

# Emotivity matters for mood licensing: Experimental evidence from French

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## Abstract

French distinguishes between indicative vs. subjunctive markings morphologically, by showing mood on the embedded verb. Embedded subjunctive appears with specific (classes of) matrix predicates, like *vouloir* (want), while the indicative mood is found with others, such as *dire* (say). This suggests that the subjunctive is licensed lexically by specific classes of predicates. However, the existence of verbs like *rêver* (dream), which seem to accept both moods, poses a challenge to this idea and raises the question of the source of optional mood selection. A recent approach sheds light on the importance of emotive contexts in the selection of subjunctive mood cross-linguistically (Baunaz & Puskás 2022, Baunaz & Lander 2024). Our hypothesis is that in cases where mood selection is optional (i.e., with alternating verbs), the subjunctive mood is licensed by the presence of the [Emo] feature, which is activated in emotive contexts. Consequently, we predict for alternating verbs, that the emotive contexts will favor the subjunctive mood, whereas the non-emotive contexts will favor the indicative mood. In contrast, the context manipulation will not affect the mood

selection patterns of verbs that exclusively select either the indicative or subjunctive mood. We provide an experimental confirmation of this claim.

**Keywords:** subjunctive, French, alternating predicates, emotive, elicitation experiment.

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## 1. Introduction

The licensing of subjunctive mood is still a debated question (Baunaz & Puskás 2022, Grisot, Blochowiak & Puskás 2022, Marques 2024 for recent overviews of the literature). A recent approach sheds light on the importance of emotivity in the licensing of subjunctive mood cross-linguistically (Baunaz & Puskás 2022, Baunaz & Lander 2024). Emotivity is understood there as a propositional attitude that convey information about the emotional state of the subject. Based on the syntactic and semantic differences of mood alternating verbs, these authors observed that mood alternation comes with a systematic difference in meaning.<sup>1</sup> Their claim is that subjunctive mood is triggered by an emotive feature, located on an emotive verb. Their approach is set within the nanosyntactic approach to grammar (Starke 2009, 2011; Caha 2009, a.o). Their claim is that the subjunctive mood on the embedded verb is licensed by an [Emo]tive feature, which is related to a bouletic operator.

An open question is what enables the activation of the [Emo] feature with alternating predicates. The Hypothesis we would like to put forth is that one of the key factors responsible for the activation of the [Emo] feature comes from pragmatics. This hypothesis assumes that the activation of the [Emo] feature and thus the licensing of the subjunctive mood operates at the syntax-pragmatics interface.

In this paper, we check experimentally this hypothesis for French with an elicitation task experiment. We asked participants to conjugate embedded verbs in two types of contexts: (i) an emotive context and (ii) a non-emotive context. We predict that with alternating verbs, emotive contexts will trigger the subjunctive mood, while non-emotive contexts will trigger the indicative mood. Our results indicate that our hypothesis is verified, as subjunctive mood is used significantly more often in emotive contexts than in non-emotive contexts. We account for this result by claiming that the selection of mood with alternating verbs involves the syntax-pragmatics interface.

In the following, we start by discussing mood selection in embedded clauses in French and we introduce one theoretical issue triggered by this phenomenon, namely: lexical selection (Section 2). Section 3 presents two accounts of the problem: the classic one (the *(non)-veridical* approach (Giannakidou 1998, 1999, 2009 and subseq.) and a recent one — the *emotivity* approach — which we adopt. Section 4 lays out the hypotheses and predictions generated by this approach, while section 5 describes the experiment designed to test the predictions. Section 6 discusses the results. Section 7 provides a conclusion and perspectives for further experimental testing.

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<sup>1</sup> Here and throughout this paper, we employ the term "alternating predicate" in a purely descriptive manner, that is, to refer to predicates that may license either the subjunctive or the indicative mood in their embedded clause.

## 2. Is mood licensing a lexical matter?

When it comes to clausal declarative complementation, matrix predicates select for the nature of their embedded tensed complements in terms of mood, complementizers and tense. In this paper our focus is on mood. More precisely, we investigate the nature of matrix predicates licensing subjunctive vs. indicative complements in French.

French distinguishes between indicative vs. subjunctive markings morphologically. Specifically, it shows mood on the embedded verb. This is illustrated in (1) and (2) with the verb *être* ‘be’ which comes with different forms in similar contexts: in (1) it appears at the indicative mood; in (2), it is marked for subjunctive.

- (1) a. French  
 Jo dit que son cocktail est bien fait.  
 J. says that her cocktail be.IND well made
- b. French  
 \*Jo dit que son cocktail soit bien fait.  
 J. says that her cocktail be.SUBJ well made  
 ‘Jo says that her cocktail is well made.’
- (2) a. French  
 Jo veut que son cocktail soit bien fait.  
 J. want that her cocktail be.SUBJ well made
- b. French  
 \*Jo veut que son cocktail est bien fait.<sup>2</sup>  
 J. want that her cocktail be.3.IND well made  
 ‘Jo wants her cocktail to be well made.’

Since in (1) and (2), embedded clauses are introduced by the complementizer *que*, we say that *que* introduces both indicative and subjunctive embedded clauses.

Not all languages show mood marking on the verb. For instance, Modern Greek has different complementizers. There is complementizer *oti*, which is a default one used with non-factive and with some factive verbs, as shown in (3a). In addition, there is a special (so-called) complementizer, *na*, used with non-factive verbs, as in (3b). Importantly, in such contexts French would use the subjunctive mood. The correlation between *this special complementizer* and subjunctive contexts has been extensively debated for Modern Greek (see, among others, Giannakidou 1998 and subseq; Roussou 2000, 2009, 2010 and subseq).<sup>3</sup>

<sup>2</sup> An anonymous reviewer observes that in some register of French, (2b) might come without the subjunctive mood, while (1b) cannot appear in the subjunctive mood. This suggests an asymmetry between these two examples: whereas (1b) is completely ungrammatical, (2b) is possible in substandard French. According to this reviewer, this asymmetry suggests that indicative is a default in French. Albeit an interesting point, we do not pursue this topic any further in this paper.

<sup>3</sup> As Sočanac (2017) notes, this is a one-way correlation: *na* may also appear in contexts corresponding to non-subjunctive non-finite contexts in Romance. We do not discuss this type of construction here, also known as ‘control subjunctives’ in the syntactic literature (see Sočanac 2017: 162, a.o. for details).

- (3) a. Modern Greek, Giannakidou (2009:1887)  
 Nomizo **oti** kerdizei o Janis.  
 think-1SG that win-3SG.IMPERF the John  
 ‘I think that John is winning.’  
 b. Modern Greek, Giannakidou (2009:1887)  
 Thelo **na** kerdisi o Janis.  
 want-1 SG that.SUBJ win-3SG.PERF the John  
 ‘I want John to win.’

Cross-linguistically, embedded subjunctive appears under specific (classes of) matrix predicates, indicating that subjunctive is *lexically* licensed under specific (classes of) predicates. Thus, in languages with overt mood marking, verbs like *say* license indicative mood, (4a), and verbs like *want/wish* trigger subjunctive mood, (4b).

- (4) a. French  
 Jo dit/pense/entend que Léon est / \*soit célèbre.  
 Jo says/thinks/hears that Léon be.IND / be.SUBJ famous  
 b. French  
 Jo veut/souhaite/ordonne que Léon \*est / soit célèbre.  
 Jo decides/wishes/orders that Léon be.IND / be.SUBJ famous

The choice of mood within the embedded clause varies, both intra and inter-linguistically. However, there seems to be certain core cases that behave systematically analogously across languages. Specifically, directive verbs (e.g., ‘order’), desire verbs (e.g., ‘want’, ‘wish’) and some modal predicates in impersonal constructions (e.g., ‘be possible’, ‘be necessary’) consistently require the subjunctive mood in their complement clauses. In contrast, verbs of saying (e.g., ‘say’, ‘mention’) and factive verbs (e.g., ‘know’) consistently require the indicative mood in their complement clauses. These facts suggest that the mechanism of mood choice is lexical.

An apparent challenge to the idea that mood licensing is solely a lexical property is the presence of optional subjunctive complements in some languages, as illustrated in (5) for French. Similar phenomena are also observed in other Romance languages (see Quer 2001, 2009; Giorgi & Pianesi 1997; Anand and Hacquard 2013; Portner and Rubinstein 2012, Giannakidou & Mari 2021), a.o), in Modern Greek (Giannakidou 2016, Giannakidou & Mari (2001)); in South Slavic, West Slavic, and Hungarian (Baunaz & Puskás 2022).

- (5) a. French  
 Georges comprend que Léon **est** / **soit** inquiet.  
 Georges understands that Leon be.IND / be.SUBJ worried  
 ‘Georges understands that Leon is worried.’  
 b. French  
 Georges rêve que Léon **devient** / **devienne**  
 Georges dreams that Leon become.3IND / become.SUBJ  
 président.  
 president  
 ‘Georges dreams that Leon will become president.’

If the data in (1)-(2) indeed indicate that the subjunctive mood is primarily licensed under a particular class of verbs, it raises the question of the source of optional mood licensing, as seen in examples like (5). Such cases are frequently considered either as a consequence of lexical properties of particular classes of verbs, or as idiosyncratic properties. In section 3.2, we will show that when alternating predicates take the subjunctive mood, they are interpreted as being *emotive*.<sup>4</sup>

To sum up, the subjunctive mood can be morphologically marked on the verb or not (cf. Romance vs Balkan languages), it seems to be consistently associated with some specific types of predicates across languages, but it can also exhibit alternation with indicative mood in certain contexts.<sup>5</sup> This complexity highlights the need for a more nuanced understanding of mood licensing mechanisms and their variation in different linguistic contexts.

### 3. State of the art

In this section, we introduce two approaches to mood licensing cross-linguistically: the non-veridicality approach (Giannakidou 1998, 2009 and subseq, Giannakidou & Mari 2021, a.o) and the emotivity approach.

#### 3.1. (Non)-veridicality

Mood choice has been explained in terms of the speaker's attitude toward the content of the embedded proposition. A very influential stream of work on that topic argues that the key factor determining mood choice is related to the concept of **veridicality** (see Giannakidou 1998, 1999, 2009, 2011, Giannakidou & Mari 2021, Quer 2009 a.o). Roughly speaking, if a propositional attitude predicate implies at least one truth inference about its complement, it is considered veridical and licenses the indicative mood. If not, it is non-veridical and triggers the subjunctive mood. Giannakidou's *veridicality* is formally expressed as in (6).

