

PARCE QUE IN THE SYNTAX-SEMANTICS-PRAGMATICS INTERFACE*

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1. PARCE QUE: TAXONOMY AND SYNTACTIC BEHAVIOUR

1.1. Syntactic and semantic multifunctionality of *parce que*

The goals of the section 1 are the following: i) to present the existing (syntactic-discursive and semantic) distinctions for capturing the multifunctionality of PCQ (1.1); ii) to see if there are clear parallels between them (1.2). We start by a distinction in terms of subordinating conjunction *vs* paratactic (discourse) marker, then we speak about the meaning of the relation expressed by various usages.

PCQ is a prototypical subordinating conjunction. *Subordination* is a traditional term expressing the syntactic embeddedness of the subordinate clause and its dependence on the main clause. As a subordinating conjunction, PCQ can occur in initial position together with the subordinate clause it introduces.

(1) *PCQ as a subordinating conjunction*

- a. Jean est malade PCQ il a trop mangé. / John is ill PCQ he ate too much.
- b. PCQ Jean a trop mangé, il est malade. / PCQ John ate too much, he is ill.

The term *subordinating conjunction* does not only reflect the syntactic hierarchy between clauses, but also a semantic asymmetry. Semantically, PCQ expresses a hypotactic relation: the two clauses related by PCQ are interdependent and form one semantic unit, marking a local semantic relation between the propositional contents of the clauses (Debaisieux 2016). The type of causal relation expressed is an objective, descriptive causal explanation between two real-world facts (eating too much causes being ill). As a dependent clause, which is semantically related to the main clause, the subordinate can be embedded in cleft-structures (*it*-cleft and *if*-cleft), as in (1c-d):

- (1) c. **C'est** PCQ Jean a trop mangé **qu'**il est malade. *it-cleft*
It is PCQ John ate too much that he is ill.
- d. **Si** Jean est malade, **c'est** PCQ il a trop mangé. *if-cleft*
If John is ill, it is PCQ he ate too much.

However, it is known from the Groupe Lambda-L's (1975) seminal work that PCQ has also paratactic usages, where it does not express a real semantic cause-effect relation, but a justification or an inferential discourse relation (Moeschler 1986, Schleppegrell 1990). As a paratactic discourse marker (*connecteur*, as opposed to *opérateur*, in Ducrot's 1983 terms),

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PCQ relates two independent clauses which function as autonomous discursive units, that is why the relation as a whole cannot undergo syntactic modifications, as in (2b) and (3b).

- (2) *Paratactic PCQ: justification relation* (Debaisieux 2004)
- a. Alors Vincent je sais que tu fais de l'escalade [S1 est-ce que tu pourrais m'en dire plus] [S2 PCQ c'est un sport que je connais pas bien et puis ça m'intéresse].
So, Vincent, I know that you do climbing [S1 could you say more about it] [S2 PCQ I don't know well this sport and besides, I am interested].
- b. ?? Alors Vincent [...] [S1 PCQ c'est un sport que je connais pas bien et puis ça m'intéresse], [S2 est-ce que tu pourrais m'en dire plus].
?? So, Vincent, [...] [S1 PCQ I don't know well this sport and besides, I am interested], [S2 could you say more about it].
- (3) *Paratactic PCQ: inferential relation* (Debaisieux 2004)
- a. Pierre est parti, PCQ je ne vois plus sa voiture dans le parking.
Pierre has gone PCQ I don't see his car in the parking lot.
- b. ?? PCQ je ne vois plus sa voiture dans le parking, Pierre est parti.
?? PCQ I don't see his car in the parking lot, Pierre has gone.

These two connectives do not express a real-world causality (*the speaker's interest in a sport* does not cause *the hearer's saying more about it* in (2a), nor does *the absence of Pierre's car* cause *his departure* in (3a): the first segment (S1) is not a real-world fact, but a subjective conclusion or claim of the speaker, which is justified by the second segment (S2) functioning as an independent speech-act.

The distinction between subordinating conjunction vs. paratactic discourse marker (DM) is not informative about the specific meaning of the relation expressed. To capture the difference in meaning between subordinating-semantic vs. paratactic-pragmatic usages, some other dichotomies have been suggested, such as *explanative* vs. *justifying*, *descriptive* or *ideational* vs. *rhetorical*, *causal* vs. *inferential* or *argumentative*, *locutionary* vs. *illocutionary*. Thus, subordinating PCQ expresses a semantic or descriptive causality, while the paratactic DM PCQ expresses pragmatic, rhetorical or inferential-argumentative¹ (Moeschler 2009) relations, where the speaker justifies his mental state or speech-act.

A finer-grained and cognitively motivated analysis of the meaning of (causal) relations is carried out by Sweetser (1990) who distinguishes the following three domains of usages for connectives, e.g. (*because*)²: content (4), epistemic (5) and speech-act (6):

- (4) John came back because (PCQ) he loves her.
(5) John loves her, because (PCQ) he came back.
(6) What are you doing tonight? Because (PCQ) there is a good movie on.

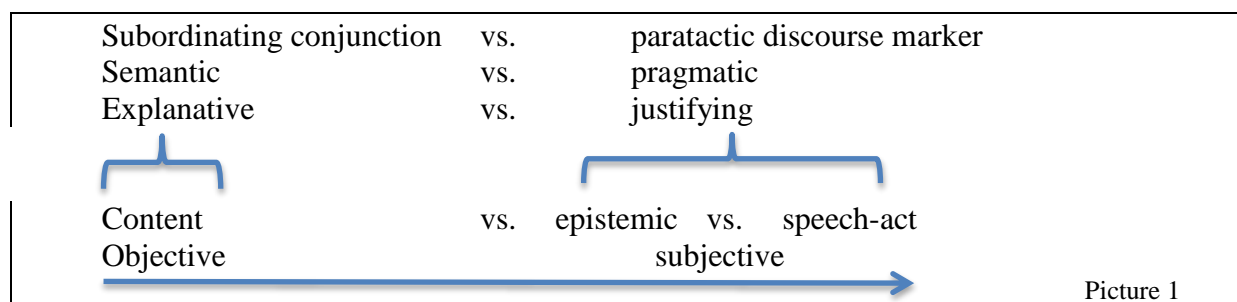
The connective in the content domain (4) is used to describe objective and factive events in the real world. In the epistemic domain, where the same segments are in reversed, iconic order, there is no real-world causality: the return of John is not the cause of John's love, but is

¹ The term *argumentative* is usually used in parallel to *justifying* in the literature about the causal relations. There is no unanimous and explicit clarification about the difference or similarity of these two terms. We will escape the discussion of this issue, and will use the term *argumentative* instead of *justificative* for describing the epistemic, inferential relations (see page 3), since not all epistemics are justifying, as we will show in the section 1.2.

² Although this distinction was done for *because*, it has been largely applied to the French connective *parce que*, which is why we assume here an analogy between the English and French connectives from the point of view of the taxonomy of causal relations they express and we use Sweetser's examples in English with *parce que* (PCQ).

an argument (premise) for the speaker to conclude that Johns loves her. The epistemic relation is argumentative and inferential; hence the speaker is subjectively involved in the construal of the relation. The connective justifies the mental state or the epistemic belief of the speaker in the first segment. Finally, in the speech-act domain, the second segment is again used for justifying the illocutionary act of asking a question.

In sum, Sweetser’s content domain is largely perceived as parallel to explanation, subordination and semantic relations, while the epistemic and speech-act domains represent justifying or paratactic relations. Another way of representing this bipartition and conserving the fine-grained subdistinctions is in terms of an objective - subjective continuum going from the most objective content to the most subjective speech-act relations (Degand & Pander Maat 2003, Pander Maat & Sanders 2000, Stukker & Sanders 2009), as in Picture 1:



1.2. The case of epistemics: subordinating or paratactic usages?

How do the traditional bipartitions match with Sweetser’s cognitive tripartition? Although there is a general (and not always explicit) unanimity about the correspondence between Sweetser’s domains and the classical bipartitions, as mentioned at the end of the previous section, we will show that in some cases the subordinating usage does not always imply a content relation, and the epistemic relation is not always expressed in paratactic usage.

