Subjunctive selection in French vs. Balkan

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1 Verbal and clausal mood

Languages vary as to how and where they mark subjunctive vs. indicative mood (Sočanać 2017, among others). Whereas French marks the indicative vs. subjunctive mood on the verb (1), Balkan languages use a special (so-called) complementizer to indicate subjunctive mood (2) (see Giannakidou 1998, 2009 and subseq. as well as Roussou 2000, 2009, 2010 and subseq. for Modern Greek; see Sočanać 2017 for details on Slavic and Balkan labguages).

(1) a. Mirka dit que Roger **est** prêt à l'heure. (French)
M. says that R. is ready on time
b. Mirka ordonne que Roger **soit** prêt à l'heure.
M. orders that R. be.SUBJ ready on time

(2) a. Nomizo **oti** kerdizei o Janis. (MG)
think1SG that win3SG.IMPERF the John
'I think that John is winning.'
b. Thelo **na** kerdisi o Janis
want1SG that.SUBJ win3SG.PERF the John
'I want John to win.' (Giannakidou 2009: 1887)

Most of the time, indicative and subjunctive mood morphology are syncretic with one another in French, but certain verbs–such as *être* 'be'–retain distinct subjunctive morphology. In Modern Greek (MG) and Balkan more generally,

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subjunctive morphology has been lost altogether and been replaced by what is known as *perfective non-past* (PNP) morphology, which encodes tense and aspect but not mood (mood being marked on the so-called complementizer).[1] The French strategy of marking subjunctive on the embedded verb is traditionally called *verbal mood*; the Balkan strategy of marking subjunctive on the complementizer may be referred to as *clausal mood* (see Sočanać 2017 and references there).

2 Veridicality and Mood selection

It is generally accepted that the subjunctive mood is a *dependent mood* selected under verbs which are associated with some special semantic features (Quer 1998, 2001, 2009, Giannakidou 1998, 2009, among others). Giannakidou, using MG data, argues that veridicality, as defined in (3), licenses mood choice:

(3) **Veridicality** (Giannakidou 1998, 2009)
A propositional operator *F* is veridical iff from the truth of *Fp* we can infer that *p* is true according to some individual *x* (i.e. in some individual *x*'s epistemic model).

According to (3), an embedded proposition has to be true for at least one individual (the subject of the main verb and/or the speaker), in all the worlds of a relevant model. Giannakidou claims that veridicality triggers the indicative mood in the embedded clause and non-veridicality triggers the subjunctive mood.

The correlation between mood and veridicality applies very well in MG and most of the Balkan Slavic languages (see Todorovic 2012), but it fails to apply to Romance's emotive factive complements (Quer 1998, 2001, 2009, Baunaz & Puskás 2014, Baunaz 2015, 2017). In Romance, here illustrated with French, predicates like *regretter* 'regret', *être content* 'be happy', etc. unexpectedly trigger the subjunctive mood, as seen in (4), even though these predicates are veridical according to (3):

[1] There is a long-standing debate on the status of *na* in the syntactic literature: is it a mood particle (i.e. an inflectional mood head, see Philippaki-Warburton 1994, 1998, Giannakidou 1998, 2009 among many others), a complementizer (Agouraki 1991, Tsoulas 1993 and Roussou 2000, a.o.) or a hybrid, that is a mood head moving to C (Giannakidou 2009)? See Giannakidou & Mari (2017) for a state of the art on this topic. See below for our take on the matter.

(4) Mirka regrette que Roger ait perdu. (French)
Mirka regrets that Roger has.SUBJ lost

It appears that Giannakidou's definition of veridicality cannot account for mood distribution cross-linguistically.

Baunaz & Puskás (2014) refine (3) by investigating the notion of "some individual", as applied to six verb classes of embedding verbs in French. Baunaz (2018) extends their findings to Balkan languages. They argue that these predicates can be classified into three groups if one takes into account the idea that the truth of the embedded proposition can relate to both the subject and the speaker (= strong veridicality), to either the subject or the speaker (= relative veridicality), or to none of them (= non-veridicality). Note that verbs can be "ambiguous" in being either strongly veridical or relative-veridical (MG *thimame* 'regret' or French *comprendre* 'understand' are cases in point; see Table 1).

