viii.	rigid relative order of auxiliaries	yes	no	no	yes
ix.	free OV/VO word order	no	yes	yes	yes

Table 1   Š&J's summary   H&S' revised summary

Š&J find fault with four properties we attribute to Slavic languages, when applied to Czech, namely (ii), (vi), and (viii), plus property (ix), which they add although it is a subcase of (vii.). Let us start with (viii) and an 'operating instruction' for the list of syntactic properties in the tables above. It is important to keep in mind that the values in the [S[VO]] column are values of *necessary* properties of [S[VO]] languages. In other words, if the grammar of a language does not meet the respective property for "yes" or for "no", respectively, the respective language cannot be an [S[VO]] language. T3 languages are members of the complement set. They are not subject to the constraints that hold in [S[VO]] language but it is possible for them to share one or the other property, for independent reasons.

All we claim is that a language is not [S[VO]] if the relative order of auxiliaries or quasi-auxiliaries is variable. On the other hand, languages with a uniform order of auxiliaries are consistent

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[30] FOFC = "*final over final constraint*". Haider (2020b), ironically accused himself of "*anticipatory plagiarism*" because of having anticipated FOFC already in Haider (2000a), as a subcase of the Branching Condition (BBC); see Haider (2013:132-135). The bibliography of Biberauer et al. (2014) lists this paper (for other purposes), which *verbatim* states what they claim as their *own* original idea in their paper. "*If a functional projection is a functional extension of the projection of a lexical category, the BC rules out functional heads to the right in general.*" (Haider 2000a: 48). Flabbergastingly, they did not bother crediting it.

[31] What immediately follows from the BBC is the exclusion of [V O] Aux]] structures. In addition, BBC excludes, but FOFC admits, [[O V] Aux]. The empirically adequate structure for O-V-Aux is [O [V Aux]V-cluster]VP.

with any type. Therefore, we gratefully accept the information that in Czech, there are invariant orders of auxiliaries.[32] Corpus data confirm however, that at least the order of quasi-auxiliaries is variable.[33]

Let us continue with line (ix), which Š&J added to our table. In fact, free OV/VO order is a sub-instance of (vii.). Here, "free" is to be interpreted as *syntactically* free, that is, not narrowed down by *syntactical* conditions, or, as Siewierska & Uhliřová (2010:109) put it: *"In each of the Slavic languages, all twenty-four possible combinations of a subject, direct object, indirect object and verb occur as grammatical declarative orders."*

In OV or VO languages, nominal objects are distributionally restricted by the directionality requirement of the head they depend on. Nominal objects *obligatorily* precede the base position of the verb in OV. In VO, they *obligatorily* follow the verb. The order restriction is independent of information structure properties, intonation effects, or other pragmatic preferences. In Czech, and in fact in all Slavic languages, even in Sorbian to a minor extent,[34] objects as well as the subject may precede *or* follow the verb. This fact cannot be seriously contested.

However, and crucially, "free" must not be interpreted as "any order is acceptable anytime". The existence of a pragmatically unmarked or neutral order is fully consistent with the syntactical variation potential. The fact that alternatively available orders are not always *freely exchangeable* in utterances is an independent issue. Information structure preferences partition the pool of syntactic variants. We do not want to repeat the explication of the interface effects presented in Haider (2020). Let us merely summarize it: "*In general, when syntax admits structural variation, this potential is captured and utilized by other subsystems of grammar.*" (Haider 2020: 375). All variants are syntactically well-formed, but, of course, they are neither equivalent with respect to information structuring, since they may be associated with particular focus, topic, or givenness properties, nor with respect to scoping or binding since word order is an interacting structural variable.

Importantly, the conditions of information structuring do not *constrain* syntax; they merely *exploit* the syntactically available options. On the other hand, if syntax does not admit variation, information structuring cannot coerce syntax, otherwise all languages would closely resemble Czech or Russian. It is a fact of Czech that there are acceptable utterances in which a direct object precedes a main verb *and* that there are acceptable utterances in which a direct object follows a main verb, finite or not, in main as well as in embedded clauses.

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[32] Š&J's Czech example, however, does not match the Polish counterpart. As the authors concede, it involves a semi-lexical verb *dát* 'give' and a modal *chtít* 'want', which systematically allows for finite embeddings with the subjunctive marker *by*, introduced by a complementizer *aby* 'that'. In contrast, the Polish modal *musieć* 'must' does not show this behaviour, and B/C/S *morati* 'must' only selects finite complements in varieties which have lost the infinitive or, at least, pushed it back. So, syntactically, Polish *musieć* (and Czech *muset*) differ from *chcieć* (and *chtít*).

