

## CONSTRUING FACTIVITY: MOOD ALTERNATIONS IN EPISTEMIC CONTEXTS

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### Prologue<sup>1</sup>

“Um homem de chapéu cinzento-escuro e sobretudo azul, também escuro, saiu de casa ainda cedo, um hábito de todas as manhãs, para dar o seu passeio diário. Estava frio. O chapéu aquecia-lhe a cabeça. Por baixo do sobretudo, a envolver-lhe o pescoço, um cachecol.”<sup>2</sup>

After a few lines, the man is having a latte in Nicola, a cafeteria downtown Coimbra. The steam from the cup clouds the man’s glasses. For some reason, the man thinks about Santa Claus and wonders if he ever had such a problem when descending a chimney, with the fumes and all...

“O homem, pode dizer-se que seja uma fidelíssima encarnação dessa personagem das histórias, a mais desejada pelas crianças. Afinal de contas, qual foi o seu papel toda a vida, se não fazer os outros radiantes? Talvez tenha sido essa a razão para que o neto do homem — obviamente, o homem tinha um neto — para que ele nunca tenha precisado de acreditar no outro, no tal Pai Natal; não era preciso atirar os sonhos para tão longe...”<sup>3</sup>

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<sup>1</sup> The two following excerpts are taken from a short story I wrote a few years ago entitled “O Homem e o Pobre” (“The Man and Beggar”).

<sup>2</sup> “A man in a dark grey hat and a blue overcoat, also dark, left home early, according to an every morning custom, for his daily walk. It was cold. The hat kept his head warm. Underneath the overcoat, surrounding his neck, a scarf.” (Translated by Wilson.)

<sup>3</sup> “The man, one might see as a most accurate portrayal of a certain character from so many stories, the ones children love the most. After all, what part did he play all of his life other than bringing splendour to people’s days? Maybe that was the reason why the man’s grandson – obviously, the man had a grandson – had never really believed in that other

This paper is delayed by a year. Do to release dates, it was impossible for me to contribute to the last issue of *Máthesis*, volume in memoriam of my grandfather Manuel de Oliveira Pulquério who past away March, 7, 2011. The next day, he would have taken his one and a half years old great grand daughter Matilde on a one-week trip to Bavaria that never came to be. Now it is impossible for me to grab my mobile, dial his number, and spend one hour talking about a particular use of the subjunctive that has tense predications. Well... I do it any way, and without the need for telephones.

## 1. Introduction

One is not dwelling on new grounds while investigating the motivations for the uses of the subjunctive and the indicative in European Portuguese. Just to illustrate the last 40 years, we can count with the works by Fonseca; Faria; Tlâskal; Marques, “Valor Dos Modos”; “Seleção”; Vesterinen, *Subordinação*; “Aproximação Cognitiva”; Vieira Santos; and if we zoom out a bit to consider also Spanish and French, there are the investigations by Terrell and Hooper; Maldonado; Achard; Delbecque, among others.

However, it seems that there is always something new to be found, mainly on the subjunctive. This is probably due to its larger variety of semantic values, which is also why it seems to be so difficult to find a common denominator to its uses (cf. e. g. Marques, “Valor Dos Modos”; Vieira Santos; and Oliveira, in Mateus et al. chapter 9: *Modalidade e Modo*).

The goal of this paper is to offer a fresh perspective to the matter, within the framework of **Cognitive Grammar** (Langacker, *Foundations 1*; Langacker, *Foundations 2*; Langacker, *C. G. Introduction*). We will argue that the contrast between the meanings of the indicative and the subjunctive in general and, in what concerns this paper, **epistemic complementation clauses** in particular, is related to one of the most fundamental principals of Cognitive Grammar: different choices regarding the way of conveying one’s perspective about a certain aspect of the world “and its surroundings” — **different construals** — also result in **different meanings**<sup>4</sup> (cf. section 3). Specifically, we propose that the choice of

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man, the one they call Santa Claus; dreams did not have to be thrown that far.” (Translated by Wilson.)

<sup>4</sup> For a description of construal operations, cf. e.g. Soares da Silva.

mood concerns the cognitive process of **construing** a complement proposition's **factivity**, as it is addressed in Cognitive Grammar (cf. section 4): the indicative reflects a strong commitment towards the proposition's factivity whereas the subjunctive is selected to attenuate the proposition's factivity.

The pattern of the distribution of the two moods, in epistemic complement clauses, we will analysed having as its primary reference the semantic classification of the matrix verbs according to an abstract cognitive model that reflects the different phases in the process of obtaining propositional knowledge: the **epistemic control cycle** (cf. Figure 1 in p. 112): formulation, inclination and result phases.

We will also take into account different effects, and its consequences, that a **negation marker** preceding the matrix verb can have in the construal of the complement proposition's factivity (cf. Figure 2 in p. 116): for the mood in the complement to be considered a construal consequence of the presence of a negation marker, the latter has to **change the polarity** of the epistemic matrix verb it is preceding from positive (like *I think that...*) to negative (*I do not think that...*) or vice-versa thus affecting the epistemic status of the complement, as opposed to situations where the negation marker denies the whole epistemic relationship profiled by the matrix verb (like *Do not think that...* with a similar meaning to *Stop thinking that ...*). We will also argue that some verbs are not susceptible to have their polarity changed.

The contents of this paper are part of a broader corpus-based investigation that addresses the semantics of the indicative and the subjunctive in all context of subordination (cf. Pulquério Vieira, to appear f.).

## 2. Some methodological information

Almost all of the examples in section 5 were retrieved from the European Portuguese corpora of the Linguateca<sup>5</sup> web site [www.linguateca.pt], namely, the *CETEMPúblico*<sup>6</sup> newspaper corpus, with circa 190 million words, *DiaClav*<sup>7</sup>, a combination of several newspapers with 6,7 million words, *Avante!*<sup>8</sup> newspaper corpus with 6,5 million words,

<sup>5</sup> “Linguateca is a distributed network for fostering the computational processing of the Portuguese language (...)” (<http://www.linguateca.pt/FAQ/#faq1.9>: last access: 10/3/2012)

<sup>6</sup> <http://linguateca.pt/acesso/corpus.php?corpus=CETEMPUBLICO>

<sup>7</sup> <http://linguateca.pt/acesso/corpus.php?corpus=DIACLAV>

<sup>8</sup> <http://linguateca.pt/acesso/corpus.php?corpus=AVANTE>

*Naura/Minho*<sup>9</sup> newspaper corpus, with 1,7 million words, and, whenever possible, from the *Museu da Pessoa*<sup>10</sup> spoken corpus, with 375 thousand words. All these corpora are syntactically and morphologically annotated.