(6) **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)

As per the definition in (6), for an embedded proposition to hold, it must be true for at least one individual, which can be both the subject of the main verb and/or the speaker, across all possible worlds within a relevant model. Factive verbs like 'regret', 'know', and 'realize' are considered strongly veridical because both the speaker and the subject of the main clause are unequivocally committed to the truth of the embedded

<sup>4</sup> As observed by an anonymous reviewer, this property is shared with factive predicates like *regretter* which have also been described as emotive (see Kiparsky & Kiparsky 1970), see also section 3.1 below.

<sup>5</sup> It is worth noting that mood selection may also be influenced by presence of negation or of a question operator (see literature on Polarity Subjunctive (Quer 2009). This topic is however outside the scope of this paper.

proposition. Also, non-factive verbs such as ‘believe’ or ‘think’ make it clear that the subject of the main clause is dedicated to the truth of the embedded proposition. Consequently, these verbs are categorized as veridical, as well.

The connection between mood and veridicality becomes less consistent when applied to Romance languages as noted by Quer (2009). In contrast to Modern Greek, Romance emotive factive predicates such as ‘regret’ trigger the subjunctive mood, as shown in (7). These verbs presuppose the truth of their complements, as argued by Kiparsky & Kiparsky (1970). Consequently, a verb like *regretter* ‘regret’ in French should take the indicative mood, but it is not the case, as shown in (7b). These predicates are also special in Modern Greek, as they select another special complementizer, *pu*, instead of *oti* or *na*.<sup>6</sup>

- (7) a. Modern Greek  
 I Tzo lypátai **pu**/\*na/\*oti to koktéil tis dhen pínetai.  
 the Jo regrets that the cocktail her n ot drink-3SG
- b. French  
 Jo regrette que son cocktail \*est / soit  
 Jo regrets that her cocktail be.IND/ SUBJ  
 undrinkable  
 imbuvable.  
 ‘Jo regrets that her cocktail is undrinkable’

Hence, it seems that (6) may not provide a comprehensive explanation for mood distribution across different languages, and further discussion is needed to better understand what specifically triggers the use of the subjunctive mood in embedded clauses such as in French.<sup>7</sup> To do that, Giannakidou & Mari (2021) develop a more flexible view of veridicality. They propose a system which distinguishes between objective and subjective (non-)veridicality, which results in four possible combinations: objective veridical, objective non-veridical, subjective veridical, and subjective non-veridical.

The authors argue that the key difference between the indicative and subjunctive moods lies in their level of epistemic strength. The subjunctive mood is seen as epistemically weaker because it reflects a lack of full commitment by the speaker to the truth of the proposition being expressed.

Giannakidou and Mari (2021) consider factive verbs like ‘know’ as being objectively veridical because their factive nature ensures that the statements introduced via their complements are always true. They actually explore a different dimension of veridicality, highlighting that while objective veridicality is grounded in universal truths, individuals vary in how they relate these truths to their own knowledge or understanding. This introduces an element of subjectivity, where truth is shaped by each person’s unique perspective.

<sup>6</sup> More on *pu* in section 2.3.

<sup>7</sup> Baunaz & Puskás (2014), as well as Baunaz (2015), (2016), and (2018), argue that while veridicality may not have a direct impact on the selection of the subjunctive mood across different languages, it does play a significant role in characterizing the internal structure of complementizers. This characterization has intriguing syntactic implications, particularly in relation to how embedded clauses behave in terms of opacity and transparency with regard to long-distance movement (For more details, see Baunaz & Lander 2021).

The authors assert that the factive verb ‘know’ possesses both objective and subjective veridicality. It is objectively veridical because it ensures the truth of its complement and subjectively veridical because it entails the truth of the proposition within an individual’s personal knowledge space. This dual veridicality makes ‘know’ somehow strongly veridical (as in Baunaz & Lander 2014). The non-factive verb ‘believe’ differs in that it is only subjective veridical, as it entails the truth of the proposition solely from the individual’s perspective.

The authors argue that the indicative mood is allowed in contexts where there is either objective or subjective veridicality. Conversely, the subjunctive mood is used in nonveridical contexts, where there is no such guarantee of truth. They conclude that nonveridical contexts are epistemically weaker than veridical ones.

To account for mood alternation, they argue that the mood morphemes are sensitive to the (non)veridicality of the embedded proposition. As such, subjunctive is distinguished from indicative mood in that it is epistemically weaker: the individual is not committed to the truth of the embedded proposition. This approach is thus purely semantic.<sup>8</sup>

In the remaining of this paper, we argue, based on alternating predicates in French, that the licensing of subjunctive mood is also a phenomenon which lies at the interface between syntax/semantics and pragmatics.

### 3.2. The role of *emotivity*

A recent approach to cross-linguistic mood selection puts forth the argument that the grammatical semantics (i.e., those aspects of meaning that are associated with syntax) of clause-embedding verbs plays a pivotal role in the marking of the subjunctive mood (Baunaz 2017, Baunaz & Puskás 2014, 2022). They offer a fine-grained analysis of subjunctive licensing, which encompasses analysis of both syntactic and semantic aspects related to subjunctive licensors, specifically the matrix predicates. The central claim is that emotivity represents the primary factor in the cross-linguistic licensing of the subjunctive mood. However, it is important to note that emotivity is a part of a larger phenomenon, known under the label of subjectivity, which includes emotivity, expressives, viewpoint, deictics, etc. (Kerbrat-Orecchioni 1999). Here, we aim to focus on the notion of emotivity, that will be developed in the following section.

#### 3.2.1. Identifying the emotive reading

Which predicates license which mood in French? It is widely accepted that verbs of saying and cognitive (non)-factive verbs select for indicative embedded clauses, (8), while emotive factives, future referring and directive verbs select for subjunctive embedded clauses, (9).

(8) *French indicative selecting verbs*

- a. Verbs of saying: *dire* ‘say’, *observer* ‘observe’...
- b. Cognitive non-factives: *penser* ‘think’, *croire* ‘believe’...

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<sup>8</sup> We refer the reader to Baunaz & Puskás 2022 (Chapter 3) for a detailed discussion of this approach for French, which challenges the fact that flexible (non)veridicality does not permit to identify what are the core subjunctive properties cross-linguistically.

- c. Cognitive factives: *réaliser* ‘realize’, *se rappeler* ‘remember’,  
*découvrir* ‘discover’...

(9) *French subjunctive selecting verbs*

- a. Emotive factives: *regretter* ‘regret’, *heureux* ‘happy’, *surpris*  
‘surprised’...  
b. Future-referring: *souhaiter* ‘wish’, *vouloir* ‘want’, *désirer*  
‘desire’, *espérer* ‘expect’...  
c. Directive: *suggérer* ‘suggest’, *ordonner* ‘order’, *dire*  
‘tell’...

In addition, a set of predicates allows for mood alternation. French has a limited set of alternating predicates of this sort, of which *rêver* ‘dream’, *accepter*, ‘admit’ and *comprendre* ‘understand’ can be cited. (10).

(10) *French alternating verbs*

- a. non-factives : *imaginer* ‘imagine’, *rêver* ‘dream’  
b. semi-factives : *comprendre* ‘understand’, *accepter* ‘accept’,  
*admit* ‘admettre’

Let us now focus on this type of predicates to better understand why they allow for alternation.

The first observation is that the alternating verbs do not belong to a single homogenous semantic class: some are semi-factive, while others are not. In addition, the fact that the set of alternating verbs is different in different languages, that is it varies cross-linguistically, supports the hypothesis that there is no specific semantic class behind them. Therefore, as for now, we consider them as a set of verbs not linked by specific semantic properties that would unify them into a semantically coherent class. However, as we will show later, there is a semantic property, not discussed in previous accounts of the phenomenon, that is common to all of them, and which pertains to the emotive dimension.

The second observation is that mood alternation comes with a difference in meaning. The best way to account for these differences is to provide contexts where the choice of mood seems clear, as in (11). In (11a), *comprendre* selects an indicative clause, and the resulting reading is that where *comprendre* involves some mental exercise from the matrix subject only (i.e., the activity of understanding is an intellectual process, which requires cognitive abilities). In addition to this reading, when *comprendre* selects a subjunctive clause, as in (11b), it conveys in addition to the cognitive reading, some kind of emotive attitude (e.g., i.e. the subject is empathetic with Mary and wants to understand *p*) from the matrix subject.

## (11) a. French

Jean and his wife Marie have been living together for 2 years.

He calls her to find out if she's still there, but she doesn't answer him

*Il comprend que sa femme est /\*soit*  
 he understands that his wife be.3IND / be.SUBJ  
*partie sans lui dire* goodbye  
 left without to.him say *au revoir.*

‘He realizes that his wife left without saying goodbye’.

## b. French

Jean and his wife Marie have been living together for 2 years.

This morning he was very mean to her and now he regrets it.

*Il comprend que sa femme \*est /soit partie*  
 he understands that his wife be.IND / be.SUBJ left  
*sans lui dire au revoir*  
 without to.him say goodbye

‘He understands the reasons why his wife left without saying goodbye’.

Thus, in its cognitive reading *comprendre* is interpreted as ‘deducing from contextual information, while in its emotive reading *comprendre* is understood as ‘being emotionally sensitive to’.

Incidentally, these two readings suggest that the verb *comprendre* has two meanings: the one – *cognitive comprendre* – features the cognitive meaning component and the other – *emotive comprendre* – features the emotive meaning component. Importantly, one meaning (the cognitive one) is semantically included within the second meaning (the emotive one), as we will see in more detail below (see section 3.2.6).

Even though we have provided contextual information for these sentences, it is important to note that these readings need not rely on context. The presence of morphological mood on the embedded verbs is sufficient to establish the relevant reading. In other words, the sentences in (12), when considered in isolation, are unambiguous:

## (12) a. French (cognitive)

*Il comprend que sa femme est partie sans*  
 he understands that his wife be.IND left without  
*lui dire au revoir*  
 to.him say goodbye

## b. French (emotive)

*Il comprend que sa femme soit partie sans*  
 he understands that his wife be.SUBJ left without  
*lui dire au revoir*  
 to.him say goodbye

However, it is worth noting that in French, not all verbs consistently show morphological mood marking for the subjunctive mood. Consequently, in the absence of contexts, in situations like (13), ambiguity arises.