[33] In brackets the number of hits of the respective search restricted to Google books:

    i. ležet nechali (198)   ii. nechali ležet (1130)
       lie   let   let   lie
       'let lie'   'let lie'

[34] Even Sorbian – although predominantly verb-final – is not *strictly* SOV, as (i) illustrates (Scholze 2015: 206):

    i. Ćeta *dari* mi rjaneho žurka.
       aunt *gave* me beautiful hamster

The relevant data are familiar and have been reconfirmed on independent grounds, for instance by computational methods, measuring the word order freedom in parsed corpora (tree banks). Kuboň et al. (2016) present the following percentages for Czech, on the basis of a tree-bank corpus of 16,862 *main* clauses and 11.849 *embedded* clauses out of 87.913 sentences in total, in comparison with 22 other languages. (18) and (19) list the percentages of VO vs. VO serializations in main and embedded clauses.

(18) Order in main clauses:

a. Czech:	VO 61,2%	vs.	OV 27,2%	rest: 11,6 %
b. Slovenian:	VO 50,0%	vs.	OV 42,3%	rest: 7,7%
c. English:	VO 83,1%	vs.	OV 0,0%	rest: 16,9%
d. Portuguese:	VO 85,8%	vs.	OV 12,1%	rest: 2,1%

(19) Order in embedded clauses:

a. Czech:	VO 65,1%	vs.	OV 24,6%	rest: 10,3%
b. Slovenian:	VO 32,9%	vs.	OV 37,3%	rest: 29,8%
c. English:	VO 96,9%	vs.	OV 0,1%	rest: 3,0%
d. Portuguese:	VO 79,6%	vs.	OV 13,5%	rest: 6,9%

The percentages of Czech and Slovenian OV orders contrast clearly with undisputed SVO languages such as English or Portuguese, for instance. Kuboň et al. do not differentiate between pronominal and non-pronominal objects. This accounts for the "OV" orders in a VO language such as Portuguese – a language with pronominals cliticized to finite (auxiliary) verbs[35] – and English, a language without pronoun cliticization.

Kuboň et al. (2016: 15) compare and rank their set of 23 languages by computing four measures of variation (viz. max-min, Euclidian distance, cosine similarity, and entropy). On each of the four measures, Czech ends up in the top group of five languages in the ranking of word order freedom (20). SVO languages, such as English and Portuguese, are in the opposite region, namely in the top group of languages with highly restricted word order. The entropy-ranking for languages with the greatest word order freedom is shown in (20), with the respective rank in brackets:

(20) a. main clauses: Ancient Greek (1), Latin (2), Slovak (3), Slovenian (4), *Czech* (5).
    b. embedded clauses: Slovenian (1), Ancient Greek (2), Latin (3), Slovak (4), *Czech* (5).

This is independent evidence for an essential difference between Czech and its kin languages on the one hand, and uncontroversial [S[VO]] languages on the other hand, and it supports the claim put forth in the paper. Merlo & Samo reinforce these results by their measurement of distances between [S[VO]] languages and Slavic, and between Latin, Old and modern French.

Let us turn now to another discriminating trait, namely the *obligatory preverbal subject position* of SVO languages. Actually, this is a type-defining property. The [S[VO]] clause structure implicates an obligatory structural position for the syntactic subject of the clause. This position is outside of, and preceding, the VP. An [S[VO]] clause is ungrammatical when this position is

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[35] i. O comprador não *o* teria encontrado
    the buyer not *it* would-have found

radically empty. This is the case when there is no subject argument available and the position is not filled with an expletive, as in the unacceptable example (21a), contrasting with (21b):

(21) a. *Dimanche 24 mai, a été procédé à l'installation du conseil municipal.

Sunday 24 may, has been proceeded to the-installation of-the municipal council

b. Dimanche 24 mai, *il* a été procédé à l'installation du conseil municipal.[36]

Sunday 24 may, *it* has been proceeded to the-installation of-the municipal council

The limiting case of a subjectless construction is the passive of intransitives. If an intransitive verb is passivized, there is no argument left. So, the subject position must be filled with an expletive (21b) in SVO. In French, the expletive is the 3rd person sg. masc. pronoun. Such pronouns falls prey to pro-drop in Romance null-subject languages. Consequently, Romance pro-drop languages cannot and do not passivize intransitive verbs since the expletive must not be a null pronoun[37] (Haider 2019). The same is true for English, for a different reason though. English lacks a suitable expletive since "*it*" as well as "*there*" turn out to be inept (see Haider 2019). In SVO, in contrast to T3, SOV and VSO, the resulting clause structure is ungrammatical without a subject expletive. Czech provides such constructions and the following corpus excerpts (22) are grammatical and acceptable despite the absence of an expletive.[38]