On one hand, indeed, the justifying paratactic relation in (2) can be understood as a speech-act relation, since S1 (*est-ce que tu pourrais m’en dire plus*) has an interrogative illocutionary force, and with S2 the speaker does not explain the capacity of the hearer to say more, but justifies his speech-act of asking a question, as paraphrased in (2’):

- (2) *Paratactic PCQ: speech-act relation*
Alors Vincent je sais que tu fais de l’escalade est-ce que tu pourrais m’en dire plus
PCQ c’est un sport que je connais pas bien et puis ça m’intéresse.
- (2’) [*est-ce que tu pourrais m’en dire plus*]? PCQ = *The reason why I ask you this question is that* [c’est un sport que je connais pas bien et puis ça m’intéresse].

In a speech-act, S2 usually functions as *assertion postérieure* to S1 (Vallée 2003): S1 should be pronounced first, in order to be justified afterwards, since what is justified is the act of saying. That’s why an anticipating justification with initial PCQ is not possible, as in (2b)³.

The inferential paratactic relation in (3) is epistemic, where the speaker concludes the departure of Pierre based on the observation that his car is no longer in the parking lot (3’).

- (3) *Paratactic PCQ: epistemic relation*
Pierre est parti PCQ je ne vois plus sa voiture dans le parking.

³ Although we do not exclude (suggested also by a reviewer) the possibility of the initial PCQ-clause in (2), it is unanimously and largely claimed that parataxis does not accept the initial position of the connective.

(3') *The reason why I think that [Pierre est parti] is that [je ne vois plus sa voiture ...].*

So, paratactic PCQ does express subjective epistemic or pragmatic speech-act relations.

On the other hand, subordinating PCQ in (1) does express a content relation, and in the content relation (4), PCQ is subordinating: the speaker is an objective reporter describing the reason of illness, as in (1'), or Jean's return (4'), without subjective, inferential epistemic reasoning. So, the terms *content relation* and *subordinating usage* are parallel for PCQ:

Subordinating PCQ: content relation

- (1) Jean est malade PCQ il a trop mangé.
 (1') *The reason why [S1 Jean est malade] is that [S2 il a trop mangé].*
 (4) John came back PCQ he loves her.
 (4') *The reason why [S1 John came back] is that [S2 he loves her].*

However, in the literature we can find examples such as (7) (Débaisieux 2004:9 (22)), which are considered as subordinating (PCQ can be in initial and cleft position, as in 7b-c), but can hardly be interpreted as a descriptive or an objective relation in the content domain. In (7), S1 is the speaker's subjective prediction or conclusion (as indicated in 7''): the future tense indicates the subjectivity of causal relations (Sanders 2005) or modality in general (Giannakidou & Mari 2017). That's why in the paraphrase (7'), we can embed S1 under the expression *I think that* revealing the modality of the relation.

(7) *Subordinating PCQ: epistemic relation*

- a. [S1 Tu auras du mal de semer tes graines ...] [S2 PCQ la terre est trop dure].
 [S1 It will be hard for you to plant your seeds...] [S2 PCQ the ground is hard].
 b. PCQ la terre est trop dure, tu auras du mal de semer tes graines ...
 c. C'est PCQ la terre est trop dure que tu auras du mal de semer tes graines ...
 d. Si tu auras du mal de semer tes graines..., c'est PCQ la terre est trop dure.
 (7') *The reason why I think that [tu auras du mal ...] is that [la terre est trop dure].*

Contrary to Sweetser's epistemics in (3) or (6), the order of the segments in (7) is the same as in the content relations: S1 is the consequence, explained by the cause in S2:

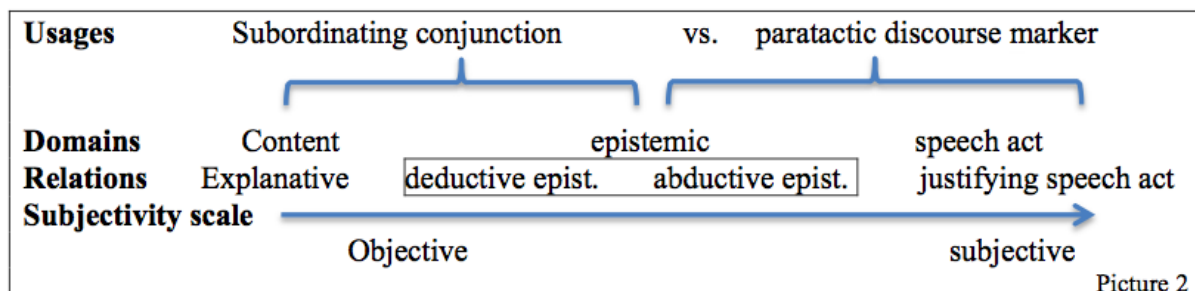
(7'') Consequence Conclusion PCQ Cause

So, the structure *Consequence PCQ Cause* is ambiguous between objective, content reading and subjective, epistemic reading: the presence of modal expressions can help to disambiguate the subjective readings, but often, in the absence of such items, the addressee has to rely exclusively on contextual clues to determine the attitude of the speaker.

(7), which structurally looks like a content relation, but has to be interpreted as epistemic, shows that Sweetser's type of epistemics (with reversed order, e.g. in (3) and (5)) is not unique, and we need to represent the epistemic domain in a finer-grained way, via two types of epistemics. This division is not widely used in the literature (apparently for the reasons of the above-mentioned ambiguity and difficulty to identify the epistemic modality outside of context), although it has been suggested by some scholars (Degand & Pander Maat 2003, Stukker & Sanders 2009) as abductive (corresponds to Sweetser's example) vs. deductive epistemic (7). So, in the literature, the term *epistemic causal* is used in the sense of abductive epistemic, with the iconic order *cause* (in S1)-*consequence* (in S2), as in (3) or (6).

What are the implications of this distinction inside the epistemic domain? First, this distinction is crucial for the correct interpretation of the causal relations. Second, as we saw in

(7b-c), this distinction is responsible for the syntactic behaviour of the connective: PCQ in the deductive relation can be put in initial or cleft position. So, the deductive relation has a subordinating (syntactically) and non-paratactic structure. Third, the deductive-abductive distinction breaks the equivalence between the subordinating usage and the content domain, and between the epistemic domain and the paratactic usage, since the subordinating conjunctions do not only express content relations, but also epistemic (deductive) relations, or not all epistemics are paratactic, only the abductives are (as shown in Picture 2):



In order to illustrate the distinction between deductive vs. abductive epistemics with the help of syntactic modifications, we will introduce in the next section a set of semantic parameters that we will use for the annotation of the segments of each causal relation and the formal representation of its meaning. By means of these parameters we will also annotate and schematically describe in a unified way all possible usages of PCQ in various syntactic structures and types of relations. The set of semantic parameters presented in section 2 is necessary and sufficient to formalise the differences between various types of causal relations, as well as to answer the following questions in a “unified language”:

1. How can we account for the syntactic and the interpretational diversity of causal relations in a unified way? (section 2)
2. What does it mean for a construction to be structurally modified? If the modification is possible, does it mean that the modified and non-modified structures have the same interpretation? What is, if any, the pragmatic impact on the interpretation of the modified structures, such as putting the connective in initial or cleft position? (section 3)
3. Why can the subordinating PCQ, be it in a content or a deductive epistemic relation, be syntactically modified (move to initial or cleft position), while this is impossible for PCQ in the paratactic (epistemic abductive or speech-act) relations? What is the syntactic-structural explanation behind the constraints or possibilities of these modifications? (sections 4, 5)

2. UNIFYING SEMANTIC PARAMETERS

In order to annotate in a unified way all possible syntactic structures and types of relations of PCQ⁴, we will use the following three semantic parameters, each having two values:

- i. Causal status of the segments: cause vs consequence
- ii. Argumentative status of the segments: argument vs conclusion

⁴ In sections 2 and 3, we discuss the French PCQ, although we give the examples directly in English version, for reasons of space and simplicity.

iii. Informative status of the segments: given vs new.

In a causal relation of the form $S1\ PCQ\ S2$, each segment can have any of these values, hence each parameter can be represented by two orders of its values. Table 1 shows the annotation of the segments in terms of the values of three parameters, the order of the segments in discourse (surface level) in terms of these values, as well as the direction of reasoning⁵ inherent to the meaning of the epistemic relations (deep level). The vertical line represents the three semantic parameters (enumerated) and orders of the segments, the horizontal line represents the types of causal relations expressed.

