

Against severing the external argument from its verb

Hubert Haider, Univ. Salzburg, Dept. of Linguistics & Centre for Cognitive Neuroscience

Abstract

The hypothesis that the subject of a (transitive) verb receives its theta-role externally rather than by the lexical verbal head merits being contested. It is wrong. The main reason of failure is the SVO bias. The hypothesis demonstrably misses the mark for languages with head-final VPs. Data from an OV-based language like German are sufficient for rebutting the representativeness of the original data basis. When the hypothesis and its predictions are systematically confronted with data from such a language, it fails. The results have immediate consequences for current claims within the Minimalist Program, with "little-*v*" as the theta-assigner of such (transitive) subjects.

Crucially, the subject position is VP-external only in [S[VO]] languages. It is one of the type-defining properties. In SOV and also in VSO languages, subjects stay in their VP-internal base position (unless they are *wh*-moved). As for *little v*, the fact that complex head-initial VPs contain an empty V position is a derivable property. However, *little v* as an empty verb with inherent grammatical properties is a readily dispensable concept. The obligatory, VP-external structural subject position is a predictable and derivable property of [S[VO]] languages. It is absent in SOV and VSO languages. There is neither empirical need nor theoretical necessity for an idiosyncratic "little *v*" or a universal VP-external functional subject position ("EPP").

1. The alleged source of the θ -role of SVO subjects

Based on a merely illustrative English data sample, aggregated by Marantz (1984), Kratzer (1996) bolsters the hypothesis that subjects of (unergative) verbs "*are not true arguments of their verbs*" (116). "*Strictly speaking, the agent argument of a verb is not really one of its arguments*" (131). Arguments are generally introduced by heads (116), but the head that θ -marks the subject is allegedly not the lexical verb. Originally, Kratzer (1996:132) had assumed "voice"¹ to be the functional head that assigns a θ -role to the external argument. The Minimalist Program (Chomsky 1995) has seized this hypothesis and made "little-*v*" accountable for introducing the external argument and the assignment of its θ -role (1). It is a hybrid² head since it is both a functional head and a θ -assigner for theta-roles such as "agent" or "cause".³ Consequently, and contrary to facts (see below), transitive verbs are bound to have subjects that are θ -marked as agents or causers.

(1) [_{VP} External argument [_{V'} *v* [_{VP} V^o ...]_{VP}]]_{VP}

The empirical basis for this hypothesis is merely suggestive and far from compelling. Kratzer (1996), in agreement with Marantz (1984), re-emphasizes an empirical fact of English, namely the effect of objects on the interpretation of the verb. This fact is related to another fact, namely the absence of idioms in English that include the subject and the verb, but exclude an object.

According to Kratzer (1996:113) "*Marantz presents an important argument supporting the assumption that external arguments are not true arguments of their verbs. He observes that there*

¹ [_{Voice-P} External arg. [_{Voice-P'} VOICE^o [_{VP} NP [_{V'} V^o ...]]]] (Kratzer 1996:132)

² Horvath & Sioni (2002: 107) justly criticize "little *v*" as "*a curious kind of head that is functional and yet a θ -assigner*", given that θ -roles are provided by the argument structure of lexical heads.

³ It not clear whether a unique theta-role is assigned that oscillates between "causer" and "agent", with agent as a causer enriched with [+intentional] in some cases, or whether "little *v*" could be an ambiguous θ -assigner.

are many instances where a particular kind of internal argument triggers a particular interpretation of the verb, and claims that there are few (if any) instances where an external argument does the same." A comparison with other languages, for instance German, is instructive in this case. In (2b,d), the German correspondences are aligned with the English items in the line above them.

- (2) a. *throw*: anchor / ball / glance / towel / light / shadow / waves
 b. *werfen*: Anker / Ball / Blick / Handtuch / Licht / Schatten / Wellen
 c. *throw*: fit / **calf* / support behind so. / throw so. a line / a party
 d. *werfen*: *Anfall / *Kalb*⁴ / *Unterstützung / *eine Zeile / *eine Party

(2a) and (2b) are completely parallel since these items instantiate the core conceptual content of *throw*. (2c,d) are special collocations (Barnbrook et. als 2013). Here, as in the case of idioms, languages differ. Cross-language comparisons reveal the demarcation line between the core conceptual content on the one hand and various lexicalized nuances or collocations, whose extreme form is the pure idiom, without any compositional semantics at all, on the other hand.