(22) a. *Bylo pracováno* s celkovými koncentracemi.

was worked with total concentrations

b. V tomto výzkumu *bylo pracováno* s konceptem statistické významnosti.

in this research was worked with concept (of) statistical significance

c. Rozkazu$_{Dat.}$ *bylo uposlechnuto*.[39]

(to) the order was obeyed

d. S tím *se počítalo* na příští čtvrtletí[40]

with that was reckoned for next quarter

Š&J present several unacceptable examples of intransitive passive clauses from Czech and Russian and conclude "*Czech – and this time also Russian – pattern with Italian and Spanish in this respect.*" However, this is exactly not what their data show. In Italian and Spanish, the passive of *any* intransitive verb is ungrammatical. This includes cases such as (22a-d) and many others. However, (22a-d) are acceptable and grammatical in Czech. Š&J argue as if we had claimed that *any* passivized intransitive verb is fully acceptable in Czech or Russian. This we didn't and we wouldn't, simply because it is wrong, not only for Czech.

What we claim is this: If an intransitive verb is passivized in an [S[VO]] language, the subject position must not remain empty. If it is empty, the result is ungrammatical, as in English, unless

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[36] https://www.haut-bocage.fr/2020/election-du-maire-et-des-adjoints/ [Nov. 28, 2021]

[37] Generative literature on "null expletives" is wrong in this respect. It fails to appreciate that intransitive passives are ungrammatical in Romance pro-drop languages exactly because empty expletives are theoretical entities that do not exist in the linguistic reality. See Haider (2019) for details.

[38] The German versions are fully parallel to their Czech counterparts.

i. Gearbeitet wurde mit höchsten Konzentrationen. (= 5a)

ii. Bei dieser Untersuchung wurde mit dem Konzept der statistischen Signifikanz gearbeitet. (= 5b)

iii. Dem Befehl$_{Dat.}$ wurde gehorcht. (= 5c).

iv. Damit wurde gerechnet für das nächste Quartal. (= 5d)

[39] https://www.advojka.cz/archiv/2011/12/zemepis-zhola-nelidsky [26.2.2022]

[40] https://digilib.phil.muni.cz/bitstream/handle/11222.digilib/121938/SpisyFF_246-1983-1_6.pdf?sequence=1

an expletive is adduced for filling the obligatory subject position, as in French. In SOV and T3 languages however, there is no obligatory structural subject position, hence no room for a subject expletive. Czech behaves as expected and predicted for a T3 language, and so do other Slavic languages.

The passive of intransitives is not the only source of evidence, of course, but it is the syntactically most straightforward one. There are numerous papers on Czech impersonal constructions (cf. Guiraud-Weber & Kor Chahine 2013) with data such as (23), which have to be analyzed properly (see Szucsich 2006), however. As discussed in detail in Haider (2019:20), unlike expletives, *semantically empty subject arguments* are licit null-subjects in pro-drop languages. The presence of an accusative object in (23) is an indication of the presence of a null subject. So, technically, (23a,b) from Guiraud-Weber & Kor Chahine (2013:12), and (23c) are not subjectless. In the German counterpart (23c), the semantically empty subject "es" ('it') is audible. The verbs in (23) are agentive verbs used in a variant in which the subject argument is not an agent but unspecified, that is, *semantically* empty. Let us keep in mind that preverbal objects are ungrammatical in prototypical [S[VO]] languages, unless they have been wh-moved to a clause initial position.

(23) a. Bratra zabilo.
   brother$_{acc}$ killed$_{neut}$
   '(somebody/something/it$_{indef.)}$ killed my brother.'
   b. Souseda ranilo.
   neighbor$_{acc}$ injured$_{neut}$
   '(somebody/something/it$_{indef.)}$ injure the neighbor.'
   c. Plötzlich hat *es* ihn$_{Acc}$ ohne erkennbaren Grund umgeworfen.
   Suddenly has *it* him without noticeable cause knocked-over
   'He suddenly knocked over, without noticeable reason'

Let us finish the data review with a clear-cut case of a subjectless clause, viz. (24a), taken from Guiraud-Weber & Kor Chahine (2013:9). Czech and German share the very same construction, namely a copula construction with a dative plus a nominalized verb in a PP. (24a) translates word by word into German (24b), with the exception of the cliticized negation. Such a construction is inaccessible in an [S[VO]] language since it does not contain a subject and, as German (24b) confirms, there is no (hidden) semantically empty subject involved.