- (13) French  
 Il comprend que sa femme s'énerve.  
 He understands that his wife SE get.angry.3SG  
 'He understands that his wife gets angry.'

Beyond context, another effective strategy to disambiguate between the two possible readings of (13) is to modify the main predicate with degree adverbs, such as *tellement* 'so much', as in (14). These adverbs are typically used with emotive predicates to vary their intensity. Modifying the intensity of a non-emotive predicate is less felicitous, primarily for semantic reasons. (14) illustrates the same phenomenon with the sentences in (12).

- (14) a. French  
 #Il comprend *tellement* que sa femme s'  
 he understands so much that his wife SE  
 énerve.  
 get.angry.3SG.IND
- b. French  
 Il comprend *tellement* que sa femme s'  
 he understands so much that his wife SE  
 énerve.  
 get.angry.3SG.SUBJ
- (15) a. French  
 #Il comprend *tellement* que sa femme est partie  
 he understands so much that his wife be.IND left  
 sans lui dire au revoir.  
 without to.him say goodbye  
 # 'He realizes so much that his wife left without saying goodbye'.
- b. French  
 Il comprend *tellement* que sa femme soit partie  
 he understands so much t hat his wife be.SUBJ left  
 sans lui dire au revoir.  
 without to.him say goodbye  
 'He understands the reasons why his wife left without saying goodbye'.

An important characteristic of these predicates is thus that when they take subjunctive complements, their subject tends to be interpreted as experiencing some emotive state, a feature absent from their indicative counterparts.<sup>9</sup> One of the meanings of the predicate is emotive, giving rise to an emotive interpretation of the entire sentence. We will see below that the context can also provide information as to the emotive state of the subject (see section 3.2.4).

In sum, when alternating verbs are paired with subjunctive complements, the subjects of these verbs are understood to be experiencing some emotive state. However, when these verbs take indicative complements, the subjects are not

<sup>9</sup> All the subjects discussed in this paper are animate subjects (and external arguments) of the main predicate.

perceived to be experiencing an emotive state but rather to be in a specific cognitive state.

### 3.2.2. *The emotive attitude*

As we have seen, the alternation observed in predicates is marked by systematic differences in meaning, particularly in the attitude of the subject: the presence of an emotive stance from the subject pairs with the use of the subjunctive mood. In Baunaz 2017 this alternation is associated with an ‘emotive’ property.

To provide a formal description of this phenomenon, we draw on Blochowiak’s 2014 works, where the author provides a semantico-pragmatic analysis of various types of propositional attitudes, such as doxastic (e.g., *to know*, *to believe*, *to think*), or emotive (e.g., *to regret*, *to fear*, *to hope*). In the case of sentences with emotive propositional attitudes, she proposes to consider them as denoting complex relations between the subject’s emotive state (denoted by the emotive propositional attitude stated in the matrix verb), the intentional object of the subject’s state (the eventuality described by the embedded proposition), the subject’s bouletic attitude towards this object (i.e., the eventuality described by the embedded proposition) and an axiological evaluation of this (type) of eventuality, as represented in (16).

- (16) Blochowiak (2014: 177, (274))
- a. x is in an emotional state *s* towards some eventuality *e*
  - b. eventuality *e*
  - c. x wishes or not that *e* occurs (cf. bouletic Op)
  - d. *e* is desirable or not w.r.t. some corpus of rules (cf. axiological Op)

In essence, emotive propositional attitudes are those that convey information about the emotional state of the subject in relation to the state of affairs described by the embedded proposition<sup>10</sup>. In this context, the eventualities or situations that encompass an emotional state of the speaker are semantically linked to a bouletic operator [*wish*] and an axiological operator [*Recommended*] (we drop here the axiological operator, as it is not necessary for our purpose). The bouletic operator can express either a positive or a negative desire/wish regarding the described state of affairs (i.e., described by the embedded proposition). For example, a sentence (17a) will translate into (17b):

- (17) a. Jo regrets that Leni came late.  
 b.  $\exists e \exists s [e = \text{Come late (Leni)} \wedge s = \text{Regret (Jo)} \wedge \text{Wish (Jo, } \sim e)]$

In sum, it represents the subject’s emotional attitude towards the situation, indicating whether they desire or wish for it to happen (positive) or not to happen (negative).

<sup>10</sup> “[a]ny emotional state has its polarity (negative or positive). This polarity tells us something about the experiencer’s wishes, i.e. her bouletic attitude, which inherits the polarity of emotional states (w.r.t. eventuality described by the embedded proposition).” (Blochowiak 2014:173)

### 3.2.3. *The emotive attitude and subjunctive mood selection*

Baunaz & Puskás 2022, as well as later work by Baunaz & Lander 2024, propose to adopt the definition of the emotive propositional attitude and use it to explain the mood licensing. They posit the existence of an ‘emotive’ feature at the syntactic level which captures the emotive or affective stance of the subject with respect to the situation described in the sentence. This approach allows for a more precise and formal understanding of how mood licensing is tied to the emotive engagement of the subject of the main clause.

In particular, Baunaz & Puskás (2022) claim that the subjunctive mood serves as the linguistic expression of modality associated with an emotion, which is triggered by the matrix verb in the sentence. They define this type of emotive attitude as follows:

(18) **Emotive attitude**, Baunaz & Puskás (2022: 106, (48))

The holder of an emotive attitude has some (positive or negative) expectation with respect to an eventuality based on an evaluation of other comparable eventualities

For example, (18) can account for the notion of degree involved in the semantics of *tellement* ‘so much’ found with *comprendre tellement* in (15): on a scale of different comparable eventualities, the worlds where John’s wife left without saying goodbye are evaluated as being better than those where other comparable eventualities occur.

To delve into the meaning of ‘emotive’ in subjunctive contexts, Baunaz & Puskás (2022) propose that emotive verbs must be linked to a subevent characterized as a ‘desirability’ attitude.<sup>11</sup> This connection is established through the use of a bouletic operator. The subevent related to the bouletic operator is conceptualized as a state, and the ‘emotive’ participant represents an entity that holds a certain degree of desirability for a specific eventuality to occur. Importantly, this desirability attitude can be viewed as a spectrum, ranging from positive to negative. In other words, the bouletic operator encompasses propositions that express situations considered desirable, which can be evaluated along various scales in comparison to other potential situations (see Baunaz & Puskás 2022: 106). Therefore, when a bouletic operator conveys an attitude of desirability toward an event (e.g., as seen with ‘desire’), a negative bouletic attitude reflects an attitude of non-desirability or aversion toward that event (e.g., as seen with ‘fear,’ which can be understood as a negative wish). In summary, the subjunctive mood is allowed by a predicate that is, at the very least, associated with a bouletic operator, which expresses some form of emotivity or desire regarding the event or situation in question (i.e., the embedded proposition). This is expressed in (19) (adapted from Baunaz & Puskás 2022:113, (56)):

(19) **Embedded subjunctive licensing mechanism (ESLM)**

Subjunctive mood is licensed by a predicate which is minimally associated with a bouletic operator, syntactically realized as a feature [EMOTIVE] on the verb

<sup>11</sup> As an anonymous reviewer observes, ‘desirability’ can be completely disconnected from emotivity. The term ‘desirability’ should be understood here neutrally, as ‘more positively evaluated’.

Concerning emotive factive predicates, they are emotive in a specific way. In addition to their factive nature, these predicates introduce a set of possible situations, within which the current one is assessed as either non-desirable (as seen in predicates like *regretter* ‘regret’) or desirable (as seen in predicates like *être content* ‘be happy’). These predicates elicit emotive or affective reactions from the speaker or subject, reflecting their emotional attitude toward the embedded proposition. So, emotive factive predicates introduce an element of emotive evaluation alongside their factive quality.

- (20) a. French  
 Jo regrette que son cocktail soit imbuvable.  
 Jo regrets that her cocktail is.SUBJ undrinkable  
 ‘Jo regrets that her cocktail is undrinkable.’
- b. French  
 Jo est heureuse que son article soit publié.  
 Jo is happy that her paper is.SUBJ published  
 ‘Jo is happy that her paper be published.’

In the context of these predicates, the subject associated with them holds a bouletic attitude toward the eventuality described in the embedded clause: in the case of (20a), the subject exhibits a negative emotive attitude. This means they wish that the eventuality described in the embedded clause had not occurred, expressing a sentiment of non-desirability or regret that it did take place (= *wishing that p had not been the case*). In the case of (20b), the subject demonstrates a positive emotive attitude. Here, they view the eventuality in the embedded clause as desirable, positioning it positively along a scale that includes various other, less desirable situations. This conveys a sense of contentment or happiness regarding the occurrence of that eventuality. So, in summary, the subject associated with these predicates exhibit bouletic attitudes that range from negative (wishing the eventuality hadn't happened) to positive (considering the eventuality desirable among various alternatives).

### 3.2.4. The importance of pragmatics

We have indeed provided examples in section 3.2.1 which show that the subjects of emotive predicates are strongly related to the semantics of the main verb: emotive predicates take emotive subjects, non-emotive predicates do not. Yet, this is not necessary, since the context can reveal information concerning the emotive state of the subject (see (11) above). Again, it is important to recall that emotivity is part of a larger phenomenon, known under the label subjectivity. Subjectivity includes emotivity, expressives, viewpoint, deictics, etc. i.e. mainly pragmatic notions. Here, we claim that emotivity is part of subjectivity, but it also has syntactic and semantics effects.

The following examples can help grasp this point. In (21)-(23), verbs like *préférer* ‘prefer’, *risquer* ‘risk’, *admettre* ‘admit’ etc. can be considered as emotive in the following sense. The subject of the main predicate can be in an emotive state because the predicate introduces a set of possible situations among which the current one is evaluated as, for instance, non-desirable (cf. *risquer* ‘risk’), (21), or desirable (cf. *préférer* ‘prefer’), (22), or either desirable, or non-desirable like *admettre* ‘admit’, (23).