We are aware of the limitations of this paper, and there is, naturally, a lot more to be said about mood choice in general, and epistemic contexts in particular, than what we are about to present. However, the small amount of cases we chose to analyse has a reason behind its selection. We selected both a set of typical cases, in order to illustrate the major tendencies of the distribution, but also a set of less typical ones, that would reflect some apparent deviations to the pattern.

Because we will not be able to present a detailed description of the proceedings we undertook in order to build and code the corpus, we will only point out that after using different statistical techniques, we came to the conclusion that using a decision tree making software (“The Weka Data Mining Software: An Update”) was the best option. This way, we were able to visualize the necessary combinations of factors that lead to the presence of the indicative and the subjunctive. Without going in depth into each one of them, those factors were: negation markers in the matrix clause, matrix verb, matrix verb mood and tense, preposition before the complementizer, complementizer, appositions after the complementizer, negation in the complement, modal verb in the complement, and finally, the response variable: tense and mood in the complement<sup>11</sup>. This was how we came to notice that a verb like *saber* (“to know”) almost under any circumstances takes a subjunctive complement: 0.38% of 15304 cases; that *duvidar* (“to doubt”), with a grand total of 610 cases, without negation, has 84,1% of subjunctives in the complement whereas, with negation, has 83,7% of indicatives; that regarding *ser verdade* (“to be true”), only 2,8% of the 422 cases without negation have the subjunctive; that *pensar*, (“to think”), with subjunctive on the matrix (853 cases), has 96,8% of indicative complements, and that this same verb, but with indicative on the matrix (11082 cases), only has 7,5% of complements with subjunctive in general and 2,7% without negation on the matrix; etc.

<sup>9</sup> <http://linguateca.pt/acesso/corpus.php?corpus=NATMINHO>

<sup>10</sup> <http://linguateca.pt/acesso/corpus.php?corpus=MUSEUDAPESSOA>

<sup>11</sup> Formula we used to retrieve cases of present indicatives in both clauses (no first persons in the matrix) and with all the other factors not present:

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<s> [lema!="não|ninguém|nenhum|nunca|nem|jamais|nada" & func!="*AUX.*"]* @[pos="*V.*" & pessnum!="1S|1P" &
temcagr="PR_IND.*" & lema!="ter|haver|ser" & word!="dêem|passe|vão|vamos"]
[post="*PU|V.*" & rel.*" & interr.*|K.*|ADV_foc.*|PRP.*" & PROP.*" & func!="*ACC.*" & SUBJ.*|<SC.*|<OC.*" & PRED.*"]*
[lema="com|de|a" & pos="*PRP.*" & PRP.*" & PRP.*"]{0,0} [lema="que" & pos="*KS" & func="*SUB.*"] (" & [word!="\,|;|:|'"]+ " ")*
[post="*PU|V.*" & rel.*" & interr.*|K.*" & lema!="talvez|oxalá|tomara|se"]* (" & [word!="\,|;|:|'"]+ " ")*
[post="*PU|V.*" & rel.*" & interr.*|K.*" & PRP.*" & PROP.*" & lema!="talvez|oxalá|tomara|se"]* [lema!="poder.*|dever.*|haver.*|ir.*" &
func!="*AUX.*" & temcagr="PR_IND.*" & word!="dêem|passe|vão|vamos"] within s
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Naturally, we are not trying to imply that we manually inspected all of the occurrences. We paid, in fact, special attention to the cases that, at least apparently, were deviations to the pattern, which could, by themselves and almost individually, be the subject for several papers. Just to give an example, if a modal verb like *dever* (“to must”) appears in the complements of *recomendar* (“to recommend”), an influence verb, which is usually pointed out as only taking subjunctive complements (cf. e.g. Marques, “Valor Dos Modos” 75), the indicative seems to be automatically selected. In terms of factive construal (cf. section 4), this makes perfect sense, given that the modal verb establish the complement as a norm, which, of course, does not require the attenuation of its factivity. Now, does the fact that this happens only in 35 cases out of 641 implies that is a simple deviation from the “well spoken” Portuguese or is there more to it?

### 3. Construal

**Construal** is a key notion in Cognitive Grammar. It “refers to our manifest ability to conceive and portray the same situation in alternate ways.” (Langacker, *C. G. Introduction* 43). In other words, it is the perspective from which we conceptualize the world. As a consequence, discourse, being the “outcome” of a mental process, is never objective but always a subjective process that reflects the conceptualizer’s point of view.

The alternation active voice (1) / passive voice (2) is a clear example of how the same event can be construed under different perspectives.

(1) *O homem mordeu o cão.*  
 the man bit-IND the dog  
 “The man bit the dog.”

(2) *O cão foi mordido pelo homem.*  
 the dog was-IND bitten by the man  
 “The dog was bitten by the man.”

In Langacker’s words,

“(…) reversing things does not change the event itself but results in a different way of portraying it. *The man bit the dog* and *The dog was bitten by the man* represent alternate construals of the same conceived occurrence” (Langacker, *C. G. Introduction* 366).

The active / passive alternation implies a change in the **salience** of the **participants** involved in the **profiled relationship**, i.e., the relationship designated by the verb: in (1), the primary focus — the **trajector** — is *homem* (man) and the secondary focus — the **landmark** — is *cão* (dog); while in (2) the trajector is *dog* and the landmark is *man*. These two examples “can have the same content, and profile the same relationship, but differ in meaning because they make different choices of trajector and landmark” (Langacker, *C. G. Introduction* 70).