(24) a. Petrovi (ne)bylo do smíchu / řeči / zpěvu.
   Peter$_{dat}$ (neg)was$_{neut}$ PREP laugh$_{gen}$ / talk$_{gen}$ / sing$_{gen}$
   'Peter felt/did not feel like laughing/talking/singing'
   b. Dem Peter war (*es) nicht nach Lachen / Reden / Singen.
   the$_{Dat.}$ Peter was (it) not PREP laughing / talking / singing

Let us summarize the discussion of property (ii). In the Czech sentence structure, a structural subject position is neither obligatorily present nor obligatorily filled. The contrast between Czech and undisputed [S[VO]] languages is clearly demonstrable. Czech behaves as expected & predicted for a T3 language.

Let us turn now to property (v.), viz. the absence of the LLC effect for immediately preverbal adjuncts in T3 languages. We predict that the LLC effect is absent in Czech because the VP of

a T3 language such as Czech or Russian does not count as a syntactically head-initial VP. Š&J's objection is easy to dismiss. What they present is two sentence pairs, namely their examples numbered (16a,b) and (17a,b), from Czech and from Russian, respectively. They rate one sentence of each pair as ungrammatical. In each case this is a sentence that consists of a noun at the beginning and a verb at the end, with a *single, overlong*, *center-embedded* but *extraposeable* phrase as the 'meat' of this syntactic 'hamburger'. We aren't surprised at all that such utterances would be rated less 'palatable' or even unacceptable, in comparison with their extraposed versions. But, we are surprised that this is presented as counter-evidence. Š&J have only shown that utterances are avoided that contain 'very heavy' center-embedded phrases that could be extraposed. This is not the point however. The point is that, *independently of their size*, pre-VP adjuncts must be *head-adjacent* to the VP in languages with strictly head-initial VPs. This is easy to test. The test is not restricted to APs. It is sufficient to adduce head-initial PPs.

A search in three big English corpora[41] confirms the effect of LLC in English (25b,c). The expression "*should more carefully*" is well attested in preverbal position. However, as predicted for a PP, the sequences "*should with care*", "*should with great care*", or "*should with more care*" are absent in these three corpora in the pre-VP position (see Haider 2018). They are frequently found in clause-final or clause-initial positions, however. The same is true for French (*très*) *soigneusement* in comparison with *avec* (*grand*) *soin.*

(25) a. She (has) *much more carefully* examined the case
     b.*She (has) *with great care* examined the case
     c.*She (has) *after a few minutes* stopped the examination

It is easy to locate Czech corpus data showing adverbial PPs in immediately preverbal positions (26). Note that for English, the BNC for instance does not contain a single token of "*before midnight*", "*with great care*" or "*with pleasure*" immediately before the verb although more than thousand tokens of each PP can be retrieved from this corpus. In sum, Czech is evidently not subject to the LLC constraint. This is what is predicted if the Czech VP is directionally unconstrained, which is a defining T3 property.

(26) a. Moderní psychologie (...) [*s velkou pečlivostí*] definuje stovky nových termínů (…).[42]
         modern psychology [*with great care*] defines hundreds of new terms
     b. Říkala jsi, že tě Kristvin [*před půlnocí*] opustil, asi kolem jedenácté.[43]
         said you$_{Nom}$, that you$_{Obj.}$ Kristvin [*before midnight*] left, about eleven o'clock.
     c. Rudla [*s radostí*] slyšel o jeho úspěších.[44]
         Rudla [*with pleasure*] heard about his successes.

Eventually, Š&J object to line (vi.) in the table, that is left-branch extractions from noun phrases

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[41] BNC = British National Corpus (100 million: British, 1980s-1993); CocA = Corpus of contemporary American English (520 million: US, 1990-2015); NOW = News on the web (5.2 milliard: Web news, since 2010).