We have shown in the previous section that the distinction between subordinating conjunction vs. paratactic discourse marker is not reliable for the following reasons: a) it is too rigorous since it does not account for some intermediate cases such as deductive epistemics); b) it represents a mix of syntactic and semantic-discursive dimensions, so there are no precise criteria for this distinction); and also c) is not informative about the meaning of the relation. For these reasons, we will continue our analysis in terms of Sweetser's domains, with the epistemic domain divided into two types relations: abductive vs. deductive. In this section, we will concentrate only on content, deductive and abductive relations⁶. The results of their annotation in terms of the mentioned semantic parameters are summarised in Table 1:

	Content John came back PCQ he loves her		Deductive Epistemic John will come back, PCQ he loves her		Abductive Epistemic John loves her, PCQ he came back	
	S1	S2	S1	S2	S1	S2
1. Causal status	P - cons	Q - cause	P - cons	Q - cause	Q - cause	P - cons
Temporal order of causal segments in discourse	Backward		Backward		Forward	
	e2	e1	e2	e1	e1	e2
2. Argumentative status	—		Conclusion	Argument	Conclusion	Argument
Temporal order of argumentative events	—		Backward		Backward	
	—		arg. e2	arg. e1	arg. e2	arg. e1
Reasoning direction	—		Forward: $Q \rightarrow P$		Backward: $P \rightarrow Q$	
	—		Cons. e2 = Concl	← Cause e1 = Arg	Cause e1 = Concl	← Cons. e2 = Arg
3. Informative status	given	new	new	given	new	given
Summary	$P_{e2, given} \leftarrow Q_{e1, New}$		$P_{e2, Concl = New} \leftarrow Q_{e1, Arg = given}$		$Q_{e1, Concl = New} \leftarrow P_{e2, Arg = given}$	

Table 1. Semantic parameters of content and two epistemic usages of PCQ in medial position

i. Causal status and order of causal segments: The relations discussed so far have the structure $S1\ PCQ\ S2$, but this structure is not the same for the content vs. abductive (Sweetser's) epistemic relations in terms of *cause* (Q) and *consequence* (P) statuses. As real-world events⁷, the causal event (e1) occurs before the consequence (e2). In discourse, however, these events are not usually presented in temporal order. In the content causal relation, the relata of PCQ are in backward order: S1 is the consequence (P, e2), presented before the cause (Q, e1) in S2.

⁵ We use the same terms, *backward* vs. *forward*, for both the order of the segments and the reasoning direction.

⁶ We are not interested here by speech-act usages, since they are usually not based on a causal relation. Besides, as paratactic relations, they have a similar syntactic behavior as the abductives, as shown in (2b), on page 2.

⁷ We use "event" in a broad sense, including also states, activities, etc, not referring to a particular aspectual type.

The deductive epistemic, as in (7) or (9)⁸, has the same structure (P-Q) as the content relation, and differs from abductive epistemics which have forward causal order (Q-P):

- | | | |
|------|--|------------------------------|
| (8) | John came back PCQ he loves her. | content |
| | P_{e2} PCQ Q_{e1} | backward causal order |
| (9) | John will come back PCQ he loves her. | deductive epistemic |
| | P_{e2} PCQ Q_{e1} | backward causal order |
| (10) | John loves her, PCQ he came back. | abductive epistemic |
| | Q_{e1} PCQ P_{e2} | forward causal order |

ii. *Argumentative status and order*: We described the epistemic usages in (9) and (10) as argumentative, inferential or modal, where the speaker justifies his conclusion. Hence, although (8) and (9) have the same causal structure (P PCQ Q), they are not interpreted in the same way: the relation in (8) is not modal, since both segments represent factive events. Contrary to (8), (9) and (10) are epistemic, because their first segments represent the speaker’s conclusion, hence are modal (subjective), and the second segments represent factive events which serve as arguments in the reasoning. We can show the difference in meaning between the deductive epistemic vs. content relations, and the similarity between the two types of epistemics by means of the argumentative statuses of the segments: *Argument* (the premise in reasoning) and *Conclusion* (the claim justified by the speaker via an argument). In the content domain, the relation is neither modal nor argumentative, since the speaker objectively reports the real-world facts, hence the segments can be ascribed neither *Argument* nor *Conclusion* statuses. Whereas what is characteristic for any epistemic relation, is that S2 is a known fact, which serves as an argument to justify a conclusion in S1. So, both types of epistemics have the same discursive structure in terms of *Conclusion* and *Argument* statuses: the conclusion (Concl) is presented first, followed by the argument (Arg). Since the argument is the point of departure in the argumentative process (by analogy to the causal events, we will call it *argumentative event 1*: *arg. e1*), and the drawing of a conclusion is its result or its final phase (*arg. e2*), both epistemics are represented in discourse in backward order concerning the temporal order of argumentative phases (*arg. e2 – arg. e1*):

- | | | |
|-------|--|-------------------------------------|
| (9') | John will come back, PCQ he loves her. | deductive epistemic |
| | Concl_{arg. e2} PCQ Arg_{arg. e1} | backward argumentative order |
| (10') | John loves her, PCQ he came back. | abductive epistemic |
| | Concl_{arg. e2} PCQ Arg_{arg. e1} | backward argumentative order |

Reasoning direction: The combination of causal and argumentative statuses provides an informative description of the epistemic relations, showing their difference in terms of *reasoning direction* (represented below by arrows).

In an abductive relation, the speaker knows the consequence (P, e2), which serves as an argument to draw a conclusion on the cause (Q, e1). In (10), the speaker infers John’s love knowing that he came back. So, the abductive reasoning moves from the known consequence to the inferred cause ($P_{e2} = Arg_{arg. e1} \rightarrow Q_{e1} = Concl_{arg. e2}$), contrary to the real-world causality, hence the reasoning is backward.

In deductives, the cause (Q) is factive, known and serves as an argument to draw a conclusion about the consequence (P): knowing John’s love, the speaker infers his (possible) return. So, the deductive reasoning moves in the same temporal direction as the real-world

⁸ This is an artificially constructed example by analogy with Sweetser’s content and epistemic (abductive) examples, with future tense in S1 to indicate its modal flavour and hence the epistemic nature of the relation.

causal events, i.e. from the known cause to the inferred consequence ($Q_{e1} = \text{Arg}_{arg. e1} \rightarrow P_{e2} = \text{Concl}_{arg. e2}$). Hence, the reasoning direction is forward:

(9")	John will come back, PCQ he loves her.	deductive epistemic
	$P_{\text{Concl}} \leftarrow Q_{\text{Arg}}$	forward reasoning
(10")	John loves her, PCQ he came back.	abductive epistemic
	$Q_{\text{Concl}} \leftarrow P_{\text{Arg}}$	backward reasoning

iii. The third parameter shows the *Informative status* of the segments, which is a crucial criterion to distinguish not only between usages of PCQ, but also between different causal connectives. This parameter is largely discussed for *puisque* (PSQ, *since*) which introduces *given* information (Zufferey & Carton 2012) or “mutually admitted manifestness” (Ducrot 1983). We think that the annotation of the segments (especially the one introduced by the connective) in terms of information structure values, such as *given* vs. *new*⁹, is crucial for the analysis of causal relations and connectives.

PCQ (in the content domain) is shown to introduce new information (Abraham 1991, Degand 2000, Lambrecht & al. 2006). Even if PCQ introduces a known or evident information, its causal power is presented as new (Dancygier & Sweetser 2000). The content of P, on the other hand, is known or contextually salient.

In the epistemic relations, the informative status depends on the modal status: prototypically, the argument is given information, while the conclusion of the speaker is discourse-new, unknown to the hearer, which is why the speaker needs to justify it.

(8''')	John came back PCQ he loves her.	Given PCQ New	content
(9''')	John will come back, PCQ he loves her.	New PCQ Given	deductive
(10''')	John loves her, PCQ he came back.	New PCQ Given	abductive

3. SYNTACTIC MODIFICATIONS AND MEANINGS

We have shown in Section 1 that the possibility of changing the position of PCQ reveals the subordinating (syntactically) and hypotactic (at the discourse level) types of connection.

In this section, we will show how these modifications, such as the occurrence of PCQ in initial or focalised positions, have an impact on the interpretation of the type of causal relation. The annotation of the segments in terms of causal, argumentative and informative statuses (Table 1) helps us to identify the exact type of relation expressed before and after the modification and to account for the constraints on these modifications.

3.1. Initial position

As the examples in section 1 show, only subordinating (i.e. content and deductive epistemic) PCQ can be modified, while its paratactic (epistemic abductive and speech-act) usages cannot be modified. Table 2 shows the possibilities of moving PCQ to initial position in content, abductive and deductive epistemic usages:

As the content (8) and the deductive epistemic (9) relations have the same structure $P PCQ Q$, the modified structure is also the same, $PCQ Q, P$. How can this structure be interpreted? PCQ in initial position introduces given information (Délechelle 2002, Forsgren 2012, Moeschler 2014), contrary to medial position. Besides, with PCQ in initial position, the causal

⁹ Other terms exist, such as topic vs. comment, background vs. focus, theme vs. rheme, etc. We will not discuss the differences of these terms and will use the given/new distinction as equivalent to the other distinctions.

relation acquires an argumentative flavour (Lorian 1966, Délechelle 2002). This means that the modified content relation is no longer interpreted as content, but as epistemic.