Given that embrace this assumption that different construals convey different meanings, we also assume that, in complementation contexts, an indicative clause and a subjunctive clause (**different mood construals**) have independent and contrastive meanings. If voice alternations convey different meanings because they involve a change in the salience of the participants (trajector and landmark) in the profiled relationship, so do mood alternations because they reflect **different epistemic attitudes**. These different attitudes can be construed as a nuance in the degree of certainty expressed by the matrix verb (cf. examples (3)–(4) and (6)–(7), or, more visibly, as the changing of the polarity of an epistemic judgement, from positive to negative and vice-versa, under the influence of a negation marker (cf. examples (3) and (5)).

- (3) *Penso que ela está em casa.*  
think-IND that she is-IND in home  
“I think she is at home.”
- (4) *Penso que ela esteja em casa.*  
think-IND that she is-SUBJ in home  
“I think she must be at home.”
- (5) *Não penso que ela esteja em casa.*  
[neg] think-IND that she is-SUBJ in home  
“I don’t think she is at home.”
- (6) *Penso que ela não está em casa.*  
think-IND that she [neg] is-IND in home  
“I think she is not at home”
- (7) *Penso que ela não esteja em casa.*  
think-IND that she [neg] is-SUBJ in home  
“I think she may not be at home”

In example (3), *penso* profiles a positive inclination to assume that *ela está* (indicative) *em casa* is a fact; in (4), there is less certainty, marked in

English by the modal verb *must* and, in Portuguese, by the subjunctive form *esteja*. In (5), the negative adverb *não* + *pensar* profiles a negative inclination towards the complement, also with the subjunctive *esteja*. If we want to change the construal of (5), in order to express more certainty about *her not being at home*, the best way is to use a positive judgement about it, as in (6), where the indicative *está* is found. This can, of course, be attenuated by using a subjunctive in the complement, (7). We do believe that, despite the conceptual similarities between (7) and (5), there are differences, not only in terms of construal, but also regarding the epistemic commitment about the complement<sup>12</sup>. These are, of course, fabricated examples only for explanatory purposes. In section 5 we will analyse “unbiased” cases.

In the next section, we will see how factivity is addressed in Cognitive Grammar and also why we will use it in our approach to mood alternations in epistemic contexts.

#### 4. Factivity: the degree of identification of grounds

In Cognitive Grammar, **factivity**<sup>13</sup> is “characterized in terms of **strong identification** of the **actual ground** with the **virtual ground** invoked by a finite clause” (Langacker, *Investigations in C. G.* 279, our bold). The **ground** is perceived as the circumstances of enunciation — the speech act and its participants (cf. Langacker, *Foundations 2* 243) —, and **epistemic grounding** is the semantic function that provides an event with a specific epistemic location (cf. Langacker, *Foundations 1* 489) in relation to the ground, thus creating a finite clause (a specific and well defined instantiation of that event), whose semantic pole is a **proposition** (Langacker, *Foundations 2* 551).

In the particular case of verbs, that epistemic location is established by the tense and modality markers present in finite inflexions.

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<sup>12</sup> A gradation of epistemic commitment that goes from certainty to doubt is presented in Vieira Santos (409). The first of the examples is an indicative finite clause *O João está em casa* (John is at home). The following two are complementation cases introduced by *pensar* (“to think”): the first has indicative in the complement *Penso que o João está em casa*. (“I think John is at home”) and the second one has the subjunctive in the complement *Penso que o João esteja em casa*. (“I think John must be at home”). The list goes on.

<sup>13</sup> The traditional approach on factivity (cf. e.g., P. Kiparsky and C. Kiparsky) in terms of presupposition of the complement’s truth, will not be used in this paper. We will address factivity as a gradable category that can be construed in terms of emphasis and attenuation (cf. this chapter).

The **virtuality** of a finite clause means that, by itself, it does not refer to the actual participants in the discourse nor to an actual situation but, instead, invokes a relationship (profiled by the verb) between virtual entities whose epistemic status is still to be accessed.

Let us observe a simple main clause, which is the *prototypical* (Taylor; Geeraerts) way of profiling strong identification of the actual ground and the virtual ground.

- (8) Ela chegou a horas.  
she arrived-3SG-IND on hours  
“She arrived on time.”

In example (8), there are no elements to suggest that what is attributed to the clause subject is not what actually corresponds to the speaker’s conception of reality. In grounding terms, the **perfect preterit**<sup>14</sup> indicative *chegou* locates the described event somewhere in a previous time relatively to the speech act moment and it also indicates that the event is accepted as part of the speaker’s conception of reality — strong identification. In other words, (8) is a **fact**.

- (9) Talvez ela já tenha chegado.  
maybe she already had-3SG-IMP-PRET-SUBJ arrived-PART  
“Maybe she has already arrived.”

In (9), on the other hand, the proposition is preceded by the modal adverb *talvez*. By itself, this modal already indicates a certain amount of doubt, however, the **grounding element** that specifies the epistemic evaluation of *her arrival* is the composite perfect preterit subjunctive *tenha chegado*. This finite form, although also locating the occurrence of the event in a previous moment in time, indicates that the speaker is merely pointing out that there is such a possibility. The ground evoked by that finite clause, remains virtual, thus not being identified with the actual one.

Factivity — a manifestation of strong identification — can thus be seen as what facts are endowed of. Therefore, it makes sense to “allow”

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<sup>14</sup> Literal translation of the Portuguese **pretérito perfeito**, the equivalent of the English simple past. Notice also that the subjunctive only has a **composite** perfect preterit, but with an absolute meaning. In interlinear glossing, will distinguish the perfect preterit (both of the indicative and the subjunctive) from the **pretérito imperfeito (“imperfect preterit”)** (also from both moods) by glossing the latter as IMP-PRET, whereas the former will only have the information relating to person and number. Usually, IMP-PRET has imperfective aspect.

this property to be assigned to any other constructions that also manifests strong identification of grounds, although with the possibility of different degrees of commitment. In fact, Langacker, (*Investigations in C. G.* 261), argues that epistemic verbs like *to know*, *to think*, *to believe*, among others, “differ as to ‘factivity’”. Also, a few pages later (279), in respect to the epistemic predicative adjective *certain*, the Author points out that “a lot of predicates usually not considered factive are nonetheless susceptible to a factive construal under particular circumstances”.

We will argue that the opposite is also true: “under particular circumstances”, verbs that, by default, suggest that their landmark propositions manifest a strong identification of grounds, can also take less factive complements (cf. examples (23) and (24)).