[42]Link:https://www.google.de/books/edition/Malign%C3%AD_onemocn%C4%9Bn%C3%AD_psychika_a_stres/qPYOE-AAAQBAJ?hl=de&gbpv=1&dq=s+velkou+pe%C4%8Dlivost%C3%AD+zkou%C5%A1el&pg=PA134&printsec=frontcover

[43]Link:https://books.google.at/books?id=Ohq2DwAAQBAJ&pg=PT232&lpg=PT232&dq=%22p%C5%99ed+p%C5%AFlnoc%C3%AD+opustil%22&source=bl&ots=TkdxmP8_2p&sig=ACfU3U0cxpObMupulrQvXKpbLhf5na5FvQ&hl=de&sa=X&ved=2ahUKEwj2q4K9tbH0Ah-Voh_0HHVKtBEoQ6AF6BAgQEAM#v=onepage&q=%22p%C5%99ed%20p%C5%AFlnoc%C3%AD%20opustil%22&f=false

[44]Link:https://www.google.de/books/edition/Vzorek_bez_ceny_a_pan_Biskup_aneb_za%C4%8D%C3%A1/54pEAAAA-MAAJ?hl=de&gbpv=1&bsq=%22s+radost%C3%AD+sly%C5%A1el%22&dq=%22s+radost%C3%AD+sly%C5%A1el%22&printsec=frontcover

in preverbal positions.[45] The term 'preverbal' refers to the relevant positions in the clause structure of SVO languages. The preverbal subject and any item fronted out of the verb phrase are 'preverbal' w.r.t. the base position of the verb . In current theorizing, these positions are Spec-positions and therefore opaque for sub-extractions, since the former CED constraint and today's Edge Condition block extraction out of phrases in one of these positions; see Haegeman et al. (2014: 79; 119) for details. We understand, as Š&J explain, that information structure restrictions may account for low frequencies of preverbal extraction sites in left branch wh-extractions. Corpus searches, however, show that they are in use nevertheless. Here are four examples:

(27)   a. *Kolik* letos *lidí* onemocnělo v ČR chřipkou?[46]
          how-many this-year *people* got-sick in ČR (with) influenza
       b. *Kolik* letos *lidí* naběhlo podobným podvodníkům?[47]
          how-many this-year *people* headed-into similar fraudsters
       c. Nevím *kolik* tam *lidí* celkem bylo.[48]
          don't-know *how-many* there *people* in-total were
       d. *Kolik* dnes *lidí* píše (kteří by psát neměli).[49]
          how-many nowadays *people* write (who should write not-do)

In an SVO clause-structure, patterns like (27) would be ungrammatical and unacceptable under any analysis, which evidently is not the case for Czech. In the T3 analysis of (27), the phrase that contains the extraction site is within the licensing domain of the verb. Therefore, transparency for sub-extraction is expected. In (27), the containing phrase is not only preverbal, it is the subject. So, extraction would be a No-Go option in a finite clause in an [S[VO]] language, because of the Edge Condition, see Haegeman et al. (2014: 79, 119).

Šimík (2007) himself, by the way, defends an analysis in which a left-branch extraction operates on a noun phrase in a preverbal position in Czech. According to this analysis, the particle "to" in (28) is a focus-head, with the extracted wh-item in the spec position (Šimík 2007: 145).

(28)   *Kolik*$_i$ to [--$_i$ *knížek*] jste tam nechali ležet?
       how-many TO *books* AUX+you there left lie?

At the end, Š&J's title message – "*There is no single Slavic word order type*" – invites an aside. It notably contrasts with the title of another paper of theirs (Jasinskaja & Šimík in press), viz. "*Slavonic free word order*", referring to the pan-Slavonic word order property.[50] Slavonic free word order is a word order type[51], namely T3, and this type embraces all Slavic languages (with some more specific preferences in Sorbian). The Slavic word order type characterizes a type of

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[45] Sub-extraction presupposes that the extraction site and the containing phrase of the site is within the licensing domain of a lexical head. This is the case in T3 languages and in strict OV languages, such as Japanese. See Fukuda et al. (2016).

[46] https://www.novinky.cz/domaci/clanek/epidemie-chripek-konci-druha-vlna-hrozi-az-do-kvetna-284158

[47] https://www.ifauna.cz/okrasne-ptactvo/nemodforum/r/detail/828190/rozela-pestra-modra

[48] https://hlidacipes.org/cesi-a-nato-chceme-spolecnou-obranu-davame-na-ni-ale-malo-prestiz-zachranuji-zahranicni-mise/

[49] http://www.darius.cz/bata/bata1_C.html

[50] "*Another significant property of Slavic languages is their relatively free word order, which generally serves to express functional sentence perspective information rather than grammatical relations.*" Franks (2005: 376).

[51] According to Dryer (2007:113), "*languages with highly flexible word order are themselves a linguistic type.*"

languages with a clause structure of mobile verbal heads without directional licensing restrictions, and the concomitant potential for scrambling, or in other words, it is the T3 type.

In sum, after having double-checked the issues raised by Š&J, we are content to find ourselves in a comfortable position for concluding on solid empirical grounds that the evidence for classifying Czech as a Type 3 languages is good, and in fact as good as the evidence for other Slavic languages.

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