Using the above-established semantic parameters, we can formally demonstrate which type of epistemic relation the reading of *PCQ John loves her, he came back* represents: if the first causal segment introduced by PCQ is given information, the speaker uses this knowledge as an argument to justify his conclusion in S2, which is the new content. Hence, if Q serves as an argument, and P is a conclusion, the relation is of deductive epistemic type. In sum, moving the subordinating PCQ to initial position gives rise to a deductive epistemic reading. This means no change of interpretation after the modification for the deductive epistemic relation vs. a change of domain for the content relation, which becomes epistemic (Table 4).

PCQ in canonical structure, medial position	Example	John came back PCQ he loves her.	John will come back, PCQ he loves her.	John loves her, PCQ he came back.
	Annotated structure	P Given PCQ Q New	P Concl. PCQ Q Arg	Q Concl. PCQ P Arg
	Reading	content	deductive epistemic	abductive epistemic
PCQ in initial position	Example	PCQ John loves her, he came/will come back.		* PCQ John came back, he loves her.
	Annotated structure	<u>PCQ Q</u> = Given, <u>P</u> = New <u>PCQ Q</u> = Arg, <u>P</u> = Concl		* <u>PCQ P</u> Given <u>Q</u> New <u>PCQ P</u> Arg <u>Q</u> Concl
	Reading	Forward / deductive epistemic: Q Arg → P concl		Backward / abductive epistemic: * P Arg → Q concl

Table 2. Moving PCQ to initial position in content and two epistemic usages

What if we put the connective in initial position in the epistemic abductive relations? As shown in Table 2, the resulting structure is *PCQ P, Q* (*PCQ John came back, he loves her*), which is odd, unless we explicitly mention the argumentative status of the segments, e.g. *PCQ I know that John came back, I infer that he loves her*. In terms of argumentative status, the resulting structure would be *PCQ P_{Arg}, Q_{Concl}*, again because the segment introduced by initial PCQ is given information, hence the argument. So, if the structure were natural, its interpretation would be abductive, the consequence (P) being given information that serves as an argument. But this structure is not acceptable.

To sum up, PCQ in initial position provides only a deductive epistemic reading. In abductive epistemics with medial PCQ, the connective cannot be put in initial position. In content and deductive epistemic relations with medial PCQ, the connective can move to initial position with the Q-segment, resulting in or keeping the deductive epistemic reading.

Interestingly, contrary to PCQ, which is blocked for initial position in paratactic usages, PSQ is flexible: an abductive epistemic relation expressed by medial PSQ remains abductive when PSQ is put in initial position:

- (11) Il a froid, PSQ il se couvre. **Q**_{New/Concl} **PSQ** **P**_{Given/Arg} Abductive
He is cold, PSQ he covers himself.
- (11') PSQ il se couvre, il a froid. **PSQ** **P**_{Given/Arg} **Q**_{Concl/New} Abductive
PSQ he covers himself, he is cold.

3.2. Focalisation (*it-* and *if-cleft*)

What are the possibilities of focalisation in subordinating and paratactic usages? Again, the test of focalisation confirms the relevance of the deductive vs. abductive distinction inside the epistemic domain, as [Table 3](#) shows.

Canonical medial structure	Example	John came back PCQ he loves her.	John will come back, PCQ he loves her.	John loves her, PCQ he came back.
	Annotated structure	P Given PCQ Q New	P Concl, PCQ Q Arg	Q Concl, PCQ P Arg
	Reading	content	deductive epistemic	abductive epistemic
Focalised PCQ	Examples	a) It's PCQ John loves her that he came/will come back. b) If John came/will come back, it's PCQ he loves her.		a) * It's PCQ John will/has come back that he loves her. b) * If John loves her, it's PCQ he will/has come back.
	Annotated structure	It's PCQ Q New = Concl. that P Given = Arg If P Given = Arg, it's PCQ Q New = Concl		* It's PCQ P Concl that Q Arg * If Q Arg, it's PCQ P Concl
	Reading	Backward / abductive epistemic: P Arg → Q concl		Forward / deductive reasoning: * Q Arg → P concl

[Table 3](#). Content and epistemic PCQ in focalised position

3.2.1. Focalisation of abductive (*Q PCQ P*) relations

Epistemic abductive PCQ (equivalent to paratactic usage) has *Q, PCQ P* structure. The focalisation of *PCQ P* results in invalid or odd structures, as in (12a) and (12b):

- (12) a. * It's PCQ John came back that he loves her. **It's PCQ P that Q**
 b. * If John loves her, it's PCQ he came back. **If Q, it's PCQ P**

This structure is not valid neither as content, nor as epistemic relation. It is neither content, nor abductive epistemic, since in content and abductive usages, what is given, is the consequence (P), the cause (Q) is new (see Table 1). However, here, the focalised structure imposes certain constraints on the segments in terms of informative and argumentative statuses. The focalised segment is the *new*¹⁰ content, while the complementizer *that* (*que* in French) introduces given information. Hence, here, P correlates with new status, since it is in focal position, while Q correlates with given status, since introduced by that-complementizer, contrary to content and abductive usages. So, content and abductive readings being excluded, if (12a-b) were valid, their interpretation would be deductive, since the focalised *new* segment (P) would correlate with the *Conclusion* status, and the *given* content (Q) introduced by the complementizer would be the *Argument* (as Table 1 predicts), shown in (13a-b):

- (13) a. It's PCQ **Conclusion/New** that **Argument/Given**
 b. If **Argument/Given**, it's PCQ **Conclusion/New**

¹⁰ As defined by Krifka & Musan (2012:7), among others: "Focus is new information, as opposed to topic, which is in general given information". So, the focalised segment stresses its causal power as new information, but not necessarily the novelty of the content.

medial position. In the previous sub-section, via the tests of paraphrasing, we saw that focalisation adds an argumentative-epistemic flavour to the relation, hence we will continue to annotate the segments in terms of Argument and Conclusion statuses, as shown in (13). When we focalise a deductive epistemic or a content relation, it becomes abductive¹¹, since the focalised PCQ introduces Q as conclusion, and the argument (given information) introduced by the complementizer is P, as shown in (14a-b):

(14) *Focalisation of deductive/content relations:*

a. It's PCQ John loves her that he came back.

It's PCQ $Q_{\text{New/Concl}}$ that $P_{\text{Given/Arg}}$
 $Q_{\text{Concl}} \leftarrow P_{\text{Arg}}$ Abductive

b. If John came back, it's PCQ he loves her.

If $P_{\text{Given/Arg}}$, it's PCQ $Q_{\text{New/Concl}}$
 $P_{\text{Arg}} \rightarrow Q_{\text{Concl}}$ Abductive

We have shown that the subordinating medial PCQ expressing a content or a deductive epistemic relation is no longer deductive (nor content) when it is focalised; instead, it becomes abductive. The focalisation of the abductive relation, possible by means of a paraphrase, also results in (or keeps the) abductive reading: Q is the Conclusion in both focalised structures, the paraphrased one (12'a-b), which is the result of focalising PCQ-P clause in a paratactic abductive relation, and the non-paraphrased one (14a-b), which is the result of focalising PCQ-Q in a deductive or content relation. The difference between these two structures is that in (14a-b), the Conclusion is introduced by the focalised connective, while in (12'a-b), the Conclusion is introduced by the complementizer *that*.

The test of focalisation reveals that we have two ways of implicitly expressing an abductive argumentation: via medial PCQ and reversed order of causal segments (Sweetser's paratactic structure), or via focalised PCQ (subordinating structure). The second is much more frequent in French¹² and probably requires less cognitive efforts, which would mean that there are cognitive constraints on the choice of the syntactic form (namely, a preference for the focalised structures) used for conveying an abductive causal argumentation.