This construal operation of keeping the identification of grounds of a proposition more virtual than actual will be addressed as the **attenuation** of the factivity of a proposition, where the subjunctive has a key role.

In this paper, the term *factivity* will be used to address only the **epistemic dimension of factivity**<sup>15</sup> (cf. section 5).

## 5. Epistemic factivity and the phases of the epistemic control cycle

We have already summarized how factivity is addressed in Cognitive Grammar and the nature of its relation to the grounding of a finite clause. We will now analyse some contexts of clausal complementation introduced by verbs or verbal expressions that reflect their subject’s **phase** in the process of gaining **epistemic control**, i.e., knowledge over a proposition (Langacker, *Investigations in C. G.* 131). The different phases these verbs invoke are schematized in an abstract cognitive model called **epistemic control cycle** (cf. Figure 1, obtained from Langacker, *Investigations in C. G.* 263).

Metaphorically, the landmark, which is a proposition (P), is conceived as an object that is “dangling” in a conceptualizer’s (C) field of awareness (F) (by default, the conceptualizer is the matrix subject<sup>16</sup>), and (D) represents the epistemic dominion — the conception of reality — of that conceptualizer.

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<sup>15</sup> In contrast with the **effective dimension of factivity**, that relates to contexts which are not epistemic, such as the ones introduced by emotional attitude verbs (*to regret*, *to fear*) and influence verbs (*to recommend*, *to let* and *to wish*).

<sup>16</sup> The matter concerning the co-referentiality of the speaker and the matrix subject cannot be addressed here. However, this is, indeed, a highly relevant subject when discussing the grounding process of a finite clause.

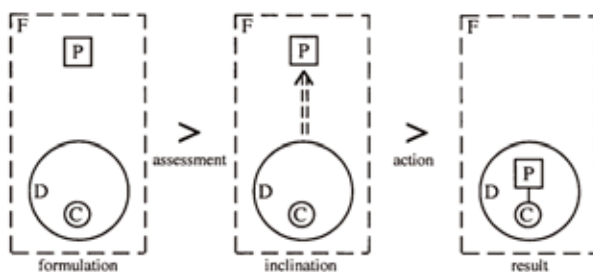


Figure 1: Epistemic control cycle (e. c. c.)

Very briefly, it consists of three main phases: **formulation**, **inclination** and **result**.

The result phase, which we will analyse in terms of **positive (by inclusion)** and **negative (by exclusion)** is invoked by verbs of certainty like *saber* (“to know”) (example (10)), or by expressions like *ser verdade* (“to be true”) (11), *estar certo* (“to be certain”), *ser óbvio* (“to be obvious”), which indicate that the matrix subject has established (P)’s definitive epistemic status by including it in his conception of reality (D) (result by inclusion). This phase is also invoked by expressions that indicate that (P) has been excluded from (D), with *não é verdade* (“it isn’t true”) (cf. example (15), which we will analyse later when dealing with negation) or by expressions like *é impossível* (“it is impossible”) (result by exclusion).

Both in examples (10) and (11), the indicative is expressing epistemic control and strong identification of grounds: for *Custodinho* (10), because of his trust in “him”, it is taken as a fact that “he” didn’t drink from the store; and in (11), the landmark proposition describes what the speaker holds as true.

The inclination phase, also **positive** and **negative**, can be exemplified by verbs like *pensar* (“to think”) (12) (positive inclination), *duvidar* (“to doubt”) (13) (negative inclination), and other verbs like *considerar* (“to consider”) and *achar* (also “to think”). In Figure 1, the double arrow implies that (C) is inclined to include (P) into (D) or, on the other hand, to exclude it from (F), without, however, making a final decision. Example (12), is a case positive inclination, with indicative: (C) is positively inclined to accept (P) in his conception of reality, but the matter is still susceptible to consideration. Example (13), on the other hand, is a case of negative inclination, with subjunctive, where the speaker expresses his doubts about (P), thus the attenuation of the proposition’s factivity.

Finally, the **formulation phase** is invoked by subjunctive complement taking expressions like *é concebível* (“it is conceivable”), or *é possível* (“it is possible”), in example (14), where we perceive (P) as simply situated in (C)’s field of awareness (F). In Figure 1, the absence of the double arrow indicates that there are no personal judgments about (P)’s epistemic status. Given that this phase solely reflects a manifestation of **weak identification of grounds** or, as we call it, **attenuated factivity**, the expressions that belong to this phase are unlikely to display mood alternations in their landmark propositions: the virtual ground they invoke do not lose their virtuality (Langacker, *Investigations in C. G.* 268–269).

- (10) *Mas o Custodinho confiava nele e*  
 but the Custodinho trusted-3SG-IMP-PRET-IND in him and  
*sabia que ele não bebia*  
 knew-3SG-IMP-PRET-IND that he [neg] drank-3SG-IMP-PRET-IND  
*nada do estabelecimento.*  
 nothing of the establishment  
 “But Custodinho trusted him and knew that he wouldn’t drink anything from the store.”  
 (Museu da Pessoa: E033-PT-50)
- (11) (...) *Mas também é verdade que é o primeiro*  
 (...) but also is-3SG-IND true that is-3SG-IND the first  
*a chegar ao sítio de trabalho!*  
 to arrive-INF to the place of work.  
 “But it is also true that he’s the first to arrive to work!”  
 (Museu da Pessoa: E008-PT-56)
- (12) *Penso que tive uma vida normal para o meu*  
 think-1SG-IND that had-1SG-IND a life normal for the my  
*tempo (...).*  
 time  
 “I think I had a pretty normal life (...)”  
 (Museu da Pessoa: E029-PT-140).
- (13) *Aliás duvido que ela me pedisse*  
 moreover doubt-1SG-IND that she me asked-3SG-IMP-PRET-SUBJ  
*autorização.*  
 permission  
 “Moreover, I doubt she would have asked my permission.”  
 (CETEMPúblico: par=ext18515-nd-91b-2)
- (14) *É possível que houvesse nesse meio da*  
 is possible that were-3SG-IMP-PRET-SUBJ in that environment of the  
*guarda fiscal alguma corrupção (...).*  
 guard fiscal some corruption

“When it comes to customs, it is possible that there was some corruption”  
(Museu da Pessoa:E018-PT-230)

Examples (10)–(14), and their location in the different phases of the epistemic control cycle, already show a pattern in which the indicative and subjunctive inflexions are the grounding elements that, to the extent and precision that the matrix verb permits, establish the landmark proposition’s epistemic factivity: the indicative profiles a higher commitment towards the factivity of the event (result and positive inclination phases) whereas the subjunctive is selected in cases where that factivity must be attenuated (negative inclination and formulation phases).