- (21) French  
 Vous risquez surtout qu'il fasse mauvais là-bas  
 You risk especially that it does.SUBJ bad there  
 aussi, que la course n'ait pas lieu.  
 too, that the race NE have not place  
 'You especially risk that the weather is bad there too, that the race will not take place.'
- (22) French  
 Jo préfère que son cocktail soit bien frais.  
 Jo prefers that her cocktail be.SUBJ well fresh  
 'Jo prefers her cocktail to be cold.'
- (23) French  
 Jo admet que Leon ait raison.  
 Jo admits that L. have.SUBJ right

Similarly for the examples in (24)-(25), with *accepter* 'to accept' and *s'assurer* 'to make sure'. Even though these verbs do not pair *prima facie* with emotive attitudes, we can think of contexts in which the emotive dimension arises.

- (24) French  
 Jean accepte que sa femme soit partie.  
 Jean accepts that his wife be.SUBJ left  
 'Jean accepts that his wife left.'
- (25) French  
 Marie s'assure que les invités soient bien placés à  
 Marie makes sure that the guests be.SUBJ well placed at  
 table.  
 table  
 'Marie makes sure that the guests are well placed at the table.'

In (24), we can imagine that Jean accepts the decision taken by his wife, even though this decision hurts him, or even though it is difficult for him to handle emotionally. In (25), we understand that Marie is not in a neutral emotive state with respect to the situation described, as she wants that every guest be well placed at the table. If, on the other hand, the speaker does not want to convey any emotive dimension about the situation described, s/he will not use the subjunctive mood with these verbs. Thus, emotivity is the prototypical relation for subjectivity and we use it here as a label, but we do not restrict the range of our operator to 'emotions'.

### 3.2.5. The Emotive feature

From a formal perspective, the bouletic operator can be conceptualized as a semantic operator. This operator plays a crucial role in conveying the speaker's or subject's emotive attitude toward the embedded proposition, influencing mood licensing and the overall meaning of the sentence. It represents the desire, wish or emotive disposition of the subject or speaker in relation to the eventuality being described.

Syntactically, the emotive operator translates as an emotive feature [Emo], projected as a head. Evidence in favor of the feature [Emo] can be found in Modern Greek (MG), which lexicalizes its emotive feature as a special complementizer, *pu*. Some factive predicates, like *thimame* ‘remember’ can optionally select either for the special complementizer *pu*, or for the complementizer *oti* ‘that’, (26).

- (26) a. Modern Greek, adapted from Giannakidou (2009: 1887, her (9))  
 Thimame **pu** ton sinandisa sto Parisi.  
 remember.1SG that him met.1SG in.the Paris
- b. Modern Greek, adapted from Giannakidou (2009: 1887, her (9))  
 Thimame **oti** ton sinandisa sto Parisi.  
 remember.1SG that him met.1SG in.the Paris  
 ‘I remember that I met him in Paris.’

Christidis (1982) and Giannakidou (2016) have shown that complementizer *pu* expresses a “strong ‘subjective’ dimension”, an “emotive” or some “expressive content”.<sup>12</sup> This is the case in (26a). This reading is absent when *oti* ‘that’ is present, as in (26b).<sup>13</sup> Note that the emotive reading can also be found in another context in MG, that is, when the matrix verb selects *na*, the subjunctive particle, (27).

- (27) Modern Greek  
 O Nikos theli **na** fiji i Stella.  
 The Nikos wants that left.3SG the Stella

The situation in (27) is thus similar to the French’s case discussed in (2a), repeated here in (28).

- (28) French  
 Jo veut que son cocktail soit bien fait.  
 J. want that her cocktail be.SUBJ well done

We thus see cross-linguistic and intra-linguistic variation in how the [Emo] feature can be lexicalized.

To sum up the facts, [Emo] can be located either on the functional sequence pertaining to the verb, as in French (28) and MG (27), but it can also appear on the complementizer, as in MG, which has a special ‘emotive’ complementizer, *pu*, (26a) - at least for some speakers.

<sup>12</sup> Note that so called emotive factive predicates in MG always select for *pu*, as shown in (i).

(i) Modern Greek, Giannakidou (2013, p. 7, (20a))  
 O Nicholas lipate/xerete **pu**/\***oti** efije i Ariadne.  
 the N. is.sad/is.happy that left.3SG the A.  
 ‘Nicholas regrets/is happy that Ariadne left.’

<sup>13</sup> There seems to be speaker variations here, as some of our Greek informants do not agree with this interpretation for *pu*.

The key point is that [Emo] can license the subjunctive mood in both languages only when it is lexicalized on the verb's functional sequence.

### 3.2.6. *The framework: Nanosyntax*

The analysis proposed here is rooted within the nanosyntactic framework (Starke 2009, 2014, Caha 2009, Baunaz & Lander 2018), where morphemes are internally complex and consist of syntactico-semantic features organized hierarchically according to an invariable functional sequence (fseq). In this framework, the idea of a universal grammatical structure, the fseq, that is realized differently depending on lexical entries is central. This approach posits that even seemingly small units of language, or "nanosyntactic features," play a crucial role in determining the structure of sentences. Thus, one such feature is [Emo] and it relates to emotivity.

Crosslinguistic variation is understood by analyzing the different ways in which languages lexicalize and express linguistic elements. Each language encapsulates the same underlying functional information into lexical entries in its own unique manner.

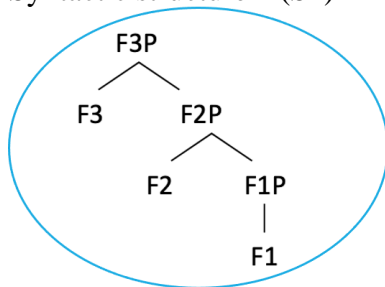
In this approach, the process of lexicalisation is crucial and can be described as follows: when the generative engine produces a structure, it does so incrementally, merging one feature at a time according to the functional sequence. Following each step of merge, the resulting syntactic structure needs to be correctly associated with a corresponding lexical structure stored in the lexicon.

In Nanosyntax, a lexical entry typically stores phonological, syntactic, and conceptual information. A syntactic structure stored within a lexical entry is a run-of-the-mill syntactic structure. (29) is an example of a lexical entry (LE).

(29) LE 1: < /phonology/  $\Leftrightarrow$  [F3 [F2 [F1]]]  $\Leftrightarrow$  CONCEPT >

A syntactic structure (S1) like (30) below can be lexicalized by the lexical structure in the LE 1, since these two structures match exactly.

(30) Syntactic structure 1 (S1)



This fulfills the condition on matching (31) (see Caha & De Clercq & Starke & Wyngaerd, under review, p. 18-19):

(31) **Condition on matching**

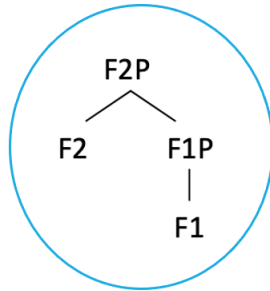
A lexically stored constituent L matches a syntactic phrase S iff S is identical to L.

Moreover, the syntactic structure (33) can also be lexicalized by the lexical structure in the LE1 due to the Superset Effect (formerly known as the Superset Principle, see Caha & De Clercq & Starke & Wyngaerd, under review, p. 18-19)

(32) **Superset Effect**

A lexically stored tree matches a syntactic node iff the lexically stored tree contains the syntactic node.

(33) Syntactic structure 1 (S2)



In the LE1, the lexical structure is a superset of the syntactic structure in (33). The Superset Effect has proven particularly useful in accounting for syncretism, which Caha 2009 defines as “a surface conflation of two distinct morphosyntactic structures” (Caha 2009: 6).

However, if the lexicon contains a second lexical entry with the structure [F2 [F1]], then this second entry would be selected to spell out the syntactic structure in (33). This rule of the ‘more specific wins’ is known as the Elsewhere Principle (see Kiparsky 1973), and is defined in (34) (definition taken from Baunaz & Lander 2018: 30 (15)):

(34) **Elsewhere Principle**

If more than one L-tree can lexicalize the same S-tree (by the Superset Principle), then the L-tree with the least amount of superfluous material is chosen.

Crosslinguistic variation is interpreted in relation to the distinct ways the universal functional sequence is lexicalized, shaped by the unique characteristics of each language's lexicon. While languages share the same syntax and derivational possibilities, our lexical inventories vary, impacting how we articulate (lexicalize) these options.

*3.2.6.1. Lexical entries of alternating predicates*

By assuming that each individual predicate has its own lexical entry in the lexicon, we can effectively account for the variations observed with alternating predicates. In other words, each lexical entry will store information specific to that predicate. Recall example (11), repeated here as (35).

## (35) a. French

Jean and his wife Marie have been living together for 2 years.

He calls her to find out if she's still there, but she doesn't answer him

*Il comprend que sa femme est /\*soit*  
 he understands that his wife be.3IND / be.SUBJ  
*partie sans lui dire* goodbye  
 left without to.him say *au revoir.*

‘He realizes that his wife left without saying goodbye’.

## b. French

Jean and his wife Marie have been living together for 2 years.

This morning he was very mean to her and now he regrets it.

*Il comprend que sa femme \*est /soit* *partie*  
 he understands that his wife be.IND / be.SUBJ left  
*sans lui dire* *au revoir*  
 without to.him say goodbye

‘He understands the reasons why his wife left without saying goodbye’.

In (35), we observed that alternating predicate like *comprendre* can be interpreted either as being purely cognitive (i.e. *cognitive comprendre* is used as a verb with a pure cognitive meaning, meaning ‘realize’), or as combining this cognitive meaning with an *emotive* meaning, meaning ‘empathize’ (and thus, involving the [Emo] feature). In other words, what we observe here is one phonological form that can be interpreted with two readings, one of the two being a superset meaning of the other, and thus the other being a subset of the other. The two readings are in semantic containment relation, which translates in Nanosyntax as Emo being a superset of the default reading, (36):<sup>14</sup>

- (36) a. Bouletic > Cognitive (meaning)  
 b. Emo > V (syntax)

This is, in other words, a syncretism (i.e. “a surface conflation of two distinct morphosyntactic structures” (Caha 2009: 6)). (36b) is thus the structure of the desirability meaning of *comprendre* (‘empathize’) and the structure of the non-desirability reading of *comprendre* (‘realize’) is the featural subset {V}<sup>15</sup> Alternating verbs like *comprendre* must be lexically specified for the full structure, corresponding to the desirability reading, while the Superset Effect allows for the subset {V}, corresponding to the cognitive reading, to be spelled out as well.