(3) displays the second verb Marantz and Kratzer adduce, namely *kill*, together with the number of hits of Google-book searches of May 2020. Table (3) re-confirms that English and German do not differ in the core meaning (3a), but do differ in collocational properties. The equivalent translation of (3b-g) into German involves two different lexicalizations in German. Monolingual dictionaries treat "*töten*" and "*umbringen*" as synonyms, while "*totschlagen*" ("dead-beat") is a complex verb whose compositional meaning is "beat to death". Four English collocations, namely (3b-e) do not exist in German at all. As for (3f), "evenings" are beaten to death, and so is "time". On the other hand, in English, "nerves" (3h) are killed only literally and do not acquire an idiomatic meaning in combination with "kill".

(3)	kill	<i>töten</i>	<i>totschlagen</i>	<i>umbringen</i>
a. kill a cockroach / fly	1830 / >24k ⁵	78 / 260	43 / 89	12/47
b. kill a conversation	>27k	0	0	0
c. kill a bottle	>21k	0	0	0
d. kill an audience	>30k	1	0	1
e. kill the time	>1380k	1	1300	0
f. kill an evening	>250k	4	44	0
g. beat the time dead	0	-----	1300	-----
h. den Nerv töten (idiom)	0 ⁶	110	0	0

Bresnan (1982: 350) and Grimshaw (1990: 35) argue that this asymmetry – lots of collocations of a verb plus an object but hardly any with a subject plus its verb – is a result of the fact that internal arguments are joined with their verbal heads in sub-constituents of the VP while the external argument is the structurally highest element. Hence, an external argument cannot enter a narrow collocation with the verb while excluding all other elements of the lower verbal projection. This is the reason why objects are able to affect the interpretation of the verb more specifically than an external argument. They can enter collocations which constrain the merger

⁴ *Die Kuh wirft ein Kalb* (lit.: The cow throws a calf) = The cow gives birth to a calf

⁵ "k" = kilo = 1000. The absolute frequencies are irrelevant since the corpus of English books is the biggest.

⁶ The idiomatic version (= to shatter sb's nerves) does not exist in English. For the literal reading of "killing a nerve", the preferred form in German is *abtöten* (off-kill).

with higher items in the structure. The limiting case of a collocation is an idiom. In genuine idioms, the compositional meaning is waived and replaced by a semantically non-compositional idiomatic meaning. In English, there are no idioms that include the external argument plus the verb, but exclude an object.

Importantly, collocations do not single out subjects, because of the following trivial fact. The more restrictions have been added to a predicate, the more restricted is the range of semantically suitable additional, 'higher' arguments, simply because every added restriction reduces degrees of freedom. This is by no means a speciality of the subject or any other higher arguments in complex projections. The very same semantic effect can be observed with iterated attributes in noun phrases or iterated nouns in nominal compounds.⁷ Evidently, because logically conditioned, the semantic space of the higher ones is restricted by the already merged lower ones.

The state of affairs sketched above is remarkable. A far-reaching hypothesis has been accepted on the selected evidence from a single language, without cross-linguistic cross-checks, and without mentioning obvious problem cases even for English. It must not come as a surprise, that English is not universally representative. English illustrates the situation of SVO languages. SOV languages, however, behave differently from OV and VSO, in a predictable, uniform manner. The following subsections review counter-evidence from idioms, from non-agentive transitive subjects, and from verbal subcategorization restrictions on clausal subjects of transitive verbs. None of these facts are compatible with the severing hypothesis.

2. Idiomatized transitive subjects, except in [S[VO]] languages

As for idioms in general, it is well-known that many of them consist of a verb and its object, such as (4a), with the subject as the 'free' slot. The inverse does not exist in English, namely idiomatic combinations of subject and verb, excluding the object (O'Grady 1998: 294). If the metaphoric source of an idiom is not construable for the user (cf. *hit the road* vs. *pull the string*), even passivization is blocked in the idiomatic reading. For (4b), only the literal reading is acceptable.

- (4) a. *hit the road*, *kick the bucket*, *rob the cradle*; *pull the strings*,
 b. *The road was hit*. *The bucket was kicked*.