	English tr.	**MG**	**SC**	**Bg**	**Fr**
Strong veridical	'remember'	*thimame*	*sjetiti se*	*pomnja*	*se rappeler*
	'regret'		%*žaliti*	*sǎžaljavam*	
	'understand'				*comprendre*
Relative veridical	'remember'	*thimame*	%*sjetiti se*	*pomnja*	
	'regret'	*lipame*	*žaliti*	*sǎžaljavam*	*regretter*
	'understand'				*comprendre*
Non-veridical	'say'	*leo*	*reći*	*kazvam*	*dire*
	'want'	*thelo*	*željeti*	*iskam*	*vouloir*

Table 1: Some (non-)veridical verbs in Modern Greek, Serbo-Croatian, Bulgarian and French (from Baunaz 2018)

The distinction between strong and relative veridicality is tracked by different complementizers in Balkan (see Table 3), or by subjunctive vs. indicative mood on the embedded verb in French (see Table 2).

The three-way distinction above does not provide an orderly way of accounting for mood selection in French, though: strong-veridical verbs and some non-veridical verbs select for indicative complements, whereas relative-veridical and some non-veridical verbs select for subjunctive complements. This results in an *ABA violation, as indicated by shading in Table 2. In MG (and Balkan more generally), veridicality and mood-marking appear to be unrelated too: non-veridical verbs can take an *oti*-clause with an indicative embedded verb, or they can ap-

pear with subjunctive *na*-complements. This is summed up in Table 2:

Main Predicates	Complementizer		Mood on V	
	Fr	MG	Fr	MG
Strongly veridical	que	pu	indicative	indicative
Relative veridical	que	pu/oti	subjunctive	indicative
Non-veridical 1	que	oti	indicative	indicative
Non-veridical 2	que	na (subjunctive)	subjunctive	none (PNP)

Table 2: Mood and veridicality in French and Modern Greek

The tripartition does, however, show promise in terms of complementizer selection, especially by splitting the non-veridical group in two (an 'indicative' NV1 and a 'subjunctive' NV2). Table 3 illustrates complementizer selection under the relevant predicates in the four languages at stake.

	MG	Bg	Serbian	Croatian	French
Strongly veridical	pu	deto	što	da	que
Relative veridical	pu oti	če	što	da	que
Non-veridical 1	oti	če	da	da	que
Non-veridical 2	na	da	da	da	que

Table 3: Finite complementizers in Modern Greek, Bulgarian, Serbian, Croatian, French

There are no problematic *ABA violations in Table 3. In other words, veridicality cleanly tracks complementizer selection in French and Balkan.

Focusing on Balkan languages, Baunaz (2015, 2016, 2018) argues that the complementizer morpheme has an internal functional sequence (fseq), and that the complementizer may lexicalize differently sized structures from this fseq. She also claims that the distribution of complementizers is governed by veridicality and shows that veridicality plays a role in so-called factive islands, called *veridicality islands* in Baunaz (2018). Based on syncretism patterns with complementizers and on wh-extractions out of (non-)veridical domains in four different languages, she argues that the predicates in Table 1 select for complementizers of different 'sizes'. She claims that the size of the complementizer plays a role in strong, weak, or non-island configurations. The basic complementizer-fseq

resulting from Baunaz's work is illustrated in (5). Note that under this analysis, *na* (and its cognates in Balkan languages) is considered to be a complementizer of the smallest size, with distinct syntactic properties from, say, non-veridical complementizers (see fn. 1).

(5) strong-veridical > relative-veridical > non-veridical 1 > non-veridical 2

Baunaz also adopts the idea from Manzini & Savoia (2011) and Roussou (2010) that complementizers may introduce a *propositional* operator (OP_{prop}). This operator closes off the clause and turns it into a proposition. Subjunctive clauses, which are open propositions, do not involve such an operator.

In this paper, we would like to reconcile the theory of complementizer selection summed up in Table 3 with the way in which mood is realized (Table 2). We will explain the apparent *ABA in French as well as some of the properties of the MG mood complementizer *na* (and its Balkan cognates, as described in Sočanać 2017) by taking a nanosyntactic approach.

3 The analysis: Peeling and packaging

In our view, the apparent ABA in French, seen in Table 2, is only an illusion. It is the result of unduly mixing up two independent processes: on the one hand, the internal structure of complementizers in terms of veridicality, and on the other hand, the selection of embedded mood by certain matrix verbs. Taken on its own, neither process violates the *ABA theorem. As we saw above in Table 3 that the veridicality domain does not show any complementizers in an illicit ABA-type configuration. And in Table 4 we see that mood is triggered by the kind of selecting predicate, i.e. the internal structure of the predicate.[2]

As seen in Table 4, indicative and subjunctive obey the adjacency requirement on syncretism, that is, they do not show any illicit ABAs.