3.3. Summary of the analyses

To sum up section 3, we have demonstrated that the traditional distinction between subordinating vs. paratactic usages of PCQ does not have a clear-cut boundary. This claim is based on an analysis of the meaning of causal relations in subordinating and paratactic usages, in terms of Sweetser's domains. The tests of initial position and focalisation of PCQ show that in the content domain it is subordinating, and that its paratactic usages correspond to Sweetser's epistemic or speech-act relations. However, this is not the complete image, since there is another type of epistemics (deductive) where PCQ is subordinating. This means that the epistemic modality cannot be a criterion of distinction between the subordinating and paratactic usages, and hence, there is no parallelism between content and subordinating, and between epistemic and paratactic usages. In a more detailed way:

¹¹ Although we do not claim that focalising the content relation turns it into an epistemic-argumentative in all the contexts, we do consider that cleft structures have argumentative-persuasive power, hence are more suitable for epistemic usages than for objectively describing a real-world causality. That is why we put "mainly" in Table 4.

¹² Interestingly, we have found no example of Sweetser's (abductive) epistemics with *Q, PCQ P* structures in our corpora of naturally produced examples in French. This could be another supporting argument in favor of our claim that speaker prefer the hypotactic – focalised structures to express their abductive argumentation.

1. What is largely considered as subordinating usage of PCQ corresponds not only to its descriptive and objective usage in the content domain, but also to the deductive type of the epistemic relations. The deductive epistemic relation has the same structure as the content relation ($P \text{ PCQ } Q$), and its epistemic modality (the subjective propositional attitude of the speaker) is not always explicitly marked, which is why its interpretation can be context-sensitive and ambiguous.
2. As Table 4 shows, the two tests have different impacts on the interpretation: when PCQ is moved to initial position in a deductive relation, the resulting relation remains deductive (cannot have abductive reading), but when PCQ is focalised, the resulting relation is (mainly) epistemic: as such, it is abductive (no deductive reading is possible with focalised PCQ). Table 5 shows the possible readings in each position.
3. The paradox of abductives is that when they are expressed in paratactic (Sweetser’s) structure, they cannot be focalised. But the focalisation of PCQ produces an abductive relation. So, an abductive relation can be expressed via paratax or via focalisation.

Readings with medial, canonical PCQ	Modification of position	Readings in modified structure	Change of meaning in modified structures
Content	Putting PCQ in initial position	(deductive) epistemic	Yes: $Q_{\text{New}} \rightarrow Q_{\text{Given, Arg}}$
Deductive epistemic		Deductive epistemic	No
Abductive epistemic		Impossible to modify	N/A
Content	Focalisation (It- / if- Cleft) of PCQ	Abductive epistemic (mainly)	Yes (mainly)
Deductive epistemic		Abductive Epistemic	Yes: from Q_{Arg} to Q_{Concl}
Abductive epistemic		Impossible to modify	N/A

Table 4. Limits and impacts of structural modifications of PCQ

	Deductive reading	Abductive reading
Medial	+	+
Initial	+	-
Focalised	-	+

Table 5. Readings in each position of PCQ

4. SOLUTION: POSTULATE OF PROXIMITY BETWEEN PCQ AND Q (CAUSE)

Why can the subordinate PCQ, be it in a content or a deductive epistemic relation, be modified syntactically (move to initial or cleft position), while this is impossible for PCQ in paratactic (epistemic abductive or speech-act) relations? No rigorous and well-formalised answer has been provided to explain the impossible modifications of the position of PCQ. In this and the following sections, we will attempt to provide an answer to this question, namely, what are the syntactic-structural constraints on these modifications?

A simple answer could be that if there is an additional “layer” of meaning besides the basic causal meaning, such as a layer about the speaker’s epistemic propositional attitude or illocutionary speech-act, this layer blocks the syntactic modifications (unless this propositional attitude is not explicitly marked). But such blocking does not exist for deductive epistemics,

although they contain an (implicit) epistemic propositional attitude of belief. So, this tentative explanation does not hold if we consider the deductive-abductive distinction.

We believe the answer should be given by first attempting to find a generalised pattern inherent to the impossible structures. As we have seen in section 3, Tables 2 and 3, the modifications of PCQ in abductive relations result in the following impossible structures:

- a. * PCQ **P**, Q
- b. * It is PCQ **P** that Q
- c. * If Q, it is PCQ **P**

At first glance, what these structures have in common is that PCQ introduces P (consequence). Hence, the introduction of P by PCQ instead of Q could be considered as a reason for the impossible structures. Indeed, PCQ prototypically introduces Q and hence creates this expectation in all positions. However, we cannot say that the introduction of P is an obstacle for PCQ, since in the canonical abductive epistemics, the medial PCQ introduces P (*Q PCQ P*, see Table 1), and the structure is not odd nor difficult to interpret.

Another point of departure could be to reveal the patterns of PCQ in the canonical medial position (*P PCQ Q*) in the content domain, in order to understand the deviations in the impossible structures. The following three conditions describe the canonical use of PCQ:

- i) PCQ introduces Q (Cause),
- ii) P (Consequence) precedes Q,
- iii) PCQ is backward.

These three conditions express the genuinely explanative nature of PCQ in the content domain. The Explanation relation in discourse implies posing first the explanandum (the content to be explained, here P) and afterwards, the introduction of explanans (the reason, Q) by PCQ. So, this is a priori a backward relation that can now be formalised by means of the three above-mentioned conditions.

What are the deviations in the impossible structures? Besides the condition (i), which is not respected in all three impossible structures, another condition is also not respected in any of them: condition (ii) is not respected in (c) structure, and (iii) is not respected in (a) and (b).

So, another way of generalising the problem in the impossible structures could be to say that PCQ does not respect two of three constraints in its prototypical usage. But again, we have other valid structures where PCQ violates two conditions:

- In the *PCQ Q, P* structure (*PCQ John loves her, he came back*), only the condition (i) is respected: PCQ introduces Q. But Q comes before P, and PCQ is acting forward, so the conditions (ii) and (iii) are not respected.
- In it-cleft structure *It's PCQ Q, that P* (*It's PCQ John loves her that he came back*), again only the condition (i) is respected, but not (ii) and (iii).
- In Sweetser's (abductive) epistemics with *Q, PCQ P* structure (*John loves her, PCQ he came back*), only the condition (iii) is respected – PCQ is backward since it is in medial position. But PCQ does not introduce Q (i), and P does not precede Q (ii).

The problem of the three impossible structures is still not solved: why is PCQ able to break two conditions out of three in some structures, but not in others? As an answer to this question, we introduce another constraint, which sums up the previous three conditions in one and is enough to explain the impossible structures:

Postulate of proximity between PCQ and causal clause (Q): No expression (a word or a clause) can intervene between PCQ and Q; Q must be adjacent to PCQ either from the left or from the right.

This postulate is a strong constraint on the syntactic behaviour of PCQ, which must be respected in all its usages and explains the impossible structures. Moreover, this postulate is inherent only to PCQ, since we saw that PSQ is flexible in introducing P in initial position (PSQ P, Q), expressing an abductive relation in (11).

5. SYNTACTIC EXPLANATION

Let us look at the postulate of proximity from a syntactic point of view. This section will adopt an idea of *syntacticisation* of scope discourse semantics (Rizzi 2013; Rizzi & Cinque 2016). Thus, we should expect that the four different readings (content, deductive epistemic, abductive epistemic and speech-act) might be ideally built on four different syntactic structures. Furthermore, we should be able to explain how the change of interpretation derives from syntactic manipulations.

From sections 1 - 4, the following results are of particular interest;

- (i) Epistemic abductive and speech-act do not allow initial position;
- (ii) When PCQ moves to initial position in content domain, the resulting relation becomes deductive epistemic;
- (iii) The focalisation of PCQ in content and deductive epistemic usages transforms the relation into an abductive epistemic;
- (iv) There is a constraint of being immediately adjacent between PCQ and Q.

The analysis in this section will adopt a generative approach. Specifically, we will follow Cartographic guidelines, without entering into technical syntactic details. Let us turn now to a brief introduction of our theoretical background.

Syntactic clauses are based on three major layers (based on Rizzi 1997): (i) a lexical layer vP containing the structural layer in which theta (θ)-roles (relations between verbs and their arguments, Haegeman 1994) are assigned; (ii) a functional/inflectional layer IP hosting morphological specifications of the verb like Aspect, Tense and Modality and those heads responsible for the licensing of argumental features such as case or agreement; (iii) a complementizer layer CP, where complementizers are generated and where sentential items move to satisfy some criteria such as Wh-, Focus or Topic. A very first map is drawn in (15):

(15) [CP [IP [vP]]] (Chomsky 1986)

The aim of Cartography is to draw fine-grained maps (Rizzi 1997; Cinque 1999, a.o.) of syntactic configurations. Thus, the labels in (15) need to be split into more specific functional projections.