Clearly, if the external argument is not theta-dependent on the lexical verb, the idiomatic reading of the VP cannot include the subject and the verb, but spare an object. The subject can be part of the idiom only if the whole clause is an idiom (cf. *The shit hit the fan*), or if the free slot is not an argument of the verb (cf. *The cat got x's tongue*). This follows from the constraints which O'Grady (1998) formulates for idioms, namely a "continuity constraint"⁸ (284) and a "hierarchy constraint"⁹ (293). The latter, O'Grady credits to Kiparsky. The items an idiom consists of in its "dictionary form" are continuous, and are idiomatized bottom-up.

⁷ a. [krümelige [(#flüssige/farblose) Substanz]] b. [fire-proof [*plush gator*]] – ?[fireproof [*sea gator*]]
 crumbly fluid achromatic substance

⁸ *Continuity*: "An idiom's component parts must form a chain." "The string x ... y ... z ... (order irrelevant) forms a chain iff x licenses y and z, or if x licenses y and y licenses z."

⁹ *Hierarchy*: "Any arguments that are part of a verbal idiom must be lower on the hierarchy than arguments that are not part of the idiom."

The two constraints apply in German as well, but German is an OV language. OV languages scramble, which ensures contiguity for the idiomatized parts. In the following list of German idioms [see Reis (1982: 178), Haider (1993: 173), (2013: 54), Müller, St. (2013: 48-50), Haider (2020a) sect. 1], the direct object precedes the idiomatized sequence of a transitive subject and the verb. Note, that O'Grady's "hierarchy constraint" has to be construed as a structural constraint. Structurally, an idiom is idiomatized bottom-up, in the given structure. Note that any of the bracketed phrases can be fronted to the clause-initial position in a V2-declarative clause.

- (5) a. Fast hätte den Mann_{Acc} [der Schlag_{Nom}. getroffen] (= The man almost had an apoplexy)
 almost had the man the stroke hit
- b. Hat diese Leute_{Acc} [der Teufel_{Nom} geritten]? (= Why do these people act like mad?)
 has these people the devil ridden?
- c. Vielleicht hat sie_{Acc} [der Storch_{Nom}. ins Bein gebissen] (= Maybe, she is pregnant)
 maybe has her the stork in-the leg bitten
- d. Dann hat ihn [der Hafer_{Nom}. gestochen] (= He is getting jaunty)
 then has him the oats tickled
- e. Wo hat ihn_{Acc} [der Schuh_{Nom}. gedrückt]? (= What worries him?)
 where has him the shoe pressed?
- f. Das haben _{Acc} [die Spatzen_{Nom} von den Dächern gepfiffen] (= This is all over town already)
 this have [the sparrows from the roofs whistled]
- g. Den hat [der Esel im Gallop verloren] (= He is not of good breeding)
 this-one has the donkey in gallop lost

This list is extendible and merely illustrative. In each case, the open slot of the idiom is the direct object while the subject is part of the idiom. The idioms are syntactically transparent since they may be passivized, as Müller (2013:49-50) documents with corpus data (6a,b), and they are accessible for wh-movement (6c).

- (6) a. die Nachricht, die von allen Spatzen von den Dächern gepfiffen wurde
 the news which by all sparrows from the roofs whistled was
- b. Vom Hafer gestochen (newspaper headline)
 by-the oats tickled
- c. Wer weiß, welcher Teufel ihn geritten hat. ([link](#))
 who knows which devil him ridden has

It is easy to realize what it is that blocks such idioms in an SVO language like English. Such an idiom would not meet the conditions of contiguity and hierarchy as a precondition for idiom formation. In English, the subject and the verb cannot form a constituent that structurally excludes the object. In German (5), scrambling renders such constituents accessible. The element that is the open slot of the idiom precedes all the idiomatized, contiguous elements, and the subject may be one of them. Icelandic is instructive in this respect, too. It is an SVO language like English, but it admits oblique subjects in combination with VP-internal nominatives. In this case, the nominative argument may be part of an idiom even in an SVO language, as confirmed by Jónsson (2003: 151).¹⁰

¹⁰ (að) Jóni_{Dat} er engin launung_{Nom} á því.
 (that) John is no secret in that ('John does not hide it')

In sum, the collocation argument is not a compelling argument for the theta-status of the subject as independent of the argument structure of the verb. The data merely reflect the restricted structural properties of [S[VO]]-languages. The following two sections add two crucial pieces of evidence to this picture.

3. Transitive verbs with a semantically empty θ -role for the subject.

If the subject of a transitive verb is an argument of a functional head, as the "*severing subject & little-v*" hypothesis postulates, subjects of transitive verbs are predicted to be highly uniform in terms of their θ -role(s). This is a necessary consequence of the fact that a covert functional head cannot have semantically differentiated and variable contents since it is not an element of the lexicon.