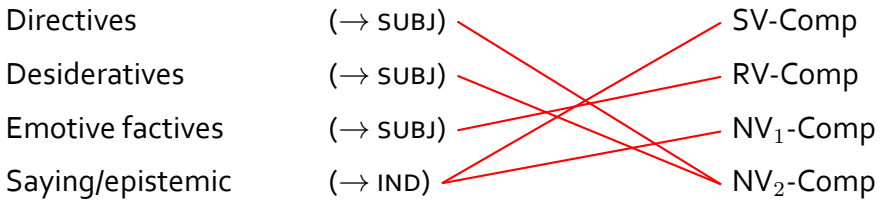
The problem arises in the observation that a relative-veridical complementizer appears to 'select' a subjunctive embedded verb. However, the correct way of framing this fact is not that the complementizer selects the embedded mood; rather, it is the higher matrix verb that is responsible for this. Veridicality is an (at least partially) independent variable, with different complementizer structures being compatible with different matrix verbs (6).

[2] For reasons of space, we borrow Baunaz & Puskás's (2014, under review) classification of embedding verbs without explanation. The reader is referred to their work for details.

Predicate class	**Internal structure**				**Selects**
Directives	CAUSE >	VOLITIONAL >	EMOTIVE >	SENTIENT	SUBJ
Desideratives		VOLITIONAL >	EMOTIVE >	SENTIENT	SUBJ
Emotive factives			EMOTIVE >	SENTIENT	SUBJ
V. of saying/ epistemic				SENTIENT	IND

Table 4: Matrix predicate classes and embedded mood

(6)



As seen in (6), RV and NV_2 complementizers are compatible with verbs taking the subjunctive mood (directives, desideratives and emotive factive verbs); SV and NV_1 are compatible with verbs taking the indicative (verbs of saying and epistemic verbs).

We make two main assumptions in our analysis. First, selection is local. Second, the order in which the main elements of the biclausal configuration are generated is **not** the following:

(7) Conventional ordering (*not* adopted here):

i. [embedded verb/clause]
ii. [Comp [embedded verb/clause]]
iii. [matrix verb/clause [Comp [embedded verb/clause]]]

Instead we will assume that veridicality – the stance taken by some individual with regard to a proposition – is in some sense the 'core' of the sentence; therefore we will hypothesize that the complementizer, as encoder of veridicality, is generated first.

(8) [RV [NV_1 [NV_2 [C]]]] (relative-veridical Comp)

In (8) we have provided the relative-veridical structure, but any complementizer

structure would also be available: strong-veridical [SV [RV [NV_1 [NV_2 [C]]]]], or non-veridical [NV_1 [NV_2 [C]]] or [NV_2 [C]]. We have chosen the relative-veridical structure because it partakes in the problematic ABA pattern discussed above.

The next step, for our purposes, is external merge of the verb with inflectional layers above (TAM, where *Subj* stands for subjunctive mood; *Prop* stands for proposition, which is also the feature yielding indicative morphology). This is seen in (9)).

(9) [Prop [Subj [T [Asp [V]]]]] + [RV [NV_1 [NV_2 [C]]]]

Following a 'peeling' approach to selection (unpublished work by Michal Starke, Caha 2009: ch. 4; see Taraldsen Medová & Wiland 2018 for a recent implementation), we will take the full structure of the verb to be merged at this stage, with selection of a subset of this structure happening in a later step, leaving behind a so-called peel.

In the next stage of the derivation the matrix verb is merged. As discussed above, it is the class of the matrix verb that determines whether the embedded mood is indicative or subjunctive.[3] In this case, with the relative-veridical Comp, we have an emotive-factive matrix predicate.

(10) [V_{matrix}P] + [Prop [Subj [T [Asp [V]]]]] + [RV [NV_1 [NV_2 [C]]]]

here: [V_{matrix}P] = [EMOTIVE [SENTIENT [VP]]]

At this stage of the derivation, the matrix VP is in a local relation to the embedded verb; we posit that this kind of relation makes it possible for the matrix verb to select some subset of the verbal structure, which here would be a verb with subjunctive inflection.