In this paper, we will only focus on the CP. We will adopt a split-CP perspective (Rizzi 1997), in which there are at least two positions for complementizers (*Force* and *Fin*) and functional projections for the movement of topicalised (*Topic*) or focalised elements (*Focus*). A finer-grained map as proposed by Rizzi (1997: for a recent analysis see Rizzi & Cinque 2016; Rizzi & Bocci, 2017), is presented in (16).

(16) CP → [**Force** [Topic [Focus [Topic [**Fin**]]]]] (Rizzi 1997)

There are at least two complementizer positions: the highest complementizer plays a crucial role at the interface with discourse articulation in main clause or higher sentence in embedded contexts, whereas the lower complementizer has to connect with the sentential content expressed in the IP. The former is called *Force* and the latter Finiteness (Rizzi 1997).

The intermediate positions of Topic and Focus are important in our analysis since they are adopted as the landing sites of a fronted clause in the case of “initial position” and focalisation (see section 5.4.).

Subsections 5.1., 5.2. and 5.3. are dedicated to the syntactic structures of the three usages of PCQ (Sweetser 1990), and subsections 5.4. and 5.5. deal with the syntactic manipulations, the change of meaning and the syntactic structure of epistemic abductives.

5.1. Content relation

The first question to address is the *locus* of the connective PCQ, adopting a cross-linguistic approach. Evidence from German (cf. Günthner 1996) and according to a mainstream analysis of Verb Second¹³ (V2) traced back to den Besten (1983), we may think that PCQ is able to block the movement (or it already fills the landing site) of the verb to the CP.

- (17) Jan hat den Apfel gegessen, **weil** er Hunger **hatte**.
John has the apple eaten, because he hunger had.

The lack of co-occurrence between the inflected verb and the *connective* ‘*weil*’ could be interpreted as targeting the same position. Thus, adopting a classical three-layers tree, we propose that the syntactic structure of content reading is the one proposed in (18).

- (18) [_{CP1} Jan hat den Apfel gegessen [_{C°} **weil** [_{IP} er Hunger **hatte**]]]

We can indeed generalise (18) into (19):

- (19) [_{CP1} P [_{CP2} [_{C°} PCQ [_{IP} Q]]]]

Haegeman (1996) and Mohr (2009) have provided an analysis of V2 in a split-CP perspective. In such analyses, the dedicated functional projection for complementizer and the landing site for the verb is considered *Fin°* (see also Haegeman 2012 for an analysis of peripheral clauses).

- (20) [_{CP1} Jan hat den Apfel gegessen [_{CP2} [_{Force°} [_{Fin°} **weil** [_{IP} er Hunger **hatte**]]]]]

Therefore, the more general underlying can be considered as presentend in (21):

- (21) [_{CP1} P [_{CP2} [_{Force°} [_{Fin°} PCQ [_{IP} Q]]]]]

In (21), a matrix clause embeds a subordinate clause. Since it is a subordinate clause, topicalisation and focalisation are allowed, as will be further developed in section 5.4.

¹³ Being the second element can only be referred to as a by-product of subjacent syntactic phenomena. As already stated by different authors (Zwart 1992: 76), grammars are not sensitive to notions like “first” or “second”.

5.2. Deductive epistemic relation

Even if content and epistemic readings have the same linear order, they may have different syntactic realisations. In German, the epistemic relations allow V2 order¹⁴ (Günthner 1996). This means that the verb moves to Fin° , therefore PCQ cannot be generated in the same functional projection. We propose that in epistemic readings the complementizer is in Force° , as in (22a). Evidence that the fronted element (XP) is in a C-position (Mohr 2009: 146, 154) comes from the fact that non-subject elements (22b) can be at the left of the inflected verb (cf. Zwart 1992):

- (22) a. ... der hat sicher wieder gsoffen, **weil** sie **läuft** total deprimiert durch die Gegend.
He has surely again drunk, PCQ she walks totally depressed through the around.
'He must have ben drinking again, because she walks around looking totally depressed'
(*Colloquial German*, Günthner 1996:328 (5))
- b. [...] **weil** so was **wollte** sie nicht weiter hinnehmen
because such a thing **wanted** she no more accept. (Reis 2013:223 (2b))

Which part of the structure is responsible for epistemic reading from a syntactic point of view? Excluding a higher silent matrix sentence (of the type, *I think that*), two phenomena can trigger the reading: (i) a verbal component within the IP (MoodEpistemic, Cinque 1999), which can be observed in the choice of the tense; (ii) involvement of a layer higher than the clause or the left of the CP (see also C-Speaker, Giorgi 2010), e.g. *Ground Layer*, where functional projections are dedicated to the participants of the utterance [Speech-act [Adresse [Speaker [CP]]]] (Wiltschko 2014).

Therefore, the underlying general structure can be considered the one in (23):

- (23) [CP₁ P [CP₂ [Force° PCQ [CP Q]]]]

5.3. Speech-act relation

According to Günthner (1996), Sweetser's speech-act usages also produce V2 structures. Following what has been proposed in 5.2., we will locate PCQ in Force° ¹⁵:

- (24) [Was denn deiner Meinung nach nicht okay] [**weil** du **hast** ja vorhin gesagt], er nervt dich ganz schön.
you totally
'what in your opinion wouldn't be okay, because as you said, he totally nerves you'
(Günthner 1996:327 (3))

However, as it will be observed in section 5.4., initial position and focalisation derive from the movement of PCQ Q to the CP of the matrix clause, as given in (25). Speech-acts can

¹⁴ The only complementizer that allows V2 structure in German is *denn* (*for*), which is paratactic. See also Wiese (2012) and Walkden (2017) for an analysis on Urban Vernacular varieties of German concerning *weil*.

¹⁵ Further evidence for the locus in Force° may come from speech-act meaning in Italian, Topics can follow PCQ without any problem.

(i) Che fai stasera? Perché [un caffè con te] lo volevo prendere.
What are you doing tonight? Because a coffee with you, I wanted to take it.

be considered as two different utterances¹⁶ and therefore initial position (topicalisation) and focalisation are excluded.

(25) [S₁ [CP₁ P]] [S₂ [_{Force°} PCQ [CP Q]]]]]]

The meaning may be given, differently from epistemic, by another level of the Ground Layer, plausibly the speech-act layer (Wiltschko 2014). We sum up the minimal difference between content, epistemic and speech-act readings in (26):

(26) Content: [CP₁ P [CP₂ [_{Fin°} PCQ [IP Q]]]]
 Deductive epistemic: [CP₁ P [CP₂ [_{Force°} PCQ [IP Q]]]]
 Speech-act [CP₁ P] [CP₂ [_{Force°} PCQ [IP Q]]]

5.4. Syntactic manipulation: topicalization, focalisation and the change of meaning

Sentences can be topicalised, moving from the lower clause into the CP of the matrix clause. The fact that they allow reconstruction of the traces as in Italian (27) or they trigger related syntactic phenomena as the V2 in German, as in (28), represents evidence for such a movement.

(27) Quando il suo_i lui ha bisogno, ogni_i donna si mobilita.
 ‘When her_i man needs something, every woman_i finds solutions’

(28) Als ich ein Kind war, **habe** ich Modelleisenbahnen gemacht.
 When I a child was, have I model-trains made.
 ‘When I was a child, I used to make model trains.’

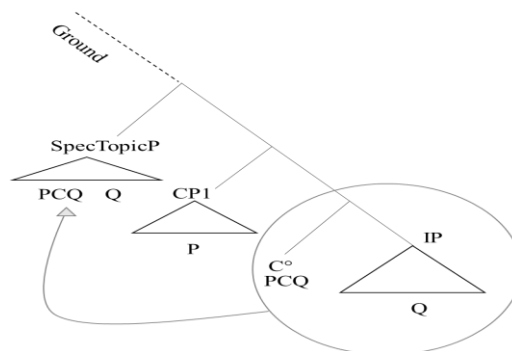
Since content readings and epistemic readings have a structure in which a matrix clause embeds a subordinate clause, we propose that there is a movement of the second clause together with the complementizer to the CP of the matrix clause, as in (29).

(29) [CP₁ [_{Force°} [_{SpecTopP} PCQ Q [IP P [CP₂ <PCQ Q>]]]]]]

How can we account for the change of meaning? A solution might be in terms of proximity.

From the perspective of a Ground Layer higher than CP (Wiltschko 2014), the layer dedicated to the speaker may look down for the closest *connective*, and the topicalised element, which used to be embedded, becomes the closest candidate.