"Little-v" is assumed to be an obligatory theta-assigner (unless it is prevented by passive or middle formation). According to the "*severing subject & little-v*" hypothesis, the VP of a lexical verb is the complement of this functional head. Its obligatory specifier accommodates the subject of the clause, which is assigned a θ -role by little-v, namely agent or cause. Let us assume for a moment that this could be true. In this case, the θ -role of the subject of a transitive verb would invariably have to be agent or cause. However, this is demonstrably wrong.

It is part of the elementary linguistic knowledge that languages allow for so-called impersonal verbs (see Müller 2013: 620), and that quite a few of them are transitive. Even the on-line dictionary Collins ([link](#)) lists immediately relevant English and German examples under the lemma "impersonal verbs". Data such as (7) can be easily gathered by web searches of on-line news and book sites. The impersonal variant is an activity verb while the agentive version (7e) is an accomplishment verb and requires a directional adjunct.

- (7)a. Wouldn't it be great if *it rained/snowed* money?
 b. Where were Russia's critics, when *it snowed* money in Moscow?
 c. Make *it rain* money/hats/fish/gold on Trump! [Link](#)
 d. Er ließ es Geld regnen. ([link](#))
 he let it money rain.
 e. Why don't *we rain/snow* money on the people?
 f. #Somebody snowed money (vs. The day, it snowed money.) [Link](#)

A transitively used weather-verb such as *rain* or *snow* preserves the quasi-argumental subject of its base form. "It" is a semantically empty argument (Haider 2019) and surely no agent or cause. Transitively used weather verbs can be embedded under a causative verb and keep the quasi-argument "it" as their subject (7c,d), and, alternatively, they can have an agentive subject (7e). It is evident that "it" in (7a-e) is not assigned an agent- or cause-role by little-v, and it is not an expletive subject either. Only (7e) could be accounted for by the *little-v & severing* hypothesis, but in this case (7f) would be wrongly predicted as fully acceptable.

German is even more instructive in this respect since there are numerous verbs with a switch in the argument structure. First, there are transitive weather-verbs (8a,b) like in English. Second, there are lexicalized variants of transitive verbs with a quasi-argument as subject (8c,d), and

finally there are numerous verbs – see Haider (2019:20) – with a productive alternation between a quasi-argument and an agentive argument as subject (8e).

- (8) a. Es hat quasi Geld geregnet, wir mussten nur den Schirm aufspannen.
 it has quasi money rained, we had-to only the umbrella spun-on
 b. dass *es* die Schafe eingeschneit hat.
 that *it* the sheep_{Acc} in-snowed has
 c. dass *es* gegen *den Mann* einen internationalen Haftbefehl gibt
 that *it* against this man an international warrant_{Acc} gives
 'that there exists an international warrant against this man'
 d. dass *es* sich bei diesem Vorschlag offensichtlich um einen Irrtum gehandelt hat
 that *it* itself at this proposal evidently of an error dealt has
 'This proposal is an error'¹¹
 e. Dann hat *es* ihn /umgeworfen /vom Dach geweht /aus der Bahn geworfen/ ...
 then has *it* him /overturned /off-the roof blown /out-of the track thrown/...

In all these cases, the semantically empty subject pronoun "es" is not an agent or cause. It is merely a quasi-argument, specified¹² in the argument structure of the lexical verb. It is a lexical property of these verbs that their subject argument slot is semantically unspecified. It is not a structural expletive (see Haider 2019), since it is mandatory and it may be represented by "PRO" in a sentential infinitival construction (9a). Finite subjectless clauses are grammatical in German, but infinitival clauses obligatory have a PRO subject which is aligned with an argument in the argument structure of the verb, otherwise the construction is ungrammatical (9b).

- (9) a. Den Mann_{Acc} hat esⁱ umgeworfen, ohne [PROⁱ ihn gleichzeitig vom Dach zu schleudern].
 the man_{dir.obj.} has it_{Subj} overthrown without [him simultaneously off-the roof to hurl]
 b. * ohne [auf ihn gehört zu werden] vs. ohne [dass auf ihn gehört wird]
 without [to him listened to be_{Pass}] vs. without [that to him listened is_{Pass}]

4. Non-agentive, non-causative subjects

If v° were a theta-assigner, the admissible theta role for subjects of transitive verbs would exactly be the theta role assigned by v° , that is, Cause or Agent (= cause + intention). This is evidently not the linguistic reality. From the onset of theta studies in the sixties, it has been evident that the theta roles of transitive subjects are not narrowed down to agentive or causative meanings, not in English and not in any other nominative-accusative language, see (10a.-e.). Moreover, it is the semantics of the verbs which reigns atypical choices of subjects, such as in (10f.-i.)