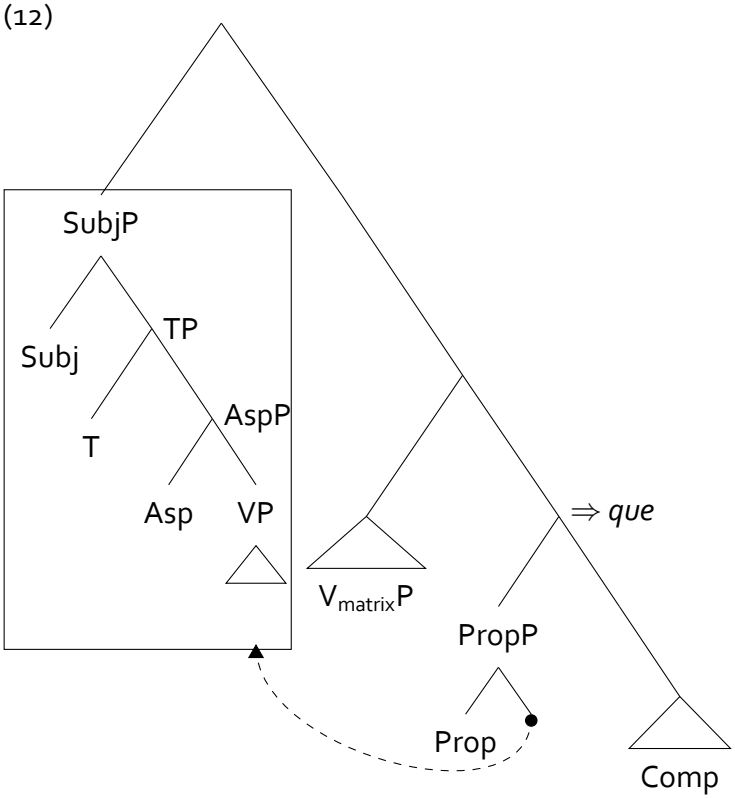
Selection involves movement of the subset to the left of the matrix VP, as sketched in (11).

(11) **[Subj [T [Asp [V]]]]** + [V_{matrix}P] + [Prop [__]] + [RV [NV_1 [NV_2 [C]]]]

Importantly, removing the subjunctive structure leaves behind a Prop layer without its complement (since SubjP has been moved out); this Prop 'peel' can be spelled out as part of the complementizer itself, i.e. Fr. *que*, as seen here:

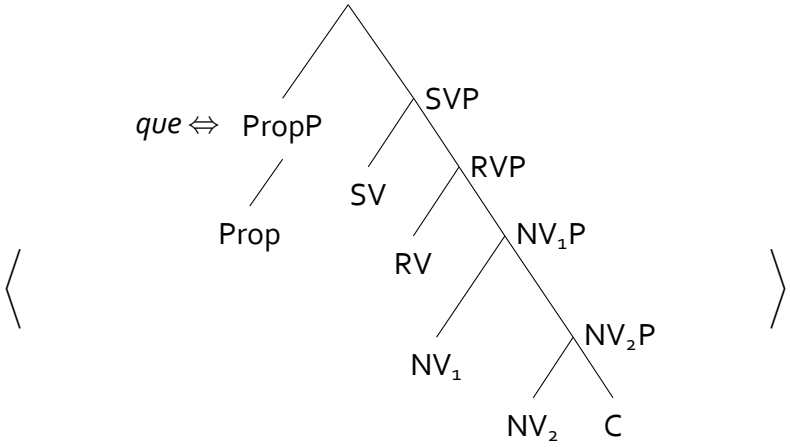
[3] See Baunaz (2017) and Baunaz & Puskás (under review) for arguments in favor of the idea that what determines the subjunctive mood is the emotive feature in the fseq of the matrix verb.