### 3.2.7. Interim conclusion and hypothesis

In languages like French and certain varieties of Modern Greek (MG), [Emo] can be located either on the functional sequence associated with the verb or on the

<sup>14</sup> Since this section only describes the logic of this approach, here we do not discuss the whole internal structure of the verb, ignoring the fact that the fseq of the verb contains more features. See Baunaz & Puskás 2022 for a detailed rationale in favor of more features in the fseq of embedding verbs.

<sup>15</sup> See previous fn.

complementizer. For example, in both French and MG, [Emo] may be used in the functional sequence of the verb to express mood, while in some very specific contexts, the [Emo] complementizer *pu* may serve a similar function in MG (see Baunaz & Lander 2024 for details).

The crucial observation is that [Emo] has the capacity to license the subjunctive mood in both languages, but only when it is present on the functional sequence of the verb. This suggests that the placement and lexicalization of [Emo] are significant factors in determining the grammatical mood of sentences in these languages.

Thus, we follow Baunaz & Puskás (2022), Baunaz & Lander (2024), (under review), who argue that when the [Emo] feature is activated, it triggers the subjunctive mood on the embedded verb. An open question remains: what prompts the activation of the [Emo] feature? We hypothesize here that in the cases of ambiguity — when neither morphological (as in (12')) nor semantic cues (as in (14)) are present to disambiguate — pragmatics plays a role in promoting the activation of the [Emo] feature. This hypothesis suggests that the activation of the [Emo] feature, and consequently the selection of the subjunctive mood, occurs at the interface between syntax and pragmatics. To verify this hypothesis, we conducted an experiment that we present in the next section.

#### 4. Empirical investigation

In the following, we start by reviewing previous experimental studies on mood choice in French, and then we present our own study, in which we verify experimentally to what extent the emotive feature is responsible for favoring the use of the subjunctive mood in alternating verbs in Hexagonal French<sup>16</sup>. We hypothesize that in the case of alternating verbs the subjunctive mood is activated in emotive contexts, as shown in Section 3.2.1.

##### 4.1. Previous experimental studies

Experimental studies investigating mood choice in complement clauses in contemporary French are scarce, Amsili and Guida (2014), Gudmestad and Edmonds (2015) and Grisot, Blochowiak & Puskás (2022) being notable exceptions.

Amsili and Guida (2014) investigated the role of epistemic verbs selecting the indicative in affirmative contexts and their influence on mood choice in negative contexts. They observe that factive and semi-factive predicates which select the subjunctive (e.g. *realiser* 'realize' or *savoir* 'know') do not alternate when they appear under the scope of negation, whereas some epistemic verbs (e.g. *penser* 'think', *considerer* 'consider' or *croire* 'believe') do alternate between subjunctive and indicative in negative sentences. Amsili & Guida (2014) conducted an elicitation experiment involving a verb conjugation task and they found that the verbs tested

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<sup>16</sup> In this study, we recruited native French speakers born in France via the prolific platform. Since these participants are exclusively from France (and not from Belgium, Quebec, Switzerland or any other French-speaking country), we refer to the variety of French studied here as Hexagonal French. See also Gudmestad & Edmonds (2015).

under the scope of negation were followed by the subjunctive in 75% of cases (or 80% when a stricter analysis is applied) and by the indicative in 25% of cases (or 20% under a stricter analysis). This indicates that while the use of certain epistemic verbs under negation tends to favor the subjunctive, this not the only factor.

In their study, Gudmestad and Edmonds (2015) implemented two elicitation experiments to investigate three distinct types of factors: the *distributive patterns of the matrix verb*, its *temporality* (past, present, and future), and *hypotheticality*. Their findings revealed that native speakers use the subjunctive mood in 78.2% of the occurrences when the matrix verb conveyed future time, in 53% of the instances when it indicated present time, and in 50.3% of the instances when it denoted past time.

Grisot, Blochowiak & Puskás 2022 also tested Hexagonal French and explored three characteristics of the matrix verb: its *distributive patterns* (i.e., verbs selecting an indicative clause, verbs selecting a subjunctive clause, and verbs exhibiting alternation), its *tense* (i.e., present vs. past), and its *grammatical aspect* (i.e., perfective vs. imperfective). Their goal was to demonstrate whether the three categories of verbs, as defined by grammars and non-variationist linguistic approaches, align with what speakers actually do. Concretely, they conducted two elicitation experiments using a 2x3 mixed design, in which participants were asked to conjugate the embedded verb. In each experiment, they manipulated the distributive pattern of the matrix verb, i.e., predicates exclusively licensing the subjunctive, predicates exclusively licensing the indicative, and predicates allowing the two moods. In addition, in their first experiment, they manipulated the role of the tense of the matrix verb, i.e. present and past tense, whereas in the second one, they manipulated the grammatical aspect of the matrix verb, i.e. perfective and imperfective aspects. Their results showed that Tense and grammatical aspect of the matrix predicate are influential factors for determining mood choice. They observed significant interactions and varied effects between tense/aspect and the distributive patterns of the verb. Specifically, the probability of using the subjunctive mood increases when it combines with an alternating verb at the present tenses, whereas the probability of using the subjunctive mood decreases with non-alternating (subjunctive licensing) verbs at the present tense. In addition, the probability of the use of the indicative decreases with alternating verbs in the imperfective, whereas it the decreases with subjunctive licensing verbs with perfective aspect.

In sum, these studies demonstrated that other factors interact with the distributive patterns of the matrix verb when it comes to mood choice, such as tense and grammatical aspect. In our study, we will focus on another factor that has not been experimentally investigated yet, which is emotivity.

## 4.2. Current study

### 4.2.1 Hypotheses and predictions

Based on the theoretical studies outlined in section 2, the hypothesis put forward is that mood choice is influenced by the presence or absence of the emotive feature, which is activated in emotive contexts (see (37)):

(37) **The emotive feature activation hypothesis:**

Subjunctive mood in French is licensed by [Emo] on the matrix predicate activated in emotive contexts

Based on (37), we expect to find that alternating verbs will license the subjunctive mood when they are associated with an emotive feature, and, conversely, they will go for the indicative mood in the absence of an emotive feature. Verbs non-associated with emotive features will license the indicative mood. The emotive feature [Emo] can be activated at the pragmatic level through emotive contexts. In other words, only alternating verbs are expected to be influenced by the manipulation of the emotive vs. non-emotive contexts. As such, the following predictions can be made:

- (38)
- a. For alternating verbs, we should observe significantly more subjunctive forms in emotive than in non-emotive contexts.
  - b. For indicative taking verbs, we should observe almost exclusively (>90%)<sup>17</sup> indicative forms.
  - c. For subjunctive taking verbs, we should observe almost exclusively (>90%) subjunctive forms.

It should be noted that it is not expected that participants perform at their maximum capacities, because we relied here on pragmatic cues of language use, which involve discerning subjective cues from the context. As such, the appreciation of whether the context is emotive or not is partly subjective. Research on pragmatic and discursive phenomena has highlighted that for pragmatic and discursive annotations, agreement among annotators is often quite low but can still be considered as reliable (Spooren & Degand, 2010; Grisot 2017). So, given the pragmatic nature of our task, we anticipate some variation among speakers.

#### 4.2.2. *Experimental design and material*

For our experiment, we adapted Grisot, Blochowiak & Puskás (2022) experimental design. Specifically, we implemented a 2x3 design, in which we manipulated the emotivity property, i.e., emotive vs. non-emotive contexts, and tested it with respect to three sets of matrix predicate: verbs selecting only the subjunctive vs. only the indicative vs. verbs accepting either mood. The verbs were randomly selected from Grisot, Blochowiak & Puskás 2022 study: 10 verbs from each set. The verbs are provided in Table 1. Using these verbs, we created a total of 30 experimental items (10 for each set of verbs), as illustrated in examples (39) and (40) (see also Appendix).

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<sup>17</sup> We set the threshold at 90% given that participants may have made errors of inattention or of typing.

**Table 1** List of verbs tested and their corresponding mood

Alternating verbs	Indicative taking verbs	Subjunctive taking verbs
s'assurer 'make sure'	trouver 'find'	vouloir 'want'
accepter 'accept, agree'	affirmer 'affirm, assure, assert'	préférer 'prefer'
comprendre 'understand, realize'	dire 'say'	proposer 'propose'
se plaindre 'complain'	raconter 'tell'	souhaiter 'wish'
admettre 'admit, accept'	déclarer 'declare, signal'	apprécier 'appreciate, value'
rêver 'dream'	croire 'believe, think'	regretter 'regret'
prévoir 'expect'	penser 'think'	désirer 'desire'
concevoir 'conceive'	remarquer 'note, notice'	ordonner 'order'
espérer 'hope, expect'	constater 'note, notice'	exiger 'require, demand'
impliquer 'involve, imply'	observer 'observe'	attendre 'expect, await, wait for'

To activate the emotive feature, we created contexts in which the subject of the main predicate is in a state which involves emotivity. In half of the situations, emotivity was of a positive nature and in the remaining half, it was negative. More precisely, to test the effect of the emotivity, we constructed short narratives in which the target sentence, containing the matrix verb and the complement phrase, were inserted. The two experimental conditions are illustrated below: the emotive condition in example (39); and the non-emotive condition in (40).

- (39) **Introduction sentence:** C'est l'anniversaire de Mme Chevrot demain et son secrétaire est chargé d'organiser une petite fête au bureau.

'It's Mme Chevrot's birthday tomorrow and her secretary has been asked to organize a small party at the office.'

**Emotive biasing sentence:** Très stressé, il n'a pas arrêté de chercher des solutions afin de la libérer demain à midi.

'Very stressed, he kept looking for solutions to free her tomorrow at noon.'

**Target sentence:** Il s'assure que sa cheffe n' (avoir) pas de rendez-vous à l'heure du lunch.

'He makes sure his boss (to have) no lunchtime appointments.'

- (40) **Introduction sentence:** C'est l'anniversaire de Mme Chevrot demain et son secrétaire est chargé d'organiser une petite fête au bureau.

'It's Mme Chevrot's birthday tomorrow and her secretary has been asked to organize a small party at the office.'

**Non-emotive biasing sentence:** Il consulte l'agenda de Mme. Chevrot pour vérifier sa disponibilité.

'He consults Mme Chevrot's diary to check her availability.'

**Target sentence:** Il s'assure que sa cheffe n' (avoir) pas de rendez-vous à l'heure du lunch.

‘He makes sure his boss (to have) no lunchtime appointments.’