- (10) a. Das *betrifft/tangiert* uns. This *concerns* / is tangent to us.
 b. Dieser Text *enthält* ungültige Zeichen. This text *contains* invalid characters.
 c. Er *besaß/erhielt* drei Portraits. He *owned/received* three portraits.
 d. Er *schuldet* ihr drei Pfund. He *owes* her three pounds

¹¹ There is an immediate French counterpart: The subject is a semantically empty argument, the object is a reflexive:

i. Il s'agit d'un problème délicate. – It is a (matter of a) delicate problem

¹² 'Es' is the candidate for semantically empty subject arguments and the reflexive pronoun 'sich' is the candidate for semantically empty direct objects, well-known from 'inherently reflexive' verbs,

- b. Dass/*ob er sich permanent damit befassen musste, hat ihn überfordert.
 that/whether he himself permanently engage must, has him overstrained
- c.??Dafür zahlen zu müssen hat einen guten Grund/spielt eine wichtige Rolle.
 for-it pay to-have-to has a good reason/plays an important role
- d. Dass/*Wieviel/*ob man dafür zahlen muss hat einen guten Grund.
 that/how-much/whether one for-it pay must has a good reason

Unlike semantic selection, subcategorization is a condition that is – to a higher extent – grammatically autonomous and not a direct reflectance of a particular lexical semantics. If 'little v' would be able to exert subcategorization restrictions on its specifier, these restrictions ought to be uniform across verbs and not dependent on an individual, embedded verb.

6. "Little v^o" – just a V-chain link, as an inevitable consequence of head-initial structuring

In a structure headed by a lexical category, the head of the phrase creates a foot position, with the dependent elements joined (or 'merged' in Generative diction) one by one. In the simplest version, the result is a head final projection (14). Its structure is minimal but implicates a sub-optimal property.

(14) [... [... [... x^o]]]_{XP}

The disadvantage of such a projection is the fact that the head comes last since it sits in the *lowest* and thereby final position. This is suboptimal for the parser. Why should that matter? It matters because grammars have developed, and keep developing, in co-evolution with the environment in which they are put to use (Haider 2020b). An essential component of this environment is the language processing brain. It sieves out 'clumsy' structures in the process of passing on grammars from generation to generation in language acquisition.

For parsers, it is advantageous if the lexically coded information of the head is accessible early since this enhances the predictability of the next parsing steps. However, a mirror image structure of (14), with the head in an *initial* foot position (15), would be even more disadvantageous. The parser would always have to guess the depth of embedding of the head, given that there are not only arguments but also adjuncts and extraposed material. Consistently left-branching structures such as (15) are parser unfriendly and therefore not attested in natural languages. The two properties of (15) – *left-branching* and *centre-embedding* – are universally avoided.¹⁴

(15) [[[x^o]]]_{XP}

The parser-friendly structure is first of all right-branching. So, what is the solution? The problem and its solution are obvious. The problem to be solved is the early presentation of the head in a right-branching structure. The solution is a structure such as (16), with the head re-instantiated in a head chain. The grammatical 'price' of a head-*initial* VP is its more complex structure. On the other hand, the price of a simple structure is the late occurrence of the head in a string, in the head-final VP. In fact, there is no structure that is at the same time as simple as (14), and as parser-friendly as (16). Hence, it must not come as a surprise that cross-linguistically, there

¹⁴ By the same token, the universal structure of functional projections is right-branching, that is, [spec [head complement]], rather than left-branching, that is, [[complement head] spec].

is a fairly even distribution of OV and VO languages, and that languages are not universally head initial or universally head final.

(16) [x_i° [YP [e_i ZP]]

The result of re-instantiating the head in a head-chain is a shell-structure¹⁵, with an empty V-position.¹⁶ What is the consequence for the top-most argument of a complex verbal projection? In fact, there are two possible implementations, namely (17a) and (17b).