In other words, one of the functional projections in Ground (e.g. Speaker) in the main clause looks down for connectives and it finds PCQ, which has been moved to the Left Periphery as the closest element. Such a search may give the epistemic reading in content



¹⁶ However, see Kayne (1994) for a different account of paratactic sentences. Similarly, Krifka (2001) on conjoined speech-acts.

clauses with topicalisation. We propose that an important role is played by *Force*^o, which is at the interface between the CP and the higher layer of the clause.

5.5. Focalisation and epistemic abductive relation

French¹⁷ exploits the strategy of clefts (Belletti 2015) in order to activate the Focus position in the CP, as in (30: adapted from Belletti 2015):

- (30) [CP [TP C'est [vP [CP [_{Foc} PCQ Q] [_{Fin} que [P <PCQ Q>]]]]]]

PCQ and Q move to the Left Periphery of a small clause selected by a copula. Interestingly, the lack of *Force*^o in the small clause leads us to propose that the “selection” from the Speaker Layer in Ground Layer comes from the root copula clause. Intervening material (the expletive and the verb *to be*) occurs between the Ground layer and PCQ. Such intervening material may be considered one of the causes of the epistemic abductive reading.

This should be in line with the last proposal, which we will describe in the following lines. “Standard” epistemic abductive of the type Q PCQ P, can be already considered a marked sentence, which aims to focalise Q. Let us briefly observe the steps:

Starting from a structure like (31):

- (31) [CP₁ P [CP₂ PCQ Q]]

PCQ and Q move higher than P, probably to a CP position as in (32). It may be plausible that the element needs to move together with the complementizer (cf. Collins 2001) in order to avoid locality principles (in terms of Relativized Minimality, Rizzi 1990):

- (32) [CP₁ PCQ Q [IP [CP₂ <PCQ Q>]]]

Then Q is able to move and be focalised in a *FocusP* higher than *TopicP*. This movement may be confirmed by the fact that such a structure is not frequent:

- (33) [CP₁ [_{SpecFoc} Q [_{SpecTopic} PCQ <Q> [IP P [CP₂ <PCQ Q>]]]]]

The lack of further movements (no further topicalisation or focalisation) may be due to criterial freezing effects (see Rizzi 2006;2007). Elements move to scope-discourse semantics positions in order to be properly interpreted at the interfaces (Bocci 2013). In order to be transparent at the interfaces, an element targeting a scope-discourse position is frozen in place, and it cannot undergo further movement.

As for the same reading (epistemic abductive) as in clefts, we should observe shared elements: Q is in a Focus position and there is some “intervening material” between the Ground layer and the connective (the copula in clefts, Q in epistemic abductive).

In conclusion, we propose that all four readings have the same point of departure *P PCQ Q* (as stated in the proximity postulate in section 4.2.). The differences are given by (i) the locus of the connective and (ii) the presence or the lack of subordination. The change of meaning which arises from manipulation can be interpreted as a syntactic effect.

¹⁷ In Italian, for example, *Focus* can be activated through clefts and, at the same time, a syntactic movement similar to topicalisation (see Rizzi 1997 for the distinction between Topics and Foci).

6. CONCLUSION

We started the paper with the most common distinction for PCQ's usages, which is the one between subordinating conjunction vs. paratactic discourse marker. We showed first that this distinction is a mixture of syntactic-structural and semantic-pragmatic features. From the semantic-pragmatic point of view, we analysed the meaning of two usages via Sweetser's tripartition, using a finer-grained subdistinction inside the epistemic domain between the deductive vs. abductive relations. From the syntactic-structural point of view, we analysed both types of usages via the tests of initial and cleft position of the connective. We demonstrated that the subordinating PCQ, which is largely perceived as equivalent to the explanative or semantic causality in the content domain, can also correspond to the deductive epistemic relations, while paratactic PCQ has epistemic abductive or speech-act readings. This analysis breaks the parallel between Sweetser's content domain and the subordinating usages, and between the epistemic domain and the paratactic usages.

Concerning the structural modifications of PCQ, our analysis shows that the position of PCQ can be modified only in subordinating usages, that is in the content and the deductive relations. When PCQ is put in initial position, the reading is reasoning, hence epistemic, of the deductive type. It is not possible to provide an abductive reading in initial position. On the contrary, when PCQ (content or deductive) is in cleft position, it becomes abductive epistemic (deductive is not possible here). This finding is very interesting, since it can have implications on the preferences for the expression of abductive causal reasoning, taking also into consideration the fact that Sweetser's types of epistemics, which are abductive, are rare in the corpora of natural occurrences, as our observation shows).

The impossible structures reveal other interesting constraints on the usage of PCQ: in initial (*PCQ S1, S2*) or cleft (*It is PCQ S1 that S2/If S1, it is PCQ S2*) structures, PCQ should introduce Q (Cause): it cannot introduce P. However, since the introduction of P is not a problem by itself for PCQ (e.g. in *John loves her-Q, PCQ he came back-P*), we explained this constraint in terms of a postulate of proximity between PCQ and Q, which stipulates that Q must be adjacent to PCQ, either from the left or from the right. This postulate does not constrain the use of PSQ, which can form abductive relations in initial position, introducing P before Q (*PSQ P, Q*). This postulate has a clear syntactic explanation, stipulating that PCQ and Q are "born" together in the deep structure, which is why Q can cross over PCQ and appear on its left side, but, contrary to PSQ, cannot do longer movement.

In order to annotate and schematically describe in a unified way all possible usages of PCQ in various syntactic structures and types of relations, we used a set of semantic parameters. The parameters describe the segments in terms of causal, argumentative and informative statuses and their orders at the level of discourse, as well as the reasoning direction inherent to the meaning of the epistemic relations. The set of parameters, presented in section 2, is supposed to i) formalise the structural and interpretative variation of the usages of PCQ, before and after the syntactic modifications; ii) to serve as criteria for comparison between PCQ and other causal connectives, such as *puisque* or *car*; and iii) to serve as criteria for comparison between homologue causal connectives in different languages.

Finally, we observed the underlying syntactic structures of the different usages. They differ according to the locus of base-generation of the connective and the presence or lack of subordination. We tentatively propose that the change of meaning resulting from syntactic modifications is related to the scope-discourse semantic layer of the syntactic structure.

REFERENCES

- Abraham, E. (1991) "Why *because*? The management of given/new information as a constraint on the selection of causal connectives", *Text 11*, 323 – 339.
- Belletti, A. (2015) "The Focus map of clefts: Extraposition and Predication", in U. Shlonsky (ed.) *Beyond Functional Sequence. The Cartography of Syntactic Structures*, Oxford University Press, 42–59.
- Bocci, G. (2013) *The Syntax–Prosody Interface A cartographic perspective with evidence from Italian*, John Benjamins Publishing Company.
- Collins, C. (2005) "A Smuggling Approach to the Passive in English", *Syntax 8:2*, 81–120.
- Cinque, G. (1999) *Adverbs and Functional heads. A cross-linguistic perspective*, Oxford University Press, New York / Oxford.
- Cinque, G. & L. Rizzi (2010) "The Cartography of Syntactic Structure", *STiL – Studies in Linguistics CISCL Working Papers*.
- Dancygier, B. & E. Sweetser (2000) "Constructions with *if*, *since*, and *because*: Causality, epistemic stance, and clause order", in Couper-Kuhlen E. & Kortmann B. (eds), *Cause, condition, concession and contrast: Cognitive and discourse perspective*, Berlin, Mouton de Gruyter, 111-142.
- Debaisieux, J.-M. (2004) "Les conjonctions de subordination: mots de grammaire ou mots du discours ? Le cas de *parce que*", *Revue de Sémantique et Pragmatique*, Presses de l'Université d'Orléans, pp.51-67
- Debasieux, J.-M. (2016) "Toward a global approach to discourse uses of conjunctions in spoken French", *Language Sciences 58*, Pages 79-94.
- Degand, L. (2000) "Causal connectives or causal prepositions? Discursive constraints", *Journal of pragmatics 32(6)*, 687-707.
- Degand, L. & Y. Bestgen (2004) "Connecteurs et analyses de corpus: de l'analyse manuelle à l'analyse automatisée", In Porhiel S. & Klingler D. (Eds), *L'Unité Texte*, Pleyben: Perspectives, 49-73.
- Degand, L. & H. Pander Maat (2003) "A contrastive study of Dutch and French causal connectives on the speaker involvement scale", In Verhagen A. & Van De Weijer J. (Eds), *Usage Based Approaches To Dutch*, Utrecht, LOT, 175-199.
- Deléchelle, G. (2002) "Les connecteurs de cause en français et en anglais", *Syntaxe et sémantique 1/3*, 99-115, Presses Universitaires de Caen.
- den Besten, H. (1983) "On the interaction of root Transformations and lexical deletive Rules", in A. Werner (ed.), *On the Formal Syntax of West Germania*, John Benjamins Publishing Company, Amsterdam, 77–92.
- Diessel, H. & K. Hetterle (2011) "Causal clauses: A cross-linguistic investigation of their structure, meaning, and use", in Siemund P. (ed.), *Linguistic Universals and Language Variation*, Berlin, Mouton de Gruyter, 21-52.
- Ducrot, O. (1983) "*Puisque* : Essai de description polyphonique", in Herslund M. & al. (eds.), *Analyses grammaticales du français*, Akademisk Forlag, Copenhagen, 166-185.
- Engel H. & al. (2012) "Un classique revisité: *car*, *parce que*, *puisque*. Entre théorisation et observations sur données authentiques", in Ahlstedt E. & al. (Eds.), *Actes du XVIIIe congrès des romanistes scandinaves, Romanica Gothoburgensia 69*, Acta Universitatis Gothoburgensis, 187-209.
- Forsgren, M. (2012) "Descriptions énonciative, informationnelle et argumentative: aspects discursifs sur quelques cas de figure", *Congrès Mondial de Linguistique Française, SHS Web of Conferences 1*, 11-24.
- Giannakidou, A. & A. Mari (2017) "A unified analysis of the future as epistemic modality: the view from Greek and Italian", to appear in *Natural Language & Linguistic Theory*, 85-