(12)



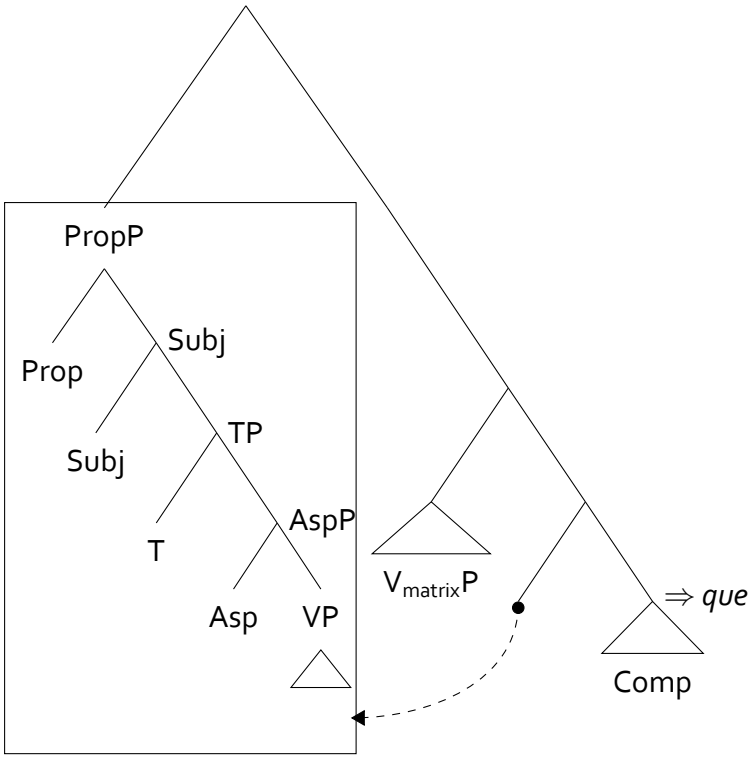
This means that the structure of French *que* as it is stored in the lexicon would look like ((13)).

(13) Lexical structure for Fr. *que*



In other words, the Prop peel encodes movement of a subjunctive verb out from underneath. However, it is not *only* in such cases that que can be spelled out. *Que* can also be spelled out if an indicative verb has been selected/moved to the left of the matrix VP, as seen in (14).

(14)



The lexical entry in (13) can still, by the Superset Principle, spell out the leftover structure in (14) as *que*. That is to say, the lexical structure with the peel in (13) is still a superset of [SV [RV [NV_1 [NV_2 [C]]]]] (or any subset of this structure). In other words, *que* is spelled out whether indicative or subjunctive has been selected by the matrix verb.[4]

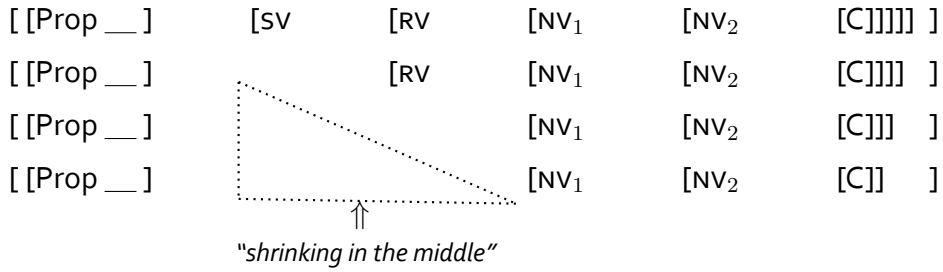
Thus the matrix verb does not directly determine the kind (size) of the complementizer. In other words, the complementizer grows and shrinks independently of the behavior of the matrix verb and the process of mood-selection happening above it. The lexical entry in (13) is able to accommodate this fact if we adopt the Revised Superset Principle, given in (15).

[4]We assume that later reshuffling in the derivation will move [$V_{matrix}P$ [Comp]] to the left of the embedded verb/clause, giving us the order [*matrix - Comp*] *embedded* ____. Furthermore, within the V-zone, we assume that VP eventually moves up to the left of the layers above it, giving the expected order [*verb*] - INFL ____.

(15) **Revised Superset Principle** (Vanden Wyngaerd 2018: 289, his. (6))
A lexical entry L may spell out a syntactic node SN iff the features of L are a superset of the features dominated by SN.