(17) a. [V_i° [XP [e_i° [YP [e_i ZP]]]]]_{VP} = VSO (absolutely head-initial VP)
 b. [XP [V_i° [YP [e_i ZP]]]]_{VP} = SVO (head-initial VP, preverbal subject position)

In (17a), the verb is re-instantiated once more, with a strictly head-initial structure as the result. This is what we see in genuine VSO languages. In (17b), the verb is re-instantiated once, with the subject preceding it. This structure is the structure of the VP of an SVO clause-structure. The XP phrase (= subject), unlike the other arguments of the verb, end up outside of the canonical directionality domain of a head-initial phrase. It *precedes* the head while all other arguments *follow*.

Phrases that are joined with the head of a phrase are subject to cross-linguistically uniform licensing constraints that operate on a cross-linguistically uniform phrasal skeleton (Haider 1992, Haider 2013). The skeleton is universally right-branching, that is, the projection nodes of the phrase always follow their sister node. In other words, arguments are always merged to the left. The central condition requires that each position is licensed by the head. Licensing means minimal and mutual c-command within the directionality domain of the head. So, XP is not licensed by the verbal head in (17b). It is in need of a licenser, which is the functional head whose complement is the VP. Mutual c-command is the trigger for raising the XP phrase (18). The raised XP minimally c-commands the licensing head, which in turn c-commands the XP by virtue of c-commanding its base position. Thus, mutual c-command is guaranteed.

(18) [XP_j [F $^\circ$ [e_j [v_i° [YP [e_i ZP]]]]]]_{VP}]_{FP}

In sum, the two characteristic properties of SVO, namely the obligatory external subject position implemented as a spec position of a functional head as well as the existence of an empty V position within a complex head-initial VP, are derivable properties of the [S[VO]]-clause structure. They are corollaries of head-initial VPs in contrast to head-final ones, and these corollaries are empirically well-supported, contrary to the EPP hypothesis which demonstrably fails in OV and VSO languages (see Haider 2019). Second, there is no need for struggling with inherent properties of a hypothetical and hybrid "little v" category either. The empty V position is an inevitable consequence of head-initial, right-branching structures. For details, see the appendix.

7. Outcome

The severing hypothesis and its integration into the Minimalist Program in terms of "little v" is an overinterpretation of underpowered data since it is *empirically insufficiently founded* and

¹⁵ Note that complex head-initial NPs involve the very same shell structure, i.e. an *NP-shell* (Haider 1991):

i. die [Wu_t [$des\ Mannes$ [e_i [$auf\ sich$]]]]_{NP} ii. das dauernde [$Verweisen_i$ [$des\ Autors$ [e_i [$auf\ sich$]]]
 the anger (of) the man_{Gen.} at himself the constant referring (of) the author_{Gen.} to himself

¹⁶ In languages with particle stranding, stranded particles are indicators of an (empty) V-position:

i. We should [$send_i$ [her [e_i *up* a drink]]] ii. We [$handed_i$ [$them$ [e_i *out* a little gift bag]]]

theoretically redundant. It is empirically unfounded since it rests on the overinterpretation of a derivable detail of the [S[VO]] clause structure, namely the obligatory functional subject position. Such a position is neither part of the SOV nor of the VSO clause-structure (see Haider 2019). The alleged evidence adduced from the lexical semantics of theta relations is empirically incorrect since it rests on too narrow a data base. The traditional account is more adequate. Semantically specified subjects are arguments of the respective heads of the verb or adjective phrases.

Second, there is no compelling empirical or theoretical reason for assuming an *inherently defined* empty category "little v". It is sufficient to realize that the empty verb in a complex, head-initial VP is a *chain-link* of a V-chain which is necessitated by universal licensing conditions applied to head-initial structures. Therefore, let us gently bow out to "little v" and the idea that subjects might not be θ -dependent on the lexical heads of the phrase they belong to. There is neither need nor necessity for "little v" or a universal VP-external structural subject position.

8. Appendix:¹⁷ Empty Vs and VP-external subjects in [S[VO]] structures

The structural directionality of phrases (projections of lexical heads) is universally right-branching. Structural directionality is the directional relation between a projecting node on the projection line and its sister node. The canonical directionality of licensing by lexical heads is parameterized. It may be uniform across the head-categories of a given languages, but its values may also vary across lexical (sub)classes, such as in the Germanic OV languages or Persian, with head-final VPs, but head-initial PPs and NPs. Complements either precede or follow the head of the phrase, depending on the directionality of licensing. The directional licensing relation in combination with the universal directionality of structuring is the grammatical source of the syntactic differences between the head-initial and head-final organization. The theoretical core assumptions are the following (Haider 1992; 2010: 26; 2013: 3f.):

- (19) i. Projection lines are universally *right-branching*¹⁸ and endocentric.
 ii. A dependent phrase is licensed in the *canonical direction*.
 iii. The position of a dependent phrase P in a phrase headed by h° is *licensed* =_{Def.} (a projection of the) phrase head h° and the Phrase P are in a *minimally & mutual c-command* relation.