Each experimental item consisted of three sentences: the introduction sentence, the biasing sentence and the target sentence. The introduction sentence was identical in all two experimental conditions; its role was to set the background. The biasing sentence oriented readers towards an emotive (39) or a non-emotive (40) interpretation of the short narrative. The emotive biasing sentences were created by using affective linguistic cues of subjectivity; the non-emotive biasing sentences were created by avoiding any of the known linguistic cues of subjectivity related to the three components of subjectivity.

The material was pre-tested to check for the emotive and non-emotive interpretations of the biasing sentence. All biasing sentences were confirmed to have an emotive or non-emotive interpretation by three independent coders.

#### 4.2.3. Procedure

Participants were asked to conjugate the embedded verb, which was provided in the infinitive form. The 30 experimental items had a variant in each experimental condition, resulting in 60 variants of the experimental items. 12 fillers, having the same structure as the experimental items, were also used in the experiment. All the short narratives (items and fillers) were distributed in 2 lists. Each participant only saw one list consisting of 42 short narratives (30 items and 12 fillers) and read experimental items in the 2 conditions. The order of presentation was randomized. A total of 12 yes/no comprehension questions appeared randomly within each list to assess the participants' level of attention. Participants could answer by pressing a key for *yes* or for *no*, according to their choice. For example, the experimental item from (39) and (40) would be followed by this comprehension question, and would require a *no* answer:

- (41) **Comprehension question** : Est-ce que c'est le mariage de Mme Chevrot?  
‘Is this Mme Chevrot's wedding?’

The experiment was designed with the Qualtrics software, as follows. Each session began with written instructions displayed on a screen, followed by a training phase, in which the participants saw one short narrative similar to the items and one short narrative similar to the fillers. There was no time constraint imposed for the task, and each participant completed the experiment within approximately 15 minutes.

#### 4.2.4. Participants

We recruited 54 participants (age range 20-35 years), all native speakers of Hexagonal French (France), via the Prolific platform during June-August 2023. Each of the participants received financial compensation for their participation in the experiment. The task was performed in approximately 15 minutes.

#### 4.2.5. Results

Prior to data analysis, the rate of correct answers to the comprehension questions was checked. All participants had more than 75% correct answer rates and no participant was removed. The final set of data consisted of a total of 1614 data points (535 for each set of verbs). Each of the participants' answers were coded w.r.t mood, that is, either *subjunctive* (as in 42) or *indicative* (as in 43).

- (42) **Introduction sentence:** C'est l'anniversaire de Mme Chevrot demain et son secrétaire est chargé d'organiser une petite fête au bureau.

**Emotive biasing sentence:** Très stressé, il n'a pas arrêté de chercher des solutions afin de la libérer demain à midi.

**Target sentence:** Il s'assure que sa cheffe n'**ait** pas de rendez-vous à l'heure du lunch. [Mood : *subjunctive*]

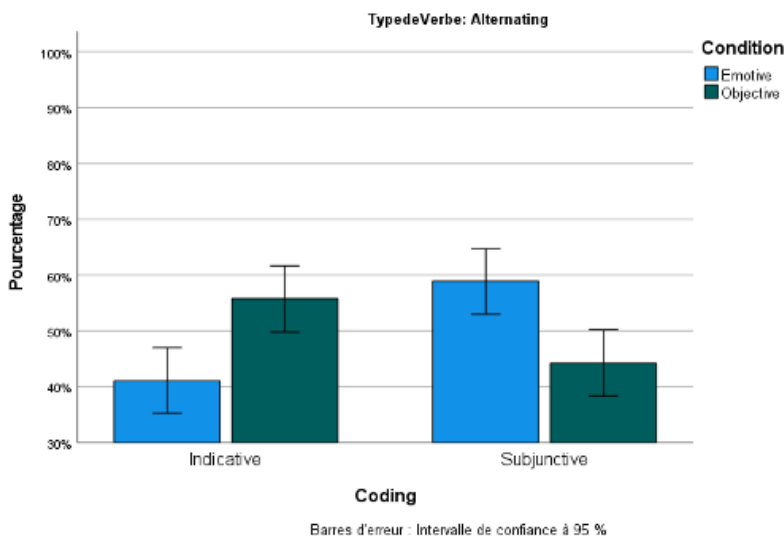
- (43) **Introduction sentence:** C'est l'anniversaire de Mme Chevrot demain et son secrétaire est chargé d'organiser une petite fête au bureau.

**Non-emotive biasing sentence:** Il consulte l'agenda de Mme Chevrot pour vérifier sa disponibilité.

**Target sentence:** Il s'assure que sa cheffe n'**a** pas de rendez-vous à l'heure du lunch. [Mood : *indicative*]

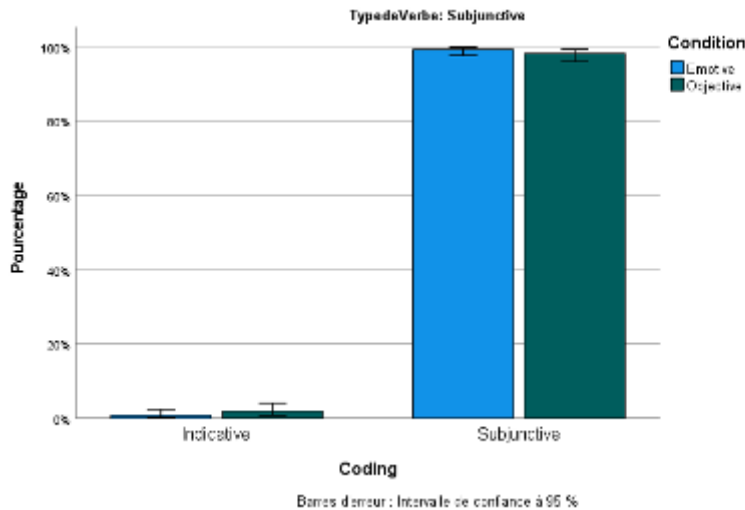
Data was analyzed using logistic mixed-effects models, with participants and items as random factors and the type of context as fixed factor. The results showed that, in the case of alternating verbs, participants provided more subjunctive forms of the verb in emotive contexts (57%) than in non-emotive contexts (43%). In contrast, participants provided more indicative forms of the verb in non-emotive contexts (58%) than in emotive contexts (42%) ( $\beta = 1.045$ ,  $SE = 0.239$ ,  $p < .001$ ).

**Figure 1.** Frequency of mood choice in the case of alternating verbs

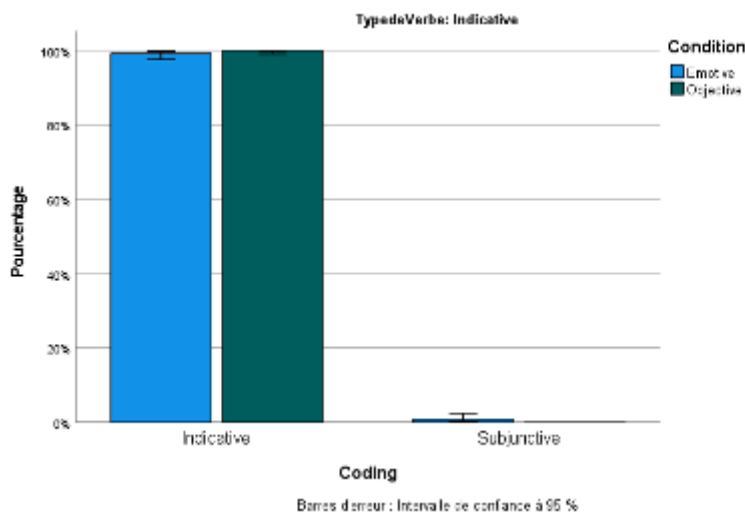


As far as mood choice patterns with non-alternating verbs, Figures 2 and 3 show that participants provided embedded verbs with subjunctive forms of the verb when it was preceded by a subjunctive verb (94.%), and this independently of the context ( $\beta = 19.58$ ,  $SE = 300.33$ ,  $p > .05$ ). Similarly, they provided embedded verbs with indicative forms when it was preceded by an indicative verb (99.8%), and this independently of the context ( $\beta = 1.390$ ,  $SE = 1.071$ ,  $p > .05$ ) Thus, mood choice was not influenced by the manipulation of the emotivity property.

**Figure 2.** Frequency of mood choice in the case of subjunctive verbs



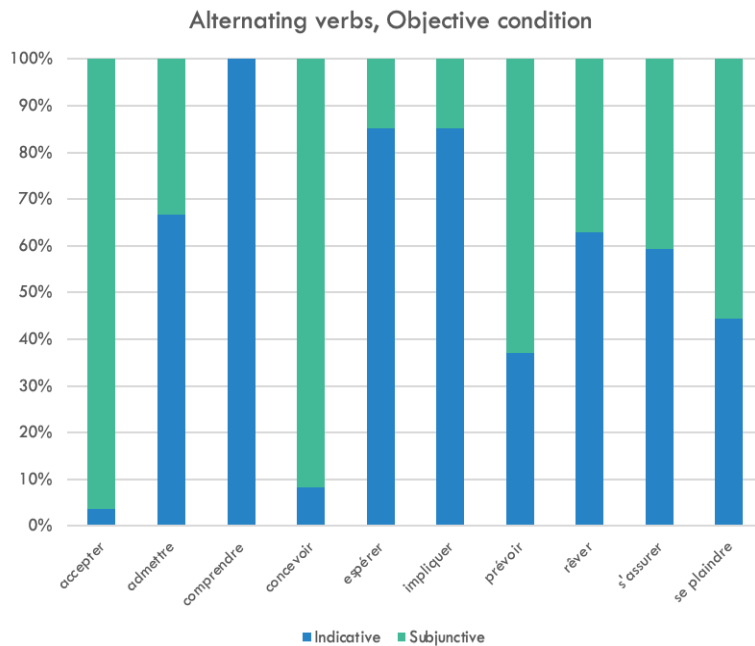
**Figure 3.** Frequency of mood choice in the case of indicative verbs



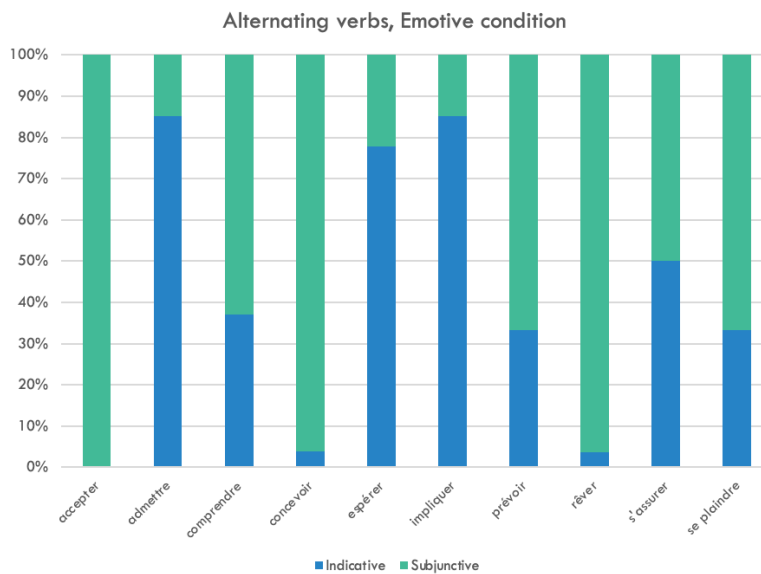
## 5. Discussion

In what follows, we will discuss in more detail individual verbs from the set of alternating verbs. The frequency of mood choice with respect to emotive vs non-emotive contexts is displayed for all the alternating verbs tested, verb by verb, in Figure 4 (non-emotive, or 'objective' condition) and in Figure 5 (emotive, or 'subjunctive' condition).