The presence of a negation marker that changes the polarity of the matrix clause, like in examples (15)–(17), helps to substantiate this pattern. Notice that, in these cases, what the negation marker does is to change the meaning of the matrix verb in a way that it can be considered a different verb. For instance, the difference between examples (11) and (15) can be seen as similar as the contrast between *it is true that...* and *it is a lie that...*

- (15) *Mas não é verdade que o presidente me tenha*  
but [neg] is-3SG-IND true that the president me-DAT  
*pedido espetáculos (...)*  
asked-PART shows (...)  
“But it isn’t true that the president has asked me to show off (...)”  
(CETEMPúblico: par=ext1267999-des-91b-1)
- (16) *Não penso que seja obrigatório, mas penso que*  
[neg] think-1SG-IND that is-SUBJ obligatory but think-1SG-IND that  
*começa a ser importante...*  
starts-IND to be-INF important  
“I don’t think it’s obligatory, but I think that it’s becoming important...”  
(Museu da Pessoa: E095-PT-15)
- (17) *Sim, porque a questão médica já foi ultrapassada,*  
yes because the matter medical already was-3SG-IND overcame  
*e a FIFA não duvida que o argentino se*  
and the FIFA [neg] doubt-3SG-IND that the argentinian itself  
*dopou.*  
doped-3SG-IND  
“Yes, because the medical matter is already behind us, and FIFA has no doubts about the Argentinian doping himself.”  
(CETEMPúblico: par=ext1029090-des-94b-1)

Both in (15) as in (16) the subjunctive is grounding a finite clause that describes, respectively, what is contrary to the speaker’s conception of

reality (15) (result phase by exclusion) and what the trajector is inclined to reject (16) (negative inclination phase). In this last example, we even have the contrast between the clause at stake (with subjunctive) and the one with a positive polarity (with indicative).

Like we pointed out, examples (15) and (16) are cases where the negation marker is **not denying** the process of believing in or thinking about (P) but, instead, it is **shifting the polarity of the matrix verb** from positive to negative, thus affecting the epistemic status of the landmark proposition. This way, the identification of grounds becomes more virtual than actual, which motivates the change in the mood of the complement (cf. e.g., example (12) with indicative and (16) with subjunctive).

In (17), on the other hand, we have the reverse shifting: from negative inclination phase (cf. example (13) with subjunctive on the complement) to result phase by inclusion (with indicative on the complement). Example (17) is a statement of absence of doubts (which is similar to a statement of certainty) about the “Argentinian” taking drugs: the negation marker is shifting the polarity of the matrix verb and not denying that FIFA “doubts” about it<sup>17</sup>.

We found no cases of formulation phase where the predicator is preceded by a negation marker. Even when dealing with an expression that, without negation, reflects this phase, the presence of negation invokes a different phase (cf. e.g., *it is possible that...* (formulation) and *it is not possible that...* (result by exclusion)).

Table 1 summarizes the mood distribution thus far, having into account the phases of the epistemic control cycle and the polarity of the matrix verb, either the default one or the one imposed by the negation marker, thus imposing on it a different meaning.

FORM.	- INC.	+ INC.	- RES. (excl.)	+ RES. (incl.)
SUBJ (14)	SUBJ (13) (16)	IND (12)	SUBJ (15)	IND (10) (11) (17)

Table 1: Basic pattern of the mood distribution in epistemic contexts.

This distributional pattern is also the bases for the traditional claim that the alternation between the indicative and the subjunctive is based on the truth value of the complement: the indicative means that the matrix

<sup>17</sup> Given the subtlety of this claim, we performed a survey on native speakers. 20 out of 20 subjects stated that example (17) is the expression of certainty, and not the denying of having doubts.

subject asserts the complement, whereas the subjunctive indicates otherwise (cf. e.g. Fonseca; Terrell and Hooper; Tlâskal).

However, as it was pointed out by several Authors (cf. e.g. Marques, “Modality”; Vesterinen, “Aproximação Cognitiva”), the assertion / non-assertion approach is a somewhat reductionist view of these two mood meanings, and although the problems it raises are more related to contexts that fall outside the scope of this paper<sup>18</sup>, there are still some issues concerning epistemic contexts where the relation between the choice of mood and the assertion or non-assertion of the complements is not so evident.

Let us consider the examples (18) and (19), both with *saber* (“to know”), which is a result phase verb, preceded by a negation marker.

- (18) *Eu, inclusive, até precisar deles, não sabia que eles existiam.*  
I inclusively until need-INF of them [neg] knew-1SG-IMP-PRET-IND that they existed-3PL-IMP-PRET-IND  
“My self included, until I needed them, I didn't know they existed.”  
(Museu da Pessoa: E095-PT-44)

- (19) *E cá está, não sei se fui bom ou se fui parvo.*  
and here is-IND [neg] know-1SG-IND if was-1SG-IND good or if was-1SG-IND jerk  
“And here it is, I don't know whether I was good or a jerk.”  
(Museu da Pessoa: E041-PT-1021)

First of all, we have to point out that, in these two cases, the negation marker is **not** affecting the polarity of the matrix verb thus giving it a new meaning. Instead, it is denying the relationship profiled by the matrix verb as a whole.

The difference between a case where negation affects the polarity of a matrix verb and a case where negation denies the relationship profiled by a matrix verb is schematized in Figure 2.

**([neg-V] ==> P) vs. ([neg] ==> S)**

Figure 2: affected polarity vs. non-affected polarity

<sup>18</sup> Like how to explain the semantic relation between the non-assertion of the subjunctive in the complements of negative epistemic judgements and the non-assertion of presupposed contexts, such as complementation structures introduced by emotional attitude “factive” verbs like *lamentar* (“to regret”).