It is the *minimal & mutual c-command* condition (19iii) that is directly causal for many of the OV/VO contrasts, namely compactness, scrambling, the Left-Left constraint (Haider 2018) and the need of a functional subject position in [S[VO]], with the concomitant syntactic properties of the functional subject position. Let me emphasize that it is the *very same* principle (viz. universality of merger to the left) implemented under parametric directionality that produces the different outcomes for OV and VO.

Let us begin with compactness. In keeping with (19i.), the universal structural skeleton of a phrase is that of (20a), but not (20b). (20a) offers two alternative foot positions for a head, namely x or y. The actual choice depends on the canonical directionality value of the head.

(20) a. ... [... [... [x y]]]

¹⁷ This section is an abridged excerpt from (Haider 2015, sect. 4).

¹⁸ In other words, the direction of merger in a phrase is universally to the left.

In OV, the projection nodes are licensing nodes, in VO they are not, because of the directionality mismatch. In VO, the only element that is able to provide the directionality requirement is the verbal head, and therefore it must be re-instantiated, whence the shell structure (22b) of complex head-initial phrases. As a consequence, head-initial structures are compact and do not leave room for scrambling.

- (24) a. He would show (**unhesitatingly*) everyone (**voluntarily*) his collection
 b. Er würde jedem *ohne Zögern* seine Sammlung *freiwillig zeigen*
 he would everyone without hesitation his collection voluntarily show

In (24b), the adverb '*unhesitatingly*' would destroy the minimal c-command relation between V and the object *everyone*. The adverb '*voluntarily*' disrupts minimal c-command between the object '*everyone*' and the lower, empty position of the verb. In each case, *minimal & mutual c-command* is violated. In (24b), on the other hand, there is always a sister node of the projection line with the required licensing directionality. Minimal & mutual c-command is a trivial property of sister constituents. The very same intervener status blocks scrambling. If an argument is scrambled, this means it is adjoined higher up. This turns the scrambled item into an intervener element. Hence, compactness and the ban against scrambling in VO are just two sides of the same medal.

Let us proceed now to the hallmark of SVO languages, namely the *functional subject position*. The trigger of the 'EPP' property of SVO structures is – once again – the directionality mismatch. In SVO, the highest argument in the VP is not in the directionality domain of the verbal head (25a). The canonical directionality is to the right; the directionality of merger in phrases is to the left. Neither the verb nor a projection node can provide directional licensing for the VP-internal subject in (25a). Therefore, a functional head has to provide directional licensing (25b). The functional projection provides the spec position for the subject that is typical for SVO languages (25b).

- (25) a. [VP XP_{Subj} [V_i → [YP [V_r e_i → ZP]]]]
 b. [FP XP_j [F_r F^o → [VP e_j [V_i → [YP [V_r e_i → ZP]]]]]]

In OV, any argument of a verb is within the directionality domain of the verbal head, whence the absence of this functional projection in the OV-based clause structures. The functional spec position in (25b) is at the same time the position of *expletive subjects*. The absence of this functional layer in OV is the grammatical reason for the absence of expletives for this kind of subject position in OV. The EPP is a property of SVO languages. The functional spec position of the functional head that licenses the VP-internal subject is obligatorily lexicalized in SVO (except for pro-drop).

The final ingredient of the derivation is the trigger for the raising of the SP-subject into the spec-position of the functional head. Why is it not sufficient that XP is directionally licensed in its base position by the functional head? The answer is condition (19iii). The licenser and the licensee must c-command each other. This is possible only if the subject phrase is raised to the spec position of the licensing functional head.¹⁹ In sum, the external subject position of the SVO-clause structure and the occurrence of empty verb positions in a head-initial, complex VP

¹⁹ By the same token, in a head-initial VP, an ECM-subject raises to an object position of the licensing verb.

do not need to be stipulated, by invoking EPP and "little v". They are mere corollaries of the licensing conditions (19).

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