**Figure 4.** Frequency of mood choice verb by verb for alternating verbs in non-emotive contexts



**Figure 5.** Frequency of mood choice verb by verb in emotive contexts for alternating verbs



The first thing that we note is the variation among the verbs. For most of them, the frequency of mood choice is quite well balanced between indicative and subjunctive, but there are some cases for which we observe a tendency either towards the indicative or towards the subjunctive. For instance, *accepter* ‘to accept’ and *concevoir* ‘to conceive, to understand’ lean towards the subjunctive mood, whereas *espérer* ‘to hope’ and *impliquer* ‘to imply’ lean towards the indicative mood. In the following, we zoom in on each of them, one by one, to try to understand the causes of their unexpected behavior.

Starting with *concevoir* ‘to conceive, to understand’, recall that it belongs to the set of alternating verbs; however, our participants were found to conjugate it almost exclusively in the subjunctive mood, with nearly 100% of the experimental items. Let's examine the context we created to check if any confounding elements may have been introduced inadvertently.

- (44) **Introduction sentence:** En tant que grand supporter du PSG, Jérémie vient d'assister à un match de son équipe.

‘As a big PSG supporter, Jérémie has just attended a match of his team.’

**Non-emotive biasing sentence:** Après que l'arbitre ait sifflé la fin du match, le score est sans appel.

‘After the referee whistles the end of the match, the score is final.’

**Target sentence:** Il conçoit que son équipe (pouvoir) perdre le championnat.  
He conceives that his team (can) lose the championship

- (45) **Introduction sentence:** En tant que grand supporter du PSG, Jérémie vient d'assister à un match de son équipe.

‘As a big PSG supporter, Jérémie has just attended a match of his team.’

**Emotive biasing sentence:** Il est bien triste, car son équipe a perdu tous les matches jusqu'à présent.

‘He is very sad, because his team has lost all the matches so far.’

**Target sentence:** Il conçoit que son équipe (pouvoir) perdre le championnat.  
He conceives that his team (can) lose the championship

In the non-emotive context, there is no emotive cues, whereas in the emotive context, there are emotive cues such as ‘il est bien triste’. Yet, we found a high rate of subjunctive mood in non-emotive contexts. We think that a possible explanation for the subjunctive boost here is that the introduction sentence sets an inherently emotive context: that of playing football and of being a big supporter of a football team, and sport, especially in a context of competition, is a trigger of emotivity *per se*. This, in itself, makes the situation more emotive than expected, even in the absence of lexical cues of emotivity. That we did not control the context enough in this example is supported by the fact that previous (experimental) work have shown that *concevoir* is an alternating verb. In their previous empirical work, Grisot, Blochowiak & Puskás 2022 did observe variability with this verb ‘(with 40% for indicative, and 57% for the subjunctive in the present tense). We thus conclude that, the result obtained for *concevoir* is an artifact due to a bias in the particular context created for the experiment. This issue can be seen as further, albeit anecdotal, evidence that the context does impact the choice of mood in alternating verbs.

Let's turn to the verb *accepter* ‘to accept’, which also gives unexpected results. *Accepter* was exclusively conjugated in the subjunctive mood by our participants, despite being classified as an alternating verb in the literature. Let's first check whether the context constructed for the experiment was potentially problematic.

- (46) **Introduction sentence:** Martina et son frère se battent pour être le premier ou la première sur la ligne de départ.  
 ‘Martina and her brother fight to be first on the starting line.’  
**Non-emotive biasing sentence:** Vu que la règle officielle du concours dit que "le plus jeune doit être devant", Martina n'a pas le choix.  
 ‘Since the official rule of the competition says that "the youngest must be in front", Martina has no choice
- Target sentence:** Elle accepte que son frère (être) placé en première position.  
 She accepts that her brother (be) placed in first position
- (47) **Introduction sentence:** Martina et son frère se battent pour être le premier ou la première sur la ligne de départ.  
 ‘Martina and her brother fight to be first on the starting line.’
- Emotive biasing sentence :** Après quelques larmes, son père a réussi avec de grandes difficultés à la convaincre de laisser sa place à son petit frère.  
 ‘After a few tears, her father managed with great difficulty to convince her to give up her place to her little brother.’
- Target sentence:** Elle accepte que son frère (être) placé en première position.  
 She accepts that her brother (be) placed in first position

It seems that no particular problems arise, as the biasing sentence in this case has been well controlled.<sup>18</sup> Therefore, it might be that 'accepter' is not actually an alternating verb, contrary to what is generally stated in the literature. Supporting this hypothesis is the similar finding in Grisot, Blochowiak & Puskás 2022, where 'accepter' is only marginally used with the indicative mood (6% for the indicative and 94% for the subjunctive). Therefore, we can conclude that 'accepter' is a subjunctive licensing verb. Another notion that may play a role pertains to the dimension of veridicality. As one anonymous reviewer observes some examples are veridical, whereas others are non-veridical, albeit both are non-emotive. For instance, example (43) above, is in a non-emotive context, and it is veridical: when the secretary checks the agenda of Mrs Chevrot, the proposition “The boss has an appointment at lunchtime” is true. In example (44), yet, although the context is non-emotive, it is also non-veridical: at the moment of the end of the match that Jérémie watches, the truth of the proposition “His team can lose the championship” is yet not established. Two questions arise: the first is whether there is an interaction between emotivity and veridicality, and if yes, what it consists of. And second, whether veridicality, in addition to emotivity, also affected the participants' choice of mood. These questions are worth exploring further in an experimental setup and we will do so in a future work.

<sup>18</sup> However, an anonymous reviewer points out that the introduction sentence *Martina and her brother fight to be first on the starting line* in (46) is emotive (rather than neutral). This could have affected the choice of the mood as well. But as we explain later, the verb itself seems to be used mostly with subjunctive.

## 6. Conclusion

This paper investigated the topic of mood licensing, both from theoretical and experimental perspectives. As far as theory is concerned, we started with a puzzle concerning mood licensing. On the one hand, there is the idea that the subjunctive mood is triggered in embedded clauses due to the semantic properties of specific classes of matrix predicates, suggesting that the subjunctive mood is selected uniquely based on the *lexical* properties of these specific classes of predicates. On the other hand, we note that there exists a set of verbs which have the specific property of alternating between the subjunctive and the indicative mood, challenging the idea that the choice of mood is reduced to lexical selection. We adopted the approach which defends the claim that embedded subjunctive mood is triggered by the presence of a specific syntactico-semantic feature on the matrix predicate: the *emotive* feature. We mainly focused on Hexagonal French, but also presented the facts of Modern Greek as some speakers agree that in this language the emotive feature can be morphologically realized in some specific situations. Indeed, if both languages realize the emotive feature on the matrix verb, which results in subjunctive selection in the embedded clause, some Greek speakers also have the option to realize the emotive feature on the complementizer with some factive predicates: when this is the case, subjunctive mood is not selected. Baunaz & Lander 2024 analyze this fact by claiming that the emotive feature needs to c-command the embedded clause to trigger subjunctive mood selection. If it does not, as in the case of the Modern Greek emotive complementizer *pu* (they claim the *emotive* feature is buried within the complementizer), subjunctive is not selected.

Concerning the experimental part, we focused on French. The goal was to provide an experimental confirmation for the claim that the role of the emotive feature in mood selection is crucial. In line with Baunaz (2017), and Baunaz & Puskás (2022), we adopted the view that the subjunctive mood is regulated by a property of the main predicate, the emotive feature, which is associated with the subject of the embedding verb (i.e., usually the subject), and is activated in emotive contexts. Specifically, alternating verbs can realize two different syntactic structures: one involving the Emo feature, and one lacking that feature. Our claim is that mood licensing with alternating verbs operates at the syntax-pragmatics interface in the following manner: emotive contexts favor the activation of the emotive feature, thereby selecting a larger syntactic structure. This represents the core of the *emotive feature activation hypothesis* (cf. (37)). To verify this hypothesis, we implemented an elicitation experiment, in which participants had to conjugate the verb left in the infinitive form. We tested three classes of verbs: those which license the indicative mood only, those which license the subjunctive mood only, and those which can alternate between both moods. The crucial prediction concerned the alternating class of verbs: if the *emotive feature activation hypothesis* holds, we expected to find significantly more subjunctive forms in emotive contexts (i.e., when the emotive feature was activated) than in non-emotive contexts. It is important to note that we did not expect that participants perform at ceiling because we deal here with pragmatic dimensions of language use which consists in grasping various subjectivity cues from the context. In this type of task, we expect some individual variations amongst the speakers. Our experiment has highlighted the following dependency between context and utterance interpretation. The context signals that the subject of the matrix sentence is an emotive state. As a

result, participants in our experiment were primed to perceive the sentences tested in this light. When participants successfully inferred the emotive dimension of the situation from the context, they chose the subjunctive mood; if they did not, they chose the indicative.