This relaxation of the 'classical' Superset Principle is required on independent grounds (see Vanden Wyngaerd 2018 for more details). For our purposes here, (15) allows for the lexical structure of *que* in (13) to map, at least in principle, onto all of the following syntactic structures:

(16) a. subjunctive verb selected



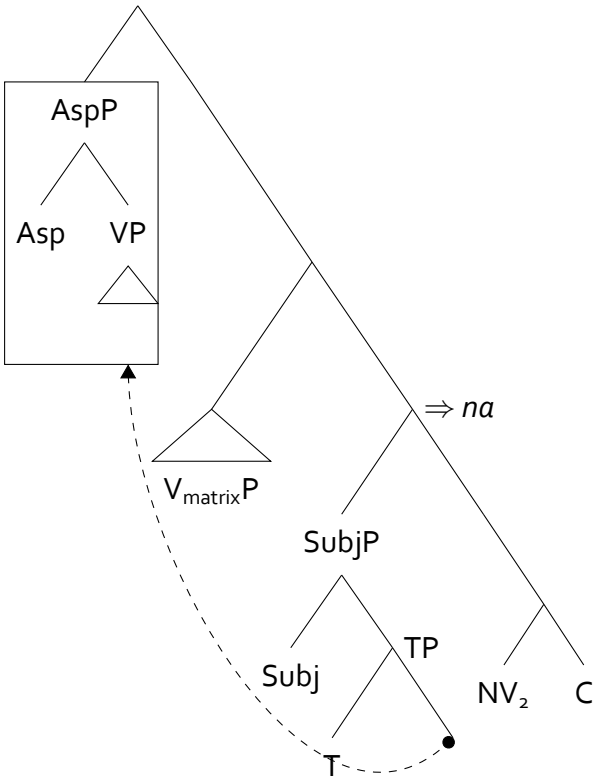
b. indicative verb selected

[SV [RV [NV1 [NV2 [C]]]]]
[RV [NV1 [NV2 [C]]]]
[NV1 [NV2 [C]]]
[NV2 [C]]

In (16a) we indicate that the complementizer zone can shrink while still keeping the Prop peel in place at the top; this is a kind of "shrinking in the middle" (as Vanden Wyngaerd 2018 puts it), a feature of the Revised Superset Principle which is absent in the traditional Superset Principle.

Turning now to Greek, it turns out that our analysis of French has some interesting consequences for the subjunctive non-veridical (=[NV_2 [C]]) complementizer-like particle MG *na*. First of all, these kinds of complements are not propositional and thus not expected to build all the way up to Prop, rather the structure stops at Subj. Second, recall that the embedded verb does not display a morphological subjunctive but rather *perfective non-past* inflection. For our purposes, PNP corresponds to [Asp [V]].

(17)



Crucially, once this part has been extracted from the verbal structure, we are left with a peel made up of Subj and T. Thus the lexical entry for *na* is the one given in (18).

(18) ⟨ *na* ⇔ [Subj [T __]] [NV_2 [C]] ⟩

This entry accounts for two major properties of *na*, namely that it is usually taken as a marker of subjunctive and also that it is an infinitival marker in T – a syncretism which is in fact widespread in Balkan.

Zeroing in on the C-zone, note that the lexical structure of *na* contains only [NV_2 [C]] and not a larger set of veridicality features (as in the lexical structure of Fr. *que*). The higher veridicality features are instead spelled out in MG by *pu* and *oti*. Embedded verbs under *pu* and *oti* cannot take PNP but instead show indicative morphology. Furthermore, contrary to *na*-clauses, *pu*- and *oti*-clauses

are propositional. Thus we can assume for *pu* and *oti* that the full PropP structure has been extracted in these contexts, leaving no peels behind. The lexical entries we land on are:

(19) a. ⟨ *pu* ⇔ [SV [RV [NV$_1$ [NV$_2$ [C]]]]] ⟩
b. ⟨ *oti* ⇔ [RV [NV$_1$ [NV$_2$ [C]]]] ⟩

The *lack* of peels in (19), then, encodes the fact that a larger verbal structure (namely indicative, requiring Prop in our analysis) occurs under *pu* and *oti*. The bigger peel in the lexical structure of *na*, on the other hand, encodes the fact that a smaller verbal structure (PNP, basically just a species of aspectual marking) occurs under *na*.

4 Conclusions

Nanosyntax makes it possible to 'package' features (and then store them in the lexicon) in different ways cross-linguistically. For us, it is crucial that Subj can be spelled out on the embedded verb in French, which has *verbal mood*, but as part of the complementizer *na* in MG, where *na* is a manifestation of *clausal mood*. This general nanosyntactic strategy has in this paper been combined with a peeling approach to selection, whereby a leftover peel from the verbal zone implies what kind of inflected verb has been extracted. We show that packaging and peeling, combined with the assumption that the complementizer is built *before* the embedded verb/clause, can be utilized to coherently account for the facts of subjunctive selection in French vs. Balkan.

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