[neg-V] is an epistemic verb with reversed polarity; (P) is the proposition that [neg-V] is judging; [neg] is a negation marker; (S) is a complex sentence comprising a matrix and a complement clause.

Our claim is that, in order for the mood in the landmark to be considered a construal effect of the presence of a negation marker, the latter must affect the polarity of the epistemic matrix verb, thus turning it into a different verb which imposes a different construal, instead of denying the profiled relationship as a whole, where the landmark's mood keeps its coherence with the unchanged matrix verb.

As we already saw in example (15), with *ser verdade* ("to be true"), the presence of *não* can shift the polarity of the truth-value judgment emitted by the matrix verb from positive (positive inclination phase) to negative (result phase by exclusion), thus triggering the subjunctive in the landmark to ground the proposition without identification of grounds.

But *saber* ("to know"), on the other hand, profiles a state of knowledge, which cannot have its polarity changed. In fact, changing the polarity of *saber*, thus imposing a construal in which its landmark is to be regarded as not identified with the actual ground, is highly unlikely. In order to express that *one does not know* (P), one can only *deny to know* (P). The polarity of the truth-value of a proposition can be changed, but the polarity of *knowing* a proposition cannot.

Nevertheless, in example (18), the verb *saber*, preceded (or not) by *não*, and despite of its temporal projection, indicates that, at the moment of speech, the landmark proposition as been accepted by the matrix subject. However, in order to consider that the choice of mood in the complement implies the assertion (now) of the complement, we would have to ignore the temporal projection profiled by *sabia* and focus only the current state of knowledge of the speaker, disregarding the element of change from the past to the present.

Be as it may, the indicative is grounding a proposition that, taking into account its relation to the actual ground elements, i.e., the speech act moment and the participants in the discourse, has no elements that could favour the attenuation of its factivity.

Now, considering example (19) (cf. also (20)–(22)), it is fairly obvious that the indicative does not mean that the matrix subject is asserting the complements.

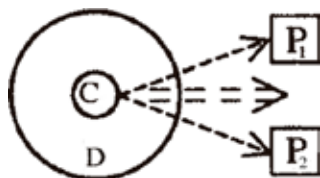


Figure 3: *se* complement clauses

In this case, the complementizer is not *que* (“that”) but *se* (“whether”) (Figure 3, adapted from Langacker, *Investigations in C. G.* 315), which imposes a different construal than the former, in that the landmark is one of the possible propositions that will become part of the matrix subject’s conception of reality. In this particular case, the speaker (coincidental with the matrix subject) even gives the two possible choices from which to select the right one<sup>19</sup>. Note that the negation marker is not affecting the polarity of the knowledge about its complements: it is expressing the doubt about a choice between (P1) or (P2), and the verb *saber* designates the kind of relationship that will exist between its trajector and (P1), (P2), ... In Figure 3, the double arrows represent the active effort in gaining knowledge, and (P1) and (P2) are two of the possible propositions that (C) is targeting for inclusion in his epistemic dominion, i.e., his conception of reality (D). This is another case where the mood is not construed as a consequence of the negation marker (cf. Table 2).

- (20) *Os pescadores querem mais fiscalização para que os espanhóis*  
the fishermen want-3PL-IND more supervision so that the Spanish  
*não pensem que estamos desamparados pelas nossas*  
[neg] think-3SG-SUBJ that are-1PL-IND helpless by our  
*autoridades.*  
authorities  
“The fishermen want more supervision so that the Spanish don’t think we’ve  
been left unprotected by the authorities.”  
(Adapted from Natura/Minho: par=4009.)
- (21) *Não penses que é um disparate o título que te*  
[neg] think-2SG-SUBJ that is-IND a nonsense the title that you-ACC  
*proponho hoje (...)*  
propose today (...)  
“Do not think that this title I’m proposing for you is nonsense (...)”  
(Natura/Minho: par=35836)
- (22) *E, como nunca queremos ver os defeitos dos que*

<sup>19</sup> This is not, however, necessary. *Se* already presupposes the existence of alternatives.

and because never want-1PL-IND see-INF the flaws of our which  
*nos são queridos, nunca pensei que a classe*  
 to US-DAT are-3PL-IND dear never thought-1SG-IND that the class  
*média brasileira pudesse aderir a esse modelo*  
 middle Brazilian could-3SG-IMP-PRET-SUBJ subscribe to that model  
*importado pela minoria rica.*  
 imported-PART by the minority rich  
 “And because we never want to see our loved ones' flaws, I never thought the  
 Brazilian middle class would subscribe to this model which was imported by  
 the rich minority.”  
 (Avante!: ed=1429 id=460=t1)

Let us now look at example (20). The landmark proposition is grounded with an indicative form, but, obviously, the purpose of the sentence is not to assert that “the Spanish think...”. This complement clause is embedded in an adverbial final clause that elaborates the landmark in respect to another clause that is, itself, the matrix of the sentence. Let us just point out that the relationship between a matrix clause and a final clause it is not of an epistemic nature but of a more effective nature<sup>20</sup>. The final clause describes what is intended to be achieved by the event described in the matrix clause. In this particular case, that objective is to avoid a potential occurrence from happening, which, in turn, can be specified in terms of *pensem que estamos desamparados pelas nossas autoridades* (“think we’ve been left unprotected by the authorities.”). The indicative inflexion *estamos*, is instructing that, given the surrounding circumstances, the idea of the “Spanish thinking that we’ve been left helpless by the authorities”, is to be taken as something that, if not for the influence of the trajector of the sentence, can very well become a fact (if it is not an actual fact, already). The negation marker is not, once again, changing the polarity of the matrix verb *pensar* (cf. Table 2), but is, in fact, marking the need to avoid or exclude that particular “thinking”.

A fairly similar explanation can be given to (21). In this case, we are dealing with a directive speech act, and definitely, not an assertive one.