Our findings showed indeed that in contexts where the emotive feature was present participants did conjugate the verb with the subjunctive statistically more often than in contexts where the emotive feature was absent (cf. Figure 1). In sum, our results provide an experimental confirmation in favor of the *emotive feature activation hypothesis* when it comes to mood choice in complement clauses in Hexagonal French. Our study completes the scarce experimental literature on mood choice, which revealed that there are multiple factors that influence mood choice: tense, grammatical aspect and emotivity interact with the class of the embedding predicates in the process of mood choice (see Grisot, Blochowiak & Puskás 2022).

We aim, as future research, to experimentally investigate this hypothesis for other languages, such as Modern Greek.

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## References

- Amsili, Pascal & Florian Guida. 2014. Vers une analyse factorielle de l'alternance indicatif/subjonctif. In *Actes du 4e Congrès Mondial de Linguistique Française*. Vol. 8. 2313-2331. <https://doi.org/10.1051/shsconf/20140801249>
- Anand, Pranav & Valentine Hacquard. 2013. Epistemics and attitudes. *Semantics and Pragmatics* 6, 1–59. <https://doi.org/10.3765/sp.6.8>
- Baunaz, Lena. 2015. On the Various Sizes of Complementizers. *Probus* 27(2), 193-236. [doi.org/10.1515/probus-2014-0001](https://doi.org/10.1515/probus-2014-0001)
- Baunaz, Lena. 2016. Deconstructing Complementizers in Serbo-Croatian, Modern Greek and Bulgarian. In C. Hammerly & B. Prickett (eds.), *NELS 46: Proceedings of the Forty-Sixth Annual Meeting of the North East Linguistic Society, October 16–18,*

---

2015, *Concordia University, Volume One*, 69–77. Amherst, MA: Graduate Linguistics Student Association.

Baunaz, Lena. 2017. Embedding Verbs and Subjunctive Mood: The Emotive Factor. In S. Perpiñán, D. Heap, I. Moreno-Villamar & A. Soto-Corominas *Romance Languages and Linguistic Theory 11: Selected Papers from the 44<sup>th</sup> Linguistic Symposium on Romance Languages (LSRL), London, Ontario*. 9–31. Amsterdam and Philadelphia: John Benjamins. <https://doi.org/10.1075/rllt.11.01bau>

Baunaz, Lena. 2018. Decomposing Complementizers: The Functional Sequence of French, Modern Greek, Serbo-Croatian, and Bulgarian Complementizers. In L. Baunaz, K. De Clercq, L. Haegeman & E. Lander (eds.), *Exploring Nanosyntax*. 149–179. New York: Oxford University Press. <https://doi.org/10.1093/oso/9780190876746.003.0006>

Baunaz, Lena & Eric Lander. 2018. *Nanosyntax: the basics*. In L. Baunaz, K. De Clercq, L. Haegeman & E. Lander (eds.), *Exploring Nanosyntax*. 3–56. New York: Oxford University Press. <https://doi.org/10.5167/uzh-167406>

Baunaz, Lena, & Eric Lander. 2019. Subjunctive Selection in French vs. Balkan.” In M. Bağrıaçık, A. Breitbarth & K. De Clercq (eds.), *Mapping Linguistic Data: Essays in Honour of Liliane Haegeman*. 35–49. [www.haegeman.ugent.be](http://www.haegeman.ugent.be).

Baunaz, Lena, & Eric Lander. 2021. Factive Islands in Nanosyntax. In A. Farinella & A. Hill *NELS 51: Proceedings of the Fifty-First Annual Meeting of the North East Linguistic Society, November 6–8, 2020, Université du Québec à Montréal, Volume One*. 37–50. Amherst, MA: Graduate Linguistics Student Association.

Baunaz, Lena, & Eric Lander. 2024. Same Syntax, Different Lexical Entries: Mood Selection in Romance and Balkan. In R. Pinsonneault & Yoann Léveillé (eds.), *Actes du colloque 50 ans de linguistique à l'UQAM: Regards croisés sur les enjeux de la linguistique*. 20–32. Montréal. <http://archipel.uqam.ca/id/eprint/17529>

Baunaz, Lena & Puskás, Genoveva. 2014. On subjunctives and islandhood. M.-H. Côté & E. Mathieu. *Variation within and across Romance languages. Selected papers from the 41st Linguistic Symposium on Romance Languages (LSRL), Ottawa, 5–7 May 2011, [CILT 333]*, 233–253. Amsterdam: John Benjamins. <http://doi.org/10.1075/cilt.333.16bau>

Baunaz, Lena & Puskás, Genoveva. 2022. *A Cross-linguistic Approach to the Syntax of subjunctive Mood*. Cham: Springer Nature. <http://doi.org/10.1007/978-3-031-04540-0>

Blochowiak, Joanna. 2014. *A Theoretical Approach to the Quest for Understanding: Semantics and Pragmatics of Whys and Because*s. PhD dissertation, University of Geneva.

Blochowiak, Joanna. 2015. *Why*-questions and island effects. *Semantics-Syntax Interface* 2(1): 58–91.

Grisot, Cristina, Blochowiak, Joanna & Genoveva Puskás. 2022. Predicting verbal mood in complement clauses: the role of the *semantic category*, the *tense* and the *grammatical aspect* of the matrix verb, *Glossa: a journal of general linguistics* 7(1). <https://doi.org/10.16995/glossa.5798>

Grisot, Cristina. 2017. A quantitative approach to conceptual, procedural and pragmatic meaning: Evidence from inter-annotator agreement. *Journal of Pragmatics*, 117, 245-263. <https://doi.org/10.1016/j.pragma.2017.06.020>

Caha, Pavel. 2009. The nanosyntax of case (Doctoral dissertation). University of Tromsø.

Caha & De Clercq & Starke & Wyngaerd, under review. Nanosyntax: state of the art and recent developments.

Christidis, Anastasios Phoevos. 1982. *ότι/πως-που: επιλογή δεικτών συμπληρωμάτων στα νέα ελληνικά [Oti/pos-pu: Complementizer choice in Modern Greek]*. *Studies in Greek Linguistics* 2: 113–177

Giannakidou, Anastasia. 1998. *Polarity Sensitivity as (Non)Veridical Dependency*. Amsterdam/Philadelphia: John Benjamins. <https://doi.org/10.1075/la.23>

Giannakidou, Anastasia. 2009. The dependency of the subjunctive revisited: Temporal semantics and polarity. *Lingua* 119(12): 1883–1908. <https://doi.org/10.1016/j.lingua.2008.11.007>

Giannakidou, Anastasia. 2013. The subjunctive as evaluation— Nonveridicality, epistemic subjunctive, and emotive-as-expressive. Ms. University of Illinois at Chicago.

Giannakidou, Anastasia. 2016. The subjunctive as evaluation and nonveridicality . In J. Blaszczak, A. Giannakidou, D. Klimek-Jankowska, K. Migdalski. (eds), *Mood, Aspect and Modality Revisited: New Answers to Old Questions*. 177-217. Chicago: The University of Chicago Press.

Giannakidou, Anastasia & Alda Mari. 2021. *Truth and Veridicality in Grammar and Thought: Mood, modality, and propositional attitudes*. Chicago: The University of Chicago Press. <http://doi.org/10.7208/chicago/9780226763484.001.0001>

Giorgi, Alessandra & Fabio Pianesi. 1997. *Tense and aspect: From semantics to Morphosyntax*. Oxford University Press. <https://doi.org/10.1075/sl.24.1.11gel>

Gudmestad, Aarnes, & Edmonds, Amanda. 2015. Categorical and variable mood distinction in Hexagonal French: Factors characterising use for native and non-native speakers. *Canadian Journal of Applied Linguistics* 18(1). 107–131.

Kerbrat-Orecchioni, Catherine. 1999. *L'énonciation : de la subjectivité dans le langage*. 4e édition. Paris: Armand Colin.

Kiparsky, Paul. 1973. 'Elsewhere' in phonology. In Stephen Anderson & Paul Kiparsky (eds.), *A festschrift for Morris Halle*. 93–106. New York: Holt, Rinehart & Winston.

Kiparsky, Paul & Carol Kiparsky. 1970. Fact. In Manfred Bierwisch & Karl Erich Heidolph (eds.), *Progress in linguistics: a collection of papers*. 143–173. The Hague: Mouton.

<https://doi.org/10.1515/9783111350219.143>

Marques, Rui. 2024. Explaining the Subjunctive in factive contexts. RLLT 21, eds. Grant Armstrong, Roberta D'Alessandro & M.Carmen Parafita Couto. Special Issue of *Isogloss*. *Open Journal of Romance Linguistics* 10(2)/8, 1-27.

<https://doi.org/10.5565/rev/isogloss.273>

Portner, Paul & Aynat Rubinstein. 2012. Mood and contextual commitment. In A. Chereches (Ed.), *The proceedings of SALT 22*. 461–487. CLC Publications.

<https://doi.org/10.3765/salt.v22i0.2642>

Quer, Josep. 2009. Twists of mood: The distribution and interpretation of indicative and subjunctive. *Lingua* 119(12). 1779–87.

<https://doi.org/10.1016/j.lingua.2008.12.003>

Roussou, Anna. 2000. On the left periphery: Modal particles and complementisers. *Journal of Greek Linguistics* 1(1): 65–94. <https://doi.org/10.1075/jgl.1.05rou>

Roussou, Anna. 2009. In the mood for control. *Lingua* 119(12): 1811–1836. <https://doi.org/10.1016/j.lingua.2008.11.010>

Roussou, Anna. 2010. Selecting complementizers. *Lingua* 120(3): 582–603. <https://doi.org/10.1016/j.lingua.2008.08.006>

Sočanać, Tomislav. 2017. *Subjunctive Complements in Slavic Languages: A Syntax-Semantics Interface Approach*. Ph.D. thesis, University of Geneva.

Spooren, Wilbert & Liesbeth Degand. 2010. Coding coherence relations: reliability and validity. *Corpus Linguistics and Linguistic Theory* 6(2). 241–266. DOI: <https://doi.org/10.1515/cllt.2010.009>

Starke, Michal. 2009. Nanosyntax: A short primer to a new approach to language. *Nordlyd* 36(1):1–6.

<https://doi.org/10.7557/12.213>

Starke, Michal. 2011. Towards an elegant solution to language variation: Variation reduces to the size of lexically stored trees. Ms., University of Tromsø.

LingBuzz/001183.

Starke, Michal. 2014. Cleaning up the Lexicon. *Linguistic Analysis* 39: 245– 256.