129.

- Groupe Lambda-I (1975) "Car, parce que, puisque", *Revue Romane*, 10, 248-280.
- Günthner, S. (1996) "From subordination to coordination? Verb-second position in German causal and concessive constructions", *Arbeitspapier Nr. 75*, Konstanz, Fachgruppe Sprachwissenschaft der Universität Konstanz.
- Haegeman, L. (1996) "Verb Second, the split CP and null subjects in early Dutch finite clauses", *GenGenP*, 133-175.
- Haegeman, L. (1994) *Manuale di Grammatica Generativa: La teoria della Reggenza e del Legamento*, Editore Ulrico Hoepli, Milano.
- Haegeman, L. (2012) *Adverbial Clauses, Main Clauses Phenomena, and Composition of the Left Periphery: The Cartography of Syntactic Structures*, Volume 8, Oxford University Press, New York.
- Jivanyan, H. (2012) "Relations causales épistémiques: focalisation de *parce que* et contrefactualité", *Nouveaux cahiers de linguistique française* 30, 141-160.
- Jivanyan, H. (2015) "Antéposition du connecteur dans une relation causale: les raisons, les contraintes et les effets", *Nouveaux cahiers de linguistique française* 32, 165-185.
- Kayne, R. (1994) *The antisymmetry of syntax*, MIT Press, Cambridge, MA.
- Krifka, M. (2001) Quantifying into question acts, *Natural Language Semantics* 9, 1-40.
- Krifka, M. & R. Musan (2012) "Information structure. Overview and linguistic issues", in M. Krifka & R. Musan (eds.) *The expression of information structure*, The Expression of Cognitive Categories (ECC) 5, Berlin, Mouton de Gruyter 2012, 1-44.
- Lambrecht, K. & al. (2006) "Cognitive constraints on assertion scope: the case of spoken French *parce que*", in Nishida C. & J.-P. Montreuil (eds.) *New perspectives on Romance linguistics* 1, Amsterdam/Philadelphia, John Benjamins, 143-154.
- LeQuerler, N. (1993) "Subordination, thématization, rhématisation: l'exemple de la cause", *Travaux linguistiques du Cerlico* 6, 97-121.
- Leu, T. (2015) "Generalized x-to-C in Germanic", *Studia Linguistica* 69, 272-303.
- Lorian, A. (1966) *L'ordre des propositions dans la phrase française contemporaine: la cause*, Paris, Klincksieck.
- Moeschler, J. (1986) "Connecteurs pragmatiques, lois de discours et stratégies interprétatives: *parce que* et la justification énonciative", *Cahiers de linguistique française* 7, 149-167.
- Moeschler, J. (2009) "Causalité et argumentation: l'exemple de *parce que*", *Nouveaux cahiers de linguistique française* 29, 117-148.
- Moeschler, J. (2014) "Causality and non-iconic order", in Gobber G. & A. Rocci (Eds.), *Language, reason and education. Studies in honor of Eddo Rigotti*, Berne, Peter Lang, 243-257.
- Mohr, S. (2009) "V2 as a Single-Edge Phenomenon" in K.K. Grohmann, P. Panagiotidis (eds.) *Selected Papers from the 2006 Syntaxfest*, Cambridge Scholars Publishing, Cambridge, pp. 141-159.
- Reis, M. (2013) "Weil-V2“-Sätze und (k)ein Ende? Anmerkungen zur Analyse von Antomo & Steinbach (2010)" *Zeitschrift für Sprachwissenschaft* 32, 221-262.
- Rizzi, L. (1990) *Relativized Minimality*, MIT Press, Cambridge, MA.
- Rizzi, L. (1997) "The Fine Structure of the Left Periphery" in L. Haegeman (ed.) *Elements of Grammar*, Kluwer, Dordrecht, 281-337.
- Rizzi, L. (2006) "On the Form of Chains: Criterial Positions and ECP Effects", in L. Cheng, N. Corver (eds.) *Wh-Movement: Moving on*, MIT Press, Cambridge, MA, 97-133.
- Rizzi, L. (2007) "On Some Properties of Criterial Freezing", *CISCL Working Papers on Language and Cognition* 1, 145-158.
- Rizzi, L. (2013) "Notes on cartography and further explanation", *Probus* 25, 197-226.
- Rizzi, L. & G. Bocci (2017) "The left periphery of the clause – Primarily illustrated for Italian"

- in M. Everaert, H. Van Riemsdijk (eds.) *Blackwell Companion to Syntax*, II Edition, Blackwell Publishers.
- Rizzi, L. & G. Cinque (2016) "Functional categories and syntactic theory", *Annual Review of Linguistics* 2, 139-163.
- Pander Maat, H. & T. Sanders (2000) "Domains of use or subjectivity? The distribution of three Dutch causal connectives explained", in Couper-Kuhlen E. & Kortmann B., (eds), *Cause, condition, concession and contrast: Cognitive and discourse perspective*, Berlin, Mouton de Gruyter, 59-81."
- Sanders, T. (2005) "Coherence, Causality and Cognitive Complexity in Discourse", in Aurnage M., Bras M., Le Draulec A. & Vieu L. (eds), *Proceedings/Actes SEM-05, First International Symposium on the exploration and modeling of meaning*, Toulouse, Université de Toulouse le Mirail, 105-114.
- Schleppegrell, M. J. (1991) "Paratactic because", *Journal of Pragmatics* 16, 323-337.
- Stukker, N. & T. Sanders (2009) "Another's perspective on subjectivity in causal connectives: a usage-based analysis of volitional causal relations", *Discourse* 4, Linearisation and segmentation in discourse.
- Sweetser, E. (1990) *From etymology to pragmatics: Metaphorical and Cultural aspects of Semantic Structures*, Cambridge, Cambridge University Press.
- Vallée M. (2003) "Because et for partagent-ils les mêmes propriétés énonciatives ?", *Corela* 1/2.
- Walkden, G., (2017) "Language contact and V3 in Germanic varieties new and old", *Journal of Comparative Germanic Linguistics* 20, 49-81.
- Wiese, H. (2009) "Grammatical innovation in multiethnic urban Europe: new linguistic practices among adolescents", *Lingua* 119, 782-806.
- Wiltschko, M. (2014) *The Universal Structure of Categories: Towards a Formal Typology*, Cambridge University Press, Cambridge.
- Zufferey, S. (2014) "Givenness, procedural meaning and connectives. The case of French *puisque*", *Journal of Pragmatics* 62, 121-135.
- Zufferey, S. & B. Cartoni (2012) "English and French causal connectives in contrast", *Languages in Contrast* 12 (2), 232-250.
- Zwart, J.W. (1992) "Subject Initial Verb Second in West Flemish: A reply to Haegeman", *Groninger Arbeiten zur germanistischen Linguistik* 35, 72-91.