In Portuguese, the imperative mood is only morphologically marked in the second persons. In this particular verb, *pensar*, those forms are *pensa* (think-2SG) and *pensai* (think-2PL). The remaining forms are borrowed from the present subjunctive. Also, when negated, even the second persons are morphologically identical to the present subjunctive ones. The indicative can also be associated with an imperative act. This is

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<sup>20</sup> Given the restrictions about the size of this paper, we cannot go into details about this type of subordination context.

not, however, the place to discuss the ramifications of this issue. We will limit ourselves to say that, in terms of epistemic grounding, the differences in construal that are reflected in the forms that the speaker chooses to use, even when motivated by strictly pragmatic restrictions<sup>21</sup> are in deep connection with the attenuation or emphasis on the proposition's factivity, where the indicative reveals the strongest degree of immediacy regarding the compliance of the order.

In any case, the landmark proposition in (21) is grounded with an indicative form. Just like in (20), the negation marker doesn't modify the matrix verb (cf. Table 2) but, instead, it denies the whole relationship. The proposition at stake is part of a complex sentence that is, as a whole, the target of the negation marker: in order to command the hearer to "not think P", "thinking P" should be presented as an independent and (potential) epistemic process that the hearer may be undertaking, which explains why the mood in the landmark proposition is the indicative, in coherence with the default polarity of the matrix verb.

In the last example of this series, (22), even though the proposition grounded with subjunctive was not, at the time of the "thinking", what its subject was expecting to become part of its conception of reality, what matters here is not so much the epistemic status of the landmark proposition, or the complement's assertion or not-assertion, but, instead, the negative emotional attitude the subject takes towards the latter. This can be considered as a case of polysemy of *pensar*, which is not, in this case, profiling a cognitive process. In fact, there is a somewhat fixed expression *Nunca pensei!* (similar to the English "Well I never...") that is used specifically as a manifestation of disapproval.

The newspaper from where the example is extracted is a Left Wing banner, which clarifies why the matter at hand is so susceptible to an emotional attitude<sup>22</sup>. As a brief contextualization, in contexts of such nature, the epistemic status of the landmark propositions "lies in the background, being presupposed rather than asserted" (Langacker, *Investigations in C. G.* 311), thus not being profiled. Now, in view of what we have already suggested about the subjunctive attenuating the factivity of a proposition i.e., keeping the identification of grounds more virtual that

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<sup>21</sup> Like in French or Spanish, it would be politically incorrect to use the morphologically marked imperative form of the second person singular when addressing someone one is not in familiar grounds with, like a teacher, or a boss. In Portuguese, the second person plural, is hardly ever used.

<sup>22</sup> It is safe to state the almost absolute preference for the subjunctive in emotional attitude contexts of complementation.

actual, we claim that, outside epistemic contexts, the subjunctive has the same function, but for reasons related to the effectiveness of construing a proposition with its factivity attenuated (Pulquério Vieira to appear f.).

Finally, we have two less common (cf. section 2) uses of the subjunctive without negation on the matrix verb to analyse (cf. examples (23) and (24)). These are two examples of positive inclination cases that, given a set of “particular circumstances” (cf. section 4) have their factivity attenuated.

- (23) *Quando ouvi* *aquele barulho* *pensei* *que fossem*  
 when heard-1SG-IND that noise thought-1SG-IND that were-3PL-SUBJ  
*as botijas que fornecem gás ao prédio a rebentar, mas só*  
 the bottles that provide gas to the building blowing but only  
*quando abri* *a persiana é que me* *apercebi*  
 when opened-1SG-IND the blind is that me-REFLEX realized-1SG-IND  
*que tinha sido na garagem (...)*  
 that had-3SG-IMP-PRET-IND been in the garage (...)  
 “When I heard that noise, I thought the building’s gas cylinders were blowing up, but when I opened the blinds I realized that (the noise) came from the garage.”  
 (DiaCLAV: par=DC-N3671-1)
- (24) *Pois, não* *deves* *conhecer então* *pk* *penso*  
 right [neg] must-3SG-IND know-INF then because-ABREV think-1SG-IND  
*que ela já* *tenha* *terminado...*  
 that she already has-3SG-SUBJ finished-PART  
 “Right... probably you don’t know her because I think she may have finished already...”  
 ([http://onossocasamento.pt/forum/comentem-minhas-coisinhas-finalmente-resolvi-iniciar-este-topico?page=2]: last access: 9/3/2012)

In example (23) we have two coordinated sentences each one with an adverbial temporal clause and its matrix. As it can be seen, the subjunctive *fossem* is grounding a proposition that, regarding the temporal projection of the matrix verb, was, in fact, accepted by its trajector as part of his conception of reality. On the other hand, that is the only proposition that, at the moment of speech, does not correspond to the conceptualizer’s conception of reality. So, again, in order to explain the selection of mood in assertion terms, the temporal projection of the matrix verb needs to be disregarded.

Nevertheless, there is a sequence of propositions (the one we are analysing included) where the last one is subordinated to a verb that invokes, by inclusion, the result phase of the epistemic control cycle: *aperceber* (“to realize”). Also, the temporal clauses projected to an anterior

time in relation to their matrices do not display any reasons that could lead to the attenuation of their propositions factivity. In fact, the subjunctive is grounding the only proposition that, in contrast with the other three, has a “valid” motivation to be kept with a virtual identification with the actual ground, i.e., to have an attenuated factivity: the contrast between the previous state of knowledge (then found erroneous) and the current one. Example (23) is thus representing the result phase by exclusion (cf. Table 2).

Finally, the example (24). As we have seen before, the verb *pensar* (“to think”), by default, is construed with an indicative complement clause, unless its polarity is changed by a negation marker, which makes a subjunctive clause much more likely to be selected (cf. example (16)). But, in this case, there is no negation marker and, despite of that, a subjunctive clause, which is contradictory in assertion terms. In our perspective, the contrast between (24) and a case where the indicative would be in the complement (25) is comparable to the contrast between the presence and absence of the modal *may* in the English translations.

- (25) *Pois, não debes conhecer então pk penso*  
 right [neg] must-3SG-IND know-INF then because-ABREV think-1SG-IND  
*que ela já terminou...*  
 that she already finished-3SG-IND  
 “Right... probably you don't know her because I think she has finished  
 already...”  
 (Our example.)

Langacker often argues that a modal verb like *must* (present in the translation of example (24) indicates that the proposition it grounds is not to be considered as an accepted facet of the conceptualizer’s conception of reality (cf. e.g. Langacker, *Foundations* 2 246), i.e., the identification of grounds invoked by that proposition is attenuated by the modal. In English, though, the modal is followed by an infinitival, and not a finite form, which is why the grounding element is the modal. In Portuguese, however, the grounding element is the subjunctive (profiling the event that, in English, is designated by the infinitival), which conveys a similar meaning to the modal + infinitive: the subjunctive inflection gives to the proposition the same grounding consequence, and meaning, as the modal, which is the attenuation of the degree of inclination profiled by *pensar* and the consequent attenuation of the factivity of the landmark proposition, bringing it closer to the formulation phase (cf. Table 2), where possibilities are situated.

## 6. Summary

From what we have seen, the indicative is selected to ground propositions that profile a high level of commitment towards the landmark proposition's factivity or, in other words, that manifest a strong identification of grounds, which happens when the trajector emits a positive epistemic judgment about the landmark proposition, whether because of the default polarity of the matrix verb, like in (10) and (11) (result phase by inclusion) and (12) (positive inclination phase) or because its polarity changed under the influence of a negation marker, like in (17) (result phase by inclusion). We also saw cases where the factivity of the landmark proposition is not affected by the negation marker, which makes the choice of mood coherent with the default polarity of the matrix verb. These were the examples (18) (result phase by inclusion), where the trajector is denying to *know that (P)* (where P can only be presented as something he knows), (19) (result phase by inclusion), where the landmarks are the possible "knowledge" targets to be acquired, and the matrix subject has doubts about which one to select, and (20) and (21) (positive inclination phase), where the landmark propositions are potential or actual positive inclinations in someone else's perspective that should be avoided or corrected.

The subjunctive, on the other hand, is used to ground propositions that have their factivity attenuated in order to keep its virtuality. This happens when a negative judgment is emitted regarding the landmark's factivity: either by the default polarity of the matrix verbs (13) (negative inclination phase), or, again, by a negation marker that changes that polarity, like in (15) (result phase by exclusion) and (16) (negative inclination phase) and also in default formulation phase cases, like (14) (as opposed to example (24), which is not a default case). But this mood can also ground propositions that, departing from the original inclination profiled by the matrix verb, have elements that favour their virtualization. This happens in example (23) (negative result phase), because of the contrast with other propositions that are clearly more relevant in their identification with the ground, and also in example (24) (formulation phase), given that it is important to let the hearer know that the proposition at stake designates a possibility (coded in English by a modal verb) and not the target of a strong epistemic judgement.

It was also shown that for negation to have a role in the choice of mood in the landmark proposition, its effect has to be the changing of the polarity of the matrix verb, instead of denying the profiled relationship as a

whole. This is also coherent with our initial claim: in order for the mood in the landmark proposition to change, that change has to be motivated by the semantic change of the matrix verb, thus manifesting a different construal.

Table 2 summarizes the mood distribution by the phases of the epistemic control cycle taking into account the polarity of the matrix verb (by default or by influence of a negation marker).

<b>FORM.</b>	<b>- INC.</b>	<b>+ INC.</b>	<b>RES. (Exclusion)</b>	<b>RES. (Inclusion)</b>
SUBJ (14) (24)	SUBJ (13) (16)	IND (12) (20) (21)	SUBJ (15) (23)	IND (10) (11) (17) (18) (19)

Table 2: Summary of the mood distribution by phase of the e. e. c..

This analysis, although brief, is illustrative of the major tendencies of mood distribution in epistemic contexts. It has shown that Cognitive Grammar possesses a valid set of tools to explore the Portuguese grammar in general and mood issues in particular. Construal, as a starting point for a semantic analysis of mood alternations, and the epistemic control cycle as a construct to clarify the differences in meaning of epistemic verbs, provide the required flexibility to explain not only the basic patterns of the distribution (Table 1), but also some apparent deviations that, although sometimes less statistically relevant, are, nonetheless, coherent with the major tendencies.

## Epilogue

Muito obrigado a todos os que, pelos corredores ou no bar de Viseu, me disseram coisas muito simples como “O seu Avô faz-nos muita falta” e afins... Na altura, podia apenas sentir simpatia e orgulho por haver tanta consideração pelo meu Avô. Agora, percebo bem o que significa sentir falta dele.<sup>23</sup>

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<sup>23</sup> I am deeply thankful to all of you who, either around the corridors or at the Bar, in Viseu, told me simple things like “Your grandfather is really being missed” and such... At that time, I could only feel appreciation and pride for you to have such a consideration for my grandfather. Now, I can really understand how it feels to miss him.

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**Abstract:** This paper argues that the semantic contrast between the European Portuguese indicative and subjunctive moods, in complement clauses introduced by epistemic verbs, is related to one of the most fundamental principles of Cognitive Grammar, which states that different choices regarding the way of conveying one’s perspective about a certain aspect of the world — different construals — also result in different meanings. Specifically, it will be shown that different mood construals will reflect

different levels of commitment towards the complement clause's epistemic factivity, as it is addressed in Cognitive Grammar: factivity is the degree of identification of the virtual circumstances of enunciation evoked by the complement clause and the actual ones. The indicative is selected to convey a strong commitment towards the complement's factivity whereas the subjunctive attenuates the complement's factivity.

**Resumo:** Neste artigo, argumenta-se que o contraste entre os modos indicativo e conjuntivo do Português Europeu, em orações completivas introduzidas por verbos epistémicos, está relacionado com um dos principais fundamentos da Gramática Cognitiva, o qual afirma que escolhas diferentes relacionadas com a maneira de transmitir algum aspeto particular do mundo — diferentes perspetivações conceptuais (*construals*) — têm como resultado significados diferentes. Especificamente, irá ser demonstrado que estas diferentes perspetivações conceptuais relacionadas com o modo verbal refletem diferentes níveis de comprometimento relativamente à factividade epistémica do complemento oracional, segundo uma perspetiva cognitiva: factividade é o grau de identificação entre as circunstâncias de enunciação virtuais invocadas pelo complemento a as que de facto se verificam na altura do ato comunicativo. O indicativo é selecionado para transmitir um elevado grau de factividade, ao passo que o conjuntivo atenua a factividade do complemento.